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PURPOSE AND SCOPE

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

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

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DRUG USE AND MULTIDIMENSIONAL WORK PERFORMANCE IN A SAMPLE OF POLICE MEN IN NIGERIA

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ABSTRACT

Drug use among policemen in Nigeria has received a disproportionately scanty research attention. More importantly, the association between drug use and counterproductive work behaviour among members of this vital state agency has not been empirically investigated. Insights into these issues will not only provide useful information but will also form a strong basis for relevant intervention. In this cross-sectional survey, we explored drug use among police officers in Akwa Ibom state and the extent to which drug use predicted various domains of work performance. Using standardized measures of drug use and work performance, we interviewed 389 officers and men of the Nigerian Police Force, purposively selected from many stations and posts across the Akwa Ibom state command. Results of the inter-correlational analysis indicates that the younger a policeman is, the more his or her level of drug use ($r = -0.26$). Sex and number of years of work experience of policemen are not significantly associated with drug use. A strong association was found between drug use and various domains of work behavior as well as counterproductive work performance, indicating that policemen who are higher on drug use are also more likely to be involved in counterproductive work performance. It is recommended that the Nigerian Police should establish / equip a unit in each command to routinely screen for drug use and refer officers involved for addiction treatment.

Keywords: Drug use, work performance, policemen

INTRODUCTION

Nature of work and working environment constitute huge challenges to policemen and can act as precipitants to

drug use and abuse among them. Organizationally, police officers may have to contend with rigid command structures and inequitable treatment by superiors. In such circumstances it is obvious that

officers often experience a great deal of job related stress (Murtagh, 2010). According to Mushumbusi (2012), police works are some of the most stressful occupations accompanied with events of grief from victims, families, and violent people who would like to harm or kill them. Furthermore, law enforcers are highly susceptible to excessive use of alcohol more so than other members of the general public because of the many negative aspects associated with the profession (Mushumbusi, 2012)). Kgalema (2002) suggests that when conventional coping strategies fail (exercises, relaxation, psychological counseling and social support), one must find alternatives. In the case of policemen, a common choice is alcohol (Sutton, 2011). Research indicates that alcohol use by officers in the United States is thought to be two times that of the general population, with 20% of the officer population abusing alcohol (Lindsay, Taylor & Shelley, 2008). According to Sutton, (2011), 25% of police officers suffer from alcohol dependency; a figure that the authors felt was an underestimation. Whether it is hazardous, harmful or dependency, it is appropriate to note that alcohol consumption among policemen is, indeed, a problem (Sutton, 2011).

Researchers are of the view that military and paramilitary officers are more vulnerable to hazardous alcohol and other drugs consumption compared to the rest of the population. The United States law enforcement occupation is thought to have one of the highest abuse rates of alcoholic beverages (Lindsay, 2007). A study done among Mississippi Police officers revealed that 18.2% of the officers scored above an 8 on the AUDIT instrument, which labeled them at or above a

hazardous risk level for alcohol problems (Lindsay, 2007). However, another study done among Mississippi state police officers revealed that 70 percent of the officers either abstained from alcohol or drank less than once a month (Lindsay et al., 2008). A study carried out among Massachusetts police officers, revealed that 23% of the participants had overall alcohol screen scores that indicated alcohol dependence and seventy-eight percent of the respondents had scores that indicated hazardous drinking behaviors (Murtagh, 2010). Another study carried out in the USA showed that, alcohol abuse among police officers approximately doubles that of the general population where 1 in 10 adults abuses alcohol (Gillan, 2009). Similar trends have been reported by other researchers (e.g. Ballenger, Best, Metzler, Wasserman, Mohr, Liberman, Delucchi, Weiss, Fagan, Waldrop & Marmar, 2010; Davey, Obst & Sheehan, 2000).

In developing countries despite the fact that the overall use of alcohol at the population level is relatively low (given the high abstention rate), drinking patterns among those who do drink are often hazardous (Patel, 2007). Findings from the sub-Saharan African (where research in this area is rather scanty, despite the region having one of the highest per capital alcohol consumption in the world) are equally alarming. For instance, in Uganda, Madrama and Ovuga (2006) found high levels of alcohol dependence among the Uganda Police officers, which has resulted in poor mental health; poor work output and forced retirement. The prevalence of hazardous alcohol use among police officers (AUDIT score greater than 8) in Tanzania was found to be 5.7% (Mbatia, Jenkins, Singleton & White; 2009). In a recent study conducted among officers

and men of the Nigeria army, Kazeem and Abdulkarim (2014) investigated relationship between depression, paranoid ideation and substance abuse among Nigerian military personnel deployed for peace support operation. Findings indicated that 18.5% of Nigerian Army personnel abuse one of alcohol, cannabis and tobacco. Furthermore, the study revealed that 19.2% met criteria for alcohol use disorder, and 26.0% met criteria for alcohol use problems.

Silverberg (2000) states that the effects of drug use among police officers include: reduced work performance endangering safety and welfare of the public, higher rates of absenteeism; lateness for work; register more sick leave; increase the cost of health care benefits; lack of motivation; increased need for supervision; and setting a poor role model. McNeill (1996) states that police officers' involvement in drug use, especially excessive alcohol consumption can impede reaction time; impair thinking and co-ordination to become sluggish and may lead to aggressive behavior particularly in the presence of threat.

In Nigeria, for instance, members of the public have had cause to suspect the influence of substance abuse or heavy alcohol use among police officers given unprofessional conducts exhibited by them, including but not limited to the following: being caught with paraphernalia of drugs even while on duty, brutality of the people they are deployed to protect (with or without provocation), unnecessary loss of lives of civilians through military brutality, extra-judicial killings, "accidental discharge", an almost inexhaustible list of extra-judicial killings; unnecessary loss of lives of personnel; fatal and unreasonable intra-organizational and inter-organizational

conflicts; disobedience and flagrant disrespect for civil rules and regulations. Drug use among policemen in Nigeria has received a disproportionately scanty research attention. More importantly the association between drug use and work behaviour among members of this vital state agency has not been empirically investigated. Insights into these issues will not only provide useful information but will also form a strong basis for relevant intervention.

METHOD

Participants

Participants were 389 policemen purposively selected from stations and posts in the Akwa Ibom State Command of the Nigerian Police Force. Of the 389 respondents, 264 (57.5%) were males while 125 (32.5%) were females. Respondents' mean age was 37.7 years (± 9.18). Average number of years spent in the police force was 14.7 years (± 7.6). With regards to marital status, 127 (32.5%) of the respondents were single, 238 (60.9) were married, 6 (1.5%) were divorced, 7 (1.8%) were separated, and 10 (2.6%) were widowed.

Instrument and Procedure

A three-sectioned questionnaire was used to obtain relevant data. Socio-demographic variables were assessed in the first section of the questionnaire with individual items measuring age, sex, years of experience, highest educational qualification, marital status and job position. Work Behaviour was assessed with two standardized instruments: the Work Role

Performance Scale (WRPS) developed by Griffin, Neal and Parker (2007); and the

Counterproductive Work Performance Scale (CWPS) Koopmans, Bernaards, Hildebrandt, Vet, de, Beek and van der (2014). The WRPS is a 27-item instrument structured in the Likert format which measures work role performance (task proficiency, task adaptivity and task proactivity) across individual, team and organizational domains. For all items, participants were asked to rate how often they had carried out specific behaviours over the past month on a scale ranging from 1 ("very little") to 5 (a "great deal"). Higher scores generally denoted better performance across the domains. The instrument has been shown to be reliable and valid (Griffin et al., 2007). In the present study, a coefficient alpha of 0.74 was obtained for the entire scale.

The CWPS is a Likert-formatted, 5-item instrument that is scored along a five-point options ranging from "Never" (0) to "Often" (5) and with higher scores indicating greater tendency to engage in counterproductive work behaviour. Robust psychometric properties (alpha coefficient, concurrent validity and construct validity) have been reported for the instrument (Koopman et al (2014). In the present study, a coefficient alpha of 0.68 was obtained for CWPS.

Drug use was assessed with *Drug Use Disorder Identification Test* (DUDIT: Berman, Bergman, Palmstierna & Schlyter, 2003). The test was developed as a parallel instrument to the AUDIT (Alcohol Use Disorders Identification Test) for identification of individuals with drug-related problems. DUDIT is consisted of 11 items. Items 1 to 9 are scored on 5-point scales while items 11 and 12 are scored on 3-point scales. The maximum score for the DUDIT items is 44 points (11 x 4). Usually the points for each item are

summed up to obtain an aggregate DUDIT score. When the DUDIT is used in a group where one does not expect to find many drug users, a cut-off point of 6 or more for men with drug-related problems and a cut-off point of 2 or more for women are stipulated (Berman et al., 2003). DUDIT has been widely used and considerable evidence supports its psychometric adequacy. A coefficient (Cronbach's alpha) of 0.93 was obtained for DUDIT in the present study.

Questionnaires were personally administered to respondents by three Research Assistants (who were also Policemen). Informed consent was implied by voluntary completion and return of the questionnaire. At the end of the four-week data collection period, 389 questionnaires (out of 500 administered) were returned with usable data, representing a 78% return rate.

RESULTS

Descriptive statistics showing respondents' scores on drug use and various components of counterproductive work behaviour as well as socio-demographics are presented in Table 1. We examined item-by-item responses on DUDIT in order to know how respondents reported on DUDIT items, especially the items indicating problematic drug use. Results of the frequency of response to each item is presented in Table 2.

Results indicated that while 28.6% of respondents never used drugs other than alcohol, 22.3% had used other drugs other than alcohol. More than 20% of respondents were poly drug users. Number of times that policemen used drugs on a typical day ranged from none (36.3%) to

Table 1. Descriptive statistics

Variable	Mean	Std. Deviation	n
Age	37.66	9.18	382
Work Experience	14.69	7.56	387
Individual Task Proficiency (ITP)	11.15	3.17	389
Individual Task Adaptivity (ITA)	10.69	2.75	389
Individual Task Proactivity (ITPr)	10.69	2.73	389
Team Member Proficiency (TMP)	10.76	2.91	389
Team Member Adaptivity (TMA)	10.65	2.61	389
Team Member Proactivity (TMPr)	10.95	2.66	389
Organization Member Proficiency (OMP)	10.98	2.91	389
Organization Member Adaptivity (OMA)	10.72	2.61	388
Organization Member Proactivity (OMPr)	10.86	2.96	389
Counterproductive Work Behavior (CWB)	10.83	4.66	389
Drug Use	19.02	9.11	389

once to twice (17.4%), three to four times (5.9%) and five to six times (3.3%). These and other results, including influence of drug use, craving for drugs, how drug use has affected other activities, guilt feelings as a result of drug use, harm to others resulting from drug use, as well as concerns by significant others about drug use, are presented in Table 2.

