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PURPOSE AND SCOPE

The *African Journal of Drug & Alcohol Studies* is an international scientific peer-reviewed journal published by the African Centre for Research and Information on Substance Abuse (CRISA). The Journal publishes original research, evaluation studies, case reports, review articles and book reviews of high scholarly standards. Papers submitted for publication may address any aspect of alcohol and drug use and dependence in Africa and among people of African descent living anywhere in the world.

The term "drug" in the title of the journal refers to all psychoactive substances other than alcohol. These include tobacco, cannabis, inhalants, cocaine, heroin, prescription medicines, and traditional substances used in different parts of Africa (e.g., kola nuts and khat).

EDITORIAL AND MANAGEMENT TEAM

CONTENTS

HARMFUL USE OF ALCOHOL AMONG NIGERIAN UNDERGRADUATES: THE INFLUENCE OF ALCOHOL-RISK PERCEPTION, RELIGIOSITY AND GENDER

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ABSTRACT

This study investigated the role of alcohol risk perception, religiosity and gender in harmful use of alcohol using a sample of Nigeria undergraduates. The study participants comprised of 501 undergraduate students (340 males and 161 females) between the age of 18 and 27 years, with the mean age of 23.14 years. Participants completed a measure of the augmented CAGE questionnaire, alcohol-risk perception scale, and the religiosity scale. Linear regression showed that males are more likely to abuse alcohol than females (β= -.17; t = -3.47; P < .01). Also, alcohol-risk perception significantly predicted alcohol abuse (β= .14; t = 2.74; P < .01). However, religiosity did not significantly predict alcohol abuse. Results, implications of findings, and suggestions for further research were discussed.

Keywords: Harmful use of alcohol, Alcohol-Risk perception, Religiosity, Gender, Nigeria

INTRODUCTION

Substance use and abuse is a serious problem in Nigeria as in most other parts of the world. The early study of Obot and Olaniyi (1991) clearly depicted that a very high proportion (91%) of the patients admitted in four Nigerian hospitals for drug related problems between 1984 and 1988 were aged below 39 years. Alcohol is one of the substances with a very high level of social acceptance and consumption among Nigerian youths and adults (Akindutire & Adeboyega, 2012; Yahasai. 2010; Yusuf, 2010). One reason for such high level of consumption is that in Nigeria, unlike illicit drugs, the purchase, possession, and consumption of alcohol are legal for adults and for most, a part of their everyday social fabric. Regardless of the level of acceptance of alcohol use in the society, excessive use and abuse of alcohol causes serious problems affecting the psychological and physical health of

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millions. According to the World Health Organization (2011), 320,000 young people between the ages of 15-29 die from alcohol-related causes each year. Overall, harmful alcohol use results in 2.5 million deaths each year that arises from unintentional and intentional injuries (WHO, 2011). As a definition, harmful alcohol use, also known as alcohol abuse, refers to a pattern of alcohol use that causes physical or mental damage to health. Not only does alcohol abuse impair the physical and psychological health of the drinker, it also harms the well-being and health of the people exposed to the drinker by putting them at risk of accidents or violent behaviours.

Several studies have demonstrated a high prevalence of alcohol use and abuse among Nigeria students (Awoyinfa, 2012; Odejide, 1989; Pela, 1989) and such high rate of continuous and excessive use of alcohol is significantly associated with some adverse outcomes. For example, Ukwayi, Ambekeh, Uwanede, & Undelikwo (2013) found that among Nigerian students, excessive use of alcohol is significantly associated poor academic performance, truancy and school drop-out. Also, in respect to developmental trajectory, research has found that prenatal exposure to alcohol use is associated with Attention Deficit Hyperactivity Disorder (ADHD) (Mick, Biederman, Faraone, Sayer, & Kleinman, 2002).

Previous studies have been conducted to determine the factors that predict alcohol abuse. The role of Alcohol risk perception on alcohol use was investigated by Lundborg and Lindgren (2002) Using Swedish participants, three major conclusions were drawn. Firstly that people overestimate the risk of alcohol, secondly, these alcohol risk perceptions fall substantially with age thirdly, individuals with higher perceived risks were less likely to consume alcohol. Furthermore, Patterson, Hunnicutt, and Stutts (1992) conducted a study on perceptions of warnings and risks associated with alcohol consumption, using American young adults aged between 16 to 24 years. They concluded that consuming larger quantities perceived alcohol consumption to be significantly less risky than respondents who reported consuming smaller quantities of alcohol. Similar pattern was found in a Colombian study by Lopez-Quintero and Neumark (2010). Subsequently, a growing number of studies focus on the relationship between religiosity/spirituality and substance use including drinking. These studies consistently found a negative relationship between religiosity and alcohol use and abuse (Benda & Corwyn, 1997; Feyza, Zaje & Lee, 2008; Kovacs, Piko & Fitzpatrick, 2011; Picko, Kovacs, Kriston & Fitzpatrick, 2012; VonDras, Schmitt & Marx, 2007).

Although, there have been several studies on the influence of alcohol risk-perception and religiosity on alcohol abuse, little or no literature have considered the predicting role of alcohol risk perception, religiosity and gender on alcohol abuse in a Nigerian sample. Hence, this study stands to fill that gap in the literature.

METHOD

Participants

A total of five hundred and one (501) undergraduates, drawn from the University of Nigeria, Nsukka, were used in the study. The participants included students from the Faculties of Engineering, Biological Sciences, Social Sciences and Arts.

They were 340 males and 161 females, between the ages of 18 and 27 years, with a mean age of 23.14 years. A convenient sampling technique was used to select participants.

Instruments

The three instruments used to collect data were Augmented CAGE Questionnaire, Alcohol Risk Perception Scale and Religiosity Scale.

Augmented CAGE Questionnaire.

The augmented CAGE questionnaire is a 10- item scale developed by Ewing (1968) and validated by Shayesta Dhalla and Jacek Kopec (2007) as a global measure of alcohol abuse. The augmented CAGE questionnaire consists of 4 items from the CAGE questionnaire, which is a brief and popular screening instrument used in clinical practice and 6 items from the Alcohol Use Disorder Identification Test (AUDIT). Each item has a unique response format, corresponding to how the item is constructed. The first four items that are from the CAGE Questionnaire are anchored on a 'YES' or 'NO' response categories. In item five, participants were required to indicate how often they have had a drink containing alcohol in the past year, on a response format of *never* (0), *monthly or less* (1)*, 2-4 times per month* (2)*, 2-3 times per week* (3), *greater or equal to 4 times per week* (4). Item six required the participants to indicate the number of drinks containing alcohol they would take on a typical day when they wanted to drink on a response format ranging from *1 or 2* (1) to *10 or more* (5). The seventh to tenth items eliciting the peoples' extent of alcohol abuse are stated in a format that requires a 'YES' or 'NO' response. Composite scores are formed

by summing all item scores. Higher scores indicate higher levels of alcohol abuse. In this study, the Cronbach's alpha obtained for this scale was 0.79.

Alcohol-Risk Perception Scale.

The Alcohol-Risk Perception Scale is a modified version of Cannabis-Risk Perception Scale developed by Apostolidis, Fieulaine, Simonin and Rolland (2006). The scale is a 20-item scale modified to elicit peoples' subjective evaluation of how risky they perceive alcohol use. Respondents indicated the extent of their agreement with each item on a 7 point response format, ranging from *strongly disagree* (1) to *strongly agree (7).* The scale has been shown to perform creditably well across cultures. For the current study, Cronbach's alpha of 0.77 was obtained.

Religiosity Scale.

The third instrument used for the study was the religiosity scale developed by Agbo (2011), a 5- item questionnaire that measures religiosity. The items are (1) *my religion is my life;* (2) *I strongly believe everything I am taught in my religion;* (3) *I find it difficult to separate my religion from my life activities;* (4) *I always evaluate myself on the bases of my religious belief;* (5) *My religion is my identity.* Responses were scored on a 7 point scale ranging from *strongly disagree* (1) to *strongly agree* (7). The Cronbach's alpha obtained was 0.85*.*

Procedure

All participants used were given a description of the study that was adequate enough to enable them properly respond to the items on the questionnaire. Then a total number of 520 questionnaires were distributed based on convenient sampling

to undergraduate students of the University of Nigeria, Nsukka, in their various classes within their respective faculties. Each participant completed the questionnaire and it was collected immediately with the assistance of the class representative. The distribution and collection of the questionnaires were made within one week and the entire questionnaires distributed were collected. Nineteen (19) questionnaires were discarded due to incomplete response and inappropriate filling. Therefore a total of 501 questionnaires were used for the analysis.

Design/statistics

The study employed a cross-sectional survey design and regression technique was used to analyze the data. Analyses were done with the Statistical Packages for the Social Sciences (SPSS Version 22).

RESULTS

Before the analysis, data was screened for anomalies such as outliers, but none was found. The descriptive statistics, correlation and regression for the variables were computed. Correlations were conducted to determine the level of relationship among the study variables and to identify the significant variables to be included in the regression analysis. The results of the bivariate correlation indicated that alcohol risk perception is significantly positively related to alcohol abuse ($r=.65, p<.001$). Since alcohol risk perception scale was scored in such a way that high scores indicated low levels of perceived risk for alcohol use and low scores indicated high level of perceived risk for alcohol use, the present result therefore means that people who perceive alcohol as having less or no risk were more likely to use higher levels of alcohol than those who perceive alcohol as having high risk. The direction of the correlation indicated that high level of alcohol risk perception is related to low level of alcohol use and abuse among undergraduate students.

The results of the correlation also demonstrated that religiosity is negatively related to alcohol abuse ($r=-.59, p<.01$). High scores on the religiosity scale were significantly related to low level of alcohol abuse. Also, religiosity was negatively related to alcohol risk perception. Since high scores on the alcohol risk perception scale indicated low risk associated with

Table 1. Correlation among variables of study

Variables	1	2	3
1. ARP	_		
2. Religiosity	-.73**	_	
3. Alcohol Abuse	.65***	-.59**	_
Mean	65.93	23.84	5.11
SD	15.97	7.44	4.13
Range	165.00	51.00	49.00
Skewness	-.05	-.10	.03
Kurtosis	-.08	-.22	-.06

ARP Alcohol Risk Perception; SD Standard Deviation; **correlation is significant at p<.01;
 *** correlation is significant at p<.001 (2-Tailed)

alcohol use, the negative relationship between religiosity and alcohol abuse portrays that high scores on religiosity scale were significantly related to low scores on alcohol risk perception scale.

To address the objective of this study, a linear regression analysis was conducted to determine if alcohol risk perception, religiosity and gender significantly predicted alcohol abuse. The results of the regression analysis revealed that two independent variables were significantly associated with alcohol abuse among Nigerian undergraduate students. Specifically, gender and alcohol-risk perception were found to be significant predictors of alcohol abuse.

In this study, males were coded 1, and females coded 2. Hence, the negative sign associated with B and Beta values means that males were more likely to use alcohol than females ($\beta=-.1.56$, $t=-3.47$, $p<.01$). Similarly, the regression analysis result showed that alcohol risk perception is a significant predictor of alcohol abuse ($\beta=.14$, $t=2.74$, $p<.01$). The Beta statistics is .14 and this means that for every one-point increase in the alcohol-risk perception scale, there was an increase on the alcohol abuse scale by .14. In brief, the result indicated that a higher score on the alcohol risk perception scale (which signifies low level of perceived risk in alcohol use) is related to high score on the alcohol abuse scale.

However, as shown in Table 2, religiosity did not significantly predict alcohol use ($\beta=-.04$, $t=.396$, $p>.05$). This implies that the religious involvement and religious commitment of an individual does not influence their level of alcohol use.

DISCUSSION

The results of this study showed that alcohol risk perception is a significant predictor of alcohol use. This finding is consistent with the findings of Lundborg and Lindgren (2002) and Lopez and Neumark (2010) who found that individuals with higher perceived risks were less likely to consume alcohol and other related substance. Therefore, perceiving regular alcohol use as a risky behaviour functions as a protective factor against the intention to use, use, and abuse alcohol.

This result can be explained by the fact that individuals avoid behaviours that they consider risky. In avoidance learning, an event or condition that signals an aversive state is avoided. For instance, drinking and driving may be associated with automobile accidents and death, then because of such associations, people may engage in behaviours to avoid the anticipated, aversive consequences. Making it a practice to avoid drinking is sensible avoidance behaviour. Therefore in such manner, people avoid drinking or rather engage in low level of alcohol consumption when they associate high levels adverse consequences to alcohol use. In the

Table 2. Regression analysis of Gender, alcohol risk perception and alcohol abuse

DV	Variables	B	SE	Beta	T
Alcohol Abuse	Gender	-1.56	.45	-.17	-3.47**
	Religiosity	-.02	.28	-.04	.396
	ARP	.04	.01	.14	2.74**

DV- Dependent Variable; ARP-Alcohol Risk Perception; SE= Standard error; **= p< .01

same vein, individuals that neglect these adverse consequences and accentuate on the reinforcing effects of alcohol use, are motivated to drink because of differential sensitivities to the rewarding outcomes of alcohol consumption such as temporal anxiety-reduction, increased elation, and anxiolytic effects. Therefore the positive reinforcing effects of alcohol generally are accepted as the motivating factors in alcohol-drinking behaviours in the early stages of alcohol use and abuse (Lopez & Neumark, 2010).

