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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).

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**PSYCHOACTIVE SUBSTANCE USE DISORDERS AMONG FEMALES
IN NORTHERN NIGERIA: FINDINGS OF A FIVE-YEAR DESCRIPTIVE
SURVEY AT THE FEDERAL NEUROPSYCHIATRIC
HOSPITAL, MAIDUGURI**

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ABSTRACT

The aim of this study was to determine a five-year prevalence trend of substance use disorders and the modes of presentation of female drug users in North-Eastern Nigeria. It was a retrospective, cross sectional study in which sociodemographic, clinical and drug-related data of 2,731 clients who were attended to, at the Federal Neuropsychiatric Hospital, Maiduguri over a five year period were extracted from their clinical records. The overall prevalence of psychoactive substance use disorders among the female participants was 9.3% [n = 253] with rising rates from 8.2% in 2012 to 12.2% in 2016, and The prevalence trend shows a statistically significant change ($\chi^2 = 51.764$, $p = \leq 0.001$). One hundred and sixty five [65.2%, 95% C.I. = 45.81 - 79.45] met the ICD-10 diagnostic criteria for dependence. Codeine-containing cough syrup, 73 [28.8%, 95% C.I. = 22.18 - 42.27], and Tramadol, 41 [16.2%, 95% C.I. = 10.24 - 25.18] were the commonest substances of abuse. Most of them were either compelled by relatives, 103 [40.71, 95% C.I. = 29.46 - 53.17] or were accidentally found to be using drugs at presentation, 58 [22.92, 95% C.I. = 15.75 - 28.93]. Based on these outcomes, the design and adaptation of culturally appropriate and gender-specific educational programmes and stigma-reduction strategies, are recommended.

Keywords: Psychoactive substance use, Females, North-Eastern Nigeria

INTRODUCTION

Northern Nigeria is one of the most conservative regions of the world mainly because of its ethno-religious composition (Jappah, 2013; Terwase, 2014). Despite the relative resistance to external influences, the abuse of psychoactive substances, mainly; Cannabis, Tramadol, and other stimulants were previously documented among the populace but almost exclusively in males (Gureje, *et al.*, 2007; Adamson, *et al.*, 2015; Gudaji, *et al.*, 2016; Ibrahim, *et al.*, 2017). However, within the last decade, the abuse of psychoactive drugs by females in this sub-region of the country assumed a larger dimension in the context of the 'national drug abuse epidemic' (van Etten and Anthony, 2001; Becker & Hu, 2008). This emerging drug abuse trend among females in Northern Nigeria necessitated several pronouncements from policy makers and critical stakeholders (Suleiman, 2016; Umore, 2017).

Previous research has reported remarkable gender differences in terms of psychoactive substance use disorders; with reportedly higher prevalence rates, earlier age of onset, tendency to use multiple psychoactive substances and exhibition of externalizing behaviors among males than in females (Becker, 1999; Brady & Randall, 1999). The female drug users, on the other hand, are more likely to exhibit 'telescoping', which is a phenomenon that is characterized by a more rapid development of the features of dependence from initiation, a higher risk of developing physical and behavioral complications, as well as the risk of foetal malformations, such as the foetal alcohol syndrome (Becker, Perry, and Westbrook, 2012; and Substance Abuse and

Mental Health Services Administration (SAMHSA), 2014). Other reported peculiarities of substances use disorders in females are; the higher tendency of being initiated by a partner, increased risk of being sexually or physically abused, and increased usage in the context of comorbid psychiatric diagnoses (Greenfield, *et al.*, 2010; Cotto, *et al.*, 2010; Agabio, *et al.*, 2016).

In sub-Saharan Africa, the abuse of drugs by men is tolerated in some cultures but the use of psychoactive substances by the womenfolk depicts gross moral failure, and it is usually considered a taboo (Sorsdahl, Stein, and Myers, 2012; Paul, *et al.*, 2014). Female drug abuse is a subject of intense stigmatization in most conservative African societies like the setting in which this study was conducted (Paul, *et al.*, 2014; Florez, *et al.*, 2015). Based on anecdotal experiences, the negative societal perception of female drug abuse, and the negative consequences the users as well as the caregivers experience significantly encumber the presentation of the clients to conventional treatment centres. Secondly, most studies conducted in Nigeria on drug and alcohol use disorders were mixed gender studies that did not consider the changing gender trends nor the peculiarities of the female clients in terms of advocacy and intervention. This is the first hospital-based study in North-Eastern Nigeria that looked at drug use disorders exclusively among females.

This study sought to ascertain; (1) the prevalence and pattern of substance use disorders among female clients, (2) the changing trends of female drug abuse within a five year review period, and (3) the modes of presentation of female drug users.

METHOD

Study area

This study was conducted at the drug addiction treatment, education, and rehabilitation (D.A.T.E.R.) unit of the Federal Neuropsychiatric Hospital, Maiduguri which is located in North-eastern Nigeria. As a matter of hospital policy, any client seen in the facility is assessed by the therapeutic team which consists of a psychiatrist, a clinical psychologist, a psychiatric nurse, and a social worker. All diagnoses were made according to the International Classification of Diseases and Health-related Disorders version-10 (ICD-10) criteria of the World Health Organization.

Study Design

This was a retrospective, cross-sectional, non-randomized study. The medical records of all adult clients with substance use disorders seen in the hospital within the period under review (January, 2012 to December, 2016) were retrieved from the electronic database of the health information management unit of the hospital.

Principles for Recruitment

Inclusion/Exclusion Criteria

The inclusion criteria were; adults between the ages of 18 and 65 years, with an identified ICD-10 diagnosis of substance use disorder, and an objective evidence of drug use using the multi-panel urine drug analysis assay. The exclusion criteria were; missing relevant data such as clinical diagnoses or absence of urine drug analysis results and comorbid physical illness such as neurocognitive impairment or end-organ damage.

Procedure

Information over a five-year period (2012 to 2016), was collected from the electronic database which logs the sociodemographic and clinical information of all patients attended to at the facility. At the first stage, the records of all adult clients irrespective of gender, with diagnosis of substance use disorders, were retrieved. Substance use disorder (SUD) is defined by the presence of any of the following; acute intoxication, withdrawal syndrome, abuse, dependence, or substance-induced disorder. There were 2,847 clients identified out of which 2,731 met the eligibility criteria at the end of this stage. In the second stage, the data of female clients who met the eligibility criteria were extracted on annual basis and the total for the five year study period.

Measures

Sociodemographic data: anonymous, precoded and pretested sociodemographic questionnaires were used to collect the relevant sociodemographic characteristics which included gender, age, years of education, occupation, and marital status.

Clinical and drug-related data: which included age at onset of use of psychoactive substance, mode of initiation, the psychoactive substance the client is using, whether or not the client has met the ICD-10 criteria for dependence, and the modes of presentation were all extracted from the clinical records of the clients.

Ethical Consideration

The Institutional Review Board of the Federal Neuropsychiatric Hospital, Maiduguri reviewed and approved the study protocol.

Data Analysis

Analysis was done using the Statistical Package for Social Sciences version 18.0 (SPSS 18.0). Discrete variables were computed as frequencies and percentages. Chi-square ‘test of goodness of fit’ was used to determine the association between frequency and annual variations. The confidence interval was set at 95% confidence interval, $p\text{-value} \leq 0.05$ was used to denote significance, two-tailed.

RESULTS

A total of 2,847 clinical records of clients were retrieved for the period under consideration but only 2,731 met the eligibility criteria for the study. The remaining 116 were not included due either to incomplete

data, absence of urine drug analysis result, or being outside the age bracket stipulated for the study participants.

Sociodemographic Profiles of the Respondents

Of the total 2,731 study participants, there were 253(9.3%) females while the remaining 90.7% were males. Over 70% of the drug users in both groups fall between the ages of 18 to 37 years. Almost 63% of the female participants had less than 12 years of education in comparison to over 72% of the male study participants. Over 73% of the females were either unskilled workers or unemployed as against 90% of the male participants. Over 95% of both groups were either single or divorced/separated. These findings are presented in table 1.

Table 1. Sociodemographic Characteristics of the Study Participants

Variables	Females n(%)	Males n(%)	Total n(%)
N = 2731			
Age in years [Mean = 26.41yrs±4.78 SD, Range = 18 - 61yrs]			
18 - 27	112(44.3)	1215(49.0)	1327(48.6)
28 - 37	83(32.8)	993(40.1)	1076(39.4)
38 - 47	35(13.8)	176(7.1)	211(7.7)
48 - 57	19(7.5)	72(2.9)	91(3.3)
≥ 58	4(1.6)	22(0.9)	26(1.0)
Years of education [Mean = 8.28yrs ± 2.31 SD, Range = 0 - 18yrs]			
≤ 12 years	159(62.8)	1792(72.3)	1951(71.4)
> 12 years	94(37.2)	686(27.7)	780(28.6)
Occupational status			
Skilled	3(1.2)	18(0.7)	21(0.8)
Intermediate skilled	17(6.7)	49(2.0)	66(2.4)
Semi-skilled	48(19.0)	144(5.8)	192(7.0)
Unskilled	104(41.1)	1341(54.1)	1445(52.9)
Unemployed	81(32.0)	926(37.4)	1007(36.9)
Marital status			
Married	11(4.4)	114(4.6)	125(4.6)
Single	207(81.8)	2289(92.4)	2496(91.4)
Divorce/Separated	35(13.8)	75(3.0)	110(4.0)

Gender Comparison of Five Years Prevalence Trends of Substance Use Disorders

The overall prevalence of drug abuse reported among females in this study is 9.3% (n = 253), while it is 90.7% (n = 2478) among males. However, the annual prevalence rates from 2012 to 2016 varied. Among females, the prevalence was 8.2% in the first year of the study, then the rates dropped to 6.3% and 6.0% in 2013 and 2014 respectively,

then the rates increased to 11.6% and 12.2% in 2015 and 2016 respectively. Among the male participants, the prevalence rates increased steadily from 2012 to 2014, but decreased in 2015 and 2016, with rates of 91.8% in the first year and 87.8% in the fifth year. These findings are presented in table 2 and figure 1 respectively. The prevalence trend shows a statistically significant change ($\chi^2 = 51.764$, $p = \leq 0.001$) as depicted in table 3.

Table 2. Gender Comparison of Five-Year Prevalence Trend of Substance Use Disorder

Year	Females n(%)	Males n(%)	Total n(%)
N = 2731			
2012	42(8.2)	473(91.8)	515(18.9)
2013	31(6.3)	462(93.7)	493(18.0)
2014	26(6.0)	406(94.0)	432(15.8)
2015	68(11.6)	519(88.4)	587(21.5)
2016	86(12.2)	618(87.8)	704(25.8)
Total	253(9.3)	2478(90.7)	2751(100.0)

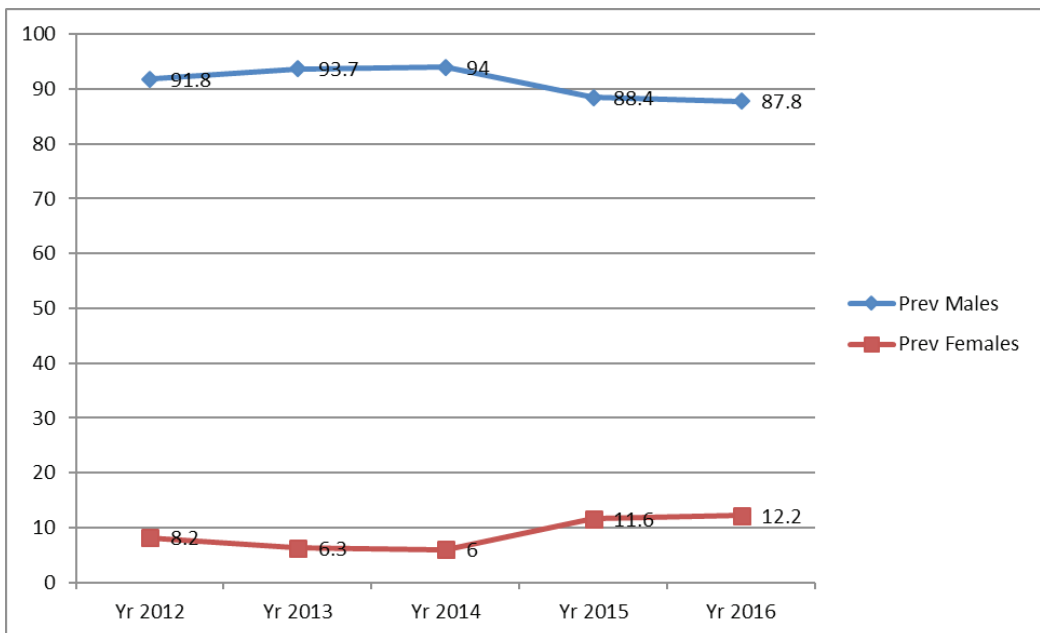


Figure 1. Comparative Five-Year Prevalence Trend Between Males and Females

Table 3. Bivariate Analysis of the Five-Year Prevalence Trend

Year	Total Users N = 2478	Female Users n = 253	%	χ^2	P-value
2012	515	42	8.2	51.764	<0.001**
2013	493	31	6.3		
2014	432	26	6.0		
2015	587	68	11.6		
2016	704	86	12.2		

Clinical Profiles of the Study Participants

The average age of onset of psychoactive substance use among the subjects is 24.45 ± 3.72 years, with a range of 12 to 56 years. Peer group pressures and use out of curiosity were the commonest

‘push factors’ for initiation while Codeine-containing cough syrup (CCCS), Tramadol, and Benzodiazepines were the most commonly used substances. Over 65% of the participants also met the ICD-10 diagnostic criteria for dependence (table 4).

Table 4. Clinical Parameters of the Female Study Participants

Variable	Frequency (%)	95% C.I.
N = 253		
Age in years at onset of drug use [Mean =24.45±3.72 SD, Range = 12-56]		
<18	42(16.6)	10.26 - 24.77
18 - 27	126(49.8)	39.97 - 58.46
28 - 37	66(26.1)	22.91 - 35.72
38 - 47	17(6.7)	3.66 - 11.54
48 - 57	2(0.8)	0.27 - 1.44
≥ 58	0(0.0)	-
Mode(s) of initiation		
Peer group influence	149(58.9)	47.61 - 72.58
By a partner	17(6.7)	3.33 - 10.54
Prescribed by a health worker	17(6.7)	3.73 - 9.47
Out of curiosity	44(17.4)	10.89 - 24.17
Others	26(10.3)	5.67 - 14.13
Type(s) of psychoactive substance used		
Alcohol	8(3.2)	1.66 - 6.52
Shisha	26(10.3)	6.14 - 18.33
Cannabis	17(6.7)	3.51 - 10.72
Cough Syrup with codeine (CCCS)	73(28.8)	22.18 - 42.27
Jankee	23(9.1)	6.18 - 16.19
Benzodiazepine	31(12.2)	8.54 - 18.76
Pentazocine	5(2.0)	1.20 - 2.94
Cocaine	1(0.4)	0.12 - 0.83
Tramadol	41(16.2)	10.24 - 25.18
Multiple Psychoactive Substances	18(7.1)	4.77 - 12.21
Other	10(4.0)	2.12 - 6.70
Met ICD-10 Criteria for Dependence		
Yes	165(65.2)	45.81 - 79.45
No	88(34.8)	30.15 - 41.56

Modes of Presentations of Female Psychoactive Substance Users

The major modes of presentation of the clients to the facility were: compulsion by relatives to present 40.7% (n = 103), incidental finding 22.92% (n = 58), and because of the occurrence intolerable withdrawal symptoms 14.62% (n = 37) (table 5).

DISCUSSION

This study assessed the prevalence and patterns of psychoactive drug use among females in North-eastern Nigeria, the changing annual prevalence trend over a five year duration, and the modes of presentation of the study participants. This is informed by the growing public concerns and the public health implications of the raging psychoactive drug use epidemic in the country in general, and the North-east sub-region in particular.

The sociodemographic characteristics of the female drug users revealed, over two-third of them fall between 18 to 37 years, with an average age of onset of drug usage of 24.45 years, while just about a quarter were above 37 years with fewer subjects above 58 years of age. This is consistent with the findings of earlier studies by Gureje *et al.*, (2007), Alti-Muazu and Aliyu, (2008), Dankani, (2013), &

Adamson *et al.*, (2015), in different parts of the country that have all demonstrated prevalent use of psychoactive substances among subjects below 40 years of age. This could be attributed to the socialization process, stressors encountered and the curiosity exhibited by the young adults as posited by Boys, *et al.*, (2001), Musick, *et al.*, (2008), Calcaterra, *et al.*, (2014), as well as Pavarin & Consonni, (2013).

In terms of their educational levels and occupational status, most of the female drug users had less than 12 years of education and an overwhelming majority of them (>70%) were either unskilled workers or unemployed. This is in tandem with the findings of earlier studies by Badel & Greaney, (2013), Dankani, (2014), and Ibrahim, *et al.*, (2017). This relationship could be explained by the obvious relationship between low education and employment status, as well as by the negative effect of psychoactive drugs on educational attainment and career progression. Like in some previous studies by Dankani, (2012) and Ibrahim, *et al.*, (2015) in similar settings, most of study participants (>95%) were either single or divorced. This could be attributed to the stigmatizing effects of feminine drug abuse or the inability of the drug users to settle and establish a secured relationship.

Table 5. Mode(s) of Presentation of Female Psychoactive Drug Users to the Facility

Mode of Presentation	Frequency (%)	95% C.I.
N = 253		
Involuntary (Compelled by Relatives)	103(40.71)	29.46 - 53.17
Voluntarily	22(8.71)	5.18 - 11.24
Incidental (Acute Psychotic Episode)	58(22.92)	15.75 - 28.93
Intolerable withdrawal symptoms	37(14.62)	10.27 - 19.52
Referred from other sources	33(13.04)	8.06 - 11.59

In terms of the prevalence trends of drug abuse among the female subjects, the overall prevalence for the five year duration was 9.3%, but the rate at the inception of the study was 8.2% in 2012, which declined to 6.3% and 6.0% in 2013 and 2014 respectively. This then increased to 11.6% in 2015 and 12.2% in 2016. This was indicative of a rising trend, but the transient decline in 2013 and 2014 could be due to the raging 'Boko Haram insurgency' which coincided with the peak of the insecurity. This might have restricted the access to mental health care particularly by the womenfolk. The rising prevalence rates thereafter, could be attributed to the escalating wave of abuse of psychoactive substances, most especially Codeine-containing cough syrup (CCCS) by young adults (especially females) and Tramadol in Northern Nigeria which were earlier reported by Dankani, (2012), and Ibrahim, *et al.*, (2017). This could be due to ready availability and accessibility to the drugs without much control on the part of regulatory and enforcement agencies. The other probable reason for the increased prevalence among the female subjects might be due to increased mental health seeking behaviour due to the health promotion programmes sponsored by the institution on local radio channels. The prevalence trend of the male subjects was directly opposite to that of the females which is reflective of the changing gender trend.