We performed a series of bivariate analyses with a view to understanding the association among study variables. A summary of the results of the bivariate analyses presented in Table 3 indicated that drug use is significantly but negatively associated with all the key indices of work performance across individual, team and organizational levels. Drug use also correlated significantly but positively with counterproductive work behaviour, indicating that more drug use is associated with more counterproductive work behaviour.

Further analysis indicated that mean score of respondents on DUDIT was 8.37 (SD = 2.2), a figure that is far higher than the norm for normal populations. Results

of the inter-correlational analysis indicates that the younger a policeman is, the more his or her level of drug use ($r = -0.26$). Sex and number of years of work experience of policemen are not significantly associated with drug use. A strong association was found between drug use and counterproductive work performance ($r = 0.87$), indicating that policemen who are higher on drug use are also likely to be involved in counterproductive work performance.

As shown in Table 4, drug use significantly predicted all facets of individual, team and organizational work performance as counterproductive work performance: individual task proficiency ($\beta = -.36$; $P < .05$), individual task adaptivity ($\beta = -.28$; $P < .05$); individual task proactivity ($\beta = -.36$; $P < .05$); team task proficiency ($\beta = -.45$; $P < .05$); team task adaptivity ($\beta = -.29$; $P < .05$); team task proactivity ($\beta = -.30$; $P < .05$); organizational task proficiency ($\beta = -.39$; $P < .05$); organizational task adaptivity ($\beta = -.35$; $P < .05$); organizational task proactivity ($\beta = -.42$; $P < .05$); and counterproductive work performance ($\beta = .30$; $P < .05$).

Table 2. Participants’ responses to DUDIT items

DUDIT Item	Response	n	%
How often do you use drugs other than alcohol?	Never	112	28.6
	Once a month or less often	50	12.8
	2-4 times a month	21	5.4
	2-3 times a week	16	4.1
Do you use more than one type of drug on the same occasion?	Never	87	22.3
	Once a month or less often	49	12.5
	2-4 times a month	20	5.1
	2-3 times a week	11	2.8
How many times do you take drugs on a typical day when you use drugs?	None	142	36.3
	1-2 times	68	17.4
	3-4 times	23	5.9
	5-6 times	13	3.3
How often are you influenced heavily by drugs?	Never	64	16.4
	Less often than once a month	40	10.2
	Every month	21	5.4
	Every week	19	4.9
Over the past year, have you felt that your longing for drugs was so strong that you could not resist it?	Never	49	12.5
	Less often than once a month	38	9.7
	Every month	37	9.5
	Every week	14	3.6
Has it happened, over the past year, that you have not been able to stop taking drugs once you started?	Never	49	12.5
	Less often than once a month	41	10.5
	Every month	25	6.4
	Every week	21	5.4
How often over the past year have you taken drugs and then neglected to do something you should have done?	Never	56	14.3
	Less often than once a month	37	9.5
	Every month	32	8.2
	Every week	20	5.1
How often over the past year have you needed to take a drug the morning after heavy drug use the day before?	Never	49	12.5
	Less often than once a month	33	8.4
	Every month	26	6.6
	Every week	25	6.4
How often over the past year have you had guilt feelings or a bad conscience because you used drugs?	Never	58	14.8
	Less often than once a month	26	6.6
	Every month	31	7.9
	Every week	28	7.2
Have you or anyone else been hurt (mentally or physically) because you used drugs?	No	4	1.0
	Yes, but not over the past year	48	12.3
	Yes, over the past year	45	11.5
Has a relative or a friend, a doctor or a nurse, or anyone else, been worried about your drug use or said to you that you should stop using drugs?	No	1	0.3
	Yes, but not over the past year	70	17.9
	Yes, over the past year	52	13.3

DISCUSSION

We found a very high level of drug use among respondents in this study. Respondents mean score on DUDIT was higher

than the average in the normal populations, with relatively younger policemen clearly at an elevated risk. Although not totally surprising as observation and other empirical evidence have shown

Table 3. A zero-order correlation showing bivariate relationships among study variables

Var	Age	Sex	Exp	ITP	ITA	ITPr	TMP	TMA	TMPr	OMP	OMA	OMPr	CWP
Age	1												
Sex	-.12*	1											
Exp	.82	-.10*	1										
ITP	-.27*	-.04	-.11*	1									
ITA	-.23*	-.05	-.05	.50*	1								
ITPr	-.21*	-.04	-.10*	.33*	.41*	1							
TMP	-.23*	.02	-.08	.45*	.43*	.51*	1						
TMA	-.15*	-.04	-.01	.41*	.47*	.41*	.52*	1					
TMPr	-.22*	-.12*	-.09	.39*	.41*	.43*	.39*	.49**	1				
OMP	-.23*	-.04	-.08	.46*	.46*	.45*	.51*	.49*	.49*	1			
OMA	-.23*	-.05	-.11*	.39*	.48*	.40*	.40*	.50*	.36*	.46*	1		
OMPr	-.28*	-.05	-.13*	.43*	.45*	.50*	.45**	.45*	.43*	.41*	.49*	1	
CWP	.23*	-.06	.06	-.32*	-.28*	-.22*	-.25*	-.20*	-.24*	-.31*	-.28*	-.33*	1
Drug Use	.33*	.06	.18	-.36*	-.28*	-.35*	-.45*	-.29*	-.30*	-.39*	-.35*	-.42*	.30*

NB: ITP = Individual Task Proficiency; ITA = Individual Task Adaptivity; ITPr = Individual Task Proactivity; TTP = Team Task Proficiency; TTA = Team Task Adaptivity; TTPr = Team Task Proactivity; OTP = Organizational Task Proficiency; OTA = Organizational Task Adaptivity; OTPr = Organizational Task Proactivity; CWP = Counterproductive Work Performance

*Correlation significant at the 0.05 level

**Correlation significant at the 0.01 level

Table 4. Linear regression of drug use and counterproductive performance

Predictor	Outcome	β	t	Sig.
Drug Use	Individual Task Proficiency	-.36	-7.49	.00
	Individual Task Adaptivity	-.28	-5.65	.00
	Individual Task Proactivity	-.36	-7.70	.00
	Team Task Proficiency	-.45	-9.96	.00
	Team Task Adaptivity	-.29	-5.99	.00
	Team Task proactivity	-.30	-6.06	.00
	Organizational Task Proficiency	-.39	-8.24	.00
	Organizational Task Adaptivity	-.35	-7.36	.00
	Organizational Task Proactivity	-.42	-9.12	.00
	Counterproductive Work Performance	.30	6.19	.00

high prevalence of psychoactive drug use among policemen (e.g. Kazeem & Abdulkarim, 2014; Mbatia et. Al., 2009; Mushumbusi, 2012; Sutton, 2011), it is certainly worrisome, given the crucial role that policemen are statutorily expected to play and how drug use can compromise the effective and efficient performance of such roles. It is equally worrisome that

while 28.6% of respondents never “used drugs other than alcohol”, almost a quarter of the respondents had done so. An equally high proportion of the respondents were poly drug users and regular users, with daily drug use ranging from none (36.3%), once to twice (17.4%), three to four times (5.9%) and five to six times (3.3%).

We also found that drug use significantly but negatively predicted police work performance across the various domains (proficiency, adaptivity and proactivity) at individual, team and organizational levels. Although, we found no previous empirical evidence that examined drug use and work-related behaviour among policemen in Nigeria, using the multi-dimensional measures adopted in the present study, the findings of the study appear to be quite plausible. Given the importance of proficiency, adaptivity and proactivity to effective policing, the finding indicating that higher drug use is associated with poorer performance in these crucial indicators of effective performance across individual, team and organizational levels has far-reaching implications for policemen, their organization and the generality of the society. The positive prediction of counterproductive work performance by drug use, though not surprising (it makes sense that the more drug use by a policeman, the more he is likely to engage in counterproductive work performance), also portends very serious practical implications for policing in Nigeria.

It is justifiable to conclude the issue of drug use among policemen in Nigeria is grossly under-researched, and the association of drug use among this key agency of the Nigerian state has not received deserved attention. Furthermore, from these findings of this study, it is evident that the prevalence of drug use among policemen in Akwa Ibom State, Nigeria, is higher compared to the prevalence in the general population. It could also be concluded that drug use among policemen is associated with important self-reported indicators of individual, team and organizational work performance. In other words, policemen's performance is likely

to be seriously and negatively affected by drug use.

It is recommended that the Nigerian Police should establish / equip a unit in each command to routinely screen for drug use and refer officers involved for addiction treatment. For instance, a training program for medical and social worker staff among the police officers should be established to identify and provide the necessary counseling and advice to police officers who engage in drug use. Police authorities should institute Employee Assistance Programme (EAP) for men and officers of the Nigeria Police to help officers develop healthy and non-detrimental coping strategies instead of resorting to drug use. Given the dearth of empirical work on this very important issue, it is recommended that more research be carried out to fully explore drug use among policemen. This obviously at-risk population should be targeted by policy makers for ameliorative attention. Further studies may focus on predictors of drug use among police officers so that appropriate intervention can be put in place. Other studies should also focus ways to further our understanding of the degree of stress and trauma police officers encounter on a day to day basis may with a view to exploring the prevalence of post-traumatic stress disorder and other psychosocial traumas among police officers. Stress reduction and trauma focused intervention may possibly be healthy and adaptive ways of managing a stress among personnel of very stressful occupation.