The findings of this study also demonstrated that religiosity did not significantly predict alcohol use. This finding is not consistent with the finding of Feyza et al. (2008) and Piko et al. (2012) which showed religious commitment, dispositional religious coping, religious attendance and private praying predicted less frequent alcohol use. The non-predicting role of religiosity on alcohol abuse found in this study could be as a result of some factor that mediates between religiosity and alcohol use. Most of the participants in this study were Christians and in most Nigerian Christian churches, alcohol consumption is not totally prohibited. Most Christian churches do not frown at moderate alcohol intake but, in the Muslim culture, alcohol consumption is prohibited. Furthermore, in the present society, people's sense of morality sometimes does not reflect in their behaviour. Even in religions where alcohol use is strongly frowned at, some individuals still engage in alcohol use and abuse. This is usually common in the case of adolescents and young adults that engage in experimental substance use. Therefore, even if the religious groups prohibit alcohol use, many adolescents would like to taste alcohol to know what it feels like to have heightened elation and other reinforcing effects of alcohol. And this is what is known as experimental substance use. Subsequently, modern adolescents may learn more from peer groups than religious groups.

Also, since alcohol is a relatively mild substance, the non-predictive role of religiosity in relation to the alcohol use may be attributed to the cultural view of alcohol as a permissible substance, used often in social settings. Though religiosity is thought to be a significant predictor of alcohol use, the finding from this study does not support such view. Furthermore, the present study found males to consume more alcohol and abuse alcohol than females. The most common hypothesis to explain why men and women differ in their drinking behaviour is that alcohol consumption both symbolizes and enhances men's greater power relative to women (McClelland, Davis, Kalin, & Wanner 1972). Alcohol consumption, particularly in large quantities has been an emblem of male superiority, a privilege that men have often reserved for themselves and denied to women (Martin, 2001). Alcohol consumption in all male-groups may affirm the privileged status of being a man rather than a woman (Nghe, Mahalik, & Lowe, 2003) and the ability to consume large amounts of alcohol without apparent impairment may help to demonstrate that the drinker is manly (Roberts, 2004). Also, men drink more alcohol than women do because men are generally more willing or motivated to take risks than women (Weber, Blais & Betz, 2002). Gender differences in risk-taking may result from many possible causes: that men find risk-taking more inherently rewarding (exciting) than women do, that risk-taking is an important way of demonstrating masculinity. Alcohol consumption

especially in large quantities may not only be a form of risk-taking, but may chemically make it easier to take other risks that women would be less likely to take, such as in aggressive behaviour. Furthermore, men's and women's drinking are differently affected by social responsibilities. On the one hand, men may be more likely to drink heavily because drinking either helps them ignore responsibilities (particularly domestic roles) or demonstrates their immunity to role obligations (Magazine, 2004). On the other hand, greater role responsibilities, particularly at home, may cause women (more than men) to limit their drinking (Bloomfield, Gmel, Neve, & Mustonen, 2001) because perhaps drinking might impair their role performance or because women with more role responsibilities are subject to greater social surveillance. These reasons for gender differences in alcohol use may occur together, so it is possible that combinations of these reasons will be sufficient to maintain gender differences in alcohol use in any given culture and historical era. It is important to also note at this point that gender differences in alcohol use and drinking behaviour are likely to be greatest where individuals, groups, or societies give the greatest value and importance to male dominance, risk-taking and avoidance of responsibilities.

Implication of the findings

In this study, 90 percent of undergraduate students admitted to having used or even abused alcohol at various instances in their life. Also, since it was found that alcohol risk perception is a significant predictor of alcohol abuse, regulatory agencies should focus on sensitizing and educating the public on the perilous consequence alcohol abuse, in order to deter

them from excessive use of alcohol. Results from this study, therefore, could arguably be used to further refine alcohol education programme efforts by directing more efforts on the risk associated with alcohol abuse.

So many laws have been promulgated to regulate, control, and prevent the sale or use of some substances such cocaine, heroin and LSD, but no law has been enacted to regulate the use of alcohol in the country. This might be because of the economic benefits accruing from the alcohol-producing companies. Another reason is that alcohol is instrumental in many cultural activities in Nigeria. But the findings of Makanjuola (1992) brought to limelight the need to enact laws regulating the use of alcohol as in other drugs of abuse. Makanjuola found drunkenness to be a significant cause of death among Nigerians through depression, suicide, road traffic accidents, liver disease, hypothermia and heart diseases. Therefore, the government should endeavor to enact a law and put in measures that will deter people from the abuse of alcohol such as issuance of alcohol license to only reputable vendors, regulating the number of alcoholic products an individual can have access to at a time, banning the sale of more alcohol to an already intoxicated person, organizing seminars and mobilizing the press to educate the masses on the health risks associated with alcohol abuse.

Further studies should vividly explore not only alcohol use but also various substances that are being used by the citizens within that particular context, and also state explicitly the negative effects of such usage in order to deter people from engaging in substance use and abuse. Second, subsequent studies that are aimed

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at finding the relationship between religiosity and alcohol use should explore different dimensions of religiosity to assess what aspects of it are significantly related alcohol use. Third, any future research in this area should investigate the variables that mediate the relationship between religiosity and alcohol use.

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THE ROLE OF ALCOHOL ABSTINENCE SELF-EFFICACY IN ALCOHOL USE: A CROSS-SECTIONAL SURVEY OF GHANAIAN UNDERGRADUATE STUDENTS

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ABSTRACT

There is an increasing awareness of indiscriminate alcohol use among University students worldwide. Self-efficacy to abstain from alcohol use plays a significant role in the abstinence of alcohol use by perceiving less benefits (pros) and more costs (cons) of alcohol use. However, not much is known about self-efficacy to abstain from alcohol use in relation to the pros and cons of alcohol use among Ghanaian university students. The aim of this study was to examine the role of alcohol abstinence self-efficacy in the pros and cons of alcohol use in Ghanaian university students. Participants consisted of 215 undergraduate students with a mean age of 23.5 years who completed self-report measures assessing alcohol abstinence self-efficacy and pros and cons of alcohol use. Thirty nine percent of students had never used alcohol. Adjusting for age, gender, and residence status, results of a one-way MANCOVA showed significant main effect of alcohol abstinence self-efficacy on both pros ($p < 0.001$) and cons ($p < 0.001$) of alcohol use, although the effect was stronger in cons ($\eta_p^2 = 0.26$) than pros ($\eta_p^2 = 0.18$) of alcohol use. Independent-samples t-test results showed that students classified under high (M = 11.12, SD = 11.02) alcohol abstinence self-efficacy reported more pros than those classified under low (M = 1.68, SD = 3.58) alcohol abstinence self-efficacy, $t(122.25) = -8.22$, $p < 0.001$. Similarly, those classified under high (M = 11.12, SD = 12.17) alcohol abstinence self-efficacy reported more cons than those classified under low (M = 2.03, SD = 6.66) alcohol abstinence self-efficacy, $t(154.58) = -6.59$, $p < 0.001$. Finally, while there were no gender differences in cons of alcohol use, males (M = 8.8, SD = 10.06) reported significantly higher than females (M = 4.61, SD = 8.24) on pros of alcohol use, $t(209) = 2.74$, $p < 0.01$. These findings provide preliminary evidence for the viability of reinforcing self-efficacy, particularly relating to abstinence, as a strategy to encourage abstinence from alcohol use and subsequently prevent harmful use of alcohol in Ghanaian university students.

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INTRODUCTION

Harmful use of alcohol among young people, especially in universities, has increasingly become a major global public health concern. As at 2012, about 5.9% of all deaths globally and an estimated 5.1% of the global burden of disease were attributed to alcohol use (WHO, 2014a; WHO, 2014b). Also, about 2.2% of death in Africa is attributable to alcohol use in approximately 30% females and 55% males who drink alcohol, apparently due to the fact that alcohol production and consumption is an integral part of the social and cultural life of the people (Obot, 2000) resulting from cheap and readily available local brews (Zawaira, 2014). In Ghana, presently, there is proliferation and marketing of all kinds of local alcoholic drinks (de Bruijin et al., 2014), compelling alcoholic beverage companies to organise alcohol education programmes to educate and provide factual information to empower university students to make informed choices about alcohol use (Daily Graphic, 2013). In spite of this, there is a paucity of research studies in Africa, in general, and Ghana in particular on the alcohol use behaviour of university students (Karam et al., 2007; Moitlakgola & Amone-P'Olak, 2015).

Although the relationship between alcohol use and health outcomes is complex and multidimensional, research has indicated that, in the general population, harmful use of alcohol is associated with a risk of developing several non-communicable diseases such as increasing risk of cirrhosis of the liver (Beaglehole et al. 2011), mental and behavioural disorders (Room, Babor & Rehm, 2005), and unintentional and intentional injuries, including those due to road traffic accidents and violence (Gjerde et al., 2011), and risky sexual behaviour which may expose the youth to sexually transmitted infections (Oppong Asante, Meyer-Weitz & Petersen, 2014). Among undergraduate students, those who engage in harmful use of alcohol are susceptible, particularly, to serious acute and chronic harms including substance abuse, drink driving, violence, and alcohol dependence (Karam, Kypri & Salamoun, 2007).

In view of the fact that university students are the future leaders of many countries and also that lower-income countries generally have lower capacity for the prevention and control of non-communicable diseases, it is absolutely imperative that, alcohol consumption, one of the well-known contributory factors in non-communicable diseases is controlled, preferably through a message of abstinence. There is a proposed global strategy to reduce the harmful use of alcohol that offers measures and outlines priority areas of action to protect people from harmful alcohol use (WHO, 2010). Some university campus policies, such as total bans on drinking on campus, have been associated with an increased level of abstinence from alcohol use and lower levels of heavy episodic drinking (Wechsler et al., 2001). To that extent, a

strategy that will target the psychological dimension of abstinence or reducing the harmful use of alcohol among university students is essential.

Self-efficacy is a very important concept which could be useful in strategies aimed at preventing harmful use of alcohol in young people. Self-efficacy is the belief in an individual's capabilities to organize and execute the causes of action required to manage prospective situations and to produce given attainments (Bandura, 1977, 1997). According to Bandura (2006) self-efficacy is a judgment of capability while self-esteem is a judgment of self-worth. With respect to the theory of self-efficacy, two types of expectations have a considerable effect on human behaviour. These are outcome expectations - the belief that certain kinds of behaviours may lead to certain outcomes, and self-efficacy expectations - the belief that an individual can successfully perform this particular behaviour (Maddux, Sherer & Rogers, 1982).

Several studies conducted outside Africa have found strong associations between alcohol abstinence self-efficacy and alcohol use. For example, low self-efficacy for refusing heavy drinking has been found to be negatively associated with alcohol use (Gilles, Turk & Fresco 2006, while increased self-efficacy predicted subsequent abstinence from alcohol use (Burleson & Kaminer, 2005). Additionally, drinking expectations and drinking refusal self-efficacy have also been found to predict alcohol use (Oei & Jardim, 2007; Young et al., 2006).

These suggest that individuals' self-efficacy to abstain from alcohol use is largely dependent on the inherent pros (benefits) and cons (cost) they derive or will derive from alcohol use and subsequent harmful use of alcohol. It is plausible to posit that

when individuals' perception of cost outweighs the benefits of using alcohol (i.e. decisional balance) then their self-efficacy to abstain from alcohol use is likely to increase. On the other hand, however, when the perceived benefits outweigh the perceived cost of using alcohol, then self-efficacy to abstain is likely to diminish. Decisional balance in alcohol use suggests that individuals weigh pros and cons when making a decision regarding whether or not to change their behaviour (Prochaska et al., 1994), and in the context of the present study, whether to either start drinking, continue drinking or quit drinking. Among university students in western countries, studies have found that the pros of drinking have a strong association with measures of alcohol use and problems (Maddock, 1997; Migneault et al., 1997). Also, university students who report either normal drinking behaviours or Diagnostic and Statistical Manual of Mental Disorders Text Revision (DSM-IV-TR) criteria for an alcohol disorder, show significantly higher perceived benefits of alcohol use (Morgen & Gunneson, 2008). Additionally, Steinman (2003) found that students who had stopped episodic heavy drinking perceived more risks and fewer benefits associated with harmful use of alcohol.

It is expected that this pattern of findings among university students in western samples would differ significantly from that of Ghanaian university students, essentially because of the religious and cultural background differences between Ghana and western countries. In spite of the rapid socio-economic changes in Ghana, which may create stressful situations conducive for alcohol use, little is known about alcohol abstinence self-efficacy in relation to the pros and cons of alcohol

use among Ghanaian university students. Therefore, the aim of this study is to examine the role of alcohol abstinence self-efficacy in the pros and cons of alcohol use among Ghanaian university students.