Regarding the clinical profiles of the study participants, most of the subjects were initiated into psychoactive substance use due to peer group pressure and out of curiosity to know how it feels to take the drug. This is consistent with the outcomes of previous studies by Reed and Rountree, (1997), and by

Simons-Morton and Farhat, (2010). A peculiar method of initiation noted in the female subjects in this study, is that by partners in intimate relationships which has also been reported by Fleming, *et al.*, (2010). The three commonest psychoactive substances used by the subjects were codeine-containing cough syrup (CCCS) reported in over a quarter of the them, Tramadol reported in over 16% of the subjects, and Benzodiazepines reported in 12% of them. This finding supports earlier assertion by the Substance Abuse and Mental Health Services Administration (SAMHSA), (2014) that female psychoactive substance users are more likely to use Opiates and sedatives while their male counterparts that are more likely to use alcohol and Cannabis. In addition, over 7.0% use multiple psychoactive substances. Multiple psychoactive substance use is common in the setting the study was conducted as reported by Gudaji, *et al.*, (2016) in Kano and Ibrahim, *et al.*, (2017) in Maiduguri. Finally, over 65% of the subjects met the ICD-10 diagnostic criteria for dependence. This might not be unconnected with the phenomenon of 'telescoping' which posits that women develop features of dependence at a faster rate when compared to their male counterparts (Brady & Randall, 1999).

An interesting outcome of this study was that less than one-tenth of female subjects presented voluntarily to the facility for treatment, while over three-fifth of them were either compelled by caregivers or were incidentally found to be using psychoactive substances when they presented with acute psychotic episodes. This is pertinent, considering the fact that self-efficacy and optimal motivation as indicated by the willingness to

present self for treatment is a positive prognostic indicator as posited by Ciraulo, *et al.*, (2003), and Gau, *et al.*, (2007) in the management of substance use disorders. The factors possibly responsible for the high rate of involuntary presentation include; stigmatization of mental illness, most especially feminine drug use, and the misconceptions about the aetiology of mental illnesses which are still being viewed from the supernatural perspective in most sub-Saharan African settings as reported by Adebowale and Ogunlesi, (1999); Kabir, *et al.*, (2004); Isa, *et al.*, (2008); Adewuya, *et al.*, (2008); Audu, *et al.*, (2011); Sheikh, *et al.*, (2015); and Armiya'u, *et al.*, (2015).

Strength and Limitations of the Study

This is the first study that attempts to answer the question of psychoactive substance use exclusively among females in northern Nigeria based on available literature, while the limitations include: (i) it is a hospital-based study, therefore, it might not be a true reflection societal problem since most patients do not present to the facility for the fear of being stigmatized (ii) causal inference cannot be made because of the cross sectional nature of the study.

Conclusion and Recommendations

This study revealed that there is a rising prevalence trend in the use of psychoactive substances among females, especially those in the 18 to 37 years age bracket in Northeastern Nigeria. Peer group pressure, curiosity and induction by a partner were the most common methods of initiation into drug use, and that CCCS and Benzodiazepines were the most common substances of abuse with over 60% of them meeting the criteria for dependence. The rate of voluntary hospital

presentation is abysmally low. These findings have some policy implications. The authors, therefore, recommend the designing of culturally appropriate and gender-specific educational programmes that will mitigate the escalating scourge. Secondly, the operational capacities of control agencies should be enhanced to effectively implement drug demand reduction strategies as contained in existing policies. Thirdly, stigma-reduction strategies associated with female drug use should be implemented through massive community mobilization via social and conventional media outlets.

Competing Interests

The authors declare no competing interests

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**“IF THERE IS NO ALCOHOL, THERE IS NO PARTY”: SOCIAL PRESSURES,
ALCOHOL CONSUMPTION AND SOCIAL IDENTITY CONSTRUCTION
IN NIGERIAN STUDENTS’ PARTIES**

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ABSTRACT

Alcohol consumption and its related problems are rising among Nigerian students, and factors such as social pressures to drink or drink more, social identity construction with heavy drinking, students’ parties and other contextual factors contribute to these problems. Drawing on semi-structured interviews with 31 male and female undergraduate students attending a Nigerian University, this study explores how students employ alcohol to construct social identity and develop social capital in party contexts. The findings show that for a social event to be ‘qualified’ as a ‘party’, alcohol must be served. While the brands of alcohol served in each party are associated with social class, the meanings attached to drinking in parties and drinking motives are fluid. The findings further show that entertaining guests with foreign and/or expensive alcoholic beverages confers a higher social status on the host than serving locally-made/cheap brands. Also, the larger the quantity served, the higher the host is ranked on the social ladder. Consequently, young people employ the promise of sumptuous beverages to woo potential party attendees to their parties. Males are generally wooed because they will drink free and expensive alcohol while females tend to perceive the host as possessing a higher economic status; thus, they want to associate with him. At the same time, the ability to outdrink peers during gendered ‘drinking games’ is used to construct a range of social identities and to develop social capital. The use of alcohol to construct social identity and social pressure to drink among students should be addressed through health education and reorientation. Public health interventions that will reduce alcohol availability on and around campuses should also be implemented in Nigeria.

Keywords: Alcohol, gender, Nigeria, party, social capital, identity, students

INTRODUCTION

Internationally, research conducted among young people (students and non-students) has shown the fluidity of meanings attached to their drinking. Generally, while regular use of alcohol has become an integral part of contemporary young people's leisure culture (Frederiksen, Bakke, & Dalum, 2012), heavy drinking, is particularly the lifestyle of many youths, especially university students (Peralta, 2007; Supski, Lindsay, & Tanner, 2017). Pre-loading (i.e., drinking before attending social events such as parties or going to a licensed venue (Clapp et al., 2008), drinking games (Pedersen & LaBrie, 2008) and other ritualistic drinking patterns in party contexts have been found to encourage drinking sprees among youths, in that alcohol is often consumed in most parties organised by them (Demant & Østergaard, 2007; Frieze & Grube, 2014). In addition to being supplied with alcohol by party hosts, some guests bring alcohol to parties (Clapp et al., 2008; Frieze & Grube, 2014). Thus, the more likely that the level of drinking and intoxication will increase because the higher the number of guests who come to parties with alcohol, the higher the rate of alcohol availability in such parties (Frieze & Grube, 2014).

Furthermore, evidence shows that the context, in which a party is held, to a large extent, determines the availability of alcohol, the amount that is consumed and the level of intoxication (Clapp et al., 2008). For example, the level of drinking increases in parties organised in private places or bars other than those that are hosted in homes where young people live with their parents (Clapp et al., 2008; Frieze & Grube, 2014). One of the reasons for this is because young people consume

less alcohol at home than they do in party contexts (Demant & Østergaard, 2007). Drinking and level of intoxication have also been found to increase in themed parties than in non-themed events because alcohol is served free in the former (Clapp et al., 2008).

Alcohol's roles among young people (within and outside party spaces) are socially dynamic. For instance, purposeful drunkenness, which facilitates the transgression of traditional gender boundaries, is popular among many students who attend parties (Clapp et al., 2008; Demant, 2009; DuRant et al., 2008; Montemurro & McClure, 2005). Again, heavy drinking to the point of *being wasted* is a status conferral among some youths (de Visser, Wheeler, Abraham, & Smith, 2013) while others employ the consumption of large quantities of alcohol to develop social capital (Demant & Järvinen, 2011). According to Granfield and Cloud (1999), social capital is "the social relations in which individuals are embedded and the resources that potentially flow from these relations". Demant and Järvinen (2011, p.91) added that "social capital should be understood both in terms of norms and resources". For example, young people's alcohol consumption has a lot to do with the norms of the group to which they belong as well as the position they occupy in such groups. If for instance, the group accepts and normalises drinking and intoxication, members will not only drink alcohol, but some will engage in heavy drinking, particularly to maintain group norms and enhance social relations among network of friends.

Additionally, in social events like parties, drinking is used to "overcome shyness, lower inhibitions, and to aid friendship and bonding processes" (de Visser

et al., 2013, p.1466). Given that alcohol consumption performs the role of modern ritual, young people must engage in diverse ritualistic drinking practices for a get-together to “become a party” (Demant & Østergaard, 2007, p.524), and this is one of the reasons why some guests leave for other parties when alcohol is exhausted (Clapp et al., 2008).

Although most youths attend parties with the intention to drink, research has also shown that some of them may attend parties not only to consume alcohol, but also because partying provides them with the opportunity to accumulate social capital and expand their friendship networks (Demant & Østergaard, 2007; Friese & Grube, 2014). Despite that a few youths may not attend a party intending to drink (or drink heavily); the quest to develop social capital often provokes alcohol use (Demant & Järvinen, 2011). This is particularly because social capital influences alcohol consumption negatively (i.e., by inciting alcohol use; although it can also influence consumption positively by constraining lonely drinking) (Demant & Järvinen, 2011). Research conducted in Nigeria (Ibanga, Adetula, & Dagona, 2009) and elsewhere (Mäkelä & Maunu, 2016) have also shown that direct and indirect social pressure to drink and/or drink more alcohol is common among alcohol user, especially those in friendship network, but this often heightens heavy drinking and intoxication.

Sociologists argue that identities are socially constructed and not given (Giddens, 1991). That is, humans, in social interaction, make/enact the type of ‘social badges’ with which they want to be identified, and these badges include masculine and feminine gender identities. While several resources are employed to construct

social identities, evidence shows that alcohol (and other drugs) facilitates the *making* of masculine and feminine identities (Peralta, 2007), and social contexts such as parties serve as a platform to either enact or showcase such identities. For example, studies have revealed how men (Capraro, 2000; De Visser & Smith, 2007; Mullen, Watson, Swift, & Black, 2007) and women (Emslie, Hunt, & Lyons, 2015; Lyons & Willott, 2008; Rolfe, Orford, & Dalton, 2009) construct a range of identities with heavy and other (risky) drinking patterns. According to Courtenay’s (2000, p.1385) relational theory of gender and health, this is particularly because “health-related beliefs and behaviours, like other social practices that men and women engage in, are a means for demonstrating femininities and masculinities”.

In the Nigerian context, little is known about how contemporary youth leisure culture influences their drinking, and even less is known about how social contexts, especially partying and social pressures are associated with young people’s alcohol (mis)use. What is known about alcohol consumption among Nigerian youths, especially students, is that they play drinking games and also use heavy drinking to construct gender identities (Dumbili & Williams, 2017a). Other factors that motivate their drinking include to attenuate sorrow, alleviate depression, and to boost their courage to deliver class seminars (Dumbili & Onyima, 2018). Given that Nigerian students engage in these drinking practices indicated above, alcohol-related problems such as accident and injuries (Abayomi, Onifade, Adelufosi, & Akinhanmi, 2013), alcohol use disorders (Adewuya et al., 2007), alcohol-facilitated rape (Dumbili & Williams,

2017b) and other sexual risk behaviours (Chikere & Mayowa, 2011) are common on campuses.

Despite that a few studies have shown why students drink and the consequences of their drinking, there is a dearth of studies regarding how social context contributes to these trajectories. Drawing on qualitative interviews with undergraduate students of a Nigerian university, this study begins to fill this gap. This paper aims to explore the role of alcohol in the construction of social identity and accumulation of social capital, and how Nigerian students' parties are implicated in these trajectories. This study is important as existing literature has indicated that alcohol misuse, especially among university students is a growing concern. Therefore, understanding the role social identity constructions in campus parties and accumulation of social capital play in students' drinking behaviours will help in the provision of holistic solutions to reduce the growing alcohol-related harms among contemporary Nigerian youths.

METHODS

The data were collected from a south-eastern Nigerian university campus, between September and December 2013, after ethics approval was granted by the Nigerian University and the Brunel University London Ethics Board. The participants were recruited on campus through convenience sampling and snowballing approaches. On campus, I approached students and introduced the study to them. After rapport was established, the students were asked if they consumed alcohol. Following this, those who currently use alcohol (defined as having consumed

alcohol at least once in the last 30 days) were asked if they would consider participating in the study to share their experiences of alcohol use.

This convenient technique facilitated the recruitment of 26 (20 males and 6 females) participants while snowballing methods aided the recruitment of an additional three females and two males. Given that alcohol use among youths is a sensitive issue in Nigeria, and that young female drinkers are particularly stigmatised (Dumbili, 2015; Umunna, 1967), young females, are not easily accessible for such sensitive studies. Thus, reaching them through any channel that might expose their identity will hinder their participation. This was why the techniques indicated above were deemed necessary for the successful recruitment of female participants. While written informed consent was obtained from the participants, their identities have been replaced with pseudonyms in the "results section".

Interviews and data analysis

Drawing on social constructionism, which focuses on how people use language to achieve shared meaning-making (Burr, 2015), 31 in-depth interviews lasting 33-90 minutes were conducted with 22 male and nine female undergraduate students (aged 19-24 years), who were of legal drinking age (i.e. 18 years and above). The participants were invited to share their views on whether or not they attend parties, whether or not they drink alcohol in social events like parties and how and why they drink in parties.

Following the permission of the participants, the interviews were recorded with a digital device. All but one of the participants was from the *Igbo* ethnic group, and this is particularly because

of admission policies in Nigeria, where universities have “catchment areas” and admission quotas. Therefore, gaining admission to a university within one’s catchment area, where a particular ethnic group may predominate, is standard practice. The interviews were transcribed verbatim and a thematic analysis was conducted to identify patterns of meaning in the data set (Braun & Clarke, 2006). Drawing on data-driven and theory-driven codes (Fereday & Muir-Cochrane, 2006), the analyst/author initiated the analysis immediately after conducting the first interview. Notes taken during the interview were read many times, and the audio file was crosschecked for accuracy. This aided the identification of some new areas to explore further in the subsequent interviews. Again, it facilitated the development and recording of some tentative coding schemes (Braun & Clarke, 2006; Syed & Nelson, 2015) that were subsequently refined and utilized for the identification of nuanced patterns of meanings in the data (Campbell, Quincy, Osserman, & Pedersen, 2013).

Next, the first interview was transcribed. As the audiotope was being transcribed, the initial extracts were manually categorised into broad themes and subthemes. This process was repeated for the subsequent six interviews. In order to ensure analytical rigor from the onset, the analyst’s initial thoughts and ideas about coding were assessed (Syed & Nelson, 2015) by two senior academics (a professor and a senior lecturer who supervised the doctoral project from which this article was drafted), who read and commented on the interviews and the preliminary coding and analysis. When all 31 interviews had been transcribed, the transcripts were read several times and

crosschecked and reconciled with the audio recordings before being imported into NVivo 10 where the analysis was completed (Seale & Rivas, 2012). Following this, the patterns of meaning from the key themes (e.g., *alcohol makes a party, social pressures, drinking and the construction of gendered identity and lowering social inhibition*) that had been identified were recorded. These themes are presented in the “results” section.

RESULTS

The findings presented here show that most students’ parties are held during weekends, although some, especially birthday parties, may be organised during weekdays. The analysis reveals that partying also increases towards the end of each academic session or at the end of the year. While the former is organised by the graduating students or their friendship networks (to bid their friends farewell), the latter is often put together by hostel residents to mark the end of the year. Most of these parties are held at off-campus hostels while others included hall, bar and hotel parties. Specifically, results regarding three themes: (1) *alcohol makes a party*; (2) *social pressures, drinking and the construction of gendered identity* and (3) *lowering social inhibition* are presented.

Alcohol Makes a Party

This theme outlines how serving alcohol is a sine qua non for a party to be held among students on this campus and how the interviewees perceived drinking to lighten up party environments, by boosting attendees’ moods and social-ity/sociability. The analysis shows that

alcohol is not only ubiquitous in students' parties, but drinking is seemingly compulsory for the following reasons. First, alcohol lightens up party environment, in that without drinking, **"people will not misbehave"**, which means that **"everywhere will become dull and boring"**. That is, intoxication is thought to facilitate banter and/or loss of control which increases partygoers' ability to socialise in parties. Second, both male and female participants reveal that alcohol must be available to have what can be called a party. For example:

Favour: Normally, we have seen that on this campus, any party without alcohol is like a child's play or no party at all...

Chisalum: ...This is why always on campus, if there is no alcohol, there is no party. A party without alcohol is no party because people will feel like nothing happened there.

Chioma: Most students are involved in parties, and alcohol is available everywhere [in parties].

On their own terms, alcohol must be available to have a "confirmed"¹ party and this is one factor which distinguishes what they called a "real party" and a "child's play". One of the insightful parts of the data is the way in which the interviewees highlighted that alcohol plays some important roles in students' parties not only on this campus, but on other Nigerian campuses:

Boniface: I am not talking about only on this campus, but in [other] schools

[campuses]; it's something that [is common]. As we're students, it's kind of our lifestyle. If you are going to organise a "confirmed" party, alcohol will be there.

When he was asked to shed more light on why alcohol makes a *confirmed* party, he noted:

Boniface: It is because it's kind of the norm in schools [campuses]. You know, if there's no alcohol in a party [it is not always lively] but when there's alcohol, it becomes lively.

Just like many other male and female participants, Boniface indicated that consuming alcohol makes boys and girls to be "kind of free" not only to do things they have never done before, but also to **"do things that I don't think they would have done under normal circumstances"**.

The analysis also shows some nuances regarding the role alcohol plays even before a party is held, especially during the publicity of an upcoming event. For instance, when inviting a friend (or other potential attendees) to a party, one serious persuasive point you will put forward to convince them to attend is that alcohol must be served, and it can be inferred from the analysis that the brands and quantity are often emphasized. Interestingly, the presence of alcohol not only increases the number of guests in each party, but the data also show that some attendees, especially boys either come to parties with alcohol or buy drinks if the quantities served are not enough:

¹ A common slang used among young Nigerians, which is associated with perfection, maturity or upper class belongingness (depending on the contexts of use).