REFERENCES

- Ballenger, J. F., Best, S. R., Metzler, T. J., Wasserman, D. A., Mohr, D. C.,

- Liberman, A., Delucchi, K., Weiss, D. S., Fagan, J. A., Waldrop, A. E., & Marmar, C. R. (2010). Patterns and Predictors of Alcohol Use in Male and Female Urban Police Officers, *The American Journal on Addictions*, 20, 21–29.
- Berman, A. H., Bergman, H., Palmstierna, T & Schlyter, F. (2003). *Drug Use Disorders Identification Test (DUDIT) Manual*. Stockholm: Karolinska Institutet
- Davey, J. D., Obst, P., & Sheehan, M. (2000). The use of AUDIT as a screening tool for use in the workplace. *Drug and Alcohol Review*, 19(1), 49-54.
- Gillan, T. (2009). *Alcohol abuse, Central Florida Police Stress Unit Inc*. <http://www.policestress.org> (accessed on 12th March 2011).
- Griffin, M. A., Neal, A., & Parker, S. K. (2007). A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal*, 50(2), 327–347.
- Kazeem, O. T. & Abdulkarim, I. B. (2014). Depression and Paranoid Ideation as Correlates of Substance Abuse Among Nigerian Military Personnel Deployed for United Nations Peace Support Operation. *Global Journal of Arts & Humanities – Psychology*, 14 (3), 24 - 32
- Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry*, 52(12), 1048–1060.
- Kgalema, L. (2002). *Victim awareness and trauma management in metropolitan police services, centre for the study of violence and reconciliation*, Research report for the center for the study of violence and reconciliation. <http://www.csvr.org>, viewed on 5th November 2011.
- Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., Vet, H. C. W. de, Beek, A. J. van der (2014). Construct validity of the individual work performance questionnaire. *Journal of Occupational and Environmental Medicine*, 56(3), 331-337.
- Lindsay, V. L. (2007). Police Officers and Their Alcohol Consumption: Should We Be Concerned? *Journal of Alcohol Studies*, 11 (1), 74-87
- Lindsay, V., Taylor, W. B., & Shelley, K. (2008). Alcohol and the police: an empirical examination of a widely-held assumption, Policing. *An International Journal of Police Strategies & Management*, 31 (4), 596 – 609.
- Madrama, C., & Ovuga, E. (2006). Patterns of drinking among police officers in Kampala district, *African Health Science*, 6 (1), 167-181.
- Mbatia, J., Jenkins, R., Singleton, N., & White, B. (2009). Prevalence of alcohol consumption and hazardous drinking, Tobacco and drug use in urban Tanzania and their associated risk factors. *Journal of Environmental Research and Public Health*, 6 (7), 261-273.
- Murtagh, C 2010, *Police stress and alcohol abuse*, PhD thesis, Brandeis University, Massachusetts.
- Mushumbusi, Z. L. (2012). Prevalence of Alcohol Abuse among Police Officers at the Major Barracks, Dar es Salaam, Tanzania. *Master of Science Clinical Psychology Dissertation, Muhimbili University of Health and Allied Sciences*
- McNeill, M. (1996). Alcohol and police workplace- factors associated with excessive intake. *National Police Research Unit*, no. 119.1.

- Patel, V. (2007). *Alcohol Use and Mental Health in developing Countries*, AEP, vol. 17.
- Silverberg, C. (2000). *Alcohol use and abuse in policing*, A report to Calgary police Commission. Calgary, Canada.
- Sutton, C. J. (2011) *Alcohol treatment program for police officers: A multi-modal group therapy Manual*, Degree of Doctor of Psychology in Clinical Psychology, Argosy University, Hawaii.

RELIGIOSITY AS A PROTECTIVE FACTOR AGAINST ALCOHOL AND SUBSTANCE USE AMONG FIRST-YEAR STUDENTS IN A SOUTH AFRICAN UNIVERSITY

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ABSTRACT

Religiosity modulates many aspects of human behaviour. However, there is paucity of empirical studies examining the protective effects of religiosity on alcohol and substance use among first-year students in South African universities. This study therefore assessed the protective effects of religiosity on alcohol and substance use among first-year students in a South African university. A total of 348 first-year students were purposively sampled for the study which lasted for 30 days. Results revealed that alcohol consumption, tobacco smoking, use of cannabis and any substance were 60.1%, 31.5%, 23.3%, and 36.9% respectively. High religiosity scores conferred protective effects on alcohol consumption, (OR=0.33, $p<0.01$), tobacco (0.23, $p<0.01$), and on the use of any substance (0.38, $p<0.021$). Being a male student, residing with parents and living in an urban area were associated with increased odds of alcohol use. Age and fathers' educational level were predictive of likelihood to use tobacco. The use of marijuana was associated with being a male student. Use of any substance was associated with being a male student and residing in the urban area. The current findings suggest that religiosity had a restrictive role on alcohol consumption and substance use. Parental factors underscored the use of substances among the study population.

Keywords: Religiosity, alcohol, substance use, protective factors, university students

INTRODUCTION

Religiosity as a protective factor against alcohol consumption and substance use is gaining popularity in developed and developing countries. Chitwood, Weiss, and Leukefeld (2008) found 410 associa-

tions between religiosity and substance abuse in 105 peer reviewed articles published between 1997 and 2006. Sixty-two percent (62%) of the associations showed that religiosity had protective effects against alcohol and drug use, whereas 32.5% of the associations showed no link

between religiosity and substance abuse. However, five instances suggested that higher religiosity was associated with higher levels of substance abuse. These studies concluded that religiosity had protective effects and the five instances could not have occurred by chance. Inverse associations between religiosity and adolescent substance use have been documented in several studies (Bahr, Hawks, and Wang 1993; Gryczynski and Ward 2011; Koenig, King, and Carson 2012; Rew and Wong 2006). Studies in developed countries have demonstrated that spiritual or religious practices offer protective effects from alcohol consumption (Jankowski, Hardy, Zamboanga, and Ham 2013; Harold G Koenig 2009; Menagi, Harrell, and June 2008). Furthermore, protective effect of religiosity was observed among student and adolescent populations who abused alcohol (Dulin, Hill, and Ellingson 2006; Johnson, Sheets, and Kristeller 2008; Harrell and Powell 2014) and substances (Hodge, Marsiglia, and Nieri 2011; Chu 2007; Ulmer Desmond, Jang, and Johnson 2012). In real life situation, religiosity and other contextual factors operate in a complex interaction to influence alcohol consumption and substance use. Empirical studies of primarily young populations have shown that religiosity regulates family influences (Bahr and Hoffmann 2010; Kim-Spoon, Longo, and McCullough 2014; Pearson, D'Lima, and Kelley 2011; Taha et al. 2010), self-regulation (DeWall et al. 2014; Jankowski et al. 2013), peer influences (Jackson et al. 2014; Kyei and Ramagoma 2013) and substance experimenting tendencies (Brown et al. 2008) with alcohol and illegal drug use. For instance, low likelihood to use drugs or experiment with drug in parent-adolescent bonds relationship was

mediated by religiosity (Bahr, Hawks, and Wang 1993; Bahr and Hoffmann 2010; Litchfield, Thomas, and Li 1997). Similarly, studies have shown that religiosity mattered most in adolescents' low likelihood of drug use in parental monitoring (Bahr and Hoffmann 2010; Bahr et al. 1998; Kim-Spoon et al. 2014). In their studies, religiosity attenuated the relationship between peer influences and substance use (Bahr et al. 1998; Desmond, Soper, and Kraus 2011) and alcohol consumption (Desmond et al. 2011). Irrespective of religiosity dimensions, the practice often translates to protective effects against health risk outcomes (Gomes et al. 2013; Nonnemaker, McNeely, and Blum 2003; Salas-Wright et al. 2017; Sauer-Zavala, Burris, and Carlson 2014). Private and public religiosity had protective effects against cigarettes, alcohol and marijuana use among adolescents in America (Nonnemaker et al. 2003; Salas-Wright et al. 2017) and university students in Ethiopia, Beriut and Brazil (Gebreslassie, Feleke, and Melese 2013; Ghandour, Karam, and Maalouf 2009; Gomes et al. 2013). Protective effects of private religiosity was observed by deterring substance use initiation (Nonnemaker et al. 2003). Although private and public religiosity correlates as an intervening variable in protecting against alcohol consumption and substance use, studies have documented differential effects of religiosity dimensions on outcome variables (Luk et al. 2013; Martinez et al. 2015). However, nuanced integration of the two types of religiosity would reinforce each other as a health risk prevention strategy (Bahr et al. 1998; Jankowski et al. 2015). How unified dimension of religiosity may protect against alcohol consumption and substance use in student population could

be more effective than disaggregated dimensions. However, few studies combining multidimensional measure of private and public religiosity using factor analysis were carried out in developed countries (Hooker, Masters, and Carey 2014; Kendler et al. 2003).

However, studies linking protective effects of religiosity on alcohol consumption and substance use in South African universities are inadequate. Furthering secular interventions on health risk prevention negates the importance of religiosity as a risk protective factors in South African society. Few studies conducted have revealed inverse relationships between religious denominations and alcohol consumption (Osuafor, Maputle, and Ayiga 2016; Kyei and Ramagoma 2013), and substances use (Kyei & Ramagoma, 2013) among students in South African universities. However, these researchers did not evaluate the impact of religiosity on alcohol consumption and substance use in their study population. Furthermore, these studies focused on students in general while neglecting the most vulnerable first-year students. Most of the first-year students are experiencing separation and freedom from parental supervision for the first time in the university environment. This separation often gives leeway to socialization, exploration and experimenting with substance. While there are several studies among students, only one examined religiosity and substance use among first-year students at the University of the North (Peltzer, Malaka, and Phaswana 2002). Indeed, religiosity as a protective factor against alcohol consumption and substance use among first-year students has not been given adequate attention in South African universities. Given that about seventy-five

percent of South Africans over the age of 18 years attributed their religion as guiding principle for moral behaviour (Pew Research Center, 2014), the role religiosity on alcohol consumption and substance use appeals for examination. The purpose of the paper is to examine the protective effects of religiosity on alcohol consumption and substance use among first-year students in a South African university. It was therefore hypothesized that high religiosity would have protective effects against alcohol and substance uses among the first-year students.

METHOD

Design: A cross-sectional survey on health risk behaviour among first-year students of age range 18 to 30 years old was carried out between April and June 2016 at Walter Sisulu University Mthatha campus in Eastern Cape Province. A list of lectures halls allocated for first-year modules was compiled. Five of these lecture halls were randomly selected for the survey. Before the data collection, the lecturers who should be in the selected lecture halls by university schedule were contacted to arrange the convenient time for the research. The lecturers whose lecture periods were used assisted the principal investigator in data collection. The purpose of the research was explained to the students and their consents were obtained before filling out the questionnaire. Data were collected by distributing self-administered questionnaire to first-year students during the lecture periods. The questionnaire was designed by the principal investigator from the review of related studies (Ghandour et al. 2009; Gomes et al. 2013; Peltzer et al. 2002;

Abu-Ras, Ahmed, and Arfken 2010). A total of 500 questionnaires were distributed but 400 questionnaires were returned. After screening the returned questionnaire, 338 were correctly filled and subsequently used for the data analysis. The research protocol for the survey was approved by the Research Ethics Committee, with project number REC/9b/2016.

Measures: The outcome variables were current alcohol consumption and substances use in the last 30 days prior to the survey. The following psychoactive substances were examined separately: 1. Cannabis; 2. Mandrax; 3. LSD; 4. Nyaope; 5. Tobacco; 6. Glue; and 7. Tranquilizers. A substance was considered used if it had been consumed at least once in the last 30 days prior to the study. The respondents were asked if they used any of these substances in the last 30 days. The responses were either “Yes” or “No”. Those who reported that they consumed alcohol were further asked “How many times did they experience a subjective loss of control (drunkenness) within the 30-day period. Religiosity was measured on five questions representing private and public religiosity. Three questions were on religious practices; “How often do you attend services?”, “Do you pray in the morning and at night?”, and “How often do you read the Bible?”. Respondents could choose one from four responses: 1. Never; 2. Rarely; 3. Few times; and 4. Regular. Two questions on the religious beliefs were “how important is your religious teachings to you?” and “how important is God in your daily life?”. Respondents could choose one option from the level of importance: 1. Not Important; 2. Slightly Important; 3. Important; and 4. Very Important. The five questions were

subjected to consistency and factor analysis tests and were found to have high coefficient reliability with Cronbach alpha of 0.812, suggesting internal consistency on the measure of religiosity. Factors analysis scores revealed KMO adequacy of 0.814 and explained 57% of variance on religiosity measures.