METHOD

Participants and procedure

A quantitative cross-sectional survey design was used in this study. Undergraduate students from a population of about 2000 students in a private university in Ghana were invited to participate in the study. A simple random sampling method was used to select six courses from various programmes, after which a simple random sample method was again used to select 40 students from each course, mostly in the fourth year as most of them were available during data collection. The response rate was 89.6% as 25 students in total did not return their questionnaires. The randomly selected sample, thus, comprised of 112 males and 103 females between 16 and 48 years of age with a mean age of 23.5 (SD = 3.9). The study complied with the Helsinki declaration regarding ethical principles for medical research involving human subjects. Students who willingly agreed to participate were invited to complete questionnaires by initially providing signed informed consent forms. Participants were not paid to participate. The Ethics and Research Committee of Regent University gave formal permission and ethical approval (GSR/EA/14/003) for the study to be conducted.

Measures

The questionnaire included demographic variables assessing participants' gender, age, level at university and residence status (home or hostel). For analysis

purposes, age was dichotomised based on median splits into younger (16-23) and older (24-48) students. Alcohol use was assessed by asking "In the past week how often have you used alcohol" and participants responded by indicating either 'never', 'once or twice', 'more than once or twice', and 'regularly - at least once a week'. It is assumed that participants who have never used alcohol will fall under the category 'never'.

Alcohol Abstinence Self-efficacy Scale (AASES)

The AASES (DiClemente et al., 1994) assesses self-efficacy and evaluates an individual's efficacy to abstain from drinking in 20 situations that represent typical drinking cues. Participants are asked to give a current estimate of efficacy to abstain from alcohol. These situations constitute four subscales and are rated on a 5-point Likert scale ranging from not at all [0] to extremely [4] with the total scores ranging from 0 to 80, where higher scores indicate higher self-efficacy to abstain from alcohol use. For the purpose of this study, the AASES was dichotomised based on median split: low (0 - 10.5) and high (11-80). DiClemente et al. (1994) and Carbonari & DiClemente (2000) found a Cronbach's α of 0.92 for the 20-item AASES and 0.88, 0.82, 0.83 and 0.81 for the negative affect, social pressure, physical pain/illness, and thoughts about using subscales respectively. In the present study the Cronbach's α for the total AASES was 0.98 and 0.96, 0.94, 0.97 and 0.96 for the negative affect, social pressure, physical pain/illness, and thoughts about using subscales respectively.

Alcohol Decisional Balance Scale (ADBS)

Decisional balance was measured using the 20-item ADBS (Maddock, 1997).

The ADBS consists of 10 items measuring the benefits (pros) of alcohol use and 10 items measuring the costs (cons) of alcohol use. The scale asks "How important to you are the following statements in making a decision about drinking?" and participants respond on a 5-point Likert scale ranging from 0 - not at all important to 4 - extremely important on both the pros and cons subscales. Items included "Drinking helps me deal with problems" and " I like myself better when I am drinking" on the pros subscale, and "My drinking causes problems with others" and "I could accidentally hurt someone because of my drinking" on the cons subscale. Each subscale had scores ranging from 0 – 40 with higher scores representing both more pros and cons of drinking. In populations or cultures with less drinking experience, the measure is commonly construed as an individual's decision making regarding whether or not to drink at all (Migneault et al., 1999). In the present study, Cronbach's α was high for both the pros (α = 0.93) and cons (α = 0.96) subscales.

Statistical analysis

IBM SPSS version 22 software was used to perform the statistical analyses. A one-way Multivariate Analysis of Covariance (MANCOVA) was the main statistical analysis method used to examine the effects of levels of alcohol abstinence self-efficacy (high and low) on the pros and the cons of drinking alcohol while adjusting for the effect of age, gender and residence status. The univariate adjustment for multiple comparisons was estimated with the Bonferroni correction for all significant main effects for alcohol abstinence self-efficacy at the 0.05 level of significance. Independent-samples t-test was performed when there was a significant effect in any of the covariates.

The Box's Test of equality of covariance matrices which checks the assumption of homogeneity of covariance across the groups was significant (Box's M = 119.61, $p < 0.001$), indicating that there are significant differences between the covariance matrices. As Box's test violated the assumption of homogeneity of covariance, the Pillai's Trace Test, a test statistic that is very robust and not highly linked to assumptions about the normality of the distribution of the data (Pillai, 2006) was used in the interpretation of the results. Finally, a Spearman correlation was used to estimate the interrelationships among the key variables.

RESULTS

Drinking levels and Demographic Characteristics

In the past one month, drinking level was: never – including who have never taken alcohol (38.8%); once or twice (11.2%); more than once or twice (25.2%), and regularly - at least four times a week (24.8%). Categorisation and descriptive statistics on alcohol abstinence self-efficacy, pros and cons of drinking, age, gender, and residence status is presented in Table 1 and this shows that majority of the participants were younger. There were slightly more male students than female students. Also, about two-thirds of the participants reside at home while attending the university. Finally, there were more final year students followed by second year, third year and first year students respectively, this is due to their availability during data collection.

Table 1. Descriptive statistics of variables and demographic characteristics of the sample

Variables	Category	N (%)	M	SD	Range
	Younger	123 (57.7)	-	-	16 - 23
Age	Older	90 (42.3)	-	-	24 - 48
	Total	213 (100)	23.5	3.9	16 - 48
	Male	112 (52.1)			
Gender	Female	103 (47.9)			
	Total	215 (100)			
	Home	144 (67)			
Residence Status	Hostel	71 (33)			
	Total	215 (100)			
	100	29 (13.5)			
	200	45 (20.9)			
Level/year in school	300	37 (17.2)			
	400	104 (48.4)			
	Total	215 (100)			
	High	103 (47.9)	-	-	11 - 80
Alcohol Abstinence Self-efficacy	Low	103 (47.9)	-	-	0 -10.5
	Total	206 (95.8)	24.95	29.58	0 - 80
Pros of Drinking	-	211	6.39	9.36	0 - 40
Cons of Drinking	-	210	6.46	10.66	0 - 40

Alcohol abstinence self-efficacy and pros and cons of drinking

Results of a one-way MANCOVA, Table 2, shows that Pillai's Trace test estimate indicates that alcohol abstinence self-efficacy had a significant effect on both pros and cons of drinking while gender had a significant effect on pros of drinking only. All other variables did not have a significant effect on both pros and cons of drinking. Accordingly, the effect size was small between the covariates and both pros and cons of drinking with the exception of alcohol abstinence self-efficacy which had moderate to high effect size, showing evidence of a higher proportion of variance explained in pros of drinking. Consequently, the multivariate effect size of alcohol abstinence self-efficacy was stronger in cons (η_p^2 = 0.26) than pros (η_p^2 = 0.18) of alcohol use.

Independent-samples t-test results showed that students who reported high (M = 11.12, SD = 11.02) alcohol abstinence self-efficacy reported more pros than those with low (M = 1.68, SD = 3.58) alcohol abstinence self-efficacy, $t(122.25)$ = -8.22, $p < 0.001$. Similarly, those reported high (M = 11.12, SD = 12.17) alcohol abstinence self-efficacy reported more cons than those with low (M = 2.03, SD = 6.66) alcohol abstinence self-efficacy, $t(154.58)$ = -6.59, $p < 0.001$. Finally, while there were no gender differences in cons of alcohol use, males (M = 8.8, SD = 10.06) reported significantly higher than females (M = 4.61, SD = 8.24) on pros of alcohol use, $t(209)$ = 2.74, $p < 0.01$.

With regard to levels of alcohol abstinence self-efficacy, Bonferroni correction estimate showed that there was a sig-

nificant difference between low and high alcohol abstinence self-efficacy for pros of drinking (Mean Difference = -9.15, $p < 0.001$) and a significant difference between low and high alcohol abstinence self-efficacy for cons of drinking (Mean Difference = -8.80, $p < 0.001$).

Overall, levels of alcohol abstinence self-efficacy and the covariates explained a higher proportion of the variance in pros ($R^2 = 0.28$ (Adjusted $R^2 = 0.27$)) than cons ($R^2 = 0.19$ (Adjusted $R^2 = 0.17$)) of alcohol use. This indicates that age, gender, residence status and self-efficacy to abstain from alcohol are more associated with alcohol use than not using alcohol.

Age, residence status, and alcohol abstinence self-efficacy

Results of Spearman correlation analysis with age, residence status, and alcohol abstinence self-efficacy showed that there were significant associations between the subscales and total alcohol abstinence self-efficacy and pros and cons of drinking. Age and residence status did not have a significant association with pros and cons of drinking and the total alcohol abstinence self-efficacy. However, social pressure self-efficacy, had a significant negative association with students' residence status, indicating that residing at home or in a hostel and attending school is connected to students' social pressure related self-efficacy to abstain from alcohol use. Also, social pressure related self-efficacy had a stronger association with pros than cons of alcohol use, indicating the influence of peers outside home on alcohol behaviour. Table 3 shows the intercorrelations among the study variables.

Table 2. Descriptive statistics and MANCOVA for age, gender and alcohol abstinence self-efficacy on pros and cons of drinking (N = 215)

Independent Variable	Dependent Variable	Category	Mean	SD	Pillai's Trace	df	F	η_p^2
Age	Pros of Drinking	Younger	6.48	9.76	0.017	1	2.94	0.02
		Older	5.89	8.15				
	Cons of Drinking	Younger	6.82	11.13		1	1.83	0.01
		Older	5.57	9.36				
Gender	Pros of Drinking	Male	8.08	10.06	0.039	1	6.43*	0.03
		Female	6.41	8.24				
	Cons of Drinking	Male	6.66	10.66		1	0.00	0.00
		Female	6.24	10.70				
Residence Status	Pros of Drinking	Home	7.18	10.18	0.013	1	1.20	0.01
		Hostel	4.83	7.29				
	Cons of Drinking	Home	7.36	11.18		1	2.42	0.01
		Hostel	4.66	9.33				
Alcohol Abstinence Self-efficacy	Pros of Drinking	Low	1.68	3.58	0.284	1	67.13**	0.26
		High	11.12	11.02				
	Cons of Drinking	Low	2.03	6.66		1	41.56**	0.18
		High	11.12	12.17				

*$p < 0.05$, ** $p < 0.001$. Pros of Drinking: $R^2 = 0.28$ (Adjusted $R^2 = 0.27$); Cons of Drinking: $R^2 = 0.19$ (Adjusted $R^2 = 0.17$)

Table 3. Spearman correlation analysis among key variables (N = 215)

	1	2	3	4	5	6	7	8
1. Residence	--							
2. Age	-0.18**	--						
3. Pros of Drinking	-0.12	-0.06	--					
4. Cons of Drinking	-0.12	-0.06	0.58**	--				
5. Negative Affect	-0.08	0.05	0.27**	0.32**	--			
6. Social Pressure	-0.14*	0.05	0.39**	0.32**	0.92**	--		
7. Physical Pain/Illness	-0.03	0.03	0.26**	0.29**	0.94**	0.86**	--	
8. Thoughts about Using	-0.05	0.02	0.29**	0.29**	0.95**	0.92**	0.95**	--
9. AASES	-0.07	0.04	0.31**	0.31**	0.98**	0.95**	0.97**	0.98**

*$p < 0.05$, ** $p < 0.01$, AASES = Alcohol Abstinence Self-Efficacy

DISCUSSION

The purpose of this study was to examine the role of alcohol abstinence self-efficacy in the pros and cons of alcohol use among Ghanaian undergraduate students. The results indicated that a relatively large number of students had never used alcohol, which is contrary to findings of studies conducted in developed countries among university students where a relatively large number use alcohol (Bullock, 2004; Webb et al., 1996). This may have been so because many university students in Ghana live with their parents or guardians while attending school and are expected to abide by the rules and regulations in the house which includes abstinence from alcohol use. This phenomenon may be influenced by adherence to strict religious principles which is commonly practiced in Ghana and many non-western countries. Life-time abstainers from alcohol use have been found to be more likely to associate abstinence to, among others, religion and upbringing (Bernards et al., 2009). Those who use alcohol, however, probably did so because of a lower social pressure related self-efficacy through their peers outside the home environment.

Results of this study also showed that there were significant alcohol abstinence self-efficacy differences in both pros and cons of alcohol use. High alcohol abstinence self-efficacy was more associated with pros than cons of drinking. These findings are quite similar to that of previous studies that found strong associations between self-efficacy and harmful use of alcohol (Oei & Jardim, 2007; Young et al., 2006). These findings are probably due to the concept of self-efficacy expectation, which is a cognitive process that acts as a mediator between a desired outcome and confidence in an individual's ability to perform that behaviour (Velicer et al., 1990). Students, in this case, perhaps thought that once they have a higher self-efficacy, they were capable of controlling any adverse consequence of alcohol use.

Findings also showed that, independently, cons associated with alcohol use were higher than pros associated with alcohol use, implying that students generally thought that the costs of using alcohol exceeded the benefits of alcohol use. These results are compatible with results of previous studies that found that pros of drinking are strongly associated with alcohol use (Maddock, 1997; Migneault et al.,

1999; Morgen & Gunneson, 2008), and the perception of fewer benefits associated with harmful use of alcohol leading to less alcohol use (Steinman, 2003). It is plausible to assume that students reported more cons than pros of alcohol use because of the influence of parents and guardians in their lives, which involves direct monitoring of their behaviours in and outside the home environment (Bernards et al., 2009). Also, this may be as a result of the fact that a relatively large number of students reported that they have never used alcohol.