Boniface: If you don't have alcohol in your party, it's most likely that there won't be a large turnout in that party. I've gone to a party where...boys brought their own drinks for themselves... You see stuff like that almost every time [where young men bring their drinks to parties].

Although as an offshoot of the south-eastern Nigerian traditional leisure norms, alcohol is mainly supplied by the host(s) in these parties because it symbolises hospitality. Despite this, the above account has shown that some guests come to parties with alcohol. As the data revealed, it is clear that some men come to parties with alcohol (or buy their brands at party contexts) because of the relationship between brands and social identity in Nigeria (Obot, 2013). For instance, the analysis reveals the role brands (and their prices/origin) play in conferring status among Nigerian students on this campus. The interviewees indicated that drinking *foreign* or local brands in social contexts is markedly a point of departure for categorising a "rich" and "poor" student. This is serious, to the extent, that "Foreign Extra Stout" (a brand of Guinness stout) which is produced in Nigeria, is rated higher above other brands of stout just because it has the word- *foreign* attached to its name (i.e., it is mistakenly thought to be imported and superior to local products). Relatedly, despite the fact that the production of Heineken beer has been localised, it is still not only regarded as a foreign brand, but many Nigerians consider it to be superior to local brands. As such, it is associated with the upper class. Given that consuming Heineken confers status, some of the participants noted that men often change their brand

to Heineken when they want to demonstrate their economic status to their peers in social contexts such as bars or parties.

To further demonstrate how the participants construct social identity with brands, I will draw on Chisalum's account- a female participant, in that it is a useful exemplar of how students venerate and fetishize expensive brands:

Chisalum: You cannot come to a party [and the host] serves the guests all these soft drinks like Limca and Goldspot [local brands]; it must be red-labels [foreign and expensive spirits/wines]... Even when we went to a picnic, some people actually brought out their life-savings to buy all these red-labels so that people will feel like [they are rich]...

The data also highlighted the role of alcohol in the construction of social identity, particularly among party hosts. This is because the host of a party accrues social capital, by boasting (via face-to-face) about how much has been spent in purchasing alcohol in a bid to increase the number of potential attendees:

Favour: If you are the one who is going to organise [host] the party, you'll boast about the amount of money you've spent on alcohol and the quantity of alcohol you've bought.

The act of boasting about the amount of money one has spent in purchasing different brands of alcohol appears to serve two important purposes. First, it is used to strengthen the confidence of the potential attendees, especially men to come to your parties because they will drink large quantities of free alcohol. Second,

it is used to portray one's socioeconomic status, in that it makes the potential attendees, especially women to see you as someone who is rich and/or generous; thus, they want to identify with you. When the party is eventually held, the actual quantity of alcohol that you served and the origin of the brands (i.e., whether it is local or foreign) become status conferral to the host, especially because the guests compare your party with others they had attended earlier. This, in turn, helps the host(s) to accumulate social capital and expand his/her network and influence.

Together, these accounts have revealed how inevitable alcohol is in students' party and the nuanced indispensable roles it plays for them. It is clear that while alcohol must be served in a party for such to qualify to be called a party, the taste of a brand is immaterial. Indeed, what matters to these students include: the origin of a brand (which is directly related to the price) and the quantity of such brands.

Social pressures, drinking and the construction of gendered identity

Under this theme, the data revealed some nuances regarding how drinking more than one's peers constituted having a great party, while drinking small amount or not drinking at all was seen as contravening party norms. In fact, the male participants demonstrated how they play male-dominated drinking games in party contexts because of the following reasons. First, drinking game connoisseurship confers social status on the winner. Thus, game playing is used to demonstrate the superiority of one's masculinity, and party contexts appeared to be a perfect 'theatre' for such displays. Second, those who play games consume more quantity

of free alcohol, especially because it is required of the host(s) to provide the resources (e.g., alcohol) for a game to take place. Also, the analysis shows that every party attendee is expected to drink alcohol, and one of the implications of refusing a drink, especially among the male participants, is that it attracts negative sanction, in the form of distrust: **"if you don't drink alcohol, I can't trust you"**. As the accounts below indicate, the quest to avoid negative sanctions engenders "drinking to belong", where most people either drank to impress their peers or to maintain their membership of friendship networks:

Edulim: Most people drink to impress their friends...

Kelechi: The more you drink, the more you keep those your friends that drink.

Similarly, the accounts of the female participants show that some of them drink to maintain group norms. The analysis reveals that girls pressure their peers to drink, when they refuse to accept the offer to drink. In addition to drinking to satisfy their friends or not to be different from their peers in social gatherings such as a party, some participate in social drinking just to avoid name-calling. For example:

Patience: Your friends can actually make you want to have a feel of alcohol... Most times they tend to 'embarrass' you if you don't drink... Even among girls, they will be like ah, what is your problem? Come-on, take this drink for once! Like you gonna feel cool; it'll make you go high and stuff like that. Then you will be like, let me satisfy them by having a taste of it...

Pretty: If...you say that you want to drink malt [non-alcoholic drink], people [peers] will look at you like, you don't belong [to their class], or that you don't know what is happening [you are not fashionable].

Not only is social exclusion or loss of social capital used as a punishment for not drinking among the participants, the male participants in particular also noted that some seemingly harsher sanctions might be applied:

Chike: Normally, your friends will always make a jest of you if you don't take alcohol because this is one of the behaviour patterns that is expected in this environment. It's expected that if you are a "real man", you should be into alcohol; you should participate in some kind of [tough] activities of which alcohol is one of them. So if boys see a guy who is not into alcohol at all, they'll see him as being less than a man, and that's why they normally refer to them as a 'dull man' [not fashionable]. So instead of allowing yourself to be mocked by your friends, some boys will actually decide just to drink.

Larry: If you don't drink alcohol, then it means you are not man enough...

Fred: As in, many of them do say that if you don't take beer, you are not a boy.

Still on the association between alcohol and masculinity, other male participants shed light on how the quest to maintain masculine identity contributes to the reasons why men drink alcohol in social contexts such as parties. For instance, Jacob revealed that **"guys drink to maintain their ego"**, and this was buttressed by other participants. For example:

Chijioke: We don't hang out at home but in bars or parties, and when you go to such places, you will definitely have to drink alcohol...

Interviewer: Can you say a little more on why one must drink alcohol in such places?

Chijioke: Drinking is like a test of manhood; if you don't consume alcohol, you are "dulling" [not smart or fashionable]... So if you want to meet up with the expectation of your friends, in order not to let them down, you have to consume [alcohol] as much as they are consuming. I have tried it, I have decided to take non-alcoholic beverages but you know; there is this look they'll give you. Most of them will feel ashamed [that you are taking a soft drink], and they will be like: why are you drinking a soft drink? Are you a woman or a girl? I just feel it is this manly thing for you to consume alcohol. I think most people do it to impress or to feel among.

Interestingly, the data revealed that instead of abstaining from drinking and suffer the social consequences, many youths would prefer to drink, but this can result in other health-related consequences:

Dozie: I went out with some friends to a birthday party, and there was this girl I knew; she has never had alcohol before, but just because other girls there were holding Smirnoff Ice [flavoured spirit] on their hands, she had to join them to drink and she... ended up messy.

From these accounts, it is clear that factors such as peer pressure and the belief

in the use of drinking to construct superior masculinity facilitate alcohol use in parties among students. As the analysis shows, instead of positioning themselves to be mocked by friends, the interviewees often decided to consume alcohol, but this facilitates negative social capital (Demant & Järvinen, 2011).

Lowering social inhibition

The analysis also shows that in these parties, alcohol is perceived to boost strength and confidence so that young people can dance and as well do things they would ordinarily not do when they are sober:

Patience: Alcohol makes me high; it makes me do things that I can't normally do because I am a shy person.

Agatha: You know at times when I want to dance very well and not be tired, I take alcohol.

Chimanda: ...I like drinking when there is a party going on. It can make me dance and feel relaxed...

Among the male participants, alcohol is also used to enhance performance in parties while dancing:

Chijioke: Most times, if I go to a party, I don't really dance but once I take alcohol I can dance. Let me say that it helps me to do away with shyness so that I can do those things that I can't really do [without alcohol].

Boniface: You can see someone who has never danced before, but when he takes one, two or even three bottles [of beer], he'll start dancing.

Drinking not only enhances the male participants' ability to dance, but it is

also used to lower inhibition. Indeed, the data show that men who may not be bold enough to initiate a sexual relationship with females dare to do so under the influence:

Buchi: When you drink alcohol, you will be able to do something you can't do before. For example, maybe you want to approach a girl and you don't have the confidence, but when you take alcohol, it makes you feel like you have the confidence. It removes that shame on you that makes you feel like if I go, the girl may say no...

Boniface: There are cases of a guy who possesses low self-esteem when it comes to talking to girls, but when he takes alcohol, he'll have confidence to meet any girl and talk to her.

When most people become inebriated, "boundaries for *normative* behaviours are dissolved" (Demant & Østergaard, 2007, p.524). As the accounts below show, intoxication facilitates timeout for women to initiate relationships with men in party contexts:

Pretty: Okay, like I said earlier, in a party, when you just want to talk or express yourself, you'll take alcohol or when you are feeling too shy 'to do something' [talk to a male] you'll take alcohol, and it makes you bold.

Agatha: ...I know that there is a kind of courage alcohol gives. That is why I used that statement: 'that you do extraordinary things when you are drunk'. There are some things that on a normal day you can't tell someone. For example, on a normal day, you can't tell [a male] that I love you, but when you drink, you'll see yourself

telling somebody [a male] that I love you.

Nigeria is a patriarchal society; thus, it is not normative for women who are seen as the sexual gatekeepers to initiate sexual relationships with men because such is regarded as transgressing gender boundaries, but it appears that drinking helps some of the female participants to navigate around this social inhibition.

Together, these accounts have highlighted how alcohol facilitates the ability to let one's guard down, and thus inhibits young people's self-consciousness, to the extent that they engage in activities they would not engage in when they sober up.

DISCUSSION

The study contributes to, and develops extant literature on the role of social contexts in young people's drinking behaviours, particularly in Nigeria and Africa more generally. The study suggests that partying is ubiquitous on and around this campus, especially at off-campus contexts, and that alcohol is central to student parties. It was highlighted that students often used direct means of publicity, in the form of face-to-face and/or word-of-mouth means to invite potential attendees to their parties. That most parties are held at off-campus sites and that the marketing and publicity strategies involved the use of word-of-mouth support Clapp et al.'s (2008) study.

Despite the fact that the result regarding publicity supports previous research, it also develops extant literature. This is because if you invite a friend to a party, one important point you will employ to persuade him/her to attend is the

promise that alcohol must be available, and in large quantity. Relatedly, it was found that alcohol must be served for individuals to accept that they had gone partying. That is, drinking in these parties is not only expected, but it is generally accepted and publicized. That alcohol must be drunk for a social event to be seen as a party lends credence to previous research (Demant & Østergaard, 2007), but one of the insightful aspects of the finding of this current study, is that young people are pressured to drink to appear sociable and acceptable among peers. Given that drinkers are often considered to be more sociable than non-drinkers (de Visser et al., 2013), this may be one of the reasons why the interviewees in this current study accept to drink (or drink more than they had planned).

In these festal assemblies, alcohol performed a number of social roles. First, it supports pleasurable party experience. That is, drinking is perceived to increase partygoers' fun, especially because intoxicated guests exhibit behaviours that are not only normative and expected in party contexts, but are also a source of entertainment for guests. Second, alcohol facilitates timeout, in that it is used to boost confidence to initiate sexual relationships. Because of the pharmacological capacity of alcohol to affect human body (Zakhari, 2006), excessive consumption often results in loss of control and transgression of sociocultural boundaries (Dumbili, 2015; Peralta, 2008), and this is played out in this study, where young people, especially females initiate a relationship under the influence of alcohol. As indicated earlier, Nigeria is a patriarchal society where women act as sexual gatekeepers, and sexual intercourse among unmarried youths is equally taboo

in south-eastern Nigeria (see Dumbili & Williams, 2017b). Thus, the act of initiating sexual relationship among young people not only breaches the traditional social/sexual norms, but the use of alcohol to embolden oneself before engaging in such acts further shows how intoxication encourages the transgression of traditional boundaries and heightens risky behaviours.

Elsewhere, research shows that alcohol consumption is associated with reputations (i.e., it confers status, e.g., image and reputation- a mature man) among young people (de Visser et al., 2013). In the current study, the results reveal that alcohol is a resource for the social construction of a range of social and/or gender identities. For example, the brand that the host uses to entertain the guests is a status conferral, which in turn, helps him/her to accrue/develop social capital. Given that identities are socially made, *and* not given (Giddens, 1991), interviewees demonstrated how they use party spaces to *make* the kind of identities they want to be known by, and diverse brands of alcoholic beverages serve as perfect resources for *making* such identities. The analysis shows that these young Nigerians were more concerned with where a brand originated from, and/or how expensive it is. This is because consuming a foreign and/or expensive brand conferred social status on the consumer.

That alcohol performed a myriad of social functions for these young people resonates with the fact that in most Nigerian communities, alcohol is an indispensable resource for enacting friendship and facilitating social cohesion (Ibanga, Adetula, & Dagona, 2009). As such, it is often served in most social gatherings. For example, in the traditional era, individuals, especially

males drank locally-made alcoholic beverages during community meetings and festivals with a single 'calabash cup' after the eldest male had performed libation (Oshodin, 1995). This act of drinking from a single cup not only helped in unifying the members of each community, it also boosted trust and dispelled suspicions (i.e., the use of a single cup makes it difficult to poison another person (Oshodin, 1995)). Irrespective of the ubiquity of this ritualistic social drinking, young people were not permitted to drink because alcohol was seen as a mark of being an elder (Oshodin, 1995). Young people were only allowed to drink on festive days (that happened in most cases, once in a year). Again, in such festivals, they were guided by elders who monitored the quantity they consumed, in that intoxication was taboo (Oshodin, 1995). In this study, it was obvious that young people, especially the males engaged in drinking just to maintain masculine pride. That young men on this campus drink alcohol and associated drinking with superior masculinity not only deviate from the tradition leisure norms of south-eastern Nigeria (Umunna, 1967), but it also shows that the globalization of the culture of intoxication is becoming pervasive.

Research conducted elsewhere shows that the more a party is attended by guests, the higher alcohol is supplied from multiple sources (i.e., by the host and guests (Friese & Grube, 2014)). In this light, it could be argued that guests in these Nigerian parties are most likely to consume large quantities of alcohol for the following reasons. First, the host of each party strives to encourage a large turnout in their parties by providing alcohol, in that such is associated with social/economic capital. Second, some guests

bring alcohol to parties, especially because of the association between brands, social status and social capital (i.e., if the host fails to supply the brand some guests drink, they may opt for their brands or buy expensive brands to show off and/or develop social capital). This is especially because Nigerian party spaces are like a 'theatre', where individuals portray their *economic capital* to peers, which facilitates the accrument of social capital. Put another way, social capital as "norms and resources" facilitates certain actions and inhibits others (Demant & Järvinen, 2011, p.91); thus, heavy drinking to gain friends (social capital) and or to *do gender* will likely increase when youths coalesce in these campus parties.

The study has some notable limitations. First, while it reported the data collected from a small sample, the number of women included was particularly few (although as indicated above, this was as result of the difficulties in recruiting willing female participants). Relatedly, the study reported data that were elicited via self-reporting. As such, future studies should consider using ethnographic methods to explore students' lived experience, especially how social contexts such as parties and other leisure spaces facilitate alcohol use among youths. Third, the data were elicited from a university campus located in one geographical region of the country and also among the people of similar socio-cultural beliefs. Given that Nigeria is a multi-ethnic/cultural entity, studies should be conducted on other campuses in other parts of Nigeria. Irrespective of these shortcomings, the study has highlighted the dynamic roles alcohol plays for Nigerian students in party contexts and adds depth to our understanding of how social contexts and situations encourage

the culture of intoxication and the transgression of traditional leisure boundaries.

A number of implications can also be derived from the study. First, there is a need to address the use of alcohol to construct gender/social identity, and/or to facilitate timeout from traditional gender roles and expectations among Nigerian students through health education because these drinking patterns encourage heavy drinking and risky sexual behaviours. Evidenced-based interventions that will cast light on the risks associated with these drinking patterns/motives should be designed and implemented on Nigerian campuses. This will likely change the belief that drinking is associated with superior masculinity, and as well dispel the belief that alcohol emboldens individuals to initiate sexual relationships. Again, there is a need for public health interventions, especially those that will reduce alcohol availability on and around campuses. Relatedly, reorientation of Nigerian students should be encouraged. This will help to change the view that without serving and/or consuming alcohol, a party cannot be held. Relatedly, the association of brands with prestige has to be changed by health educators through proper reorientation. This might help to reduce the unhealthy competitions that manifest in using diverse tactics to woo potential attendees to parties because of alcohol. This is especially because such encourages negative social capital, where alcohol becomes the primary focus of each party, and attendees are pressured to drink or drink above their limits.

That some of these parties are held on alcohol sale outlets that are strategically located on and around this campus suggests that they may be increased alcohol availability, easy access and heavy

drinking among party attendees. Thus, there is a need for the University authority in collaboration with the community to implement measures that will regulate these outlets, especially as the Nigerian government has failed to implement WHO-favoured alcohol control policies in the country (World Health Organization, 2018). In sum, social contexts such as parties facilitate heavy drinking, which may result in more alcohol-related problems among Nigerian students.

Note:

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**SELF-CONTROL AS A PREDICTOR OF DRUG USE:
A STUDY WITH UNIVERSITY STUDENTS IN BOTSWANA**

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ABSTRACT

The study examined the relationship between self-control and drug use among university students in Botswana. Bandura's social cognitive theory of self-regulation provided the theoretical framework for the study. Among the 269 participants with a *mean* age of 20.9 years ($SD = 1.8$), 72.9% were female and 27.1% were male. Instruments employed were the Brief Self-control Scale and the Drug Abuse Screening Test. Drug users had significantly lower self-control scores than non-drug users ($t = 4.57, p = 0.000$). Levels of drug use were negatively associated with self-control ($r = -0.33, p = 0.006$). Participants who had stopped using drugs had significantly higher self-control scores ($t = 2.38, p = 0.020$). Low self-control, male gender and higher level of studies explained between 16.9% (Cox & Snell) and 29.9% (Nagelkerke) of the variation in whether or not students had used drugs, with self-control having the strongest predictive ability ($p = 0.001$). The results of this study imply that self-control does play a pertinent role in whether or not young people engage in drug use. The results are discussed with regard to drug use prevention and treatment strategies that should equip young people with skills and techniques in self-control to protect them against drug use and abuse.