Covariates examined were sociodemographic profile which including age, sex, places of residence, religious affiliation, parents’ educational levels, and the person residing with. Socioeconomic status was measured by one self-rated on “How would you describe your home socioeconomic status? Expressed as 1. Poor, 2. Middle, and 3. Rich.

Data Management and Analyses: Demographic characteristics, alcohol consumption and substance use were analysed using descriptive statistics. Individual multivariate logistic regression models were used to establish the predictors of alcohol consumption, cannabis, tobacco and any substance use in the past 30 days. Backward stepwise elimination was performed with religiosity and all the demographic variables were included as covariates in each of the models. The results were described using frequencies, odds ratio and confidence interval (95% CI). All data analyses were performed using IBM Statistical Package for Service Solutions (SPSS) version 24.

RESULTS

Demographic characteristics of the respondents

The mean and standard error of the respondents age was 20.9 ± 0.12 . Table 1 indicates that about two-third were

Table 1. Demographic characteristics of the first-year students

Characteristics	Frequency	Percentage
Sex		
Male	111	32.1
Female	235	67.9
Residence		
Urban	236	67.8
Rural	112	32.2
Residing with		
One parent or both	152	81.3
Relatives	35	18.7
Mother's Educational level		
<= Primary	73	24.9
Secondary	120	41.0
Tertiary	100	34.1
Father's Educational level		
<=Primary	73	31.1
Secondary	81	34.5
Tertiary	81	34.5
Socioeconomic status (SES)		
Poor	116	35.6
Middle	186	57.1
Rich	24	7.4
Religious Affiliation		
None	32	10.1
Methodist	77	24.2
Pentecostal	117	36.8
Other churches*	92	28.9
Preach against alcohol in the past one month		
No	49	24.3
Yes	138	68.3
Don't know	15	7.4
Preach against substance use in the past one month		
No	52	27.2
Yes	125	65.4
Don't know	14	7.3

*Other churches include Anglican, Roman Catholic, Lutheran, Twelve Apostles, Seventh Day Adventist and Baptist whose sample size were very small to stand alone in the analysis.

females. The same proportion resided in the urban area. About 8 out 10 were living with either one parent or both parents. In terms of education, 4 out of 10 and 3 out of 10 indicated that their mother and father respectively had secondary education. Over half reported that they belong to middle stratum in terms of socioeconomic class. About 10% did not have any religious affiliation. About two-third stated that message against alcohol consumption and substance use

was preached in the last 30 days in their places of worship.

Religiosity measures among respondents

Table 2 showed that about 37.9% and 36.8% reported that they attend religious services few times or more regular. Over 80% engaged in spiritual activity of praying morning and night more often. Nearly two-third indicated that they read the Bible regularly or few times. Forty-seven

Table 2. Percentage distribution of religiosity among the respondents

Religiosity statements	Never % (N)	Rarely % (N)	Few times % (N)	Regular % (N)
How often do you attend services?	11.5 (40)	13.8 (48)	37.9 (132)	36.8 (128)
Do you pray morning and at Night?	3.2 (11)	14.5 (50)	37.2 (128)	45.1 (155)
How often do you read the Bible	9.0 (31)	26.1 (90)	37.1 (128)	27.6 (96)
	Not Important	Slightly Important	Important	Very Important
How important is Religious teachings to you?	7.0 (24)	25.3 (87)	46.6 (162)	20.6 (71)
How important is God in your daily life?	3.5 (12)	4.4 (15)	12.0 (41)	80.1 (274)

Table 3. Alcohol and psychoactive substances use among the first-year students in the last 30 days

Variables	No % (N)	Yes %(N)
Alcohol		
Alcohol consumption	39.1 (139)	60.1 (209)
Consumption with no episode of drunkenness	-	46.4 (97)
One or more episodes of drunkenness	-	53.6 (112)
Substances used consumed in the last 30 days other than alcohol		
Cannabis	76.7 (237)	23.3 (72)
Mandrax	95.0 (268)	5.0 (138)
LSD ^a	93.6 (42)	6.4 (18)
Glue	95.4 (269)	4.6 (13)
Nyaope ^b	92.3 (263)	7.7 (22)
Tobacco	68.5 (204)	31.5 (94)
Tranquilizers	93.1 (256)	6.9 (19)
Any substance	63.1 (178)	36.9 (104)

^aAcid, Candy, Smarties; ^bNyaope is fine powder that is usually combined with marijuana and other elements like rat poison, cleaning detergents and even crushed antiretroviral drugs.

percent reported that their religious teaching is important to them. Whereas over 80% stated that God is very important in their daily lives.

Alcohol and psychoactive substances

Table 3 above presents summary of respondents’ alcohol and substance use in the last 30 days. About 60% had consumed alcoholic beverages, with 54% stating they had experienced one or more instances of drunkenness. About 37% had used psychoactive substances in the last 30 days. The substances consumed by largest number of the respondents were tobacco (32%), followed by cannabis (23%), nyaope (8%),

tranquilizers (7%), LSD (6%), mandrax (5%) and glue (5%) in decreasing order.

Multivariate analyses

Multivariate logistic regression analysis was applied to identify salient variables which in combination predict alcohol consumption and substance use in the past 30 days among participants studied. Table 4 shows that religiosity had protective effect on alcohol consumption, tobacco and on any substance use. This confirmed the hypothesis that the greater the religiosity the less likely it is that a first-year student will consume alcohol, tobacco or use any psychoactive substance. However, the effect of

Table 4. Multivariate regression analysis of alcohol, cannabis, tobacco and any substance (other than alcohol) in the last 30 days

Variables	OR	CI 95%	P value
Alcohol			
Religiosity factor	0.34	0.15-0.73	0.006
Sex			
Male	3.32	1.01-10.97	0.049
Female	1.00	-	
Residence			
Urban	3.21	0.98-10.50	0.053
Rural	1.00	-	
Residing with			
Parents	3.73	1.04-13.35	0.043
Relatives	1.00	-	
Cannabis			
Sex			
Male	4.28	1.39-13.09	0.011
Female	1.00	-	
Tobacco			
Religiosity factor	0.23	0.09-0.55	0.001
Age	0.77	0.59-0.99	0.047
Father's Education			
<=Primary	1.00		
Secondary	2.92	0.68-12.53	0.148
Tertiary	8.54	1.75-41.60	0.008
Any substance			
Religiosity factor	0.38	0.17-0.87	0.021
Sex			
Male	9.30	2.44-35.37	0.001
Female	1.00	-	
Residence			
Urban	4.90	1.27- 19.01	0.021
Rural	1.00	-	

religiosity on cannabis use was not statistically significant. Male students were 3 times more likely than females to report alcohol consumption. The association between place of residence and alcohol consumption is marginally weak. Similarly, those who lived with their parents were about 4 times more likely to report alcohol consumption than those living with their relatives. Only sex was significantly associated with the use of cannabis; male students were more likely than female to report the use of cannabis. As the age increased, the chances that a first-year student will use tobacco decreased. Furthermore, respon-

dents whose fathers had tertiary education were more likely than those their father had primary or no formal education to report tobacco use. Male students were 9 times more likely than females to report any substance use. In terms of place of residence, those living in the urban area were more likely to report any substance use compared to those in rural area.

DISCUSSION

This study examined the protective effect of religiosity on alcohol and substance

use among first-year university students. The hypothesis was confirmed by the findings that students who practiced high religiosity were less likely to report alcohol and substance use compared to those who were less religious. The results supported the findings of some earlier studies who reported that religiosity modulated low alcohol consumption among university students (Gomes et al. 2013; Moore, Berkley-Patton, and Hawes 2013; Scharer 2017). Results showed that over 60% of participants reported that messages against alcohol consumption were disseminated during services in their religious groups in the last 30 days. It was therefore plausible that anti-drinking preaching may have permeated as acceptable behavioural norm which deter alcohol consumption among first-year students.

The results of the present study also demonstrated that religiosity had protective effect on tobacco and any substance use in the last 30 days. This is consistent with previous studies that found inverse relationships between religiosity, tobacco (Salas-Wright et al. 2017) and substance use (Gomes et al. 2013) within the same time frame of the survey. Religious teachings such as human body as temple of God is a universal norm. Furthermore, negative attitude and proscriptive beliefs against substance use often disseminated by religious groups may create unfavourable ground to use tobacco or any substance. It is therefore suggestible that such religious beliefs have protective effects against the use of tobacco or any substance.

The results did not reveal significant association between religiosity and the use of cannabis. A result that contradicted some earlier empirical findings which showed significant inverse relationship between religiosity and cannabis

use among university student population (Burke, et al. 2014; Gomes et al. 2013; Peltzer et al. 2002). The discrepancies would first be attributed to the complex multifaceted measure of religiosity used in the study. In the present study, five items which integrated private and public religiosity were used; whereas other studies (Burke et al. 2014; Gomes et al. 2013) used one or disaggregated dimensions of religiosity. Secondly, the proportion sampled population that use cannabis in this study was very small compared to large numbers in other studies.

The results of this study are similar to other reports that male students consume alcohol (Abu-Ras et al. 2010; Erevik et al. 2017; Heydari et al. 2015) and use psychoactive substance (Goel et al. 2015; Heydari et al. 2015) more than their female counterparts. Alcohol consumption is a means of socialization and making friend for males. South African society in the past and present has traditional festivals which make experimenting and testing of alcohol and other substance by young males unavoidable. The implication is that males use alcohol consumption and use of psychoactive substance as tests of resistance, pride and masculinity. However, it is suggestible that females still hold restrictive behaviour toward alcohol consumption and substance use among the study population.

Results further revealed that students living with their parents were more likely to consume alcohol than those living without their parents. This is not unexpected because about 60% of the students have consumed alcohol during their high school days. Another 43% indicated that the drugs were supplied by their friends while 42.6% obtained drugs by themselves. Poor parental monitoring,

supervision and parents being unaware of their children friends have been associated with alcohol consumption and substance use (Bahr and Hoffmann 2010; Bahr et al. 1998; Harrell and Powell 2014). With poor monitoring, parents are unaware of friends and situation that may encourage exposure to alcohol and substance use. The findings are line with previous studies in Iran (Khami et al. 2010) and Saudi Arabia (AlSwuaillem, AlShehri, and Al-Sadhan 2014; Taha et al. 2010) that higher educational level of fathers predicted students' tobacco use.