With reference to the controlled variables, only gender was found to have significant differences in pros of alcohol use, with males reporting more pros of alcohol use. Perhaps this is because males feel they derive more benefits than females from alcohol use. Previous studies also found among university students that males see benefits in using alcohol which has led to higher prevalence of alcohol use in males (Johnston et al., 2006; Webb et al., 1996). This may be as a result of gender differences in learned expectations about the potency of alcohol. It has been posited that men who have strong expectations that drinking will lead to social and physical pleasure and to sexual enhancement tend to drink more (Norberg et al., 2010). Also, men tend to drink more than women apparently because of social and community norms and expectations that disapprove and look down on women who use alcohol (Neighbors et al., 2010).

Some limitations should be considered when interpreting findings of this study. First, all of the measures depended on the self-report of the participants, which may not have elicited very accurate responses given the sensitive nature of the study, in respect of the social-cultural and religious background of the study setting - which

abhors alcohol use. The use of an observational method to corroborate the responses given by participants would be commendable. Second, the relatively small sample size and the fact the study was conducted in a private university limits the ability to generalise the findings to the entire undergraduate student population in Ghana. In future, research using several universities of varying size (private and public), demographics, and across Ghana would produce a sample that could better be generalised to the entire university population of Ghana. Finally, students responded to just normal alcohol use suggesting that the results could have been different if the sample were more of heavy drinkers or if the frame of the questions was shifted to one of avoiding drinking excessively.

Nonetheless, the present study was a good first step in taking alcohol use behaviour and research among university students on a sound path, especially in Africa and Ghana in particular. Furthermore, the present study offers a contribution of being the first examination of how alcohol abstinence self-efficacy influences self-reported benefits and costs of alcohol use among university students in Ghana. By understanding the role of alcohol abstinence self-efficacy in the pros and cons of alcohol use, specific and personalised interventions can be designed that would ensure that students who have never used alcohol would continue to abstain and those who are already using would avoid excessive and harmful use, if not quit completely.

CONCLUSIONS

This study has shown that self-efficacy to abstain from alcohol use is an important attribute that could stimulate university

students to believe that the costs exceed the benefits of alcohol use and that they have the self-belief and capacity to abstain, reduce or quit alcohol use.

Competing Interests

Funding

Authors' contributions

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PATTERN OF SUBSTANCE ABUSE AT THE DRUG DE-ADDICTION UNIT OF A NIGERIAN PSYCHIATRIC HOSPITAL

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ABSTRACT

Substance abuse is a complex challenge of modern society with significant public health importance. The aim of the study was to identify the common drugs of abuse, socio-demographic features and clinical characteristics of individuals who abuse substance in a drug de-addiction unit of a psychiatric hospital in Nigeria. It was a cross-sectional descriptive survey of 86 in-patients of the drug de-addiction unit of Federal Neuropsychiatric Hospital, Enugu, South-Eastern Nigeria. A modified questionnaire by United Nations Office on Drugs and Crime Nigeria Epidemiology Network on Drug Use (NENDU) was used to obtain the data. Data analysis was done using the Statistical Package for Social Sciences (SPSS), version 20. Results show that the primary substances of abuse were cannabis (81.4%) and alcohol (16.5%), while cocaine and other stimulants were rarely used (1.2%). The mean age of the participants and age at initiation of substance use were 30.88±8.49 and 22.59±5.98, respectively. Indices of social disadvantage were seen in people with substance use disorders. The commonest route of use was by smoking (81.3%) with mental disorders, as the most common comorbidity seen (88.3%). The finding in this study on cannabis is conceded by existing literature, which reports a persistent rise in its use despite international and national efforts to reduce its supply. The early age at initiation begs for more comprehensive drug prevention programmes especially in the various levels of education.

Keywords: Pattern of substance use, De-addiction Unit, Nigeria, Cross-sectional study

INTRODUCTION

Substance abuse is a complex and multidimensional problem with a long history and global impact. It is influenced by social, economic, political, and psychosocial factors (Rather, Bashir, Sheikh, Amin and Zahgeer, 2013). The problem

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is not restricted to an individual, drug or community but involves the interaction among the triad (Arturo, 1990).

In some cultures in Nigeria, traditional drugs (e.g., alcohol, kolanuts) are used by sections of the society either for leisure or as part of religious ceremony. Therefore, their consumption does not invite any sanction from the society. While the use of alcoholic beverages and tobacco is endemic in many societies, the use of other psychoactive substances appears to be an epidemic, with semblance to a communicable disease (zMe, 1990).

The health consequences of illicit drug use continues to be of global concern, this is more so because majority of problem drug users have limited access to treatment (UNODC, 2014). Globally, it is estimated that a total of 246 million people (1 out of 20 people) between the ages of 15 and 64 years, used an illicit drug in 2013 (UNODC, 2014). About 27 million people, which is the estimated total population in Malaysia, are problem drug users. 12.19 million of the problem drug users inject drugs and an estimated 1.65 million of those who injected drugs were living with HIV in 2013. The annual statistic of drug related deaths as of 2013 was 187,100 (UNODC, 2014). This projects a heavy burden on the existing public health systems in terms of prevention, treatment and care of drug use disorders as well as the health consequences.

Over the past few decades, the drug scenario in Nigeria has changed rapidly according to the National Drug Enforcement Agency (NDLEA, 2013). The changes are seen in terms of availability, choice of psychoactive drugs, users and their socio-demographic characteristics (NDLEA, 2013). The increase in drug abuse at the different levels of society during the past

decades and their attendant physical and psychiatric problems have become a subject of public concern and moral panic, especially among young people.

According to the World Drug Report, 2015, there are national and regional variations in the pattern of drug use. The limited data available indicate that the use of opiates (heroin and opium) has remained stable at the global level (UNODC, 2015). This is probably due to trends in America and Europe. Cocaine use has declined overall, while use of cannabis and pharmaceutical opioids has continued to rise globally (UNODC, 2015). There are also indications that the number of people requiring treatment for cannabis use is increasing in most regions of the world (UNODC, 2015).

However, a community-based study done in Nigeria showed that the commonly used psychoactive substances in the decreasing order are alcohol, tobacco products, cannabis and stimulants (Omoluabi, 1995). In Nigeria, some regional differences exist. For example, kolanut is the most commonly used psychoactive substance in northern Nigeria, while alcohol is the most common in southern Nigeria. This may be due to cultural influences on pattern of substance use such that northerners who are predominantly Moslem are less likely to use alcohol for religious reasons (Abasiubong, Udobang, Idung, Udoh & Jombo, 2014). In the hospital setting, the most commonly used psychoactive substance among in-patients in Nigerian psychiatric facilities is cannabis. This is similar in most regions of the country (Abdulfatai and Balarabe, 2016). This may reflect the increasing availability of cannabis as well as its accessibility in the country, with most people starting its use early in life (UNODC, 2013). Cannabis has

been reported to be produced in Nigeria as discovered by the NDLEA, when 3,908 hectares of farmland produced marijuana between 2013 and 2014 at the Southern part of the country (INCSR, 2015).

The socio-demographic profile of individuals has been shown to affect the pattern of drug use (Van-Etten and Anthony, 2001). Compared with drug use among men, overall drug use remains low among women (Van-Etten and Anthony, 2001). At the global level, men are three times more likely than women to use cannabis, cocaine or amphetamine, while women by contrast are more likely than men to misuse prescription drugs, especially opioids and tranquilizers (INCSR, 2015). This may reflect differences in opportunities to use drugs due to influence of the social or cultural environment rather than intrinsic gender vulnerability (Van-Etten and Anthony, 2001). The area of residence, characteristics of the neighbourhood, and having friends that abuse substances are identifiable socio-demographic risk factors for drug abuse (Igwe, Ojinaka, Ejiofor, Emechebe and Ibe, 2010). Based on epidemiological data, the increasing population of Nigeria and worsening economic hardship shows there is an urgent need for substance abuse policies and programmes as regards prevention and treatment.

The United Nations Office on Drugs and Crime (UNODC) has recently established a drug treatment unit in a Federal Neuropsychiatric Hospital in South-Eastern Nigeria for comprehensive drug de-addiction programme. The data collection engrained in the programme provides a good opportunity to evaluate the pattern of use and socio-demographic profile of drug users in this area. These data highlight the extent of problems that substance abuse is causing, identified the type of the substances used and the population group with the highest burden, and will inform the direction of policy and target resource. The objectives of the study were to identify the common drugs of abuse, to identify their socio-demographic characteristics, and some clinical indices associated with drug use among these patients.

METHOD

Study design and population

This was a cross-sectional hospital based descriptive study of 86 in-patients admitted into the drug treatment unit of the Federal Neuropsychiatric Hospital, Enugu, South-Eastern Nigeria. This is a 300-bed hospital located within Enugu metropolis. The state was created from the old Anambra state in 1991. Enugu was the capital of the old Eastern region of Nigeria. The hospital serves the entire South-Eastern states and neighbouring geopolitical zones. The hospital offers both acute and long term care for psychiatric in-patients with a comprehensive drug treatment program in collaboration with UNODC. It also operates an out-patient clinic on weekdays and emergency clinic on daily basis. The average length of stay in the hospital is approximately 4weeks. Patients with substance use disorder can stay for as long as 90-days. Participants were 86 patients admitted to the drug treatment unit of the hospital from January, 2016 to December, 2016. All were sampled after obtaining a written informed consent.

Procedure and Measurement

All participants were interviewed by the researcher and the UNODC trained data collection officers using a questionnaire adapted from United Nations Office

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for Drug and Crime Nigeria Epidemiology Network on Drug Use (NENDU).

ETHICS

Ethical approval was obtained from the ethical committee of the Federal Neuropsychiatric Hospital Enugu, Enugu state, Nigeria. International Ethical norms and standards were strictly adhered to at all times.

Data analysis

The results were analyzed using the Statistical Packages for Social Sciences, version 20. Sample means, standard deviations, and percentages were calculated.

RESULTS

All the 86 patients admitted within the one-year period of the study in the drug

Table 1. Socio-demographic profile of the patients

Characteristics	(N = 86)	%
AGE Mean= 30.88 ± 8.49		
SEX		
Male	83	96.5
Female	3	3.5
MARITAL STATUS		
Never Married	76	88.4
Married	7	8.1
Separated/Divorced/Widowed	3	3.5
EDUCATIONAL STATUS		
Never completed primary	3	3.5
Completed primary	10	11.6
Some secondary	13	15.2
Completed secondary	30	34.9
Some tertiary	15	17.4
Completed tertiary	15	17.4
EMPLOYMENT STATUS		
Regular employment	13	15.1
Occasional employment	15	17.4
Pupil/student	17	19.8
Unemployed	41	47.7
AREA OF RESIDENCE		
Urban	33	38.4
Semi-Urban	27	31.4
Rural	26	30.2
TYPE OF ACCOMMODATION		
Home/Stable	81	94.2
Dormitory/Institution	1	1.2
No stable	4	4.7
LIVING STATUS		
Alone	15	17.4
With parents	53	61.6
With spouse/partner	3	3.5
With friends	14	16.3
With children alone	1	1.2

de-addiction unit of the hospital participated. As shown in Table 1, the mean age of the participants was 30.88±8.49 years. Eighty-three (96.5%) were males, 88.4% were never married, 47.7% were unemployed, 38.4% resided in urban areas, 94.2% in stable accommodations and 61.6% lived with parents.

The mean age at first use of a psychoactive substance among the participants was 22.59±5.98 years. The most common route of drug use was by smoking (81.4%), 87.2% used drugs daily, 55.5% had previous treatment for drug related problems. The mean number of treatment was 1.05±1.17; the most common comorbid health condition was mental and behavioural disorders (88.4%). All participants paid out of the pocket either through personal income or from family and friends, the primary source of drugs was from the street. (Data presented in Table 2.)

Table 2. Clinical characteristics of the patients

Characteristics	(N = 86)	%
AGE AT FIRST USE Mean= 22.59 ± 5.98		
ROUTE OF DRUG USE		
Swallow	14	16.3
Smoking	70	81.3
Snort/Sniff	1	1.2
Inject	1	1.2
FREQUENCY OF DRUG USE		
Daily	75	87.2
2-6days per week	10	11.6
Once per week or less often	1	1.2
PREVIOUS TREATMENT		
Yes	48	55.8
No	38	44.2
NUMBER OF TREATMENT Mean 1.05 ± 1.17		
COMORBID CONDITIONS		
None	4	4.7
Respiratory diseases	1	1.2
Mental disorders	76	88.3
Liver disease	5	5.8
SOURCE OF REFERRAL		
Self	4	4.7
Family/friends	76	88.3
Court/police	6	7.0
TYPE OF ADMISSION		
Voluntary	79	91.9
Involuntary	7	8.1
PAYMENT FOR TREATMENT		
Personal income	15	17.4
Family/friends	71	82.6
PRIMARY SOURCE OF DRUG		
Friends	33	38.4
street	53	61.6

The most common primary drug was cannabis (81.4%), followed by alcohol and stimulants. Cocaine was rarely used among the participants. (See data in Table 3 and Figure 1).