Keywords: Botswana, drug use, gender, self-control, self-regulation, university students

INTRODUCTION

Drug use among young people is a global problem (UNDOC, 2017) that also affects the youth in African countries (Abasiubong, Udobang, Idung, Udoh, & Jombo, 2014; Derrick & Clark, 2013; Odejide, 2006; Osuafor, Maputle, & Ayiga,

2016; Tesfaye, Derese, & Hambisa, 2014). In Botswana, where the present study took place, a national youth survey conducted in 2011 revealed that 13.2% of primary and secondary school students reported using marijuana, 12.2% reported using glue, and smaller percentages reported using cocaine, mandrax, and

ecstasy (Letamo, Bowelo, & Majelantle, 2016). Social trends, accessibility, and affordability contribute to patterns of drug use and the types of drugs consumed (Griffith & McKetin, 2003). For example, a relatively new drug from South Africa referred to as Nyaope is spreading fast because of its relatively low costs (about US\$3 per fix). Nyaope contains a highly addictive mixture of heroin, methamphetamine, cocaine, and other ingredients such as paracetamol, antiretroviral medications, household detergents and rat poison that are rolled with cannabis, heated, and then inhaled (Mokwena & Fernandes, 2014).

In the African context, drug studies often focus on the prevalence of drug consumption and its socio-demographic correlates but few studies have investigated psychological variables that could explain why some young people engage in drug use while others do not. For example, in a study with university students in Botswana, Ludick and Amone-P'Olak (2016) determined that a temperamental disposition of 'novelty seeking' predicted the use of cannabis. Novelty seekers are known to be easily excitable and to react impulsively (Cloninger, 1986), which puts them at risk of using drugs (Mitchell & Potenza, 2016). In the study by Ludick and Amone P'Olak (2016), novelty seeking explained 35% of the variance in cannabis use. In another study with university students in Botswana, Gareikitse and Plattner (2016) found that students with low self-esteem were more likely to contemplate the use of drugs as a way of coping with emotional distress. Another psychological variable associated with drug use is self-control. Self-control is a self-regulatory behaviour through which a person controls his or her thoughts, emotions, motivations,

impulses, and desires (Bandura, 1991; Baumeister, 2018). Young people with low levels of self-control are more likely to engage in drug use than young people with high levels of self-control as they are less able to resist temptation and their behaviour is more likely to be influenced by impulses (Frieze & Hoffmann, 2009).

Various studies established a relationship between self-control and drug use. For example, positive associations between low self-control and drug problems have been observed among adolescents (Vaughn, Beaver, DeLisi, Perron, & Schelbe, 2009). Longitudinal research with adolescents has shown that drug use was reduced among participants with higher levels of self-control (Wills, Ainette, Stoolmiller, Gibbons, & Shinar, 2008; Wills & Stoolmiller, 2002). A study of drug use offenders in the UK found that low self-control was associated with higher use of drugs as well as with earlier age of onset of drug use (Packer, Best, Day, & Wood, 2009). In a study of American high-school students, Sussman, McCuller, and Dent (2003) found that low self-control was a consistent predictor of use of marijuana and cocaine use. In a study of American undergraduate students, Ford and Blumentstein (2013) found that students with low self-control were more likely to use marijuana and to abuse prescription drugs than students with high self-control. Higgins, Mahoney, and Ricketts (2009) had found that low self-control was associated with non-medical use of prescription drugs among young adults.

To the knowledge of the authors, no studies investigated self-control as a predictor variable of drug use in Botswana. The present study, therefore, aimed to explore (1) whether young people who use drugs differ in their levels of self-

control from those who do not use drugs, (2) whether drug users who had stopped using drugs differed in their levels of self-control from drug users who reported drug use at the time of the study, and (3) whether level of self-control is associated with level of drug use. The target group for the study was university students. University students are known to have higher rates of drug use than young people who do not attend university (Ford & Blumenstein, 2013). The study hypothesised (i) that students who had used drugs would have lower levels of self-control than students who had never used drugs, (ii) that students who had stopped using drugs would have higher levels of self-control, and (iii) that high levels of drug abuse would be associated with low levels of self-control; (iv) the study also hypothesised that self-control would predict drug use. The study considered differences in drug use behaviour based on gender, year of study, and whether students were raised in a rural or an urban area. The results of the study could be of benefit for the development of efficient drug use prevention and treatment programmes.

The study was entrenched within Bandura's social cognitive theory of self-regulation (Bandura, 1991). According to this theory, human beings have the capacity to control or regulate their own behaviour as part of an on-going process of self-influence. However, whether or not individuals are able to influence their behaviour will depend on (i) how well they monitor their own behaviour and its determinants and effects, (ii) how they react emotionally to their own behaviour, and (iii) how they judge their own behaviour while considering personal standards and environmental circumstances. For example, although peer pressure

has been identified as one of the strong determinants of drug use among young people (Lee, Neighbors, & Woods, 2007), Bandura (1991) pointed out that people with high levels of self-control are better equipped to follow their own standards, even when in situations of social pressure. The ability to exert self-control varies from situation to situation. For example, situations of distress can lower people's self-control (Baumeister & Heatherton, 1996) and make them behave in ways that they would otherwise not opt for. The concept of self-control helps to understand why some individuals may be more prone to getting involved with drugs while others are able to withhold any temptations of drugs. However, while low self-control appears to be a personal trait that makes individuals vulnerable to drug use, it should be noted that many of the illicit drugs contain psychoactive components that affect the same neural circuits in the brain that enable self-control (Baler & Volkow, 2006); that is, the more a person abuses psychoactive drugs, the more he or she will lose the ability to exert self-control and, as a result, gets absorbed by the vicious circle of drug addiction (Baler & Volkow, 2006; Leshner, 1997).

METHOD

Procedure

Applying convenience sampling method, 284 self-administered questionnaires were distributed in four undergraduate classes at the University of Botswana attended by students from various academic programmes. The participants completed the questionnaires individually in the lecture venues and returned them to the researchers in class. Participation in

the study was voluntary and anonymous and based on informed consent. Ethical clearance was obtained from an Ethics Board in the University of Botswana. The researchers debriefed all participants and offered them information about where they could seek psychological assistance. All questionnaires were returned, but 15 questionnaires were excluded from data analysis because they were either incomplete over large parts or because participants were below the age of 18 years and no informed consent was obtained from the participants' parents/guardians.

Participants

The final sample remained with 269 participants of whom 72.9% were female and 27.1% were male. Their *mean* age was 20.9 years (*SD* = 1.8). More than half (55.0%) of the participants were enrolled in the Social Sciences and 22.3% were enrolled in Business Studies; smaller percentages of participants were enrolled in Engineering (5.6%), Humanities (5.6%), Sciences (4.8%), Education (4.5%), and Health Sciences (2.2%).

Measures

The self-administered questionnaire contained questions asking whether or not participants had ever used illicit drugs, what kind of drugs they had used, and whether they had used drugs at the time of the study. The questionnaire also contained the Drug Abuse Screening Test (DAST-20; Skinner, 1982), comprising 20 items (e.g., "Can you get through the week without using drugs?") to determine the level of drug abuse; each item is presented with two response categories (i.e., "No", "Yes"). In this scale, total scores can range from 20 to 40 with high scores indicating high levels of drug

abuse. In this study, a Cronbach's alpha of 0.98 was obtained, suggesting strong internal consistency reliability for this scale.

Furthermore, the questionnaire included the Brief Self-control Scale (Tangney, Baumeister & Boone, 2004), which contains ten items (e.g., "I am good at resisting temptation") measuring levels of self-control with 5-point response categories (i.e., "Not at all like me", "A little like me", "Somewhat like me", "Mostly like me", "Very much like me"). Total scores in this scale can range from 10 to 50, with high total scores indicating high levels of self-control. In the present study, a Cronbach's alpha of 0.83 was obtained for this scale.

The questionnaire also explored demographic and personal background variables (i.e., age, gender, year of study, faculty enrolment, place of upbringing, and parents' level of education).

Data Analysis

Data were analysed with IBM SPSS Statistics 25, utilising descriptive statistics, correlation analysis (Pearson's product-moment correlation co-efficient), independent samples *t*-test, *Chi*-square test (including continuity correction for 2x2 tables), and binary logistic regression analysis.

RESULTS

Personal background of the participants

The sample (*N* = 269) consisted of 196 (72.9%) female and 73 (27.1%) male participants. Their average age was 20.9 years (*mean*; *SD* = 1.8), ranging from 18 to 27 years. Slightly more than a third (36.6%) of the participants were raised in a rural area (i.e., village or agricultural lands) and 63.4% were raised in an urban area (i.e.,

city or town). Slightly more than half of the participants (53.0%) had a mother/female guardian who had completed university/college level education and fewer (42.7%) had a father/male guardian who had completed university/college level education. About a quarter (24.7%) of the participants were in their first year of university studies, 29.2% in their second year, 22.5% in their third year, and 23.6% in their fourth year.

Self-reported drug use among participants

The majority of participants ($N = 183$; 68.0%) reported that they had never consumed illicit drugs while 86 participants (32.0%) had consumed illicit drugs at some point. In addition, 34 (12.6%) of the participants reported that they had abused prescription drugs. Among the drug users, 40 (46.5%) had consumed drugs at the time of the study.

Among the participants who reported drug use, marijuana was the most commonly used drug (72.5%), followed by codeine (17.5%) and Nyaope (7.5%); cocaine, heroine, and paint were mentioned only once each; six participants did not specify what kind of drugs they had used. Twelve (14.5%) participants reported that they used more than one drug at a time.

Gender, place of upbringing, and year of study by drug use

An independent samples t -test revealed that drug users were significantly older ($mean = 21.4$ years, $SD = 1.8$) than non-users ($mean = 20.7$ years, $SD = 1.7$; $t(266) = -3.25$, $p = 0.001$). Table 1 shows that male participants were more likely to use illicit drugs than female participants ($\chi^2(1) = 17.34$, $p = 0.000$). Participants who were raised in an urban area were also more likely to use drugs than participants raised in a rural area ($\chi^2(1) = 12.38$, $p = 0.000$). Participants in their fourth year of study were more likely to use illicit drugs than participants in lower levels of study ($\chi^2(3) = 15.13$, $p = .002$).

Self-control

Participants' total self-control scores ranged from 15 to 50 (out of a possible score range from 10 to 50), with a $mean$ total score of 36.05 ($SD = 7.8$). Female participants had significantly higher self-control scores ($mean = 37.16$, $SD = 7.6$) than male participants ($mean = 33.00$, $SD = 7.7$; $t(260) = 3.91$, $p = 0.000$). Age was not associated with self-control ($r = -0.02$, $p = 0.703$). Participants who grew up in a rural area had significantly higher self-control scores ($mean = 38.01$, $SD = 6.3$) than participants who were raised in

Table 1. Gender, place of upbringing, year of study, and drug use

Variables		Total		Non-drug users	Drug users	$\chi^2(df)$, p -Value
		N	%	%	%	
Gender	Female	196	72.9	80.9	55.8	17.34 (1), 0.000
	Male	73	27.1	19.1	44.2	
Place of upbringing (1 missing)	Rural	98	36.6	44.0	20.9	12.38 (1), 0.000
	Urban	170	63.4	56.0	79.1	
Year of Study (2 missing)	First	66	24.7	27.1	19.8	15.13 (3), 0.002
	Second	78	29.2	33.7	19.8	
	Third	60	22.5	22.1	23.3	
	Fourth	63	23.6	17.1	37.2	

an urban area (*mean* = 34.90, *SD* = 8.4; $t(243.6) = 3.40, p = 0.001$). Year of study was not associated with self-control ($r = 0.01, p = 0.846$).

Self-control and drug use

An independent-samples *t*-test was conducted to compare the self-control scores for drug users and non-drug users. The results revealed that drug users had significantly lower self-control scores (*mean* = 32.9, *SD* = 8.0) than participants who had not used drugs (*mean* = 37.5, *SD* = 7.3; $t(260) = 4.57, p = 0.000$). Therefore, the hypothesis that drug users would have lower self-control scores than non-drug users was supported.

The study had also hypothesised that drug users who had consumed drugs at the time of the study (current drug users) would have lower self-control scores than drug users who had stopped their drug use. This hypothesis was supported by the results of an independent-samples *t*-test which showed that current drug users had significantly lower self-control scores (*mean* = 30.68, *SD* = 8.3) than drug users who had stopped using drugs (*mean* = 34.80, *SD* = 7.3; $t(80) = 2.38, p = 0.020$).

Among those participants who reported drug use, the results of the Drug Abuse Screening Test revealed a *mean* score of 24.82 (*SD* = 3.4), ranging from 21 to 36 (out of a possible score range from 20 to

40), indicating that on average drug using participants had a low level of drug abuse. It was hypothesised that higher levels of drug abuse would be associated with lower levels of self-control. Correlation analysis revealed a negative, moderate association between levels of drug abuse and self-control ($r = -.33, p = 0.006$), thus, supporting the hypothesis.

Predictors of drug use

Binary logistic regression analysis was employed to test a model which assumed that self-control, gender, age, place of upbringing, and year of study would predict drug use. The results revealed that only three of these variables contributed significantly to predicting drug use, with self-control having the strongest predictive ability, followed by gender, and year of study (Table 2). The results suggested that an increase in self-control would decrease the probability of drug use. The results also revealed that the odds of using drugs were more than three times higher for male participants and more than two times higher for student participants in higher levels of their studies. The predictive power of the model was supported by the ‘goodness of fit’ test ($\chi^2(5) = 48.08, p = 0.000$) and by the Hosmer and Lemeshow test ($\chi^2(8) = 10.45, p = 0.235$). However, self-control, gender, and year of study explained only between 16.9% (Cox

Table 2. Binary logistic regression predicting the likelihood of drug use based on self-control, gender, age, place of upbringing, and year of study

Variables	Ever used illicit drugs				
	<i>B</i>	(<i>SE</i>)	Wald	<i>OR</i> (95% <i>CI</i>)	<i>p</i> -Value
Self-control	-0.09	0.03	10.77	0.92 (0.87,0.97)	0.001
Gender	1.24	0.41	9.17	3.46 (1.55, 7.74)	0.002
Age	-0.18	0.17	1.05	0.84 (0.59, 1.18)	0.304
Place of upbringing	0.55	0.48	1.34	1.74 (0.68, 4.43)	0.247
Year of study	0.88	0.31	8.27	2.42 (1.33, 4.42)	0.004

& Snell *R* Square) and 29.9% (Nagelkerke *R* Square) of the variation of whether or not participants had ever used drugs.

DISCUSSION

This exploratory study aimed to investigate the relationship between self-control and drug use among university students in Botswana. Most of the participants in this study did not use drugs and most of those who did, had used marijuana. Marijuana is a commonly used substance in Botswana (Diraditsile & Rasesigo, 2018) and is also used frequently among university students elsewhere (Ford & Blumenstein, 2013).

While drug abuse may not have been a protuberant problem in the sample of this study, the results supported the hypotheses of the study. More specifically, participants with lower levels of self-control were more likely to have engaged in drug use than participants with higher levels of self-control. Self-control predicted drug use and the results suggest that an increase in self-control will decrease the probability of drug use. These results are consistent with findings from other parts of the world where self-control was found to be inversely associated with drug use (Ford & Blumenstein, 2013; Higgins et al., 2009; Packer et al., 2009; Sussman et al., 2003; Vaughn et al., 2009). The results of this study imply that self-control does play a pertinent role in whether or not young people engage in drugs.

Among those participants who had engaged in drug use, about half of them had not used drugs at the time of the study, suggesting that they had been able to stop their drug consumption and that they had not developed an addiction. This

assumption was supported by the results which showed that participants who had not taken drugs at the time of the study had significantly lower scores in the drug abuse screening test than those participants who had taken drugs at the time of the study. As hypothesised, those who had been able to stop their drug use had significantly higher levels of self-control than those who took drugs at the time of the study. This result suggests that even when young people had used drugs at some point in their life, perhaps out of curiosity (Lee et al., 2007), higher levels of self-control may have enabled them to stop using drugs and protected them from developing an addiction. Such interpretation is in line with Bandura's theory of self-regulation (Bandura, 1991), according to which self-control empowers people to consciously and pro-actively decide upon their own behaviour. Bandura (1991) emphasised that the capability of self-reflection and self-reaction enables individuals to exert control over their thoughts, emotions, and actions. Therefore, participants with higher levels of self-control may have found ways to stop using drugs.

However, it is imperative to consider that a person's willpower to exert self-control in order to stop drug consumption may not just be a question of a personal trait. While self-control can be learned and trained (Diamond, Barnett, Thomas, & Munro, 2007; Romer, Duckworth, Snitman, & Park, 2010), the ability to exert self-control is a function of the brain. As mentioned earlier, many of the psychoactive drugs affect the same neural circuits in the brain that enable self-control; drugs deplete a person's ability to exert self-control (Baler & Volkow, 2006). While people with low self-control may be more prone to start using

drugs, drugs on their own can lower a person's self-control. This means that stopping drug use may not simply be a question of personal willpower but also a question of the chemical composition of the drug. In the present study, participants with higher scores in the drug abuse screening test had significantly lower levels of self-control than participants with lower drug abuse scores. The cross-sectional design of the present study did not allow determining whether participants' level of self-control was already low before they started using drugs or whether their self-control had diminished over time resulting from the effects of the drugs they had consumed. A longitudinal design would be necessary to investigate the effects of drug use on self-control.

While self-control predicted drug use in this study, other variables also contributed to use of illicit drugs. Male participants were more likely to have used illegal drugs than females. This is consistent with findings of other studies that have reported that males were more likely to use drugs (e.g. Cotto et al., 2010; Letamo et al., 2016; Ludick & Amone P'Olak, 2016; Mitchell & Potenza, 2016). Reasons given for gender differences are that men seem to have more positive attitudes towards drugs than women (Wagner, Stempluk, Zilberman, Barroso, & Andrade, 2006) and that men are more impulsive than women, making them more likely to use drugs (Mitchell & Potenza, 2016). In the present study, males had significantly lower levels of self-control. Therefore, they were likely to have engaged in impulsive behaviour, which could have contributed to their drug use.