Residing in urban areas significantly predicted alcohol consumption and use of any substance within the last 30 days. This finding is consistent with report among university students in Ethiopia (Gebreslassie et al. 2013). High urban alcohol and substance use may be linked to the fast urbanization and globalization processes in South Africa society. Previous studies predicted rise in alcohol and substance use in most developing countries due to urbanization (Babor, Robaina, and Jernigan 2015; Ferreira-Borges et al. 2015). This rapid transformation has made access to illicit substances easy for students living in urban area with high causalities. While delay in banning alcohol advertisement lingers in South Africa, prohibiting the use of urban university students for alcohol marketing and promotion is pertinent.

In conclusion, this study investigated the protective effect of religiosity on alcohol and substance use among first-year students in a South African university. Findings indicated that religiosity played protective roles against alcohol consumption and substance use. It was therefore suggested that encouraging first-year students involvements in religious activities help reduce their propensities

to substance use and subsequently substance abuse and its attendant effects. It was further suggested that both private and public religiosity as an aggregate force may play a positive role in protecting against alcohol consumption, tobacco and any substance use. Finding that religious affiliation did not matter in prevention of substance use may suggest desertion of religious mission in teaching and values on alcohol use by the students. Given that this university has recorded losses of life due to substance use, management can draw from the findings of this study and encourage students, especially first-year students to get involved in religious activities as a strategy for reducing substance abuse tendencies.

However, despite the robustness of these findings, there are caveats to interpretations. The present study used cross sectional data which prohibit claiming causation on alcohol use by predicting variables. There are cultural variables which were not available in the dataset. Religiosity dimensions used signified an extreme level of internalised sense of religiosity which respondents may have responded to less than truthfully. Furthermore, our findings cannot be extrapolated to other religious groups because all respondents were Christians. Nevertheless, these dimensions have been used extensively with other items in predicting protective effects of religiosity. The present findings may not be generalised to the whole student population because data was collected from the first-years students.

Conflict of interest

We have no conflict of interest. The manuscript is our original work and has not been submitted for publication or under review by any other journal.

REFERENCES

- Abu-Ras, Wahiba, Sameera Ahmed, and Cynthia L. Arfken. (2010). "Alcohol Use among US Muslim College Students: Risk and Protective Factors." *Journal of Ethnicity in Substance Abuse* 9 (3): 206–220.
- AlSwuaillem, Abdullah S., Majed K. AlShehri, and Salwa Al-Sadhan. (2014). "Smoking among Dental Students at King Saud University: Consumption Patterns and Risk Factors." *The Saudi Dental Journal* 26 (3): 88–95.
- Babor, Thomas F., Katherine Robaina, and David Jernigan. (2015). "The Influence of Industry Actions on the Availability of Alcoholic Beverages in the African Region." *Addiction* 110 (4): 561–571.
- Bahr, Stephen J., Ricky D. Hawks, and Gabe Wang. (1993). "Family and Religious Influences on Adolescent Substance Abuse." *Youth & Society* 24 (4): 443–465.
- Bahr, Stephen J., and John P. Hoffmann. (2010). "Parenting Style, Religiosity, Peers, and Adolescent Heavy Drinking." *Journal of Studies on Alcohol and Drugs* 71 (4): 539–543.
- Bahr, Stephen J., Suzanne L. Maughan, Anastasios C. Marcos, and Bingdao Li. (1998). "Family, Religiosity, and the Risk of Adolescent Drug Use." *Journal of Marriage and the Family*, 979–992.
- Brown, Sandra A., Matthew McGue, Jennifer Maggs, John Schulenberg, Ralph Hingson, Scott Swartzwelder, Christopher Martin, et al. (2008). "A Developmental Perspective on Alcohol and Youths 16 to 20 Years of Age." *Pediatrics* 121 (Supplement 4): S290–S310.
- Burke, Adam, Juliana Van Olphen, Mickey Eliason, Ryan Howell, and Autumn Gonzalez. (2014). "Re-Examining Religiosity as a Protective Factor: Comparing Alcohol Use by Self-Identified Religious, Spiritual, and Secular College Students." *Journal of Religion and Health* 53 (2): 305–316.
- Chitwood, Dale D., Michael L. Weiss, and Carl G. Leukefeld. (2008). "A Systematic Review of Recent Literature on Religiosity and Substance Use." *Journal of Drug Issues* 38 (3): 653–688.
- Chu, Doris C. 2007. "Religiosity and Desistance from Drug Use." *Criminal Justice and Behavior* 34 (5): 661–679.
- Desmond, Scott A., Sarah E. Soper, and Rachel Kraus. 2011. "Religiosity, Peers, and Delinquency: Does Religiosity Reduce the Effect of Peers on Delinquency?" *Sociological Spectrum* 31 (6): 665–694.
- DeWall, C. Nathan, Richard S. Pond Jr, Evan C. Carter, Michael E. McCullough, Nathaniel M. Lambert, Frank D. Fincham, and John B. Nezlek. (2014). "Explaining the Relationship between Religiousness and Substance Use: Self-Control Matters." *Journal of Personality and Social Psychology* 107 (2), 339.
- Dulin, P. L., R. D. Hill, and K. Ellingson. (2006). "Relationships among Religious Factors, Social Support and Alcohol Abuse in a Western US College Student Sample." *Journal of Alcohol and Drug Education* 50 (1), 5.
- Erevik, Eilin K., S Pallesen, Øystein Vedaa, Cecilie S. Andreassen, and Torbjørn Torsheim. (2017). "Alcohol Use among Norwegian Students: Demographics, Personality and Psychological Health Correlates of Drinking Patterns." *Nordic Studies on Alcohol and Drugs* 34 (5): 415–429.
- Ferreira-Borges, Carina, Sonia Dias, Thomas Babor, Marissa B. Esser, and

- Charles D. H. Parry. (2015). "Alcohol and Public Health in Africa: Can We Prevent Alcohol-Related Harm from Increasing?" *Addiction* 110 (9): 1373–1379.
- Gebreslassie, Measho, Amsalu Feleke, and Tesfahun Melese. (2013). "Psychoactive Substances Use and Associated Factors among Axum University Students, Axum Town, North Ethiopia." *BMC Public Health* 13 (1), 693.
- Ghandour, LA, EG Karam, and WE Maalouf. 2009. "Lifetime Alcohol Use, Abuse and Dependence among University Students in Lebanon: Exploring the Role of Religiosity in Different Religious Faiths" 104 (6): 940–48.
- Goel, Nidhi, Vivek Khandelwal, Kapil Pandya, and Atul Kotwal. (2015). "Alcohol and Tobacco Use among Undergraduate and Postgraduate Medical Students in India: A Multicentric Cross-Sectional Study." *Central Asian Journal of Global Health* 4 (1).
- Gomes, Fernanda Carolina, Arthur Guerra de Andrade, Rafael Izicki, Alexander Moreira Almeida, and Lúcio Garcia de Oliveira. (2013). "Religion as a Protective Factor against Drug Use among Brazilian University Students: A National Survey." *Revista Brasileira de Psiquiatria* 35 (1): 29–37.
- Gryczynski, Jan, and Brian W. Ward. (2011). "Social Norms and the Relationship Between Cigarette Use and Religiosity Among Adolescents in the United States." *Health Education & Behavior* 38 (1): 39–48.
- Harrell, Zaje AT, and Kandace Powell. (2014). "The Relationship between Parent and Student Religious Coping and College Alcohol Use." *Journal of Religion and Health* 53 (3): 895–903.
- Heydari, Seyed Taghi, Somayeh Izedi, Yaser Sarikhani, Navid Kalani, Ali Akbary, Abolfazl Miri, Mojtaba Mahmoodi, and Maryam Akbari. (2015). "The Prevalence of Substance Use and Associated Risk Factors Among University Students in the City of Jahrom, Southern Iran." *International Journal of High Risk Behaviors & Addiction* 4 (2).
- Hodge, D. R., F. F. Marsiglia, and T. Nieri. (2011). "Religion and Substance Use among Youths of Mexican Heritage: A Social Capital Perspective." *Social Work Research* 35 (3): 137–46.
- Hooker, Stephanie A., Kevin S. Masters, and Kate B. Carey. (2014). "Multidimensional Assessment of Religiousness/Spirituality and Health Behaviors in College Students." *The International Journal for the Psychology of Religion* 24 (3): 228–40.
- Jackson, Nicki, Simon Denny, Janie Sheridan, Terry Fleming, Terryann Clark, Tasileta Teevale, and Shanthi Ameratunga. (2014). "Predictors of Drinking Patterns in Adolescence: A Latent Class Analysis." *Drug and Alcohol Dependence* 135 : 133–39.
- Jankowski, Peter J., Sam A. Hardy, Byron L. Zamboanga, and Lindsay S. Ham. (2013). "Religiousness and Hazardous Alcohol Use: A Conditional Indirect Effects Model." *Journal of Adolescence* 36 (4): 747–58.
- Jankowski, Peter J., Sam A. Hardy, Byron L. Zamboanga, Lindsay S. Ham, Seth J. Schwartz, Su Yeong Kim, Larry F. Forthun, et al. (2015). "Religiousness and Levels of Hazardous Alcohol Use: A Latent Profile Analysis." *Journal of Youth and Adolescence* 44 (10): 1968–83.
- Johnson, Thomas J., Virgil L. Sheets, and Jean L. Kristeller. (2008). "Identifying