DISCUSSION

In recent times, the drug treatment unit of our institution has witnessed a tremendous rise in admission for drug related problems. This has become a public concern especially with the changing pattern and demographics of substance abusers, associated crime rate and lost productivity in a struggling Nigeria's economy.

Africa, with Nigeria in particular is considered a major transit hub for drugs trafficked to other parts of the world. The geographical location of the area covered by the hospital is within a major trafficking route in Nigeria (Anambra State);

Table 3. Pattern of drug use among the patients

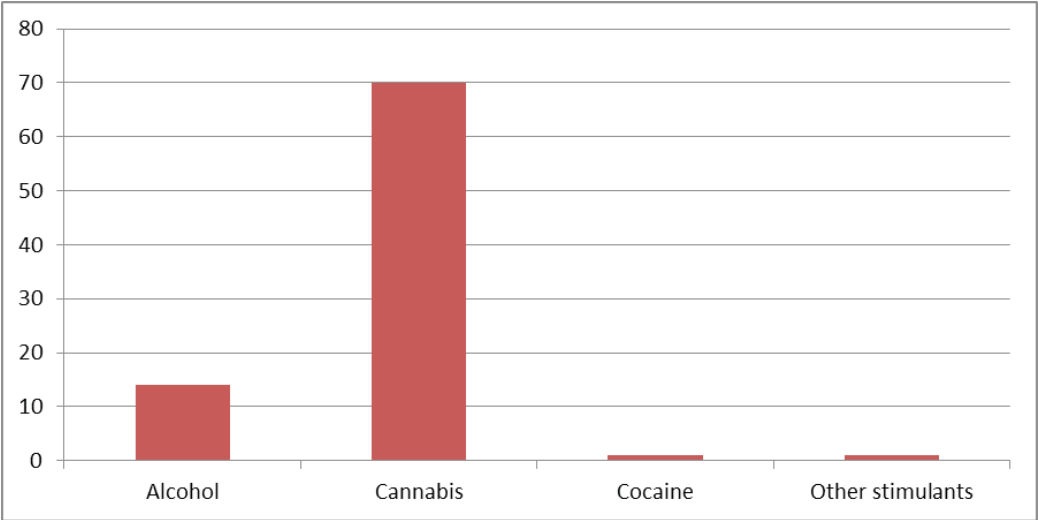|	First (n = 86) N (%)	Second (n = 40) N (%)	Third (n=15) N (%)	Fourth(n = 4) N (%)
Alcohol	14(16.5)	14(35.0)	7(46.7)	1(25.0)
Cannabis	70(81.4)	4(10.0)	1(6.7)	0(0.0)
Cocaine	1(1.2)	1(2.5)	1(6.7)	0(0.0)
Other stimulants	1(1.2)	14(35.0)	4(26.7)	1(25.0)
Opiate	0(0.0)	5(12.5)	2(13.3)	0(0.0)
Sedative-hypnotics	0(0.0)	2(5.0)	0(0.0)	2(50.0)
Poly-drug use	(n = 86)			
	N		%	
Yes	39		45.3%	
No	47		54.7%	

Figure 1. Frequency of primary substance of abuse among the study participants (bars show number of participants for each drug)

cannabis production and distribution in Nigeria (NDLEA, 2013). This study was conducted to determine the pattern of substance abused among in-patients in the drug de-addiction unit of a Nigerian Psychiatric Hospital. The present study showed that most of the participants were males (96.5%), and the mean age of the participants was 30.88±8.49. This is similar to the previous reports that showed that substance use was the most occurring activity common among adolescent and young adults (Igwe, Ojinaka, Ejiofor, Emechebe and Ibe, 2010; Gupta, Kajal, Padda, Monga, Devgan, 2016). Most of the participants in this study were unemployed, 17.4% were occasionally employed, while 15.1% were engaged in full occupation. Therefore, this study supports other studies that showed a negative association between employment and drug use (Igwe, Ojinaka, Ejiofor, Emechebe and Ibe, 2010). Majority of the participants were never married (88.4%), whereas only 8.1% of the participants were married. This is similar to the report by United State National Institute on Drug Abuse, which noted that drug abuse is lowest in persons that are married, while those who were single and those who were divorced showed much higher rates of abuse (NIH, 2010). Most of the participants lived with a family member and had stable accommodation (66.3% and 94.2%, respectively). This is different from some studies done in western countries which reported higher rates in the absence of family structure and quality (Igwe, Ojinaka, Ejiofor, Emechebe and Ibe, 2010; McArdle, Wiegersma, and Gilvary, 2002). Although, this study did not examine the quality of the family relationships. This result may partly be due to the strong family ties in this society that enables family

to be involved in the care of wards, and partly due to avoidance of stigma that a homeless drug abuser may bring to such families.

The mean age at first use was 22.59±5.98; the commonest route of use was by smoking (81.4%), which mirrors the commonest drug of use. This is similar to the finding by Avci and his colleagues in a hospital population but differs from school based studies that reported earlier age at first use (Avci, Sarikaya, Kavak, Ozmen, Aydin and Arslan, 2016). Most of the participants had previous treatment (55.8%) and 88.4% had comorbid mental disorder. This reinforced the findings of previous global reports on comorbidity between substance use disorder and other mental disorders (NIDA, 2010). The United State National Institute on Drug Abuse, Research Report Series, 2010 reported higher comorbidity between substance use disorders and other mental disorders (NIDA, 2010). They also enumerated the possible reasons for this high comorbidity to include; first, drugs of abuse can cause abusers to experience one or more symptoms of another mental illness. Second, mental illness can lead to drug abuse and finally, both substance use disorder and other mental illnesses may be caused by overlapping factors such as underlying brain deficits, genetic vulnerabilities, and early exposure to stress or trauma (NIDA, 2010).

The common primary substances of abuse were cannabis (81.4%), alcohol (16.5%), cocaine and other stimulants (2.4%). The secondary substances of abuse were opiates (tramadol, codeine in cough syrups), sedative-hypnotics. This pattern is similar to that reported in Sokoto, Northern Nigeria, which showed that cannabis was the most common abused

drugs among their in-patients (Abdulfatai and Balarabe, 2016). However, this differs from other reports from the same region (Igwe, Ojinaka, Ejiofor, Emechebe and Ibe, 2010). Igwe et al found that the most common drug of abuse in Enugu, Southern Nigeria was alcohol (Igwe, Ojinaka, Ejiofor, Emechebe and Ibe, 2010). This could be due to the differences in the sampled population; in the present study, in-patients on treatment were used while their study was done among students. This may also reflect a changing pattern of drug abuse in this environment owing to the increased availability and affordability of cannabis as recently by the National Drug Law Enforcement Agency (NDLEA, 2013).

Limitations and Conclusion

This was cross-sectional study with a non-probability sampling method. The hospital based population may limit the application of this study to the general population. Future studies should probably employ a longitudinal design with community based population. Multi-center studies may also better explain the variation in substance abuse across geopolitical zones.

Survey of drug treatment units of psychiatric hospitals in order to assess the pattern of abuse, variability of substances used, geopolitical variations in availability and accessibility of psychoactive substances as well as the presence of comorbidities would become necessary in order to inform effective policy formulations and management strategies.

This study provided data on the pattern of substance abuse in a drug de-addiction unit of a psychiatric facility in the South-Eastern Nigeria. The finding that cannabis is most frequently used drug strengthens the call on NDLEA to improve on their existing strategy to curb this menace. More so, indices of social disadvantage (e.g., unemployment, being unmarried, poor educational status) are seen more on drug abusers which calls for an integrated social service to reduce the impact of socio-economic factors on this population.

Conflict of interest

There are no conflicts of interest

<center>CONTRIBUTORS</center>

Justus Uchenna Onu and Ngozi Nneka Unaogu were the primary investigators. However, the first and second authors contributed to the study design, analysis and interpretation of data, drafting the manuscript and approved the final draft for submission. The 3rd, 4th and 5th authors contributed to data collection.

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ACNEIFORM LESIONS IN A FEMALE PERFORMANCE AND IMAGE-ENHANCING DRUG USER: THE FIRST AFRICAN CASE REPORT

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ABSTRACT

The literature on performance and image-enhancing drug (PIED) use and their harms is dominated by studies of largely North American, European and Australian males. We present the first case of a non-athlete PIED user from Africa. We describe a 27-year-old South African female of African ancestry who presented with a 9-month history of acne involving mainly the trunk and face. After her initial denial, she confessed a 6-month illicit anabolic-androgenic steroid use. She was also using whey protein supplements. Her motive for PIED use was physique enhancement and endurance. Acne is an underestimated adverse effect of PIED use and health providers need to be aware of this. Polypharmacy and stacking may also exacerbate the risks of experiencing acne and other harms. Health providers must be empathic and open-minded with PIED-using patients to facilitate healthcare provision. This pioneering African case report adds to previous publications from other parts of the world.

Keywords: Anabolic-androgenic steroids; acne; doping; performance and image-enhancing drugs; South Africa

INTRODUCTION

Anabolic-androgenic steroids (AAS) are one of the most popular performance and image-enhancing drugs (PIED). AAS refer to the natural male hormone testosterone and its synthetic derivatives that are illicitly used by some persons primarily to enhance muscle growth and strength. Long-term and high dosage AAS use has been associated with various physical and psychosocial disorders and premature mortality (Pope & Kanayama, 2012). The preponderance of evidence on PIED use, particularly AAS, and associated harms is based on studies of male

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samples from North America, Europe, and Australia (Sagoe et al., 2014). Hence, there is a dearth of evidence from non-western cultural contexts particularly Africa. Against this backdrop, we report the first-ever case (to our knowledge) of a female non-athlete PIED user from the African continent.

CASE PRESENTATION

A 27-year-old South African female of African ancestry presented with a 9-month history of acneiform lesions involving mainly the back and front chest with a few facial lesions (Figure 1).

Severe acne was noted mainly on the trunk with monomorphic lesions and commedones. She was generally healthy with no significant history of note. Drug enquiry was nonsignificant besides use of whey protein supplements. Physical examination revealed a well-built masculine female with no other androgenizing signs besides hypertrophic biceps, triceps and lower body muscles.

Figure 1. A 27-year-old female PIED user with acne on the face and trunk

Due to the morphology, extent and distribution of the acne, the patient was further prompted on AAS use history. She denied initially and was adamant that she had been using only pharmacy-purchased whey protein supplements. On establishing rapport, she confessed a 6-month illicit use of oxandrolone (Anavar) 10 mg and female stack 5 mg tablets. She had purchased them from a person at her gymnasium. Her boyfriend was an injectable AAS user. The patient was not involved in competitive sport and professed an obsession with the appearance of her masculine body. Her motive for using AAS was physique enhancement and increased energy to exercise six times a week.

DISCUSSION

The present pioneering case report of a non-athlete AAS user from the African continent adds to previous publications from other parts of the world on the development of acneiform lesions in AAS users (Kraus et al., 2012; Perez et al., 2016). Acne is one of the most prevalent but underestimated adverse effects of AAS induced in nearly 50% of AAS users (Melnik, Jansen, & Grabbe, 2007; Walker & Adams, 2009). Long term and high dosage AAS use leads to an increase in cutaneous lipids, cholesterol, free fatty acids, and *Propionibacterium acnes* resulting in acne (Kazandjieva & Tsankov, 2017).

Many AAS users also practice polypharmacy (the combined use of AAS and other drugs/substances) and stacking (the combined use of multiple AAS), and whey protein supplements are one of AAS users' most preferred synergistic substances (Sagoe et al., 2015). The intake of whey protein supplements has been found to induce acneiform lesions (Cengiz et al., 2017, Simonart, 2012). Polypharmacy and stacking, as with our case, may also exacerbate the risks of developing acne (Sagoe et al., 2015). The patient's participation in recreational sports is in line with evidence delineating recreational sportspeople as the largest subpopulation of AAS users (Sagoe et al., 2014) and her motive for AAS use and source is consistent with findings from a systematic meta-synthesis (Sagoe, Andreassen, & Pallesen, 2014).

Acne is an important and common clinical presentation of performance and image-enhancing drug use especially amongst youth (Melnik, Jansen, & Grabbe, 2007) and health providers need to be aware of this association. Many AAS users experience stigmatization from health providers and therefore mistrust them (Sagoe et al., 2016; Yu et al., 2015). Such mutual mistrust may lead to denial of AAS use to healthcare providers as shown initially with our patient, sometimes resulting in adverse consequences and complications (Sagoe et al., 2015). On suspicion of AAS use, healthcare practitioners are encouraged to establish rapport and adopt a non-judgemental approach with patients. This will ensure open and honest disclosure that will facilitate adequate provision of healthcare. Further, targeted interventions are needed to deal with AAS use and its associated harms including the negative stereotype of AAS users among healthcare providers.

Conflict of interest and funding
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Author contributions
NCD conducted the clinical work. DS drafted the initial manuscript with input

from NCD. All authors contributed to the writing process and approved the final manuscript.