Older participants and participants in their fourth year of studies were more likely to use drugs than younger students

and those in lower levels of their studies. Interestingly, only year of study, but not age, predicted whether or not participants had engaged in drug use. The result suggests that the longer young people are at university the more likely they get involved in drugs, which raises the question as to how much university life on its own contributes to students' drug use.

Limitations

One of the limitations of this study is that it had not explored the length of time participants had been using drugs. Another limitation is that based on the self-report questionnaire, participants may have over or underreported their drug use. The study did not control for moderating or mediating variables such as personality characteristics, relationship with parents, stability of the family environment, or adjustment to university life. Further research is necessary to attend to these limitations.

Conclusion

The results of this study suggest that self-control does play a crucial role in whether or not young people use illicit drugs. Low self-control makes young people vulnerable to drug use and subsequent addiction. In Botswana, where drug use is a problem, it could be important to address self-control as a psychological variable when targeting young people's drug use behaviour. Regardless of whether low self-control is a personal trait or the result of long-term drug use, a person's improvement or restoration of self-control is key for the prevention and/or treatment of drug abuse. Drug use prevention and treatment strategies should aim to strengthen young people's self-control. In university contexts, it may be useful to offer specific self-control

enhancing counselling services, particularly to first-year students, that equip them with skills and techniques to regulate their own behaviour so that they are more protected against the temptation of drug use while at university.

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ILLICIT USE OF HIGH-DOSAGE BUPRENORPHINE IN TUNISIA

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ABSTRACT

In Tunisia, dependence to high-dosage buprenorphine (HDB) is expanding since the uprising of 2011, driving the epidemics of blood-borne infections among people who inject drugs. Only one rehabilitation center (Thyna center), run by the Tunisian Association for the Prevention of Drug Use is still operating in the country and accepting to treat patients. The aim of this study is to provide evidence-based solutions for the mitigation and prevention of HDB illicit use in Tunisia through the analysis and discussion of the results of a cross-sectional survey conducted to describe the socio-economic, the medical characteristics, the substance use patterns, and the treatment outcomes of patients seeking treatment at the Thyna rehabilitation center during the year 2013. The results of this survey showed that main demographic characteristics of the patients using illegal HDB were single men, unemployed and from low-income urban areas. The intravenous use was privileged and incarceration recurrences ($p < 0.05$), alcoholism ($p < 0.01$) and migration ($p < 0.01$) were associated with daily dosage of HDB. Most of the patients dropped out of treatment within the first month at the center. The analysis reveals the unmet needs of the people who inject drugs in terms of prevention and treatment and identifies opioid maintenance therapy within a psychosocial rehabilitation program framework as a good alternative to the current available health services for people who use drugs in Tunisia. Future research areas will explore the social factors behind substance use and substance injection in Tunisia among out-of reach groups of women and adolescents; as such data is needed to develop efficient policies.

Keywords: Injecting drug use, opioid, maintenance therapy, drug policy

Illicit drugs dependence has direct and indirect adverse consequences on individuals and on populations. In 2010, it

was estimated to account for almost 1% of global all-cause Disability-Adjusted Life Years (DALY) (Degenhardt et al., 2013).

A particular aspect of drug dependence is Injecting Drug Use (IDU), mainly opioids that derive from opium e.g. heroine, morphine. Opioid dependence is the largest contributor to the global burden of disease causing 9.2 million DALY globally (Degenhardt et al., 2013). Countries with the highest burden are mainly countries in Europe and North America, nonetheless, recent reviews suggest that illicit substance use is quickly expanding across Africa and the Middle-East (Dewing, Plüddemann, Myers, & Parry, 2006). A literature review on IDU in six African countries showed that high-risk behaviors among people who inject drugs are potentially contributing to the spread of Human Immunodeficiency Virus (HIV) in the continent (Dewing et al., 2006). This high risk is imputable to direct transmission of the virus through the sharing of injecting equipment, such as syringes ("People who inject drugs, HIV and AIDS," 2015). Furthermore, IDU alone as a risk factor accounts for 2.1 million DALY globally (Degenhardt et al., 2013) and is considered as an important factor driving the HIV epidemics in African countries (Horton & Das, 2010).

Tunisia, a North African country, is no exception. While transmission of HIV in the general population is still limited, the highest infection rates are registered among high-risk groups such as people who inject drugs. In 2011, a study conducted in Tunis, capital city of Tunisia, estimated that almost 25% of HIV infections are imputable to IDU and that 2.4% of people who inject drugs are HIV positive (Rahimi Movaghar, Amin Esmaeili, Aaraj, & Hermez, 2012). The Tunisian National AIDS Strategy includes people who inject drugs as a key target population. Yet, it is hard to assess the general prevalence of

IDU in the country, and harm reduction and preventive services are solely provided by non-profit, private organizations ("Bénéficiaires principaux Sida," n.d.). Finally, rehabilitation options are very limited in the public sector and Opioid Maintenance Therapy (OMT) medication are not available in Tunisia (Skhiri, Zalila, Zid, & Boukassoula, 2014).

OMT offers a long-term treatment of opioid dependence with replacement medication such as Methadone or High-Dosage-Buprenorphine (HDB) to decrease the withdrawal syndrome after opioids cessation (Bart, 2012). Buprenorphine is a semi-synthetic opioid formulated in sublingual, highly-dosed tablets to be prescribed as part of OMT (Khanna & Pillarisetti, 2015). Although HDB is not legally accessible in Tunisia, neither in hospitals nor in pharmacies, the sub-lingual tablets could be obtained illegally on the black market since the early 2000. Back in 2008, a hospital-based study, described HDB intravenous use as "an emerging reality" in the Tunisian society (Becheikh, Ghachem, Zalila, & Boussetta, 2008). After the 2011 Revolution, its trade and use have expanded and have not been effectively addressed since (Belarbi et al., 2014). Today it is considered to be the first IDU substance (Skhiri et al., 2014).

Overall, drug use and injection are extremely criminalized by the law in Tunisia and people who inject drugs are marginalized from the rest of the society (Rahimi Movaghar et al., 2012). Men and women who inject drugs also face limited treatment options and insufficient prevention services, in addition to incarceration. Efforts to mitigate and prevent are limited and coverage is low as only six free and safe needle exchange facilities exist on the national territory (Rahimi Movaghar et al.,

2012). The growing non-medical and illicit use of HDB as a risk factor behind the growing hepatitis and HIV epidemics in Tunisia (Kilani et al., 2007; Mumtaz et al., 2014), is a Public Health concern. Despite this reality, the legislation and national policies are lagging behind the emerging social trends. The few rehabilitation clinics available in Tunis have shut down in recent years. Moreover, harm reduction centres and rehabilitation services depend on external funding as they are not government-based. The political transition of 2011 has affected the development of their activities, and in some cases they were completely ceased. Only one rehabilitation center has been operating and accepting patients from all regions of the country (Skhiri et al., 2014). This center is managed by a non-governmental organization, the Tunisian Association for the Prevention of Drug Use, named ATUPRET and located in Thyna, near the city of Sfax.

METHODS

The main objectives of this survey are to describe the socioeconomic and medical characteristics, to identify the consumption patterns and history of dependence, and to look at the correlated factors with HDB use and treatment outcomes of the patients seeking therapy for HDB dependence at the above-mentioned rehabilitation center. The aim is to use the results of the survey and provide evidence-based alternatives from the literature on mitigating the use of HDB in the Tunisian society.

Participants

In this study, the population sample solely includes patients aged at least 18 years old, and admitted for the treatment

of HDB dependence between January 1st 2013 and December 31st 2013 at the rehabilitation center. A total of 167 subjects met these criteria and their records were retrieved.

Data collection

The data collection took place at the center between January and March of 2014 after gaining access to the archived medical records of the year 2013, with an ethical waiver from the association's executive board. After consultations with the medical experts and psychologists at the center, a data collection form was developed by the authors with respects to anonymity and confidentiality. The form helped collecting personal information related to the objectives of this survey. Relevant data included the socioeconomic variables e.g. gender, age, level of education, work and family status, the family history of substance use disorders, the individuals' experience of initiation of substance use, the dosages and means of HDB daily self-administration. Blood-borne infections such as hepatitis C and HIV were reported as part of the medical history. The length of the stay at the clinic and the number of previous rehabilitation admissions, were collected to report on treatment outcomes.

Statistical Analysis

The information extracted was classified and codified into variables. The free software R-GUI was used for the statistical analysis. Frequencies, ranges and standard deviations were determined for socioeconomic characteristics and for variables related to HDB consumption. A chi-square statistical test was conducted for variables related to the daily dosage of HDB and to the duration of HDB intake. Subsequently, a Kendall non-parametric

test was run to identify the correlated variables in the sample.

RESULTS

Patients admitted for HDB dependency in 2013 presented 54% of all the patients admitted that year.

Socioeconomic characteristics

All patients were men and the mean age was 33.5 ± 8.1 years with 95% between 32 and 35 years old. The population characteristics are summarized in Table 1. Among the patients, 73% were single, 60% were unemployed and 51% had completed their primary education or less. The majority of the population (94%) was living in urban areas and 35% came from large families (more than three siblings). More than a quarter (28%) experienced domestic violence and 20% were orphaned at a young age. Family history defined as having any family member with history of substance use disorders was reported for 16%. Furthermore 40% had migrated, mainly to European countries (34%), either legally or through illegal ways. Incarceration rate was at 68% with 44% recidivism rate after the first confinement.

Medical history

On the 167 medical records, 54 indicated infection with hepatitis C, 14 with hepatitis B and 13 reported HIV-positive cases. Among the HIV-positive group, 12 also suffered from hepatitis C (cases of double infection).

History and initiation of substance use

The mean age for the first consumption of a psychoactive substance, was $16.4 \pm$

4.5 years and the mean age for the first injection of an opioid was 24.0 ± 6.1 years. Many subjects initiated drug use by taking multiple products at the same time. For about half (53%), marijuana was the first recreational consumption and for almost the fifth (18%) it was diverted psychotropic medicine such as benzodiazepines. Furthermore, a small proportion of 8% reported glue or other inhalants sniffing before the age of ten years old, whereas use of heroin and cocaine as the first recreational drug was in only 7% of the cases and HDB for a few 2% (Figure 1).

Self-reported causes of initiation were related to peer-pressure in 25%, to feelings of curiosity and thrill-seeking in 21%, in order to escape a harsh reality in 22% and within the illegal emigration context for 16% of the cases. A specific reason for using HDB was the abundance of the substance and the facility of finding and procuring it in comparison to other products such as Heroine, which was the case for 13% of the sample. Less than 1% reported that they have developed an opioid dependence after using prescribed pain killers which led them to the use of DB as a replacement.

Multiple consumptions

Apart from regularly injecting HDB, the majority of the population (98%) was using multiple other dependence-producing substances simultaneously. Harmful alcohol use affected 78% and alcoholism 22%. Tobacco and Marijuana smoking rates were at 86% and 70%, respectively. Moreover, diversion of psychotropic medicine was common with benzodiazepines used by 60% and anxiolytic drugs by 43% of the subjects.

Patterns of HDB intake

The daily intake and dosage of HDB were reported in the medical records in

Table 1. Demographic characteristics and substance use initiation variables

Ages (Years): Mean (\pmSD)	Mean	
Age	33,5(\pm 8,1)	
Age At First Substance Use	16,4 (\pm 4,5)	
Age At First Substance Injection	24,0 (\pm 6,1)	
Mean Duration Of HDB Use	7,5 (\pm 3,7)	
Marital Status	Number	Percentage
Single	122	73%
Married	34	20%
Divorced	9	6%
Widow	2	1%
Place of Living	Number	Percentage
Urban	157	94%
Non-Urban	10	6%
Education	Number	Percentage
Primary School	85	51%
Secondary/High School	66	40%
High School Graduate	13	8%
University	3	2%
Family Environment	Number	Percentage
Parent(S) Deceased	33	20%
Domestic Violence As A Child	46	28%
Large Family	59	35%
Family History Of Substance Use	26	16%
Profession	Number	Percentage
Unemployed	101	61%
Precarious Worker	31	19%
Salarial Work	35	21%
Migration	Number	Percentage
Emigrated	66	40%
Lived In European Country	56	34%
Illegal Migration	33	20%
Legal Migration	33	20%
Detention	Number	Percentage
Incarcerated At Least Once	113	68%
Multiple Incarcerations	74	44%
Drug-Related Felonies	73	44%

Demographic characteristics of the sample of 167 patients show the number and the percentage for each variable. The highest rates are related to being single and unemployed, having a low education level, living in urban areas, and having being incarcerated at least once.

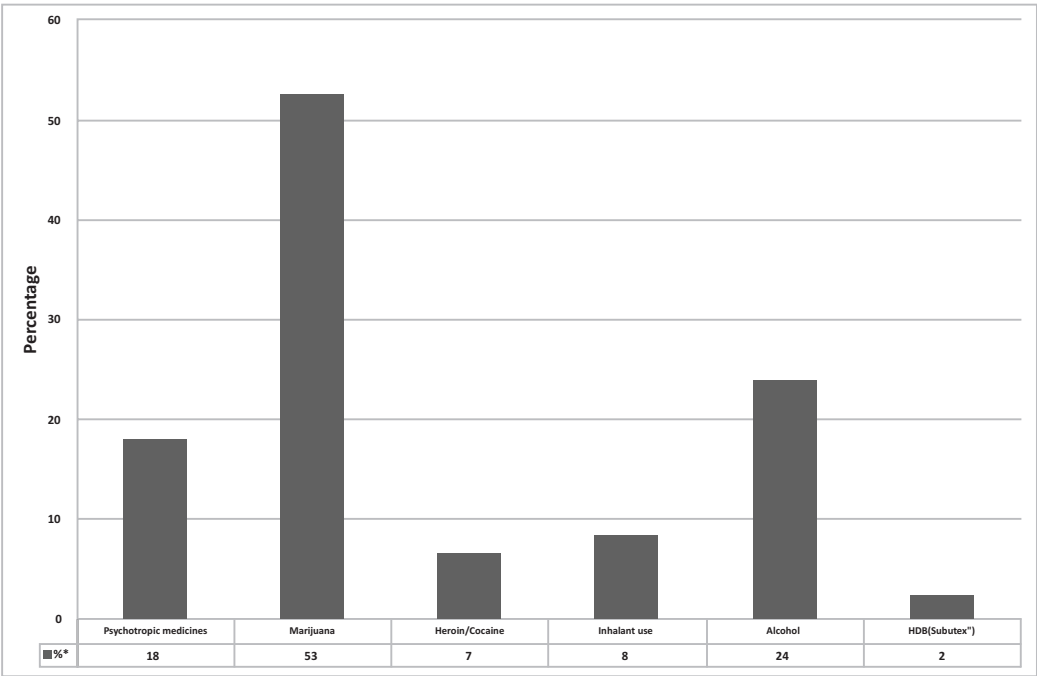


Figure 1. Substance used as the first recreational substance

Note: Initiation of substance use may start with one, two or more concomitant consumptions. Marijuana is the most popular substance to be used at the first time, followed by alcohol and psychotropic medicines that include tranquilizers and sedatives. Smaller proportions of the subjects used inhalants such as sniffing glue, and even less used heroin or cocaine as their first substance. HDB came last as the first ever consumed substance for recreational purposes.

terms of multiples of eighth (1/8) of a tablet. In fact, this is how the patients referred to their consumption: one tablet was typically cut in 8, sold and consumed in such portions. For the sake of clarity and consistency, the dosage of daily intake was directly calculated from the medical records then reported in milligrams, considering that a tablet contains 8mg of HDB as it is the most common form of diverted HDB in the country (Skhiri et al., 2014). The mean dosage of daily intake was 6.5 ± 3.8 mg per day. The mean number of daily intakes was 3.7 ± 2 times a day and the mean duration of HDB long-term use was evaluated to 7.5 ± 3.7 years.

Less than 1% of the patients used HDB via the sub-lingual route. Almost 70% started HDB intake through intravenous

route and more than a quarter (26%) started HDB consumption through the intranasal route or “sniffing”. At the time of admission to the clinic, the majority of the sample (96%) was self-administrating HDB through intravenous syringe use, in opposition to 4% who have not transitioned from sniffing yet.

Treatment and treatment outcome

The mean length of stay at the center was 16.8 ± 8.3 days. About 47% of the medical records indicated that the patient had undergone at least another previous withdrawal management therapy.

Statistical Analysis

The chi-square test revealed that incarceration recidivism ($p < 0.05$), alcohol

dependence (or alcoholism) ($p<0.01$) and migration ($p<0.01$) were associated with the daily dosage of HDB. In addition, duration of HDB consumption was significantly related to marital status ($p<0.01$), past heroin dependence ($p<0.01$) and alcohol dependence (Table 2). A correlation was established between the place of living and the self-reported causes of HDB use ($p<0,05$).

Kendall non-parametric test showed that the daily dosage was positively correlated to the number of daily intakes ($r=0.33$, $p<0.01$) and to the long-term HDB intake ($r=0.18$, $p<0.01$). A positive correlation between the early onset of substance use and the early onset of substance injection was also found but not significant ($r=0.08$, $p=0.2$). Finally, another positive correlation was revealed between the age of the subject and HDB consumption duration ($r=0.39$, $p<0.01$).

DISCUSSION

Through the analysis and discussion of the results and identification of the unmet needs of patients at the rehabilitation center, this study aims at providing

evidence-based alternatives and solutions to prevent HDB use and mitigate its consequences in Tunisia.