- Mediators of the Relationship Between Religiousness/Spirituality and Alcohol Use." *Journal of Studies on Alcohol and Drugs* 69 (1): 160–70.
- Kendler, Kenneth S., Xiao-Qing Liu, Charles O. Gardner, Michael E. McCullough, David Larson, and Carol A. Prescott. (2003). "Dimensions of Religiosity and Their Relationship to Lifetime Psychiatric and Substance Use Disorders." *American Journal of Psychiatry* 160 (3): 496–503.
- Khami, M.R., H. Murtomaa, S. Razeghi, and J.I. Virtanen. (2010). "Smoking and Its Determinants among Iranian Dental Students." *Medical Principles and Practice* 19 (5): 390–94.
- Kim-Spoon, Jungmeen, Julee P. Farley, Christopher Holmes, Gregory S. Longo, and Michael E. McCullough. (2014). "Processes Linking Parents' and Adolescents' Religiousness and Adolescent Substance Use: Monitoring and Self-Control." *Journal of Youth and Adolescence* 43 (5): 745–756.
- Koenig, Harold George. (2009). "Research on Religion, Spirituality, and Mental Health: A Review." *The Canadian Journal of Psychiatry* 54 (5): 283–91.
- Koenig, Harold George, Dana King, and Verna B. Carson. (2012). *Handbook of Religion and Health*. USA: Oxford University Press, USA.
- Kyei, Kwabena A., and Mpho Ramagoma. (2013). "Alcohol Consumption in South African Universities: Prevalence and Factors at the University of Venda, Limpopo Province." *Journal of Social Sciences* 36 (1): 77–86.
- Litchfield, Allen W., Darwin L. Thomas, and Bing Dao Li. (1997). "Dimensions of Religiosity as Mediators of the Relations between Parenting and Adolescent Deviant Behavior." *Journal of Adolescent Research* 12 (2): 199–226.
- Luk, Jeremy W., Rebecca L. Emery, Kenny A. Karyadi, Julie A. Patock-Peckham, and Kevin M. King. (2013). "Religiosity and Substance Use among Asian American College Students: Moderated Effects of Race and Acculturation." *Drug and Alcohol Dependence* 130 (1): 142–49.
- Martinez, Marcos J., Flavio F. Marsiglia, Stephanie L. Ayers, and B. Nuno-Gutiérrez. (2015). "Substance Use, Religion, and Mexican Adolescent Intentions to Use Drugs." *Public Health, Social Work, and Health Inequalities; Friedman, BD, Merrick, J., Eds*, 131–146.
- Menagi, Feyza S., Zaje A. T. Harrell, and Lee N. June. (2008). "Religiousness and College Student Alcohol Use: Examining the Role of Social Support." *Journal of Religion and Health* 47 (2): 217–26.
- Moore, Erin W., Jannette Y. Berkley-Patton, and Starlyn M. Hawes. 2013. "Religiosity, Alcohol Use, and Sex Behaviors Among College Student-Athletes." *Journal of Religion and Health* 52 (3): 930–40.
- Nonnemaker, James M., Clea A. McNeely, and Robert Wm Blum. (2003). "Public and Private Domains of Religiosity and Adolescent Health Risk Behaviors: Evidence from the National Longitudinal Study of Adolescent Health." *Social Science & Medicine* 57 (11): 2049–2054.
- Osuafor, Godswill N., Sonto M. Maputle, and Natal Ayiga. (2016). "Patterns of Substance Use and Its Predictors among North-West University Students Mafikeng Campus." *African Journal of Drug and Alcohol Studies* 15 (2): 111–121.

- Pearson, Matthew R., Gabrielle M. D'Lima, and Michelle L. Kelley. (2011). "Self-Regulation as a Buffer of the Relationship between Parental Alcohol Misuse and Alcohol-Related Outcomes in First-Year College Students." *Addictive Behaviors* 36 (12): 1309–1312.
- Peltzer, Karl, Dorothy W. Malaka, and Nancy Phaswana. (2002). "Sociodemographic Factors, Religiosity, Academic Performance, and Substance Use among First-Year University Students in South Africa." *Psychological Reports* 91 (1): 105–113.
- Pew Research Center. (2014). "Worldwide Many See Belief in God as Essential to Morality." www.pewresearch.org. Accessed 8th August 2014
- Rew, Lynn, and Y. Joel Wong. (2006). "A Systematic Review of Associations among Religiosity/Spirituality and Adolescent Health Attitudes and Behaviors." *Journal of Adolescent Health* 38 (4): 433–42.
- Salas-Wright, Christopher P., Michael G. Vaughn, Brandy R. Maynard, Trenette T. Clark, and Susanna Snyder. (2017). "Public or Private Religiosity: Which Is Protective for Adolescent Substance Use and by What Pathways?" *Youth & Society* 49 (2): 228–253.
- Sauer-Zavala, Shannon, Jessica L. Burris, and Charles R. Carlson. (2014). "Understanding the Relationship between Religiosity, Spirituality, and Underage Drinking: The Role of Positive Alcohol Expectancies." *Journal of Religion and Health* 53 (1): 68–78.
- Scharer, Jacob L. (2017). "The Role of Religious Fundamentalism in College Students' Perceived Drinking Norms, Alcohol Consumption, and Alcohol-Related Problems." *Mental Health, Religion & Culture* 20 (2): 188–201.
- Taha, Attia Z., Amr A. Sabra, Zaid Z. Al-Mustafa, Hasan R. Al-Awami, Mujtaba A. Al-Khalaf, and Momen M. Al-Momen. (2010). "Water Pipe (Shisha) Smoking among Male Students of Medical Colleges in the Eastern Region of Saudi Arabia." *Annals of Saudi Medicine* 30 (3): 222.
- Ulmer, Jeffery T., Scott A. Desmond, Sung Joon Jang, and Byron R. Johnson. (2012). "Religious Involvement and Dynamics of Marijuana Use: Initiation, Persistence, and Desistence." *Deviant Behavior* 33 (6): 448–468.

MOTIVATION TO USE CANNABIS AMONG YOUNG ADULTS AT A UNIVERSITY IN BOTSWANA

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ABSTRACT

In low and middle income countries, cannabis use is common and reported to be rising, especially among adolescents and young adults. Data on the motives to use cannabis among this group is lacking. This study aimed to assess the prevalence of and motives for using cannabis among 350 University of Botswana students (48.6% male, n=169). Cannabis use was assessed by the revised Cannabis Use Disorder Identification Test (CUDIT-R) and motives to use cannabis by Marijuana Motives Measure (MMM). Using both univariable and multivariable regression analyses, the prevalence of cannabis use and the extent to which the social and coping motives predicted cannabis use were assessed in the sample. A total of 128 (36.6%) students reported using cannabis at least once in the past six months of whom 82 (64.1%) were male students. Among self-reported users, 16.4% (n=21) were problem users (CUDIT-R score ≥ 13). Both coping ($\beta = 0.56$ (95% CI: 0.41, 0.72)) and social ($\beta = 0.33$ (95% CI: 0.16, 0.51)) motives significantly predicted cannabis use in univariable regression analyses. When adjusted for social motive, coping motive independently and significantly predicted cannabis use for the total sample ($\beta = 0.57$ (95% CI: 0.38, 0.77)) and for both male ($\beta = 0.47$ (95% CI: 0.19, 0.73)) and female ($\beta = 0.74$ (95% CI: 0.52, 0.99)) students while the influence of social motive attenuated and ceased to be insignificant. In young adults, cannabis use is common and motivated by both coping and social reasons, particularly coping motive. Both motives are essential for designing interventions to reduce cannabis use in educational institutions. Such interventions may include better education on drug and substance use and adaptive coping strategies.

Keywords: Cannabis use, social motive, coping motive, university students, Botswana

INTRODUCTION

Globally, cannabis is the most widely used illicit drug (UNODC, 2015; WHO, 2010), particularly among adolescents and mainstream youth (Degenhardt, Ferrari, Calabria, et al., 2013; Gowing, Ali, Allsop, Marsden, Turf, West, & Witton, 2015; Hall & Degenhardt, 2007). In low and middle income countries, cannabis use is reported to be on the rise (Hall & Degenhardt, 2007). The reasons for the rise in cannabis use in developing countries remain largely unknown. Possible reasons could be the dearth of information on cannabis, the normalization and legalization of the drug in some parts of the world (Sobesky & Gorgens, 2016), and the lack of research on drug and substance use in general (UNODC, 2015; WHO, 2010). Nevertheless, cannabis use remains potentially harmful in both the short and long-term. In the short term, cannabis use is linked to cognitive impairment (e.g., reduced ability to plan, make decisions, maintain attention, and solve problems) and poor school outcomes (Fergusson, Boden & Horwood, 2015). In addition, cannabis use is reported to be a gateway to the abuse of other drugs such as tobacco and alcohol (Kandel & Kandel, 2015). In the long-term, cannabis use, especially with an early onset, is suggested to disrupt normal brain development particularly neurological development and associated with reduced regional brain volume (Filbey, Aslan, Calhoun, et al., 2014; Lubman, Cheetham, & Yucel, 2015). Similarly, long-term cannabis use has also been associated with reduced motivation for goal directed behaviour such as poor concentration, inability to follow routines, and to master new materials (Lubman, Cheetham, & Yucel, 2015; Volkow,

Swanson, Evins, et al., 2016), chronic psychotic states (e.g., hearing voices, delusions and erratic behaviour) and violent behaviours (Volkow, Swanson, Evins, et al., 2016; Dugré, Dellazizzo, Giguère, Potvin, & Dumais, 2017; Fergusson, Boden & Horwood, 2015).

Particularly for the youth, cannabis use is often associated with accidents (Fergusson, Boden & Horwood, 2015), other drug use such as tobacco and alcohol (Kandel & Kandel, 2015), crime (Carney, Myers, Kline, Johnson, & Wechsberg, 2017), risky sexual activities (Parry, Carney, & Petersen Williams, 2017), and can potentially lead to dropping out of college due to truancy, poor academic outcomes, and reduced motivation (Lac & Luk, 2017; Volkow, Swanson, Evins, et al., 2016). Furthermore, cannabis use is also associated with a numerous mental health problems such as depression and anxiety (Danielsson, Lundin, Agardh, Allebeck, & Forsell, 2016; Horwood, Fergusson, Coffey, Patton, Tait, Smart, et al., 2012) and cognitive processes such as inability to think clearly, organize thoughts, and poor memory (Iversen, 2012; Filbey, Aslan, Calhoun, et al., 2014), all of which are critical for educational success.

Although cannabis use has been widely studied in the Western world, research on cannabis in developing countries such as Botswana is lacking (UNODC, 2015; WHO, 2010). Moreover, the studies that have been conducted in countries such as Botswana have mainly been epidemiological with associated personality and mental health problems (Ludick & Amone-P'Olak, 2015; Spriggs & Hides, 2015). Yet, knowledge on what motivates the youth to use cannabis is lacking. The current study will focus not only on the prevalence but also the motivation to use

cannabis among young adults, a subpopulation where cannabis use is more common (Johnston, O'Malley, & Bachman, 2015) and associated with adverse future health and social consequences. Knowledge on what motivates adolescents and the youth to use cannabis can provide clues for developing effective interventions to prevent the onset and continued use of cannabis and to identify vulnerable youth.

Theoretical framework

Adapted from the Drinking Motives Measure, Cooper (1994) developed Marijuana Motives Measure (MMM) to predict cannabis use among college students based on a 5-factor model: enhancement motives, conformity motives, expansion motives, coping motives, and social motives (Benschop, Liebrechts, van der Pol, Schaap, Buisman, van Laar, ... & Korf, 2015; Cooper, 1994; Simons, Correia, Carey, & Borsari, 1998). The model posits that individuals are motivated to use cannabis for different needs and reasons (Figure 1). Some use it to enhance their social status (e.g., lower anxiety), to conform to their subculture (e.g., peer pressure), cope with problems (e.g., to reduce stress) or for social reasons (e.g., leisure or having fun). The motives are useful in helping to understand when, where and how frequently cannabis is used and behaviours associated with its use (Benschop,

Liebrechts, van der Pol, Schaap, Buisman, van Laar, ... & Korf, 2015; Cooper, 1994; Simons, Correia, Carey, & Borsari, 1998).