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FAMILIAL DRINKING HABIT, EMOTIONAL STABILITY AND ALCOHOL USE IN A SAMPLE OF MALE AND FEMALE ADOLESCENTS IN IBADAN, NIGERIA

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ABSTRACT

This study examined demographic variables, familial drinking habit and emotional stability as predictors of alcohol use among adolescents in Ibadan, Nigeria. This is across sectional study that used ex-post facto research design. Data were collected from 220 (118 males & 102 females) adolescents using structured questionnaires comprising of demographic characteristics and scales measuring variables of interest in the study. Three-stage hierarchical multiple regression analyses were used in the study. Parents' SES (β = .13; p<.05) and parents' educational level (β = .16; p<.05) independently predicted alcohol use; and along with age, they accounted for 7% of the explained variance in alcohol use. Inclusion of familial drinking habit along with other variables accounted for 40% of the explained variance in alcohol use. Male reported more alcohol use than female adolescents. Findings were discussed in accordance with previous studies. The relevance of the influence of familial drinking habits was emphasized in alcohol-reduction intervention programmes for adolescents.

Keywords: Alcohol use, familial drinking habits, emotional stability, adolescents, Nigeria.

INTRODUCTION

Alcohol is the most frequently used psychoactive substance by adolescents globally (Olumide, Robinson, Levy, Mashimbye, *et al.,* 2014; Atilola, *et al.,* 2014; Hibell, *et al.,* 2009; Johnston, *et al.,* 2010). In Nigeria, a high level of alcohol use by adolescents has been severally reported (Idowu, Fatusi & Olajide, 2016; Hamisu, Ahmad & Lim, 2014; Ebirim & Morakinyo, 2011). In their study, Idowu et al. (2016) described that 36.1% of their study sample reported consuming alcoholic drinks. The adverse consequences of high consumption of alcohol by adolescents call for unrelenting efforts of researchers to continue to investigate and

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give possible solutions that could lead to a significant reduction in alcohol intake in the population of youth in Nigeria. Apart from findings across the globe that adolescent alcohol use is associated with several problem behaviours (Sise, *et al.,* 2009; World Health Organization, 2008), many studies in Nigeria also confirm the link with numerous risky behaviours such as hazardous drinking, sexual risk behaviours, violence, drinking and driving, and other problematic patterns of alcohol use (Atilola, Ayinde & Adeitan, 2013; Abiokoye & Olley, 2012). The consequences of alcohol abuse by adolescents go beyond them as perpetrators; rather, they cut across the family, friends and the society at large.

Review of several studies has shown that family is among the most prompting variables on young children's attitudes toward alcohol use and actual consumption of alcohol (Erik, *et al.,* 2014; Latendresse, *et al.,* 2008; Chassin, Flora & King, 2004). As reported that a family with a history of alcoholism is a well confirmed risk factor for the development of alcohol use by members of such family (McGue, 1994), perhaps concurrently or later in life. Also, Chassin, *et al.* (2004) reported that familial alcoholism partly raised risk factor and drug use among adolescents. To further establish the implication of familial drinking habit in drinking nature of adolescents, Erik et al. (2014) found that adolescents, who often see their family member drunk, would engage more in drinking too. Also, Wang, Hipp, Butts, Jose and Lakon (2015) reported that parental drinking environment affected alcohol use among adolescents. Nevertheless, some children of alcoholics might not become alcoholics too when other mediating variables are considered. In

line with this assertion is the report made that having a positive family background for heavy drinking was not related to alcohol consumption by young individuals (Engs, 1990). This suggests that there are multiple pathways as predisposing factors to alcohol consumption (Sher et al. 1997; Cloninger et al., 1996). However, in this current study, familial drinking habit is defined to be a situation or an event whereby a member of the family has the habit or fond of drinking alcohol a lot. An event of this nature is viewed as a possible contributing factor to alcohol consumption by adolescents.

Adolescents who are not emotionally stable appear to be open to some health risk behaviours; perhaps they feel uneasy to deal with or express certain feelings; thus, seeking for any form of perceived enhancing substance. Many personality traits have been reported to be associated with or moderate alcohol use in different populations. For instance, Lawal and Ogunsakin (2012) reported the relevance of big five personality factors in individuals who patronize beer parlours. Some of the mostly identified personality traits influential to alcohol use according to the literature include the big five personality factors (Lawal & Ogunsakin, 2012), impulsivity (Littlefield, Sher, & Wood, 2009), sensation seeking (Cyders, Flory, Rainer & Smith, 2009), hopelessness (Woicik, Stewart, Pihl & Conrod, 2009) and anxiety (DeMartini & Carey, 2011) among others. Since people often use alcohol as a way of coping with emotional problems, the study therefore looks at emotional stability in adolescents as a conceivable factor predicting alcohol use. Investigating the relationship between emotional stability and alcohol use, Stevenson, Dvorak, Kuvaas, Williams and Spaeth (2015) recently

reported a positive relationship between emotional instability and alcohol consequences; which was moderated by cognitive control. Similarly, Dvorak, Kuvaas, Lamis, Pearson and Stevenson (2015) revealed an indirect association between emotional stability and alcohol dependence symptoms.

Gender difference in human behaviour has always been found necessary for clarity in the way a male or a female behaves. Prior studies have reported gender difference in alcohol drinking, with male adolescents recording higher consumption compared to female adolescents (Lawal & Ogunsakin, 2012; Melotti, *et al.,* 2013). In contrast, Substance Abuse and Mental Health Services Administration (2008) reported remarkably indifference in current alcohol use between female and male adolescents. In Nigeria, however, there has always been the argument that alcohol consumption is a "male thing", and not for females (Dumbili, 2015). This conclusion might have resulted to gender difference recorded in literature with more males consuming alcohol than females.

Socioeconomic status (SES) appears to be a construct mostly used as a yardstick for understanding the financial status of a family or how affluence a family is. Previous studies have reported mixed findings regarding relationship between parental background variables such as socioeconomic status (SES), educational level and alcohol consumption. For instance, Melotti, *et al* (2013) reported that higher household income was associated with greater risk of alcohol consumption and related problems; particularly among females. While, Silveira, *et al* (2014), reported opposite views by finding that those with low (SES) consume alcohol drinks more. Also, parents' educational

level might have an association with consumption of alcohol by adolescents. For example, Melotti, *et al* (2013) reported in their study that higher maternal education appeared to be protective in controlling alcohol-related problems among male children. The main aim of this study was to investigate the extent to which age; parents' socioeconomic, parents; educational level, perceived familiar drinking habit and emotional stability independently and jointly predict alcohol use among adolescents in Ibadan Nigeria. Also examined, is gender difference and direct influence of perception of parents' SES on alcohol use by adolescents.

METHOD

Study Design

This is a cross sectional study that adopted ex-post facto research design. The design was chosen because the researcher did not subject any of the independent variables to manipulation; rather their influences on dependent variable were measured. Independent variables are age, parents' socioeconomic level, parents' education level, perceived familial influence and emotional stability, while the dependent variable is alcohol use.

Sample

The sample for this study was drawn from five secondary schools located within Ibadan North Local Government Area of Oyo state, Nigeria. With the use of convenience sampling method, 220 comprising of 118 (53.6%) males and 102(46.4%) females completed questionnaires in the study. Ages of participants ranged from 12 to 19 years (*M* = 15.25, *SD* = 1.72). Other demographical profile of the respondents

showed that 160(72.7%)of them were Christians, 57(25.9%) were Muslims and 3(1.4%) specified Traditional religion. Distribution of participants' level of education showed that 181(82.3%) were in Senior Secondary School classes and 39(17.7%) were in Junior Secondary School classes. Two hundred and eleven adolescents (95.9%) indicated their both parents intact and 9(4.1%) indicated both parents not intact. One hundred and eighty six (84.5%) of the respondents were from monogamous family background and 34(15.5%) were from polygamous homes. In terms of rating parents socio-economic status, 110(50%) of the adolescents assessed their parents to be of low SES, 101(45.9%) assessed this to be of middle level and 9(4.2%) assessed it to be high. Description of parents' level of education, 181(82.3%) had primary education, 37(16.8%) had secondary education and 2(0.9%) has tertiary education.

Instrument

Questionnaire was used as an instrument for data collection in the study. The questionnaire comprises of demographic background information of respondents and reliable scales measuring variables of interest in the study. Order of the sections in the questionnaire is as follows:

Section A consists of demographics such as age, gender, religion, class, parent type, family type, parents' socioeconomic status, parents' educational level.

Section B comprises of the 24-item Michigan Alcoholism Screening Test (MAST) developed by Selzer (1971). High score indicates higher alcohol use by respondents. The MAST is a self-report measure with original response format of YES and NO. Selzer, *et al.* (1975) reported a high internal consistency of alpha

coefficient of .95, while in the current study, the researcher obtained a Cronbach's alpha coefficient of .93.

Section C consists of 10-item Familial Drinking Habit scale developed for the purpose of this study. Examples of items in the scale include "My family cannot do without drinking alcohol", "I know that my grandfather cannot do without drinking alcohol", etc. The scale has 5-point Likert response format ranging from strongly disagree (1) to strongly agree (5). High score indicates higher familial drinking habit. The researcher obtained alpha coefficient of .91 in the current study.

Section D of 10-item Emotional Stability scale constructed by AS Patel. Respondents are requested to read each of the ten statements carefully and indicate Yes if agree or No if disagree to them. High score is indicative of higher emotional stability. In the current study, the researcher reported a reliability coefficient of .93.

Data collection procedure

Data were collected from five secondary schools located within Ibadan North Local Government Area of Oyo state, Nigeria. For ethical reason, the researcher approached School Principals to seek permission for conduct of the exercise and this was granted having explained research purposes to them. The principals provided us with teachers who led the researcher and his assistant to classes in order to meet with students for administration of the questionnaires. With the belief that higher classes would comprehend the test items very well, the researcher only administered the questionnaires to students in Senior Secondary School classes (I, II & III). Method of administering the questionnaires involved asking the students who were interested and willing to signify; and

they were given a copy each to complete. Completion of a copy of the questionnaire took about 25 minutes. In all, a total number of 250 questionnaires was distributed, but 232 were collected. However, only 220 properly competed were used in this study. This suggested a response rate of 88% and 12 improperly completed questionnaires were discarded.

Statistical Analyses

Statistical analyses were performed with IBM SPSS 20 version. Regarding the demographic variables; age was measured in ratio as reported by respondent; perceived parents' socioeconomic status was measured as low (scored, 1), middle (scored, 2) and high (scored 3); and parents educational level was measured as primary (scored, 1), secondary (scored, 2) and tertiary (scored, 3). Familial drinking habit, emotional stability and alcohol use were measured as continuous variables. Descriptive statistics such as mean, standard deviation and percentages were used to analyse demographic characteristics of participants. Three-model hierarchical multiple regression was employed to ascertain the study objectives. At first model, age, perceived parents'

socioeconomic status and parents' educational level were entered. At second model, familial drinking habit was entered. At third model, emotional stability was entered.

RESULTS

Bivariate correlation analyses on interrelationships among study variables are presented in Table 1. Results showed that age of respondents does not relate with parents' SES ($r=-.02; p>.05$), parents' educational level ($r=.10; p>.05$), familial drinking habits ($r=.06; p>.05$) and emotional stability ($r=-.04; p>.01$), but positively related with alcohol use ($r=.13; p<.01$). Parents' SES does not related with parents' educational level ($r=.11; p>.05$), familial drinking habits ($r=.09; p>.05$) and emotional stability ($r=-.07; p>.01$), but positively related with alcohol use ($r=.19; p<.01$). Parents' educational level does not relate with emotional stability ($r=-.10; p>.05$), but positively related to familial drinking habit ($r=.24; p<.01$), and with alcohol use ($r=.18; p<.01$). Familial drinking habits negatively related with emotional stability ($r=-.25; p<.01$), but positively

Table 1. Mean, standard deviation and correlational matrix between variables in the study *(N = 220)*

	Variable	1	2	3	4	5	6
1	Age	-					
2	Parents' PSES	.02	-				
3	Parents' Education Level	.10	.11	-			
4	Familial Drinking Habit	.06	.09	.24**	-		
5	Emotional Stability	-.04	-.07	-.10	-.25**	-	
6	Alcohol Use	.13*	.19**	.18**	.61**	-.22**	-
	M	15.25	1.54	1.19	15.71	35.75	45.41
	SD	1.72	0.58	0.41	7.39	10.47	18.57

** p <.01, PSES = Parents' Perceived Socioeconomic Status

related with alcohol use (*r=.61; p<.01*). Emotional stability was negatively related with alcohol use (*r=-.22; p<.01*).

In order to test the extent at which each of the predictor variables: age, parents' SES, parents' educational level, familial drinking habit, and emotional stability independently and jointly contribute to explain alcohol use of adolescents, hierarchical multiple regression of three stages was conducted. The results revealed that at stage one, age, parents' SES and parents' educational level jointly contributed significantly to the regression model, F (3,216) = 5.79, p <.01 and accounted for 7% of the variation in alcohol use. Addition of familial drinking habits in stage two led to a significant increase of 32% of variation in alcohol use with joint contribution to the regression model F (4,215) = 35.27, p <.01. At stage three, adding emotional stability as a personality variable led to a non-significant

1% variation in alcohol use; though significantly jointly contributed F (5,214) = 28.64, p<.01. When all the five predictor variables were included in stage three of the regression model, parents' SES and perceived familial drinking behaviour were independently significant predictors of alcohol use, while age, parents' educational level and emotional stability were not significant independently in predicting of alcohol use among adolescents. However, all the five predictor variables accounted for 40% in the variation of alcohol use.