The results showed that the majority of HDB users seeking help at the center are young adult men, single, unemployed, and with low educational level. Although the center did not use any selection criteria and accepted patients from all over the country, the majority of the sample came from urban areas. These findings are similar to other reports that have stated that trafficking of this substance occurs in low-income urban settings among groups of young unemployed men with history of criminal cases (Skhiri et al., 2014). Other research studies have consistently portrayed comparable aspects of people who inject drugs in Tunisia, as well (Becheikh et al., 2008; Belarbi, Ben Ammar, Moula, Bouasker, & Ghachem, 2013; Robbana, Moula, Guermani, Bouasker, & Ghachem, 2013). The social stigma around IDU has amplified through its consistent portrayal in relation to criminality in major published studies and official reports. Consequently, other groups such as adolescents and women with substance use disorders become harder to reach and include in

Table 2. Consumption of high-dosage buprenorphine

	A+	A-	χ^2	P	H+	H-	χ^2	P	E+	E-	χ^2	P	I>2	I<1	χ^2	P	Single	Married	χ^2	p
Daily dosage of HDB	21.56%	71.27%	52.2	3.47E-05	32.34%	67.66%	15.77	0.07184	39.52%	60.48%	22.79	0.006675	44.31%	25.75%	121.36	0.01541	73.05%	20.36%	16.35	0.9459
Duration of HDB consumption			56.15	0.009793			32.21	0.01415			23.86	0.1231			142.18	0.6629			77.56	0.009654

$p<0.01$

Note: A+ Reported alcohol addiction ; A- No reported alcohol addiction; H+ Reported heroin addiction; H- No reported heroin addiction; E+ Have emigrated; E- Have never emigrated; I>2 Have been incarcerated more than once; I<1 Have been incarcerated once or never.

research studies as they fear stigma or other social or legal consequences.

About 70% of the patients had a criminal record with drug-related felonies in more than 50% of them. Findings also indicated long periods of custody and frequent recidivism. High incarceration rates have also been reported by Dakhliya et al. and Robbana et al. in their studies on smaller samples of patients with HDB dependence admitted in public hospitals (Dakhliya Boukhari & Zalila, 2010; Robbana et al., 2013). Nevertheless, HDB was depicted in the literature to be considered by people who inject drugs as a “*safer*” substance to use in order to avoid criminal convictions, since it is not detectable through forensic investigations (Skhiri et al., 2014). The high rates of drug-related felonies in the survey sample may be related to the use of other substances in concomitance with HDB or in the past at the initiation of recreational substance use.

A study conducted in Singapore, stated that 80% of people who injected HDB served a prison sentence (Winslow, Ng, Mythily, Song, & Yiong, 2006). Both Singapore and Tunisia have strong legislation governing substance use. In Tunisia, non-medical consumption of opioids and other drugs is criminalized (Narcotics Law n° 92-52, 18th May 1992) and treatments of opioid addiction are not available in prisons. Apart from hindering the work of harm reduction programs, such strong laws doubled with strict moral social norms constrain people who inject drugs and dissuade them from coming forward to seek medical care and social assistance. Furthermore, HDB consumption was correlated to migration among the study sample. Both Becheikh et al. in 2008, and Robbana et al. in 2013,

also reported in their respective studies high rates of illegal migration to European countries, among a subgroup of people who inject HDB with a history of heroin addiction. The subgroup of HDB users who have lived in European countries have first encountered HDB during a prescribed OMT to treat their heroine dependence. Illegal use of HDB later on in life, and in places where OMT is not a legally available therapeutic option, is an attempt to self-manage a long-term opioid dependence.

The circumstances and rationales of HDB use in Tunisia, where it is illegally sold in the black market, are different from other countries where it can be legally procured within an OMT framework. In fact, the self-reported causes of HDB initiation were correlated to the place of living. In Italy, younger opioid consumers were reported to be more likely to divert HDB (Moratti, Kashanpour, Lombardelli, & Maisto, 2010), while in Sweden a study showed that buprenorphine was typically used at a later stage or at a severe level of opioid dependence (Johnson & Richert, 2015) as an attempt to self-treat withdrawal or to manage pain (Cicero, Ellis, Surratt, & Kurtz, 2014). These studies occurred in countries where HDB is legally available, which is not the case in Tunisia where HDB is not perceived as a medication but rather as an illegal, recreational, and dependence-producing substance. HDB has never been introduced as a treatment option in any sanitary structures; and Tunisian healthcare professionals have not been trained to prescribe it. Therefore, even though the rationales behind the illicit use of HDB in Europe and in Tunisia can be similar, the patterns of self-administration and dependence stages are different.

The initiation of injection of a dependence-producing substance among people who already use it through other routes, is a complex phenomenon involving a wide range of biological, socio-economic and psychological factors such as peer-pressure (Goldsamt, Harocopos, Kobrak, Jost, & Clatts, 2010). Ability to use less of an opioid or tolerance to different modes of administration can also, lead to initiating intravenous intake. The correlation found between the daily dosage of HDB and the number of daily intakes demonstrates the biological tolerance phenomenon that is particular to opioids and leads the user to increase the dosage or resort to a quicker intake route, in order to obtain the same effect of the substance. In fact, nearly all patients transitioned to injecting the substance per intravenous, after starting with intranasal administration. Peer-pressure, affluence and availability of HDB despite its illegal characteristic, were self-reported reasons for the initiation of injection of the substance. HDB is indeed considered to be a widely available and cheaper opioid than other illegal opioids on the black market (Skhiri et al., 2014).

On another note, 98% of the sample reported concomitant consumption of one or multiple other recreational, dependence-producing substances next to HDB. In a 2012 survey conducted by the Center for Urgent Medical Assistance of Tunis, 92% of HDB users co-administered other substances at the same time which the authors labeled as *poly-consumption* (Ben Salah & Hamouda, 2013). The most common psychotropic compounds used with HDB being benzodiazepines and alcohol, these associations may become very dangerous and may lead to fatalities (Häkkinen, Launiainen, Vuori, & Ojanperä, 2012).

Anxiolytic medications, sought for their tranquilizing effects, also have a major diversion and dependence potential. Poly-consumption challenges the therapeutic management as it is complex to tackle numerous addictions simultaneously. The length of the treatment at Thyna center for dependence was approximately two weeks, indicating a high drop-out rate and poor health outcomes. Derbel et al. evaluated the outcomes of the medical management of patients admitted at Thyna center and concluded that the symptomatic care of the withdrawal symptoms had limited and poor outcomes (Derbel, Ghorbel, Akrou, & Zahaf, 2016). Alternatively, maintenance therapy can be a beneficial tool to optimize treatment outcomes.

In addition, high rates hepatitis C and HIV-hepatitis C double infections were registered, illustrating the role of HDB injection and high-risk behaviors as risk factors behind the expansion of HIV and hepatitis among people who inject drugs in Tunisia (Belarbi et al., 2013). In a hospital-based study, 78% of HIV-positive inpatients had history of substance injection (Kilani et al., 2007). Numerous preventive public health interventions in Tunisia, such as the unlimited selling of sterile syringes over the counter in community pharmacies, are strategic to face the expansion of blood-borne infections but remain insufficient. Modern health policies are needed to democratize the harm-reduction facilities and improve their accessibility.

Providing affordable and safe HDB was established as an effective strategy to limit its diversion (Lofwall & Walsh, 2014). Policies that facilitate access to therapeutic options for opioid users were proven to be better solutions than constrained substance use policies. Relaxed legislation and OMT treatment options have been proved

to have positive outcomes and were associated with not only an improved quality of life, but also with a better social rehabilitation of the people who inject drugs and with positive effects on their families and social networks as well (Bart, 2012). In France, the marketing of HDB as a treatment for opioid dependence, proved to bring major public health benefits (Fats-eas & Auriacombe, 2007). Sun. et al meta-analysis looked at the OMT experience in China and concluded that it is an effective tool for the successful rehabilitation of opioids' users (Sun et al., 2015). In the light of this available evidence about the importance of OMT, implementation of modern and patient-centered therapeutic options coupled with responsive and Human Rights-based drug policies in Tunisia, will help to lower the high incarceration rates and poor treatment outcomes depicted in the results. Tailored long-term replacement and maintenance medication treatment with simultaneous psychotherapy are effective to prevent relapses, lower blood-borne infection risks, promote social reinsertion and improve general quality of life (Carrieri et al., 2006). Introducing OMT in Tunisia will help reduce the illegal use of HDB and its consequences on a broader scale.

OMT medications (HDB and Methadone) were enlisted on the WHO list of essential medicines since 2005 (Herget, 2005). Yet, in 2018 they are not legally accessible to the patients who need them in Tunisia. Introducing OMT could prove to be a multi-fold scheme that will encompass various sectors. However, successful experiences from other middle-income countries have been extensively documented and evidence-based guidelines are available. To carry-out OMT in Tunisia, training and technical support to health-

care providers and social workers will be necessary to equip them with the necessary tools.

CONCLUSION

Opioid diverted use has been largely documented in North Africa and particularly in Tunisia under the umbrella of HIV prevention programs. However, all reports align with this survey showcasing a homogenous group of single and unemployed men with criminal records with substance use disorders, seldom portraying out-of-reach groups such as women and adolescents who inject drugs. Despite the alarming expansion of substance use disorders and its public health repercussions since the 2011 uprising, therapeutic and preventive solutions are still limited in Tunisia. The social factors surrounding HDB dependence are yet to be explored. Evidence-based policies such as OMT are paramount to improve the current situation, rehabilitate the alarming growing number of HDB users, and reverse the trends. Advocacy for introducing OMT in Tunisia should be supported as a Human Rights-based approach and an efficient alternative to the existing withdrawal management therapy.

AUTHOR NOTE

This study was conducted as part of Pharm D. thesis project by the first author, Hager Ben Mosbah, who conducted data collection, data analysis and writing of the manuscript. Asma Ghorbel supervised and assisted in the data collection and data analysis and participated in the writing. Abderrazek Hedhili oriented and supervised the research process. All

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**DRUG-RECIDIVISM NEXUS IN NIGERIA:
A SOCIOLOGICAL CRIMINOLOGY PERSPECTIVE**

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ABSTRACT

The vast majority of studies that examine the drug-recidivism nexus are generally found in the Western literature, while the scholarship has received comparatively far less attention in Nigeria, despite its pervasiveness. This gap in knowledge calls for first, a theoretical discourse, and later, data-based studies on the interplay between substance use and recidivism. Guided by sociological criminology perspective, we applied multidisciplinary approach (i.e. an integration of economic, psychosocial, sociological, medical/physiological and criminological thoughts, concepts, variables, constructs, models, and theories) to examine the problem. From the review, it was found that illicit substance use inhibits the pathways to criminal desistance (aging out of crime) and heightens the trajectories to criminal persistence (recidivism). That is, it amplifies the tendency for individuals to take a long career in crime and at the same time causes them to persist in crime to get money to sustain their drug culture. This shows that the outcome of drug-recidivism interactions is mixed or perhaps unclear in terms of a particular variable that significantly influence the occurrence of the other. It is therefore, suggested that further studies in Nigeria be focused on developing a more robust methodologies and survey instruments for generating quantitative or qualitative data, or a combination of both methods. The aim is bidirectional: firstly, is to establish a more scientific basis for a clearer understanding of the two variables for accurate predictions and generalisation. Secondly, it stands to direct the paths to formulating treatment-based (against the widespread punishment-oriented) policy and practice on drugs and

recidivism, with primary focus on legal, social, economic, medical/physiological and psychological harm reduction as well as prison decongestion.

Keywords: Drugs, Nexus, Recidivism, Nigeria, Sociological Criminology Perspective

INTRODUCTION

Derived from the Latin word 'recidere' which means 'to fall back', recidivism simply means re-arrest, resistance to reformation and rehabilitation, repeat offending, re-conviction, reoffending, re-admission, re-incarceration, repetitious criminal tendency, or chronic offending. It is act of relapsing into criminal behaviour by an individual who had once or more times been processed (corrected or punished) through the criminal justice system (police, courts, or prisons). The problem is of global concern, as different societies—whether developed or developing—are experiencing increasing incidence of reoffending behaviour. It is one of the most fundamental challenges not only facing correctional institutions, prison system but also other subsystems in the criminal justice system and society at large. Although the rate of the problem varies from country to country, statistics lending credence to its prevalence on the global scale is seemingly overwhelming. For instance, Tica (2014) argued that recidivism is present in different percentages in all countries. In Romania, the incidence of repeat offending among prisoners is 45.78%. This percentage indicates that, for more than half of the inmates incarcerated in prisons, social and penal policies are ineffective and do not lead to the desired prosocial correction.

In Europe, the following percentages are presented concerning recidivism rate:

Austria (38%), Germany (35.7%), Netherlands (40.4%), Sweden (36%), Norway (43.4%), Scotland (53%), and England and Wales (48%) (Wartna, 2009; Tica, 2014). The problem appears to be more pronounced in the United States of America (USA), or perhaps is because it has rich sources of statistics on recidivism compared to most countries. Virtually all the States in USA are currently witnessing rapid increase in prison population, with recidivism inmates on the lead. A longitudinal study undertaken by the Bureau of Justice Statistics (BJS) in 2005 followed up 404,638 prisoners released in 30 States in US for five years after their release, that is, between 2005 and 2010. The result of this study revealed that 76.6% of them released in 2005 were rearrested at end of the five-year follow-up study period (i.e. 2005 through to 2010) (Durose, Cooper & Snyder, 2014; Fazel & Wolf, 2015; James, 2015). Again, the result of a study undertaken from 2003 to 2010 in 15 USA States shows that, on the average, approximately 52% of freed prisoners returned to prison for any reason within three years of release (Michael & Crews, 2012). Another evidential data shows that 61% of adult offenders in USA relapsed into crime and were arrested and incarcerated within one year of their release from prisons in 2009 (Ilorizzo, 2012).

The rate of recidivism is also high in most African countries, even though reliable statistics on the act are grossly lacking and thereby somewhat undermining

the degree, frequency and seriousness of the problem. For instance, "recidivism in South Africa is generally accepted to be very high, with some observers citing figures as high as 95%, but official figures are not known" (Quan-Baffour & Zawada, 2012, p. 73). This is an indication that there is a serious problem in all the operative ways of criminal justice system in several societies in the African continent (Stephen, 2004). In 2009, prisons in Mauritius recorded 85% rate of recidivism; most of the inmates have been to prison for 2-5 times or even more (Mauritius Prison Services, 2011 cited in Fhooblall, Chittoo & Bhoola, 2011).

As tenable in South Africa and other African countries, official statistics on crime generally, and its correlation with substance use particularly, is sparse in Nigeria. Nonetheless, few data highlighting the increasing rate of reoffending still exist in the country. Abrifor, Atere and Muoghalu (2012) explained that the rate at which inmates in Nigeria return to the prison few months after they have been released has been a major source of worry to experts and professionals from diverse disciplines who now doubt the ideal function of the prison institution. Statistics shows that the prevalence of recidivism in 2005 was 37.3%, it reached 52.4% in 2010 (Abrifor *et al.*, 2012 citing Soyombo, 2009 & Abrifor, 2010), and 60% in 2012 (Chukwumerije, 2012 in Senatorchukwumerije.net). Nigeria has about 227 prisons spread across the 36 States and the Federal Capital Territory, Abuja, with the population of about 47, 800 inmates (Nigerian Prison Service Annual Report, 2010 cited in Alabi & Alabi, 2011; Africa News Service, 2012). The total number of inmates in Nigerian prisons as at 2010 was put at over 85,000 with the

highest number of them on awaiting trial, followed by recidivism offenders (Alabi & Alabi, 2011).

However, only recently have policy and research interests in understanding recidivism in Nigeria are beginning to appear in the scientific community. Even at that, only few scholarship attention has been given to the general area of drug-crime linkages in the country, while, in specific terms, there is no scientific study till date that has exclusively and specifically investigates the interplay between substance use and recidivism. Rather, postulations and debates on the phenomenon dominate Western, foreign literature. This neglected but important area of public interest has serious implications for drug-crime policy and practice. The lack of knowledge about the relationship between drug use and recidivism has, for long, negates every effort to combat the two social problems. Calling for further scientific studies and debates on the subject matter, this paper sets out to fill a void in the existing knowledge and make contribution to new knowledge. In fact, its central goal is to advance pragmatic measures that could lead to significant reduction in recidivism and illicit drug use.

CONCEPTUAL CLARIFICATION

Sociological Criminology Perspective: A Multidisciplinary Approach

The foundation of sociological criminology can be traced to the work of pioneering sociologists, Adolphe Quetelet (1796-1874) and Emile Durkheim (1858-1917) (Nisbet, 1974 cited in Siegel, 2008). It is "an approach in criminology, based on the work of Quetelet and Durkheim, which focuses on the relationship

between social factors and crime” (Siegel, 2008, p. 4). Sociological criminology perspective is a practical and broader approach (which applies social psychological, economic, socio-medical, sociological and criminological ideas) to the study of social problems by investigating their complex network using individual, group/familial and societal push-pull factors. The central goal for adopting this perspective is to promote interdisciplinary scholarship that would fill the gap in knowledge and literature on the drug-recidivism connection in Nigeria. In so doing, the paper is in the right direction to explain, in practical and holistic terms, the complex economic, psychological, sociological, physiological and criminological dynamics of the phenomenon under study for broad-based understanding by wide audience and thus provides a lead to dealing with the problem effectively.

Drug-Recidivism Nexus: Theoretical Underpinnings

When a social problem is of multiple causations, a systematic consideration of different relevant perspectives, theories, models, paradigms, propositions, constructs, concepts, and variables that give insight into the problem becomes necessary. Downe and Rock (1988) contended that only rarely does a single theory exhaust all interesting possibilities of a problem. Van Impe (2000) explained that some conventional theories and methods suggest that strategies to conduct research on a complex social phenomenon require multidisciplinary and interdisciplinary approaches, hence the rationale for adopting sociological criminology perspective. S. E. Otu (2004, 2012a, 2012b) maintained that, since criminals possess criminogenic elements which cut across

a good number of social science theories, an integrated or alliance approach remains the best and most favoured (see also Korhauser, 1978; Elliot, Ageton & Canter, 1979; Elliot, 1985; Downe & Rock, 1988; Lanier & Henry, 2004, 2010; Nnam, 2014; Agboti & Nnam, 2015; Ordu & Nnam, 2017; S. E. Otu & Nnam, 2018).

The theoretical underpinning is ingrained in the sociological criminology standpoint, which finds support from allied disciplines. As earlier established, the perspective is conceptually holistic, objective, critical, analytical and pragmatic in explaining social pathologies like the drug-recidivism relationship. What is more, the study does not only include certain elements of sociology and criminology in its analysis, but also variables in psychology, economics and medicine/physiology in its scientific enquiries into the nature and extent of drug-recidivism associations. This it does by unifying or—in their individual form—the basic tenets of several different theories as a framework for explaining the causal relationship between the two phenomena. In developing subcultural theory (sociology and criminology) to account for drug-crime causalities, for instance, Cloward and Ohlin (1961) postulated that some lower class youths form retreatist subculture, organised mainly around illegal drug use, because they have failed to succeed in both the legitimate and the illegitimate structures of the society. As failed gang members, they retreat, tails between their legs, into ‘retreatist cultures’ (Harambos, Holborn & Heald, 2008), which also predispose them to persist in law-breaking.