Particularly for this study, two motives related to cannabis use will be assessed: coping and social motives. Previous studies suggested that only the coping and social motives had strong internal consistency (Zvolensky, Vujanovic, Bernstein, et al., 2007). These two motives were chosen for two reasons. First, students experiencing various stressful life events such as heavy academic workload, rejection by peers, poor relations with parents, peers, and lecturers are more likely to resort to cannabis use to cope with life stressors (Hetolang & Amone-P'Olak, 2017). Second, other students may indulge in cannabis use for social enhancement such as to have fun with friends (Benschop, Liebrechts, van der Pol, Schaap, Buisman, van Laar, ... & Korf, 2015; Lee, Neighbors, & Woods, 2007). Furthermore, cannabis use is reported to be more common among males than females (Cooper & Haney, 2014; Ludick & Amone-P'Olak, 2015; Moitlakgola & Amone-P'Olak, 2015). However, female cannabis users are reported to progress faster to cannabis use disorder and associated clinical problems after onset than their male counterparts (Cooper & Haney, 2014). Nevertheless, it is unclear whether females use cannabis for the same reasons as males. For this reason, it is imperative to study whether

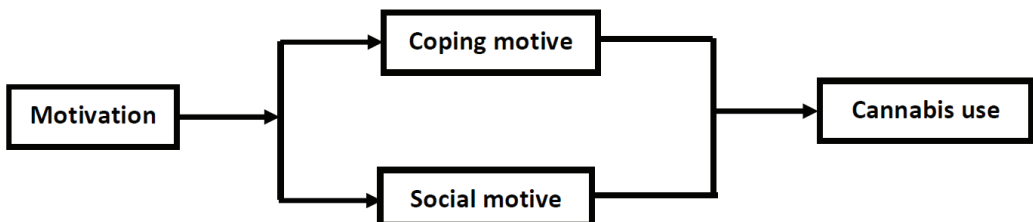


Figure 1. Theoretical model of social and coping motives to use marijuana.

motivations to use cannabis differ with gender.

The objectives of this study were three-fold: a) to assess the prevalence of cannabis use, b) to assess the motivation for using cannabis, and c) to examine whether the motivation for using cannabis differ among male and female students.

METHOD

Design and population

The design used in the current study was cross-sectional with participants selected using a convenient sampling strategy. Based on teaching timetables for each faculty, classes were randomly selected and permission sought from the respective lecturers to collect data from students during their lecture hours across all the eight faculties within the University of Botswana. Altogether, data were collected from 373 students registered for different undergraduate degree programmes in the eight faculties. A total of 23 questionnaires were discarded due to incomplete data.

Data collection procedure

Data was gathered from classrooms and lecture theatres in eight faculties of the university, namely, Social Sciences, Engineering and Technology, Humanities, Business, Health Sciences, Medicine, Science, and Education. In the different classes, the students were given information about the research purpose, their rights to decline to participate or withdraw at will during participation, and that information gathered from them would be treated with utmost confidentiality prior to seeking consent. Subsequently, the students signed a consent form before

taking part in the study. Furthermore, the students were instructed not to put any identifying information on the questionnaire. The questionnaire took about 10 minutes to complete.

Measures

In this study, three different measures were used: (i) self-developed measure to assess socio-demographic characteristics (e.g., age, gender, place of upbringing, parental educational attainment, etc.), (ii) Cannabis Use Disorder Identification Test-Revised - CUDIT-R (Adamson et al., 2010) to assess cannabis use, and (iii) Marijuana Motives Measure - MMM (Chabrol et al., 2005) to measure motivation to use cannabis.

Socio-demographic characteristics: participants were asked to report their gender, age, faculty enrolled in, year of study, secondary school attended, place of upbringing, and the educational attainment of the mother or female guardian and father or male guardian.

Revised Cannabis Use Disorder Identification Test - CUDIT-R (Adamson et al., 2010): The revised 8-item CUDIT-R scale was used to assess severity of use and problematic cannabis-behaviors. The CUDIT-R contains items relating to consumption, dependence, cannabis-related problems and psychological issues. Scores can range from 0 to 32 with 91.3% of participants with a recognized cannabis use disorder scoring above 13 (Adamson et al., 2010). The psychometric properties are adequate with high internal consistency ranging from .72 to .92 and high sensitivity (91%) and specificity (90%) (Adamson et al., 2010). Moreover, the CUDIT-R scale is brief and easy to administer with only 8 items assessing cannabis use in the

past six months. Some of the items include: “How often do you use cannabis?” or “How often during the past 6 months have you had a feeling of guilt or remorse after using cannabis?” Responses for these questions were categorized as “never” = 0 through to “daily or almost daily” =4. In this study, the Cronbach alpha for the CUDIT-R was $\alpha=.78$.

Marijuana Motives Measure - MMM (Chabrol et al., 2005): The MMM is a measure to assess the motives for using cannabis: social motive (e.g., to enjoy a party) and coping motive (e.g., forget my worries). Participants indicate on a 5- point Likert-scale their reasons for using cannabis. The MMM subscales have demonstrated excellent internal consistency (Chabrol et al., 2005). For the purpose of the current study, only the coping (4 items, e.g., “To forget about my problems”) and social (6 items, e.g., “Because it makes social gatherings more fun”) subscales of the MMM were used. In this study, the Cronbach alpha for the two scales were .92 and .89 for social and coping motives, respectively. The two factors fitted the factor structure in MMM (Chabrol et al., 2005) involving coping motive (4 items; 0.83) and social motive (6 items; 0.81), both indicative of a strong internal consistency.

Data analyses

Descriptive statistics (mean, standard deviation and range) were used to compute socio-demographic characteristics of study participants and the prevalence of cannabis use in the total group and the different genders. Sub-population differences (e.g., gender differences on prevalence and motives for using cannabis) were assessed using t-test. To ensure that

both motivation variables in the regression models were comparable, they were standardized to a mean of zero and SD of 1 (Z scores). Next, univariable regression analyses were used to assess the extent to which coping and social motives predicted cannabis use and the results stratified by gender. To obtain unique effects of each motive on cannabis use, the shared variance between coping and social motives were adjusted for each other in multivariable regression analyses. Previous studies indicate that the use of cannabis is sex-specific, with women reporting less cannabis use than their male counterparts (Cooper & Haney, 2014; Ludick & Amone-P’Olak, 2015; Moitlakgola & Amone-P’Olak, 2015). All the statistical analyses were carried out using IBM SPSS statistical software, version 24.0. (IBM Corp. Released 2016). Associations with a *p* value less than 0.05 were considered statistically significant.

RESULTS

Demographic characteristics and prevalence of cannabis use

The demographic characteristics of the study participants are presented in Table 1. Altogether, 350 (females =51.4%, *n*=191) students aged 21.73 (SD, 2.49) participated in the study. A total of 128 participants, representing 36.6% of the total sample reported using cannabis at least once in the past six months. Of these, 82 (64.1%) were male students. The proportion of cannabis problem users was 16.4% (*n*=21). Gender differences were observed for age, cannabis use in the past six months, and problem use of cannabis. Overall, male students were older, used more cannabis in the past six

months, and were more problem users than their female counterparts (Table 1).

The influence of social and coping motives on cannabis use

The results of univariable regression analyses to assess the extent to which motivation predicted cannabis use are presented in Table 2. Both coping and social motives significantly predicted cannabis use in univariable regression models for all students and also for both male and female students. The proportion of

explained variance for the model ranged from $R^2 = 0.31$ ($F_{2, 348} = 52.18, p < .001$) for coping motive to $R^2 = 0.10$ ($F_{2, 348} = 14.14, p < .001$) for social motive. The proportion of explained variance for coping motive was larger ($R^2 = 0.31$) than for social motive ($R^2 = 0.10$).

The independent effects of coping and social motives on cannabis use after adjusting for each other

The multivariable regression analysis was fitted to assess whether the influence

Table 1. Descriptive characteristics and gender differences of the variables in the study

Variable name	Total (N=350)	Male (n=169)	Female (n=181)	t-test, p value
	M (SD)	M (SD)	M (SD)	
Age	21.01 (2.36)	21.94 (2.43)	20.07 (2.33)	2.08, $p < 0.05$
Coping motive	7.56 (4.39)	7.88 (4.35)	6.98 (4.44)	1.07, $p > 0.05$
Social motive	12.00 (6.43)	12.85 (6.53)	10.44 (6.00)	2.53, $p < 0.05$
	N (%)	N (%)	N (%)	
Participants				
Year 1	115 (32.9)	44 (38.3)	71 (61.7)	
Year 2	104 (29.7)	59 (56.7)	45 (43.3)	
Year 3	49 (14.0)	25 (51.0)	24 (49.0)	
Year 4	71 (20.3)	35 (49.3)	36 (50.7)	
Year 5	11 (3.1)	7 (63.6)	4 (36.4)	
Used cannabis in the past six months				4.53, $p < .05$
Yes	128 (36.6)	82 (64.1)	46 (35.9)	
No	222 (63.4)	87 (39.2)	135 (60.8)	
Problem use of cannabis				
CUDIT-R score < 13	107 (83.6)	70 (67.3)	37 (32.7)	
CUDIT-R score \geq 13	21 (16.4)	14 (66.7)	7 (33.3)	

Key: M=mean, SD=Standard deviation, min=minimum score, max=maximum score

Table 2. Univariable regression of cannabis use on coping and social motives stratified by gender

Variables	Total		Male		Female	
	β (95% CI:)	Adjusted R^2	β (95% CI:)	Adjusted R^2	β (95% CI:)	Adjusted R^2
† Coping motive	0.56 (0.41, 0.72)	0.31	0.41 (0.19, 0.61)	0.16	0.80 (0.63, 0.99)	0.64
† Social motive	0.33 (0.16, 0.51)	0.10	0.21 (0.10, 0.42)	0.05	0.52 (0.27, 0.89)	0.25

Key: β = standardised beta; CI= Confidence Interval. † Results are adjusted for age.

of coping and social motives on using cannabis are independent of each other (Table 3). When both the social and the coping motives were simultaneously entered in the same model, the coping motive uniquely and independently predicted cannabis use while the effects of social motive fizzled out and remained insignificant for both male and female students (Table 3). By including both motives in the model, the proportion of explained variance for the model in which both the coping and social motives of cannabis use were entered were: $R^2 = 0.30$ ($F_{3, 347} = 25.97, p < .001$) for the total number of participants, $R^2 = 0.15$ ($F_{3, 347} = 7.61, p < .001$) for male students, and $R^2 = 0.64$ ($F_{3, 347} = 36.42, p < .001$) for female students. The proportion of explained variance for coping motive was larger for female students ($R^2 = 0.64$) than for male students ($R^2 = 0.15$).