In Table 3, the researcher further investigated gender difference in alcohol use among adolescents using t-test. The result showed that male adolescents (*M* = 50.43, *SD* =19.35) significantly reported higher alcohol use than female adolescents (*M* = 39.60, *SD* =15.82). The result indicates that gender has significant influence on alcohol use *t* (218) = 4.50, p = .000.

Table 2. Summary of hierarchical regression analysis for variables predicting alcohol use of adolescents (N = 220)

Variable	Model 1			Model 2			Model 3		
	B	SEB	β	B	SEB	B	B	SEB	β
Age	1.21	0.71	.11	1.00	0.57	.09	0.99	0.57	.09
Parents SES	5.38	2.12	.17*	4.11	1.72	.13*	4.01	1.72	.13*
Parents Education Level	6.96	2.97	.16*	1.03	2.47	.02	0.92	2.47	.02
Perceived Familial Influence				1.47	0.14	.59**	1.43	0.14	.57**
Emotional Stability							-0.13	0.10	-.07
R		.28			.63			.63	
R²		.07			.40			.40	
Adj R²		.06			.39			.39	
R² Change (%)		.07			.32			.01	
F		5.79**			35.27**			28.64**	
F Change		5.79**			114.57**			1.67	

Table 3: Summary of t-test analysis of male and female adolescents on alcohol use

DV	Gender	N	Mean	Std	df	t	P
Alcohol Use	Male	118	50.43	19.35	218	4.50	.000
	Female	102	39.60	15.82			

Finally, an investigation was done direct influence of perceived parents' socioeconomic status on alcohol use by adolescents with One-way Analysis of Variance (ANOVA). See Table 4. The result showed that adolescents who perceived high parents' SES ($M = 55.00$, $SD = 16.89$) significantly reported higher alcohol use than those who perceived middle ($M = 48.03$, $SD = 20.47$) and low ($M = 42.21$, $SD = 16.21$) parents' SES. The result indicates that parents' SES significantly influenced alcohol consumption among adolescents $F (2, 217) = 3.94$, p = .02.

Figure 1 shows graphically that adolescents with high parents' SES scored higher in alcohol use than those with middle and low parents' SES.

DISCUSSION

The goal of this study was to investigate the extent at which age, perceived parents' socioeconomic status, parents' educational level, familial drinking behaviour and emotional stability independently and jointly explain alcohol use among adolescents. Also, examined is gender difference and direct influence of perceived parents' SES on alcohol use. In the first model of regression, ages of adolescents, perceived parents' SES and parents' educational level jointly explained alcohol use with 7%, age did not have direct relationship with alcohol; other demographics do. The finding revealed that certain personal variables of adolescents, as well as

Table 4. Summary of One-way ANOVA of perception of parents' SES on alcohol use

Source	Sum of Squares	df	Mean Squares	F	P
Between Groups	2641.51	2	1320.75	3.94	.021
Within Groups	72841.68	217	335.68		
Total	75483.19	219			
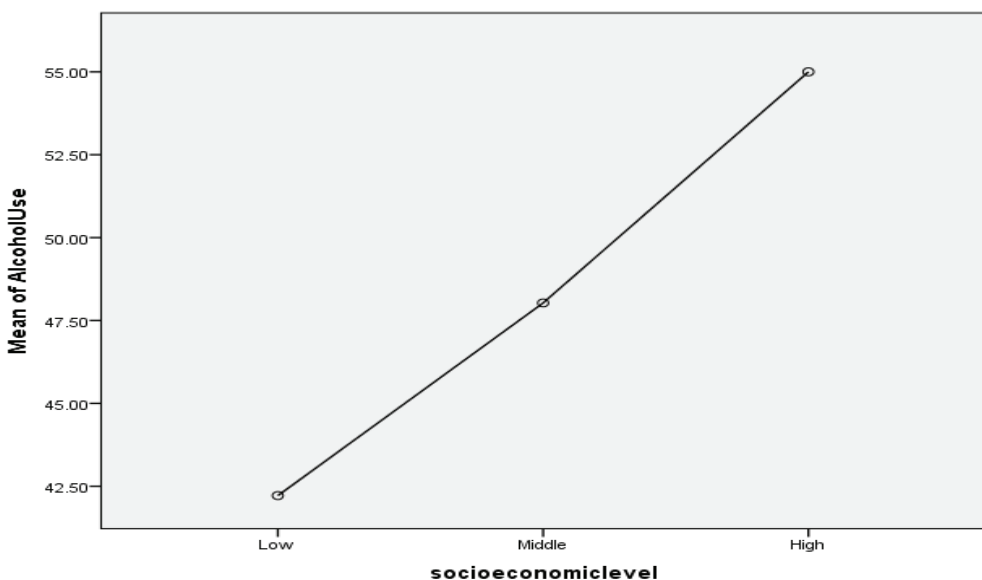
Figure 1. Perceived parents' SES and Alcohol use

parents' socio-demographic factors contribute significantly to why adolescents drink alcohol use.

The second model of regression with inclusion of familial drinking habit revealed a remarkable contribution to the explanation of alcohol use by adolescents. In other words, addition of familial drinking habit in the regression model with an increase of 32% was very substantial in alcohol consumption by adolescents. This finding corresponds with many previous studies that have revealed that parental or familial variables are keys to why many adolescents engage in alcohol-related outcomes (Wang, *et al.,* 2015 Erik, *et al.,* 2014; Latendresse, *et al.,* 2008). Our finding suggests how powerful familial behaviour could be in forming the behaviour of younger ones at home; especially when members of the family engage in risk taking behaviours.

It was found that inclusion of emotional stability in the regression model did not contribute significantly to alcohol use among adolescents. This finding suggests that certain factors go along with or mediate personality variables in explaining alcohol-related consequences in individuals. The finding is in line with the report of Hustad, *et al.* (2014) that other factors such as descriptive norms, injunctive norms, and role of drinking largely mediated the effects of personality variables on alcohol outcomes.

The finding that males consume alcohol more than female adolescents collaborates with many previous studies that have investigated gender difference in alcohol use by adolescents (Lawal & Ogusakin, 2012; Melotti, *et al.,* 2013); and conforms to the assertion that alcohol drinking is a male dominated behaviour. Perhaps, males experience some developmental changes early in life than females that predispose them to various drinking behaviours. Nevertheless, the finding that more males than female reporting higher consumption of alcohol use does not mean that female adolescents should be left out as targets in risk-reduction intervention programmes. Both sexes are important as targets in order to be successful in curbing the prevalence of alcohol abuse in our society.

CONCLUSION

In conclusion, the significant joint contribution of age, parents' SES, parents' educational level, familial drinking habits and emotional stability in explaining alcohol use by adolescents indicates the fact that a lot of factors; be it socio-demographic, family and personality play substantial roles in alcohol use by adolescents in Nigeria. Our finding that male reported higher alcohol consumption than female adolescents indicates the terrible drinking behaviour of male adolescents compared to female adolescents in our society. With the direct influence of perception of parents' SES on alcohol use by adolescents, the researcher concludes that parents need to be cautious in the way they make resources available to their children; as they could take advantage of the opportunity to have access and engage in some risk taking behaviours.

Recommendations
Considering findings of this study, the researcher recommends that alcohol-risk reduction programme for adolescents should focus more on familial related factors; especially the negative impact parental affluence and drinking behaviour could have in the encouragement of

drinking behaviours in adolescents. It is also recommended that parents need to be encouraged to ensure that the relevance of their high educational attainment should have great positive impact in upbringing and up-keeping their children. Alcohol risk reduction should be focused on both sexes as target audience in schools and at various homes.

Limitations of Study

The study was faced with few limitations. Foremost, the use of a limited number of adolescents in the study could have effect on generalizability of the findings. A larger number of adolescents across Ibadan are suggested for more generalizeable findings. Therefore, replication of a study like this across Oyo state is recommended. Second, the study was cross sectional in approach; thereby making causal-relationship between independent and dependent variables impossible. Experimental or observation methods of data collection could be added to the use of questionnaire for a more comprehensive data. Third, instruments used in the study were self-report tests. With this, respondents could be biased in their responses towards some sensitive questions; hence, observation method could be an added advantage. However, findings of the present study have been able to establish the significance roles of family or parental factors in the encouragement of alcohol use by adolescents.

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Competing Interests

The author declares no competing interest on this study.

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PRIORITIZING PUBLIC HEALTH RESPONSES IN NIGERIAN DRUG CONTROL POLICY

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ABSTRACT

Nigeria's drug control policy, a throwback to colonial dangerous drugs control legislations, is remarkable for its reliance on severe sanctions to curb drug offences. The establishment of the National Drug Law Enforcement Agency (NDLEA) in 1990 took drug control in Nigeria to a crescendo. The agency amalgamates the functions of supply control and demand reduction in a highly-centralized bureaucracy. Although it has been successful in the seizure of drugs and arrest and punishment of offenders, its impact on drug use and related problems is negligible. the success is tainted by rampant corruption and the cost of law enforcement. The development of a comprehensive drug policy which prioritizes demand reduction through public health measures such as prevention and treatment is hampered by the bureaucracy of drug law enforcement, whose direction cannot be changed without altering the structure of the organization. The devolution of functions through the creation of a new agency on drug demand reduction is a step in the right direction.

Keywords: drugs, policy, public health, law enforcement, Nigeria

INTRODUCTION

There has been significant concern over the availability and use of illicit psychoactive substances in Nigeria in recent times, but the problem is by no means new. The distribution and consumption of illicit drugs in Nigeria have a relatively long history (Obot, 2004). The use of cannabis, for instance, predated formal independence from the British in 1960. The drug was introduced into Nigeria in the aftermath of the Second World War by military officers returning from the Middle East, the Far East, and North Africa (Asuni, 1964). Surveys conducted in psychiatric hospitals in western Nigeria in the 1950s indicated that most of the patients who presented with schizophrenia, anxiety disorders and other mental health

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problems had a history of alcohol or drug abuse (Lambo, 1965).

The 1980s witnessed the entry of cocaine and heroin into the Nigerian drug market. The drugs came into the country as a result of the involvement of Nigerians in international drug trafficking. Heroin reportedly entered the country when Nigerian naval officers undergoing training in India smuggled it into the country on their return. Cocaine came into Nigeria through South American drug traffickers who used West African countries, including Nigeria and Ghana, as a passage into the European and North American drug markets (Akyeampong, 2005; Ellis, 2009). Initially these drugs were mostly used by affluent residents of Nigerian cities. The earliest reports of cocaine use included 'cocaine parties' organized by some wealthy Nigerians in Benin City (Pela & Ebie, 1982). The use of these drugs has increased, while other drugs such as amphetamine-type stimulants have been added to the list (UNODC, 2012).

psychoactive substances use is correlated with mental disorders. It is also associated with increase in the burden of disease, disability, mortality, crime and other social problems. But these issues are hardly considered in drug control policy, which is focused on controlling the supply of illicit drugs. The focus of the National Drug Law Enforcement Agency (NDLEA) is on interdiction of drugs in airports and seaports, eradication of narcotic cultivation and arrest and prosecution of drug offenders. There is a Drug Demand Reduction (DDR) unit within the NDLEA, but the effectiveness of the unit is hampered by poor staffing and funding. This paper discusses the development of drug control policy in Nigeria, and highlights the neglect of public health measures. It contends that the bureaucratization of drug control has retarded the development of public health responses to drug problems.

GLOBAL DRUG CONTROL

International drug control efforts are guided by the three UN treaties, namely the Single Convention on Narcotic Drugs of 1961 (amended by the 1972 Protocol), the Convention on Psychotropic Substances of 1971, and the Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988. They seek to "eliminate the non-scientific and non-medical production, supply and use of narcotic and psychotropic drugs" (Bewley-Taylor, 2012, p. 49). As stated in the preamble of the 1962 Convention, the rationale is that "addiction to narcotic drugs constitutes a serious evil for the individual and is fraught with social and economic danger to mankind". The drug control system (often referred to as the global drug prohibition regime) is built on the assumption that controlling the market for illicit drugs through prohibition-oriented supply-side measures will reduce the problems associated with the use of illicit drugs. This involves the development of a growing list of substances considered dangerous and subject to legal controls (Klein, 1999). Substances such as cocaine, heroin and cannabis are dangerous drugs to be controlled, while others such as tobacco and alcohol are regulated differently. Signatory states to the conventions are expected to adopt relevant measures to prohibit the production, consumption and trade in these controlled substances within their domain.

The different aspects of the drug control system are administered by specialized

agencies of the United Nations (UN) system. The development of policy is the responsibility of the Commission on Narcotic Drugs (CND), which is made of the 53 member states. The World Health Organization (WHO) and the International Narcotics Control Board (INCB) provide technical support for the CND. The INCB also serves as an independent judicial control body which assesses requirements for scheduling substances and monitors compliance with the conventions by member states. The United Nations Office on Drugs and Crime (UNODC) is the policy implementation organ of the drug control system. It is the duty of the UNODC to coordinate drug control activities and to provide technical and administrative support for the CND and the INCB in their respective functions.