A theoretical orientation stemming from social control theories, particularly social bond and self-control strands

(criminological, sociological and psychological theories) reveals that one risk factor for criminal behaviour, including recidivism, is an absence of strong social bonds with people who engage in pro-social behaviour (Carr & Vandiver, 2001; Kosterman, Hawkins, Abbot, Hill Herrenkhol & Catalano, 2005; Goldner, Peters, Richards & Pearce, 2010; Nnam, 2017b). Importantly, theoretical explanations of the relationship between drugs and crime tend to fall into one of four categories: (1) drug use precedes criminal behaviour, (2) criminal behaviour precedes drug use, (3) drug use and deviant or criminal behaviour are mutually reinforcing or accelerating, and (4) drugs and crime are both the product of a common external cause (Link & Hamilton, 2017). Although centred on drugs and violent behaviour (not recidivism precisely), one of the earliest, famous and highly cited works that has established drug-crime linkages is Goldstein's (1985) tripartite postulation. For him, people commit violent crimes for three reasons: (1) psychopharmacologically under the influence of drugs (medical/physiological, psychosocial learning and cognitive theories); (2) economically compelled to offend to fund drug use (rational choice and economic theories); and (3) systemically brought to crime by being involved in the violent environment of drug use and drug markets (general theory of crime [self-control], social bond and life-course development theories).

The strength of Goldstein's framework is significant and its contribution seminal in explaining the correlation between substance use and recidivism. However, the three variables in his construct lack empirical testing and verification (MacCoun, Reuter & Kilmer, 2003) and, as a result, have come under intense criticisms.

At its core, the model is narrow in scope, and the categories are too rigidly categorical and not mutually exclusive (Parker & Auerhahn, 1998). Comparatively, for instance, certain psychoactive substances like alcohol and, to some extent cocaine, have been linked to increased violence (Bennett, Holloway & Farrington, 2008), but many individuals who use these substances do not go on to commit crimes (recidivate) while under the influence (Belenko & Spohn, 2015). As Belenko and Spohn (2015) rightly observed, individual drugs-crime relationships vary over the life-course (life-course developmental theories in physiology, psychology, sociology and criminology), which may also suggest that Goldstein's perspective is again too limited (see also Link & Hamilton, 2017).

The economic motivation model proposes that substance abusers commit income-generating crimes such as robbery, burglary, and drug sales in order to support their drug habits. The systemic model assumes that the system of substance distribution and use is intrinsically linked with violent crime through activities such as 'turf' skirmishes, assaults to collect debts, and robberies of dealers or buyers (Goldstein, 1985; Gottfredson, Kearley & Bushway, 2008). Although the current paper takes a cue from Goldstein (1985) and others, as illustrated above, it narrows down its scope to criminal recidivism instead of crimes generally. The advocacy is on making a paradigm shift from studying the general crime problem and its correlation with drug culture to an examination of recidivism as an aspect of criminal behaviour and its association with substance use. This is in consideration of the fact that conducting empirical research exclusively, specifically on the

latter area stands to hold great promise for articulating a more practical course of action that could guard against repeat offending and its attendant problems in both the Nigerian prison system and the free society.

The Interplay Between Substance Use and Recidivism

The relationship between substance use and recidivism is contested in the academia. Gottfredson, *et al.* (2008) opined that the link between drugs and crime has been a topic of sustained interest to scholars and policymakers, as evidently seen in a large volume of literature on the subject matter. Others explained that there is a great debate on the dynamics of drugs-crime correlations and three broad explanations for the relationship have emerged. Firstly, drug use leads to crime. Secondly, crime leads to drug use. Thirdly, the drug-crime relationship is explained by a set of common causes (Goldstein, 1985; Gottfredson *et al.*, 2008; Dennison, 2013; Huebner, 2014; Link & Hamilton, 2017). Although the drug-crime connection is powerful, it does not tell the whole story as many users have had a history of criminal activity before the onset of their substance abuse (Speakart & Anglin, 1986).

In the United States, for instance, research shows that chronic criminal offenders, recidivists begin to use drugs and alcohol after they had been introduced to crime. The problem could be either way: that crime causes drug use, or substance users turn to a life of crime to support their habits—that is, drug use causes crime (Siegel, 2008). To some scholars, drug use and crime co-occur in individuals; in other words, both crime and drug use are caused by some other common

factors (Wei, Loeber & White, 2004). The 2012 statistics of the Department of Justice (DOJ) and Bureau of Justice Statistics (BJS) show that the total correctional population is estimated to be 6, 937, 600, with 4, 794, 000 inmates on probation or under parole supervision, and drug law violations accounting for the most common type of criminal offences (Glaze & Herberman, 2013). In a survey of State and Federal prisoners in the US, BJS estimated that about half of the prisoners met Diagnostic and Statistical Manual for Mental Disorders (DSM) criteria for drug use or dependence, and yet fewer than 20% who needed treatment received it (Karger & Mumola, 2006; Chandler, Fletcher & Volkow, 2009).

In more specific terms, substance users suffer a number of problems, such as excessive and uncontrollable drinking habit and mental illness (Martin, Maxwell, White & Zhang, 2004), which are related to recurring offending. The report of the State of Illinois Prison Management Committee reveals that 50% of crimes are drug-related; about 20% of the offenders admitted having committed the crimes in order to obtain money for drugs, while about 36% of them reported using alcohol at the time of their offence (McKean & Ransford, 2004). Research also shows that drugs play a major role in the cause of recidivism; for instance, the use of illicit drugs and a prior criminal history increases the risk of arrest and rearrest (Uggen, & Kruttschnitt, 1998; Benda, 2005).

The increasing incidence of drug abuse among prisoners prompted McKean and Ransford (2004) to argue that drug or substance use is an underlying factor responsible for recidivism. Drug culture and alcoholism are, without a doubt, foremost predisposing factors to both the

offence (recidivism) and offender (recidivist). Dawkins (1997) pointed out that a clear and significant relationship exists between substance use and crime; (the life-course) begins in adolescence and continuing into adulthood. Young persons, for instance, who are drug users, are more likely than non-abusers to frequently commit crime (Dawkins, 1997; Siegel, 2008); hence, the act of recidivism.

Surveys conducted on prison inmates in the United States reveal that many (about 80%) are lifelong substance abusers; more than one third of them claimed to have been under the influence of drugs when they committed their last offence (Beck *et al.*, 1993 cited in Siegel, 2008). Acknowledging the existence of drugs-recidivism correlations, the United Nations Office on Drugs and Crime (UNODC) in 2006 introduced social reintegration or social support as an intervention/programme designed to assist inmates with the moral, vocational and educational development by making, educational, cultural, and recreational activities available in prisons. Examples are addressing the special needs of imprisoned persons, with programmes covering a range of problems, such as substance addiction, mental or psychological conditions, anger and aggression, among others, which may have led to persistent offending (UNODC, 2006).

In Nigeria, research linking criminal recidivism to substance use is sparse (see for example M. S. Otu, 2017). Instead, available studies are on the 'drug-crime problem' (Iwarimie-Jaja, 2003; Igbo, 2007; Ajala, 2009; Okogwu, 2014; Nnam, 2017), but not on 'drug-recidivism problem'. Iwarimie-Jaja (2003), for instance, unravelled in his study that armed robbers particularly use marijuana before and after carrying out their criminal activities.

Therefore, it is important to move the scholarship of African economics, physiology, psychology, sociology and criminology of substance use/abuse forward by expanding the scope to include recidivism. Here, lies the strong point, driving force, newness and contribution of the current research. This it does by strike a balance through scientific investigation into the two different but related phenomena, crime and recidivism, in relation to drugs.

In addition, the aim is to build theoretical but evidence-driven harm reduction policies and interventions for the attainment of near drug/recidivism-free society, since a complete drug/recidivism-free society is practically impossible. This gap in knowledge is what the current study identified in the avalanche of existing literature and, for this reason, suggests that more empirical (data-based) studies be conducted specifically on the drug-recidivism nexus in Nigeria. With data-based studies, in-depth understanding of this public and social health issue is gained. And from which a strong lead to achieving effective prevention and control of the growing population of recidivists and drug users in Nigerian prisons, hospitals and other reformatory and rehabilitative facilities, centres is followed to logical conclusion.

CONCLUSION

The problem of this research was framed in line with its findings, and was critically and analytically dissected, to orient the conclusion. The nuances of the association between substance use and recidivism are mixed or perhaps unclear. The outcome of their influence on each other is symbiotic; it could be either way:

illicit psychoactive drug users take a long career in crime (chronic offending, recidivism) to support an already established drug habit and, at the same time, they often take to drugs to sustain or keep fit in their criminal career. This discovery has moved the scholarship of African studies on drugs and crime/recidivism forward using multidisciplinary approach, incorporating medicine/physiological, psychological, sociological and economic ideas and variables into criminological currents.

Furthermore, weak social relations and societal or familial affinity are corollary of the absence of capable guardianship, which consequently make many individuals suitable targets to motivated offenders who initiate them into drug culture and repeat offending. Sometimes, offenders are forced to pursue a long career in crime so as to get money to support an already established drug habit. Societal pariahs and other social failures are more likely to easily indulge in repetitious criminal behaviour and/or unlawful drug use both as a way of redeeming their battered image and also as coping mechanism than social conformists and social achievers. Unlike the latter category (achievers), the former's (failures) level of aging out of drugs and reoffending is exceedingly low while their persistence in law violations increases on geometrical progression.

The problem becomes complicated and aggravated when people also belong to criminal subcultures or gangs, particularly campus/street secret cult groups. Such individuals usually spend much of their time visiting taverns, 'Bunks' (a universal name given to marijuana smoking spots in Nigeria) and local drug shooting galleries with peers of the same or similar psychosocial identity and needs (see also Etuk & Nnam (2). Under the influence of drugs, coupled

with economic, psychological, social and environmental strains, this category of people stands the high risk of flouting the law and even persisting in their antisocial behaviour to keep afloat.

Policy Implications and Suggestions for Further Studies

The aetiological controversies in the intersecting area of drugs-recidivism linkages, to a large extent, have been clearly delineated and elucidated. In the light of the foregoing reviews, it is clear that the drug-recidivism nexus exists in Nigeria, yet very little attention has been paid to the problem in the scientific community, academia. Rather, most literature on the subject matter is derived from Western scholarship. What exists in Nigeria are studies that only made references to drug use as a probable cause of crime generally, but not on drugs-recidivism connections. While we acknowledged the relevance of these studies, as progressively reviewed herein, additional efforts were made to theoretically establish the true nature and extent of this relationship.

Consequently, as strongly supported by the results of previous studies so far reviewed, the veracity of the identified sociological criminology constructs linking persistent, repetitious offending to substance misuse was determined and validated. The strength and novelty of this paper lie in its efforts to identify and close the gap in knowledge, especially in Nigeria, where far less attention has been given to this increasing social problem. It has contributed to the general body of knowledge that will pave way for developing cutting edge policies and practice that could particularly move the scholarship of African studies on drugs and crime/recidivism forward.

However, theoretical consideration alone is not strong and scientific enough to solve a research problem (i.e. establish a particular variable drugs or recidivism) that significantly influence the occurrence of the other). Accordingly, it amounts to effort in futility to continue to examine the problem theoretically without conducting data-based studies on the subject of discussion. For this reason, it is suggested that further studies should focus on developing a more robust methodologies and survey instruments for generating quantitative or qualitative data, or a combination of both methods. The aim is to achieve a more empirical, clearer understanding of the two overlapping variables for accurate and specific generalisation that will pave way for evidence-based policy formulation, intervention and action. No wonder Nnam and Otu S. E. (2015, p. 74), argued "that future studies (on social problems such as drug-recidivism linkage) should focus on developing more sophisticated tools to generate data which are both hypothetical and testable" for more specific, valid and reliable theoretical and practical results to be achieved.

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SUBSTANCE-RELATED DISORDERS TREATMENT SERVICE IN A GENERAL HOSPITAL IN ETHIOPIA: EXPERIENCE, CHALLENGES AND OPPORTUNITIES

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ABSTRACT

According to the latest global burden of diseases report, substance related disorders (SRDs) remain important risk factors for disability and premature mortality. The sub-Saharan Africa region has a long history of substance use, but this was mainly limited to alcohol, tobacco, cannabis, and khat. Recently, use of hard drugs such as cocaine and heroin is on the rise. This paper highlights the current status of SRDs in Ethiopia. Alcohol, khat and tobacco are the three substances commonly misused in Ethiopia. Evidence based interventions for SRDs for low and middle-income countries (LMICs) and the challenges of setting up SRD service, and application of these interventions in Ethiopia, a country of more than 100 million people and the second largest in Africa after Nigeria with rising SRDs, is presented. It also highlights the successes, opportunities and innovative approaches undertaken. A descriptive summary of cases seen in the SRD treatment center, and outcomes of detoxification is also presented. Lessons learnt in this process have the potential to inform other similar services in LMICs.

Keywords: Alcohol, Drugs, Ethiopia, Low and Middle Income, Services, Substance, sub-Saharan Africa

INTRODUCTION

Substance related disorders (SRDs) are global problems, affecting virtually human beings living anywhere in the world, though prevalence figures vary. According to global burden of diseases (GBD) report

of 2016, alcohol and drugs accounted for 4.2% and 1.3 of all disability adjusted life years (DALYs) respectively. Alcohol remained the most commonly missed substance with age-standardized prevalence 1320.8 cases per 100 000 people followed by cannabis and opioids with

age-standardized prevalence 289.7 cases per 100 000 people and age-standardized prevalence 353.0 cases per 100 000 people respectively (GBD 2016 Alcohol and Drug Use Collaborators, 2018). Alcohol misuse alone was found to be the 7th leading risk factor for mortality and DALYs (GBD 2016 Alcohol Collaborators, 2018).

Sub-Sahara Africa region faces the double burden of infectious diseases such as HIV, TB, malaria and non-communicable diseases (NCDs) including MNS disorders (Angkurawaranon et.al., 2016, Misganaw et.al., 2017). These countries are undergoing socioeconomic and cultural transition, with emerging middle class who have disposable income for buying alcohol and recreational substances. Among the four risk factors identified by WHO to predispose individuals to NCDs excessive alcohol use remains the most prevalent factor and widely consumed in Africa (Obot, 2007); alcohol was reported to be the leading risk factor for NCDs in Southern Africa, and among the top ten risk factors in the rest of sub-Saharan Africa region (Obot, 2013). Big multinational alcoholic beverage industries have found a new niche in this region, investing billions of dollars and engaging in aggressive marketing of alcoholic drinks, dubbed neocolonialism by some authors (Willis, 2006). For instance, the largest investment in Ethiopia from Europe was in the brewery industry increasing the production of beer more than 10 fold in a span of less than 20 years (Teferra et. al., 2017).

Most commonly used substances in many African countries include alcohol, tobacco, cannabis and khat (Odejide, 2006). Use of illicit drugs is more common among at risk populations such as street youth (Fekadu, Alem & Hanlon, 2006)

Use of other substances such as opioids is on the rise in Africa. A review of injecting drug use in six African countries, namely Egypt, Kenya, Mauritius, Nigeria, South Africa and Tanzania reported rising trend of injecting drug use despite widespread belief on the contrary; moreover, the practice of IDU was unsafe and posed high risk for HIV infection (Dewing et. al., 2006). Factors contributing to the increasing misuse of drugs and alcohol in Africa include poverty, political instability, social unrest and refugee problems (Odejide, 2006). The impact of globalization on the spread of more potent addictive substances such as heroin, cocaine and ecstasy in Africa is also noteworthy (Odejide, 2006). Africa has also become a drug trafficking hub for high potent drugs such as cocaine, with Nigeria playing a major role (US DEA, 2001).

Background about Ethiopia

Ethiopia is one of the ancient civilizations in the world situated in what is commonly known as the horn of Africa in the Eastern African region. It is the second most populous country in Africa after Nigeria with a population of more than 100 million, making it home to nearly 10 percent of the African people (www.worldatlas.com/articles/the-10-most-populated-countries-in-Africa.html). Although known to the wider world with images of the devastating famine that occurred in the 1980s, it has shown remarkable economic development in the past two decades resulting in significant reduction in the level of poverty, and improvement in the provision of basic services (www.worldbank.org/en/country/ethiopia/overview).

Ethiopia is one of the five ancient civilizations in the world, and among the first to produce alcoholic beverages in the

world (Fekadu, Alem & Hanlon, 2007). It is also the origin of two stimulants: coffee and khat (Berecha et.al., 2015; Getasetegn, 2016). Being a conservative country, with almost all the citizens subscribing to one or the other major religions in the world, many people think substance misuse is not a problem. In fact, there is evidence that substance misuse is on the rise (Bekele, Gebremedhin, ...& Teferra, 2017). Increasing urbanization, economic boom, high unemployment rate and cultural transition have probably contributed to the rise of substance misuse.

The health system in Ethiopia is organized around primary health care, prevention being its primary focus. Currently the country has about 70 psychiatrists, a few hundred psychiatry nurses and only one addiction psychiatrist. The resources allocated for health, mostly donor fund-

ed, focus mainly on communicable diseases such as malaria, TB and HIV; and maternal and child health (MoH, 2015). Non-communicable diseases are emerging health problems being responsible for 24% of deaths in Addis Ababa (Misganaw et.al., 2014).

Prevalence of substance use in Ethiopia

In Ethiopia, national data exists on three substances that are commonly misused- alcohol, khat and tobacco. According to a recent national representative survey involving close to 10,000 adults, the prevalence of heavy episodic drinking was reported to be 12.4%; the proportion of current khat chewing was 15.8% and the prevalence of tobacco smoking was 4.2%. (Please see table-1 for further details)

Studies on other substances are limited to specific social groups and areas.