National drug control policies are formulated under the supervision of the INCB and with assistance from the UNODC. Until the 2016 UNGASS created a relatively open policy environment, member states had limited discretion in the formulation of domestic drug policies. As a result, local concerns were often lost in the pursuit of uniformity of policy goals and strategies. The international drug control system fosters a "background prohibitionist expectancy on nations regarding personal drug use" (Beweley-Taylor, 2012, p. 50). This involves imposing criminal sanctions on drug offences, including personal drug use. Drug prohibition is constructed as a moral necessity., West African countries are pressured to implement drug control measures. The pressure has arisen in response to the growth of illicit drug trafficking through the sub-region. Over the years there has been reported increase in seizures of illicit drugs in West Africa, enroute to European and American drug markets (Klantschnig, 2013), and this has contributed to the emergence of the region as an important site of international drug control activities.

West African countries have been pressured to strengthen law enforcement for the interdiction of drugs in air and seaports, and to repress domestic drug production. Failure to comply with the expectations of the international system attracts sanction in the form of loss of foreign aid. Thus, in the early years of the drug war the US would decertify countries that are deemed not to cooperate with its anti-drugs efforts, which meant withdrawal of aid or trade benefits. In 1994, Nigeria was decertified along with Myanmar, Iran and Syria, followed by Afghanistan in 1995. The sanction was an expression of the US displeasure over the growing role of Nigerians in the drug problem in the US. It proved successful in arm-twisting the Nigerian state to step-up drug law enforcement within its borders. Nigeria has since transformed into a model of drug law enforcement in the region, in the process earning itself a good reputation in the international community. But this means that law enforcement has become prominent in the response to drug problems, while demand reduction through public health programmes has been marginalized.

THE DOMESTIC SCENE

The control of illicit drugs production, distribution and consumption in Nigeria dates back to the colonial period when the British colonial government sought to introduce the control measures contained in the 1912 Opium Control Treaty in all her territories. In 1935, the Dangerous Drugs Ordinance was enacted in Nigeria

to control the production and consumption of substances considered dangerous. The major substance of abuse in Nigeria at the time was alcohol. The Ordinance is an illustration of the political transformation of social policy. Originally designed to protect 'inebriated natives' from the negative consequences of dangerous substances, the Ordinance morphed into a "system of tariffs and quotas on gins, schnapps and brandy imports" succeeded by "bans on distilled liquors, fermented beers, bottled beers and wine" (Klein, 1999: 54). It became an instrument for advancing the political and economic interests of the colonizers and served as the foundation of the colonial state.

Reflecting this history of prohibition, Nigeria's drug policies have contained some of the most draconian provisions ever applied to eradicate drug trafficking and use (Obot, 2004). The Indian Hemp (Cannabis) Decree of 1966 included death penalty or 21 years imprisonment for the cultivation of cannabis, 10 years imprisonment for trafficking in cannabis, and another 10 years for possession and/or smoking of cannabis. The Indian Hemp Act of 1975 abolished the death penalty and reduced sanction for cannabis smoking to 6 months and/or a fine. But the Indian Hemp (Amendment) Decree of 1984 reinstated stiff penalties for drug-related offences, while the Special Tribunal (Miscellaneous Offences) Decree of 1984 brought back death penalty by firing squad for "dealing in, buying, selling, exposing or offering for sale or inducing any person to buy, sell, smoke or inhale the drug known as cocaine or other similar drug" (Federal Military Government, 1984; cited in Obot, 2004).

The Special Tribunal (Miscellaneous Offences) (Amendment) Decree of 1986

finally did away with the death penalty. But it was substituted with life imprisonment, an equally severe sanction. Other clauses in the decree included forfeiture of assets and passport for those arrested for drug trafficking. The hallmark of drug control development came in 1989 with the enactment of Decree 48. The decree, which is now an act of parliament CAP N30 Laws of the Federation of Nigeria 2004, established the National Drug Law Enforcement Agency (NDLEA) and charged it with the responsibility of co-ordinating drug control activities in the country. The NDLEA amalgamates the functions previously discharged by different agencies of government, including the Nigeria Customs Service and the Nigeria Police (policy implementation), and the Federal Welfare Department (prevention, treatment and rehabilitation). Thus, a multi-sectoral approach to drug control was replaced by a highly centralized law enforcement bureaucracy. This has led to the ascendancy of supply control and the marginalization of demand reduction activities.

The 1989 Decree assigns 18 major functions to the NDLEA. This includes investigation, arrest and prosecution of drug offenders, confiscation and/or seizure of the property or proceeds of drug-related offences, eradication of illicit cultivation of narcotic plants and interdiction of drugs at entry points into the country. Of the 18 functions, only 2 may be considered drug demand reduction functions. These include functions related to prevention and research. There is no mention of treatment for drug use disorders. Furthermore, there is heavy reliance on criminal sanctions to curb drug offences. For example, the Decree states that any individual or organization colluding with offenders to perpetrate a drug offence or to conceal

proceeds from illicit drug trade is liable on conviction to a term of 25 years imprisonment or two million Naira fine.

The NDLEA has special commands in all borders, airports and seaports in the country to seize drugs trafficked into and out of the country, and to arrest offenders. Officials of the agency make use of special full body scanning machines to identify smugglers and couriers moving drugs such as cocaine and heroin through Nigeria to western markets. Between 2006 and 2008 officials of the agency arrested 12, 663 suspected drug dealers and seized over 418.8 metric tons of various hard drugs. In July 2009 a female courier was arrested on board a KLM flight at the Kano International airport. She excreted 42 wraps of cocaine weighing 585 grams. In September of the same year a Guinean woman was arrested at the Lagos international airport going from Brazil to Europe with 6.350 kilogram of pure cocaine. The agency has also been involved in the eradication of illicit narcotic drug cultivation. In September 2009 the NDLEA reportedly destroyed 24 hectare of cannabis plantation in a forest reserve in Osun state. Other plantations have been destroyed in Ogun and Edo states.

Going by conventional standards such as figures of arrests and drug seizures the NDLEA has been successful. The agency has also achieved recognition for its progress in counter narcotics and for effective cooperation with the US in tackling drug-related crimes and money laundering in West Africa. But the impact of the agency's operations on illicit drugs consumption and in addressing drug-related problems has been marginal. Beyond the much vaunted success in drug interdiction operations there exists a gruesome reality of drug consumption, dependence

and harm in the population. Treatment services for problem drug users are inadequate. Drug users make up the bulk of prison inmates in many prisons in Nigeria.

Furthermore, drug interdiction exacts enormous toll on the economy as funds are doled out to counter narcotics operations. Drug law enforcement activities cost the Nigerian state millions of naira annually, and the total cost has been rising consistently over the past decade. The problem is pernicious because funding for law enforcement activities limits the availability of funds for healthcare services, housing, clean water and other social services that can improve the quality of life of the Nigerian populace.

Drug control is also associated with corruption. It is now common knowledge that law enforcement officials loot funds, property and even exhibits recovered from arrested drug dealers. There have also been reports of the complicity of judges and security (police, military, customs and prisons) officials in illicit drug trade. Chieftains of the drug agency have been dismissed following allegations of corrupt practices.

DRUG CONTROL AND THE NEGLECT OF PUBLIC HEALTH

Drug control in Nigeria has throughout its history been motivated by the need to combat drug trafficking. This has justified overzealous law enforcement activities. Drug problems are generically defined as criminal offences subject to generalized and severe penalties, and drug users are punished more than traffickers. Law enforcement has not reduced drug use, and may have exacerbated it along with the associated problems. It has also increased

the risks involved in drug dealing, making the trade lucrative on account of increase in the market price of drugs. It also pushes drug users into "adopting more dangerous practices – stronger drugs replace moderate drugs, consumption moves to riskier settings where social controls are weak, and more dangerous methods of administration (smoking crack as opposed to snorting cocaine) are adopted" (Klein, 2011, p. 65). "A drug user", says Klein, "stands to suffer far greater harm from arrest, interrogation, imprisonment and a criminal record than he or she would have from using the drug" (p. 65).

law enforcement will remain the dominant approach to drug problems so long as the NDLEA remains the only agency coordinating drug control activities. This is so because, as McAllister (2012, p. 12) points out, "extant structures exert a major influence on the trajectory of events". The NDLEA was set up as a law enforcement agency, and it is impossible to change its direction without altering its overall structure. Let's quote McAllister on this:

> Bureaucracies are… hard to kill. They have built in constituencies and budget, and the capacity to generate political support if an existential threat materializes. Also, obviously, bureaucracies tend to do what they are created to do and not something else. Therefore, one of the reasons those seeking to reform or liberalise drug policy often find themselves frustrated is because they are relatively few assets devoted to prevention, intervention and treatment. In the era when these organizations were created, the overwhelming emphasis was on supply control, and hence

the extant agencies are designed and staffed to accomplish that purpose. Bureaucracies can be redirected, or 'repurposed', but doing so is always difficult because the existing organs are likely to adopt new terminologies without changing the fundamental focus of their mission, or because existing organization may simply add a branch to deal with a previously unmandated function without altering their overall focus (McAllister, 2012, p. 12).

McAllister's insightful analysis is aptly describes the Nigerian situation. The NDLEA was established at the peak of the drugs war. The content of the Decree which established it reflects the mood of the era. That is why the agency is fully focused on law enforcement, and not demand reduction. Although a Drug Demand Reduction (DDR) Unit has been appended, demand reduction activities such as prevention and treatment are not necessarily coextensive with law enforcement. In most commands of the agency, DDR Units reek of poor staffing and underfunding. As McAllister cogently observed above, the terminology of demand reduction has been adopted, but the overall focus of the agency remains intact.

PREVENTION AND TREATMENT

Nigeria's drug policy needs to prioritize prevention and treatment, which are recognized as effective measures for reducing the demand for psychoactive drugs. A variety of risk factors for drug use exists at the individual, family, peer group, and community (school, workplace and the neighbourhood) levels (Rhodes et al.,

2003). These factors suggest multiple pathways to drug use to the effect that drug use involves the interaction of multiple risk factors at different levels. Drug use prevention involves addressing the risk factors that predispose people, especially youths and young adults, to the use of psychoactive drugs. The use of multiple strategies at different levels to address risk factors for drug use within the same program enhances the effectiveness of prevention programs (Schaps et al., 1981).

Interventions designed to prevent drug use and transition to problem drug use should target 'vulnerable' or 'at-risk' youths such as school drop-outs and street children, in order to minimize risk factors and enhance protective factors. This could be approached through the provision of information on the effects of drug use through media campaigns, lectures, films and printed materials (flyers, posters and stickers) (Shoemaker, 1989). Educational programs designed to build social and psychological skills (e.g refusal skills), improve interpersonal communication, and promote self-understanding and acceptance can help in building capacity to deal with social influences to use drugs.

Further, emphasis should be placed on the prevention of early initiation into drug use, since early initiation increases the likelihood of problematic drug use (Daugherty & Leukfeld, 1998; Lloyd, 1998). This will involve targeting families, since familial factors such as family structure, relationship quality and parental and/or sibling drug use are important risk factors for drug use, including problem drug use (Wells & Rankin, 1991; Ripple & Luther, 1996; Swadi, 1988). Community factors such as availability of psychoactive drugs, socio-cultural norms, and social and economic deprivation should also be addressed as

part of a multi-level program to prevent drug use. And since the effectiveness of prevention programs depends, among other factors, on the evidence-base on risk factors associated with drug use (Rhodes et al., 2003), research should be encouraged and funded in order to shore up the scientific evidence-base for programs.

Drug abuse treatment services in Nigeria, mostly available in tertiary health facilities (e.g., psychiatric hospitals), are grossly inadequate to meet existing needs. Treatment services should be expanded and funded adequately, including community-based drug abuse treatment programs which provide services on out-patient basis. The United Nations Office for Drugs and Crime (UNODC) is currently implementing a model program in partnership with Community-Based Organizations (CBOs) in the different geo-political zones of the country. This project could be adopted, incorporated into a national drug demand reduction strategy that includes prevention components, and expanded in order to widen the coverage of treatment services.

CONCLUSION

The paper discussed drug policy in Nigeria, highlighting the ascendance of supply control and the neglect of demand reduction. The focus on supply control arises from a misplaced confidence in the capacity of law enforcement operations to curb illicit drug trafficking and consumption. This explains the imposition of severe criminal penalties on drug offenses, the logic being that harsh penalties are capable of deterring potential drug offenders. This confidence has collapsed in the face of hard evidence pointing to

the contrary. It is increasingly being acknowledged that the best approach is to manage drug problems, and this involves prioritizing drug use prevention and treatment for users. Expediency demands the separation of supply control and demand reduction functions through the creation a new agency of government to co-ordinate the latter. Thus, the recent establishment of the Drug Demand Reduction unit within the Federal Ministry of Health is a welcome development. But this should go beyond agency creation to genuine devolution of functions, adequate funding and staffing of the agency to discharge its functions. There is also need to involve civil society organizations in the national response to drug problems.

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