Table 1. Alcohol, Khat and Tobacco use among Ethiopians: Findings from the 2015 STEPS Survey*

Results for age 15-69 year olds	Females, n(%)	Males, n(%)	Both sexes, n(%)
Tobacco Use			
Current smokers	0.4(0.3-0.6)	7.3(6.1-8.6)	4.2(3.5-4.9)
Daily tobacco smokers	0.2(0.1-0.4)	6.2(5.0-7.4)	3.5(2.8-4.1)
Among daily smokers			
Average age in years of debut for smoking	22.8(19.1-26.5)	20.9(19.8-22.0)	21.0(19.9-22.0)
Daily smokers using manufactured cigarettes	48.4(26.5-70.3)	91.5(87.4-95.5)	89.4(85.3-93.6)
Average number of cigarettes smoked daily	2.4(1.1-3.7)	7.3(6.2-8.3)	7.1(6.1-8.1)
Alcohol consumption			
Life time alcohol use	2318 (42.7)	2012 (54.9)	4330 (49.3)
Past 12 month drinkers from ever drinkers	2045 (88.2)	1818 (90.4)	3863 (89.6)
Current drinkers (past 30 days)	1793 (89.4)	1709 (93.6)	3502 (92.0)
Heavy episodic drinking (? 6 or more drinks/ occasion in the past 30 days)	2.7%	20.5%	12.4%
Khat chewing			
Current Khat chewers (past 30 days)	9.4 (7.2-11.5)	21.1 (17.6-24.7)	15.8 (13.1-18.5)
Among the chewers during the past 12 months, percentage of respondents who chew Khat daily.	50.4(41.7-59.2)	61.4 (53.9-68.8)	58.4 (51.6-65.2)

* (Defar, Getachew, Teklie, Bekele, Gonfa...Teferra, 2017; Teklie, Gonfa, Getachew, Defar, Bekele...Teferra, 2017; Getachew, Defar, Teklie, Gonfa, Bekele....Teferra, 2017)

According to an old study, the proportion of gasoline sniffing among juvenile delinquents was 17% (Workneh, 1983); a rapid assessment involving street children, commercial sex workers and street vendors in the capital and several other towns in Ethiopia reported 11.2% cannabis use, 0.9% solvent use, 0.2% cocaine and heroin use each (Selassie, 1996). Currently, the use of cannabis is increasing significantly, especially in urban areas.

Current Status of Services for SRDs in low and middle income countries

In general, there is a dearth of evidence for alcohol and drug abuse services in LMICs. Most of the evidence for such services comes from high income countries, which depend on costly care models of treatment and rehabilitation. A recent review on packages of care for mental health services in LMICs, published in a series of articles on *Plos Medicine* focused on evidence based interventions for alcohol use disorders (AUDs). According to this recommendation, AUDs are neglected health problems in LMICs, most problematic drinkers visit primary care and remain untreated, and the small existing services focus mainly on tertiary care for severe dependent patients. The recommendation called for a shift in policy towards cost effective interventions focusing on brief intervention for non dependent users who form the majority of problematic users. It shies away from the effective evidence based psycho-social and pharmacological interventions due to cost and emphasizes possible stepped care model (Benegal, Chand & Obot, 2009). However, a later publication covering the whole range of SRDs took the bold step of presenting comprehensive packages of evidence-based care for LMICs which was

later incorporated in the landmark WHO-mhGAP intervention guide (Please see table-2 for details).

Challenges of SRD Service in Low and Middle Income Countries

Although SRDs are recognized as important public health problems in LMICs that need attention, more than a third of LMIC countries have no policy on alcohol and drugs. The mental health budget of most countries is below 1% of their health budget, and often SRDs get none of this budget allocated due to high level of stigma. Challenges include lack of policies, strategies and legislations, poor financing, poor capacity, and diverse treatment approaches, which may not be evidence-based (Salwan and Katz, 2014).

The Situation SRD service in Ethiopia

In Ethiopia, SRD services are better described as non-existent; the country doesn't have alcohol and drug policy, or strategy. There is a five-year National Drug Master Plan supported by the United Nations Office for Drug and Crime (UNODC), but implementation is only limited to training using Treatnet protocol (<https://www.unodc.org>), and some awareness raising activities, usually undertaken by the drug control authority, Ethiopian Food Medicine and Health Care Administration and Control Authority (EFMHACA). This institution provided some support for setting up detoxification services, one a 10 bed facility in the only mental hospital, Amanuel Mental Specialized hospital, and a 5 bed detoxification facility in a general hospital, both located in the capital city. There is no dedicated budget for the services, or provision of inputs on a regular basis. SRD related activities are not included in the Health

Management Information System (HMIS) reporting. The author, who is an addiction psychiatrist trained at the University of Toronto in Canada, has been providing

SRD services in another general hospital for the past five years and established a 4 bed detoxification service in the same hospital 2 years ago.

Table 2. Evidence-based Recommendations for Management of SRDs in LMICs**

Alcohol use disorders	Detailed description of the interventions
Screening and brief interventions	Routine screening in clinics using validated instruments such as AUDIT-3, AUDIT-C, ASSIST, brief intervention for hazardous and harmful alcohol use
Management of alcohol withdrawal	Supported withdrawal in patients with alcohol dependence, use benzodiazepines first-line medication for the management of alcohol withdrawal. Add antipsychotic medications as adjunct treatment when indicated. Oral thiamine, iv/im when evidence of Wernicke's encephalopathy present or in the presence of severe malnutrition. Inpatient management when indicated.
Preventing relapse in alcohol dependent patients	Offer acamprosate, disulfiram, or naltrexone for preventing relapse in alcohol dependent patients, depending on patient preference.
Psychosocial interventions for management of alcohol dependence	Routine provision of psychosocial support is needed for patients with alcohol addiction, with provision of more structured therapies when possible. Family support should also be provided by non-specialist health care workers.
Role of mutual help groups such as Alcoholics Anonymous (AA)	Refer patients with alcohol addiction to self-help groups, monitor attendance. Encourage family members of patients with alcohol addiction to attend family groups
Drug use disorders	
Brief psychosocial interventions	Individuals using cannabis and psychostimulants should be offered brief intervention, which should comprise a single session of 5–30 minutes in duration, incorporating individualized feedback and advice on reducing or stopping cannabis/psychostimulant consumption, and the offer of follow up. People with ongoing problems related to their cannabis or psychostimulant drug use who do not respond to brief interventions should be considered for referral for specialist assessment.
Management of drug withdrawal	1) Cannabis, cocaine, or amphetamines: is best undertaken in a supportive environment. No specific medication is recommended for the treatment of their withdrawal. Relief of symptoms (e.g., agitation, sleep disturbance) may be achieved with symptomatic medication for the period of the withdrawal syndrome. If depression or psychosis can occur during withdrawal, monitor closely and seek advice from relevant specialists, if available. 2) Benzodiazepines: convert to long acting benzodiazepines, gradually taper dose over 8–12 weeks. Additional psychosocial support should be considered. If severe withdrawal symptoms, seek specialist advice.
Treatment of psychostimulant dependence	Avoid using Dexamphetamine for the treatment of stimulant use disorders.
Psychosocial support for the management of cannabis dependence and abuse and psychostimulant use disorders	Brief motivational interviewing based psychological support; refer non responders for treatment in a specialist setting, when available.
Role of sterile injection equipment and outreach programmes for injecting drug users	Provision of sterile needs in primary care where injecting drug use is common and safe retrieval of used ones. This can be facilitated by community pharmacies or through outreach programmes. Testing for HIV and hepatitis is also necessary and referral to treatment is needed.

** (Dua, Barbui, Clark, Fleischmann, Poznyak, Ommeren et al. 2011, mhGAP-IG, 2017)

METHODS

Setting

The SRD service was established in Zewditu Memorial Hospital, a general hospital located at the heart of Addis Ababa, named after Empress Zewditu, the cousin and predecessor on the throne of Emperor Haile Selassie. The Hospital is under the Addis Ababa Health Bureau. It provides health care to residents of Addis Ababa in different specialty and general medical services, including mental health. The SRDs treatment center is found in the basement floor of the hospital's main building. It has a total of 4 inpatient beds, nurses and doctor's offices, and space for group therapy. The outpatient service has been running since 2013, but the inpatient service was opened on February fifteen 2016. Detoxification, individual psychotherapy, and group therapy services are provided in the center, both on outpatient and inpatient basis. It also provides outpatient based individual counseling and weekly group therapy. This facility was established with limited financial support from WHO-Ethiopia country office, and the Federal Ministry of Health.

Data Analysis

The current report is based on the cases admitted to the detoxification service in the first year of opening, March 2016-April 2017, led by the author. Data was collected from the registry logbook and analyzed using SPSS Version 24. Descriptive statistics is presented to provide some baseline data. Narrative summary of the experience of setting up the SRD service including the challenges and opportunities is presented.

RESULTS

The majority of patients admitted were males (95.3%), aged ≥ 30 years (69.8%), single (62.8%), had secondary education and above (86.1), and were living with their family (67.4%). Alcohol was the major substance for admission (93%). Nearly half (48.8%) had used substance for ≥ 10 years. (Please see table-3 for details).

Challenges faced when setting up the detoxification service

Experience of setting up the detoxification service

- The process of starting the detoxification center started after the author returned from Canada in April 2012, completing a fellowship in addiction psychiatry. Although there was outpatient based psychiatry service in the hospital, there was no service for SRDs. The author had to set up a designated outpatient service once a week in the afternoon in the same clinic where other general adult psychiatry patients were seen in the morning. There was no nurse or other auxiliary personnel trained in the evaluation and management of SRDs. It was literally a 'one man show', plus psychiatry residents in training. The outpatient service was mainly based on individual therapy using motivational interviewing (MI) and CBT, and MI based group therapy. There were cases who had severe dependence who needed admission. So, the process of setting up the inpatient detoxification service was started. It took three years to set up a 4 bed detoxification service at the basement of the main hospital- two years to secure the place and one year to get it ready

for the service. The author had to look for resources to renovate and partition the empty hall into a usable place. Some small funding was provided by the WHO country office and another

small funding from the Federal Ministry of Health.

- As stated in the table, the number of cases admitted in the first year weren't that many, but the impact

Table 3. Socio-demographic and Clinical Characteristics of Patients with SRDs Admitted to Zewditu Memorial Hospital Detoxification Unit, March 2016-April 2017

Characteristics		Number	%
Sex	Male	41	95.3
	Female	2	4.7
Age group (years)	<20	1	2.3
	20-29	12	27.9
	30-39	23	53.5
	40-49	7	16.3
	50+	2	4.7
Marital Status	Single	27	62.8
	Married	11	25.6
	Divorced/Widowed/Separated	5	11.6
Education	Primary	3	7.0
	Secondary	18	41.9
	College	19	44.2
	Unspecified	3	7.0
Address	Addis Ababa	38	88.4
	Other	8	18.6
Living arrangement	With family	29	67.4
	Alone	12	27.9
	Unspecified	2	4.7
Type of Substance Used	Alcohol	27	62.7
	Alcohol + Tobacco	5	11.6
	Alcohol+ Tobacco+ Khat	6	13.9
	Opioids (pethidine= 2, codeine=1)	3	7.0
	Alcohol + Cannabis	2	4.7
Duration of Substance Use	< 10 years	9	20.9
	10-19 years	17	39.5
	20+ years	4	9.3
	Unspecified	13	30.2
Presence of comorbid psychiatric diagnosis	Yes	7	16.3
	No	36	83.7
Length of stay in hospital	Up to 14 days	12	27.9
	15-28 days	20	46.5
	>28 days	11	25.6
Outcome of detoxification	Successful	41	95.3
	Not successful***	2	4.7

***left the center before completing detoxification

was powerful. The author engaged in continuous campaign using different media to advocate for attention to be given to the problem. Patient flow has been increasing since then.

- **Low priority given by the government:** no alcohol and drug policy, and low attention given to the problem. There was mention of alcohol as one of priority conditions in the recently expired five-year national mental health strategy, but it was never implemented. There is also a 'National Drug Master Plan' written every five years with the support of UNODC but poorly implemented. Treatment of alcohol and drug use disorders is not covered in the ongoing national health insurance scheme.
- **Lack of awareness:** In general, addiction to alcohol and drugs is considered a moral failure and personal weakness and not as a health problem. Consequently, there is low treatment seeking behavior both by patients themselves as well as their caregivers.
- **Lack of resources:** there is no training program in substance abuse counseling and treatment in the country except courses given to psychiatry nurses and residents which tend to be brief and inadequate to run a proper addiction treatment service. Currently, there is only one addiction psychiatrist trained abroad and two general psychiatrists who have been providing the service after receiving short courses. Besides the hospitals with a total capacity of about 20 beds, based in the capital city, there is one rehabilitation center dedicated for addiction service, a 25 bed facility in the Northern Ethiopia regional state of Tigray which has a population of about 5 million. There are no drugs for detoxification of opioids such as

methadone, buprenorphine, clonidine, naloxone or naltrexone, even thiamine. There are no medications for nicotine addiction such as nicotine replacement therapies (NRTs) or Bupropion. No relapse prevention medications for alcohol such as disulfiram, naltrexone or acamprosate. In our detoxification service, we have been using tramadol protocol for detoxification from opioids which had comparable efficacy with buprenorphine, methadone or clonidine for managing opioid withdrawal (Threlkeld, Parran, Adelman, Grey, 2006; Sobey, Parran, Grey, Adelman, Yu, 2008; Zarghami, Masoum, Shiran, 2012). For detoxification for alcohol, we have used diazepam protocol using standing dose and PRN administration according to the CIWA Ar score, and B vitamins preparations since thiamine was not available in the country. Unfortunately, this low attention continues as evidenced by the complete exclusion of medications used to manage addictions from the national drugs and supplies procurement list by the Pharmaceuticals Fund and Supply Agency of Ethiopia (PFSA, 2018).

- **Lack of self-help groups:** in Ethiopia there are no self-help groups to refer patients for continued peer support. Repeated attempts to establish Alcoholics Anonymous (AA) didn't materialize. Only small groups run by expatriate recovering alcoholics exist in the country.
- **Lack of evidence base for effectiveness of interventions in Ethiopia:** no studies have been conducted in Ethiopia on effectiveness of evidence-based interventions for LMICs. The problem is more pronounced in some substances which are endemic to the country like

khat which lack empirically tested interventions even in other parts of the world, although the diagnostic criteria Stimulant Use Disorders, from the DSM, 5th edition, has been validated for diagnosing Khat Use Disorder (Duresso et al., 2016).

Opportunities

- Although there were several challenges affecting SRD service in Ethiopia, there are also opportunities to be harnessed innovatively, namely, the inclusion of mental health in primary care, the attention being given by the government on NCDs, and the recent media attention the issue has gained which created an opportunity for advocacy. Although limited, there are some NGOs working on SRDs, and these need to be strengthened.

DISCUSSION

The findings from this report are consistent with the rest of the world, alcohol being the number one substance responsible for admission to detoxification center. As it was reported by Willis (Willis, 2006), traditional alcoholic beverages have been used in Africa for a long time, but recent massive investment from multinational breweries has changed the drinking culture, with a shift into manufactured alcoholic drinks such as beer and liquors; Ethiopia has been witnessing this transition (Teferra, et al., 2017).

The other substance most commonly misused in Ethiopia is khat, an amphetamine-like shrub, chewed for its stimulant effect (Teferra, et al. 2011). This substance is often used in combination with tobacco and alcohol. People drink alcohol

to counter the stimulating effect of khat, which is locally known as ‘chebsi’, meaning ‘breaking’ the effect of khat. Although not that alarming, prescription opioids such as pethidine are also misused in Ethiopia. The presence of the problem in itself warrants care when providing prescription for these drugs to manage pain. Recent trends show the need for strict control of these drugs, and introduction of measures on pharmacies which sell these drugs without special prescription.

The majority of patients admitted to the center were males. This is typical finding in SUDs; males tend to have preponderance for using addictive substances and getting admitted to detoxification facilities more than females. A similar study from Nigeria reported that 96.5% of patients admitted to the drug de-addiction center were males (Unaogu, et al., 2017). Another report from Uganda showed a male to female ratio of 10 to 1 for utilization of services for alcohol use disorders (Kalema et al., 2017). Substance use among women is taboo and highly stigmatized in African countries (Myers, 2011, Kalema et al., 2017).

As it is typical with alcohol use disorders, most patients had long history of drinking before they presented with severe signs of physical dependence which warranted inpatient detoxification (Hingson, Heeran & Winter, 2006). Routine administration of Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-Ar) was very useful and feasible in determining severe cases which needed admission. It was also useful for following progress and administering diazepam on as needed basis when withdrawal symptoms were not controlled by the standing dose of benzodiazepines (Sullivan et al, 1989; Reoux & Miller, 2000).

Although detoxification was relatively easy to set up and very successful, the main challenge was after care as there were no rehabilitation facilities or self-help groups to refer patients. In this setting, patients were retained in the service for as long as possible, emphasis was given to attendance to group therapy at least once a week, and a one-on-one session with a clinician for any psychological symptoms that needed attention. Patients were provided the group therapy, mainly using motivational interviewing based five-session, groups developed by Ann Fields (Fields, 2005). Patients were encouraged to come to the group sessions even after completing the five sessions in order to retain them in the care to prevent relapse, since retention in care is necessary to prevent relapse (Murthy et al., 2009). Many challenges with SRD services were reported in other African countries such as Uganda. Challenges reported from Uganda included lack of resources, services, the treatment philosophy of available services, and the lack of evidence on cultural appropriateness of treatment services for the African setting (Kalema et al., 2017).

Limitations of this study include lack of detailed review of policy documents and exploration of perspectives of policy makers, clinicians, service users on SRD services in Ethiopia. Restriction of the report to inpatients and small sample size is another limitation.

CONCLUSION

This report has demonstrated that alcohol remains the most common substance misused in the community followed by khat and tobacco, and a similar pattern was seen in the inpatient setting;

hard drugs such as methamphetamine, cocaine and heroin were rare. It was possible to set up treatment services for alcohol and drugs, but due to limitations in the availability of resources, it was not possible to fully implement the evidence-based treatment recommendations for LMICs fully. Innovative and pragmatic approaches are necessary. Evaluating the effectiveness of these interventions and their appropriateness in the cultural context through research is recommended. Linking SRD services to government priorities such as NCDs will probably help to draw their attention. Lessons learnt in this process have the potential to inform other similar services in LMIC countries.

Declaration of Conflict of Interest

The author has no conflict of interest to declare

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INSTRUCTIONS TO CONTRIBUTORS

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