DISCUSSION

Recap of main findings

This study assessed not only the prevalence of problem use of cannabis but also the motives for using cannabis among young adults at the University of Botswana. This is the first study in Botswana that considered the motives for using cannabis

among young people. Particularly, the objectives of the current study were to: a) assess the prevalence of cannabis problem use, b) assess the motives for using cannabis, and c) assess whether there were any gender differences in the motives for using cannabis among university students. The results showed that slightly over a third of students have used cannabis in the past six months and six per cent (6%, $n=21/350$) of the students in the sample categorized as problem users. The majority of the students who use cannabis in the past six months were male students. Both the coping and social motives predicted cannabis use with the effects of coping motive notably stronger on cannabis use than the social motive. This was clearly evident when both the social and coping motives were simultaneously entered together in a multivariable model, the effect of the social motive attenuated and was no longer significant in both male and female students.

Agreement with previous studies

The findings of the current study that cannabis use is more prevalent among male than female students agrees with previous findings in the same population (Moitlakgola & Amone-P’Olak, 2015; Ludick & Amone-P’Olak, 2015) and elsewhere (Degenhardt, Chiu, Sampson, et

Table 3. Multivariable regression of cannabis use on constructs of coping and social motives stratified by gender

Variables	Total		Male		Female	
	β (95% CI:)	Adjusted R ² = 0.30	β (95% CI:)	Adjusted R ² = 0.15	β (95% CI:)	Adjusted R ² = 0.64
†Coping motive	0.57 (0.38, 0.77)		0.47 (0.19, 0.73)		0.74 (0.52, 0.99)	
††Social motive	-0.02 (-0.03, 0.03)		-0.09 (-0.06, 0.03)		0.12 (-0.12, 0.39)	

Key: β= standardised beta; CI= Confidence Interval. †Adjusted for age and social motive. †† Adjusted for age and coping motive

al., 2008; Degenhardt, Ferrari, Calabria, et al., 2013; Gowing, Ali, Allsop, Marsden, Turf, West, & Witton, 2015). Furthermore, there were significant differences in cannabis use among male and female students. Male students did not only use cannabis more frequently but were more problem users than their female counterparts. The sex differences in the findings on prevalence and problem use also agree with previous reports (Crane, Langenecker, & Mermelstein, 2015; Moitlakgola & Amone-P'Olak, 2015; Ludick & Amone-P'Olak, 2015). Although gender differences in cannabis use still exist, the global trend shows a convergence of the gender gap in cannabis use (Degenhardt, Chiu, Sampson, et al., 2008) as cannabis use becomes more acceptable, perhaps due to normalization and legalization of use in other parts of the world (Sobesky & Gorgens, 2016).

The roles of the coping and social motives in predicting cannabis use also agree with previous findings (Benschop, Liebrechts, van der Pol, et al., 2015; Moitra, Christopher, Anderson, & Stein, 2015). It is possible that students use cannabis as a maladaptive strategy to cope with numerous life stressors and psychological distress. Indeed, previous studies with the same population have indicated that the students experience several stressful life events such as poor relations with peers, parents and lecturers which have been linked to depression and alcohol abuse (Hetolang & Amone-P'Olak, 2017; Ludick & Amone-P'Olak, 2015; Moitlakgola & Amone-P'Olak, 2015). Similarly, past studies with the same population and elsewhere have also linked poor self-control (Morutwa & Plattner, 2014), novelty seeking (Ludick & Amone-P'Olak, 2015), and impulsiveness (Pokhrel, Sussman, & Sta-

cy, 2014) with drug and substance abuse. Indeed, it is widely recognized that mental health problems such as depression and anxiety are related to cannabis use (Danielsson, Lundin, Agardh, Allebeck, & Forsell, 2016; Gage, Hickman, Heron, et al., 2015). Consequently, in order to cope with the stressors and mental health problems, it is possible that students resort to maladaptive strategies such as using cannabis to cope.

The findings in this study goes to highlight the importance of the motivation model which stipulates that young adults are motivated by different needs and reasons for using cannabis. The current study demonstrates that students often use cannabis for both social (e.g., for leisure and having fun) and coping (e.g., to reduce stress or cope with anxiety, poor self-control, or depression) motives (Benschop, Liebrechts, van der Pol, Schaap, Buisman, van Laar, ... & Korf, 2015; Cooper, 1994; Simons, Correia, Carey, & Borsari, 1998). It remains unclear why the effects of the social motive fizzled out in a multivariable regression analysis. It is possible that the same students who use cannabis for coping are the very ones who use it for social motives too. In addition, it could be that the same students who use cannabis to cope are also experiencing social challenges and therefore use cannabis as a crutch to navigate through social activities as well.

The results of this study has important implications for research, policy and practice. Regarding research, a longitudinal research design that aims to chart the trajectory of drug and substance use from earlier on in life while taking into account individual, family, and community contextual risk and protective factors is recommended. Policies that not only reduces

the supply but also tackle the demand side of drug and substance abuse are critical in addressing the drug and substance abuse problems among young people. At different institutions of learning, it is important to design interventions to identify the youth who are likely to abuse drugs and substance and enhance protection of the youth against drug and substance abuse. Interventions to reduce drug and substance use should target students with mental health problems by teaching them more adaptive coping strategies and social activities (e.g., having fun) without resorting to drug and substance use.

Limitations

Several factors that may limit validity need to be considered when interpreting the findings of this study. First, the self-report measure used in this study might have led to under-reporting of cannabis use. Nevertheless, there were significant variations between cannabis and non-cannabis users. Second, the convenient sampling strategy employed in the study may limit generalizability of the results beyond the setting. Nonetheless, the results of this study agree with previous findings among young adults in colleges and universities. Third, the cross-sectional design does not infer causality. The above limitations notwithstanding, the findings in this study may be a precursor to a future longitudinal study to comprehensively assess the trajectory, motivation, inter- and intrapersonal factors, and contextual risk and protective factors associated with cannabis use among young adults.

Conclusion

This study of young adults shows that cannabis use is common, especially among male students and is associated

with both coping and social motives. However, the effects of coping motive on cannabis use was markedly stronger than social motive. Sex differences were only observed in the prevalence and disordered use of cannabis other than the motives. Policies and interventions to reduce cannabis use need to consider motives for using cannabis as an important factor. This signifies that the social and coping motive probably contributes to the risk of using cannabis in young adults and should be considered by policy makers, practitioners and intervention designers.

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Conflict of interest: None

Authors' contributions

MBK and KAP designed the study and MBK implemented the survey. MBK had the original idea for the manuscript, conducted the analyses, and wrote the manuscript. All authors provide input into interpreting results, critically revised the manuscript for important intellectual content and approved the final version of the manuscript.

REFERENCES

- Adamson, S. J., Kay-Lambkin, F. J., Baker, A. L., Lewin, T. J., Thornton, L., Kelly, B. J., & Sellman, J. D. (2010). An improved

- brief measure of cannabis misuse: The Cannabis Use Disorders Identification Test-Revised (CUDIT-R). *Drug and Alcohol Dependence*, 110 (1), 137-143.
- Arseneault, L., Cannon, M., Poulton, R., Murray, R., Caspi, A., & Moffitt, T.E. (2002). Cannabis use in adolescence and risk for adult psychosis: Longitudinal prospective study. *BMJ*, 325(7374):1212-1213.
- Benschop, A., Liebrechts, N., van der Pol, P., Schaap, R., Buisman, R., van Laar, M., ... & Korf, D. J. (2015). Reliability and validity of the Marijuana Motives Measure among young adult frequent cannabis users and associations with cannabis dependence. *Addictive Behaviors*, 40, 91-95.
- Carney, T., Myers, B., Kline, T. L., Johnson, K., & Wechsberg, W. M. (2017). Aggressive behaviour among drug-using women from Cape Town, South Africa: ethnicity, heavy alcohol use, methamphetamine and intimate partner violence. *BMC Women's Health*, 17(1), 93.
- Chabrol, H., Ducongé, E., Casas, C., Roura, C., & Carey, K. B. (2005). Relations between cannabis use and dependence, motives for cannabis use and anxious, depressive and borderline symptomatology. *Addictive Behaviors*, 30, 829-840.
- Cooper, M.L. (1994). Motivations for alcohol use among adolescents: Development and validation of a four factor model. *Psychological Assessment*, 6 (1994), 177-188, 10.1037/1040-3590.6.2.117
- Cooper, Z.D., & Haney, M. (2014). Investigation of sex-dependent effects of cannabis in daily cannabis smokers. *Drug Alcohol Depend.* 136:85-91.
- Crane, N. A., Langenecker, S. A., & Mermelstein, R. J. (2015). Gender differences in the associations among marijuana use, cigarette use, and symptoms of depression during adolescence and young adulthood. *Addictive Behaviors*, 49, 33-39.
- Danielsson, A. K., Lundin, A., Agardh, E., Allebeck, P., & Forsell, Y. (2016). Cannabis use, depression and anxiety: A 3-year prospective population-based study. *Journal of Affective Disorders*, 193, 103-108.
- Degenhardt, L., Ferrari, A. J., Calabria, B., Hall, W. D., Norman, R. E., McGrath, J., ... & Vos, T. (2013). The global epidemiology and contribution of cannabis use and dependence to the global burden of disease: results from the GBD 2010 study. *PloS one*, 8(10), e76635.
- Degenhardt, L., Chiu, W. T., Sampson, N., Kessler, R. C., Anthony, J. C., Angermeyer, M., ... & Karam, A. (2008). Toward a global view of alcohol, tobacco, cannabis, and cocaine use: Findings from the WHO World Mental Health Surveys. *PLoS Medicine*, 5(7), e141.
- Dugré, J. R., Dellazizzo, L., Giguère, C. É., Potvin, S., & Dumais, A. (2017). Persistence of cannabis use predicts violence following acute psychiatric discharge. *Frontiers in Psychiatry*, 8, 176.
- Filbey, F. M., Aslan, S., Calhoun, V. D., Spence, J. S., Damaraju, E., Caprihan, A., & Segall, J. (2014). Long-term effects of marijuana use on the brain. *Proceedings of the National Academy of Sciences*, 111(47), 16913-16918.
- Gage, S., Hickman, M., Heron, J., Munafo, M.R., Lewis, G., Macleod, J., Zammit, S. (2015). Associations of cannabis and cigarette use with depression

- and anxiety at age 18: findings from the AVON longitudinal study of parents and children *Journal of Epidemiology and Community Health*, 2015; 69:A19.
- Gowing, L. R., Ali, R. L., Allsop, S., Marsden, J., Turf, E. E., West, R., & Witton, J. (2015). Global statistics on addictive behaviours: 2014 status report. *Addiction*, 110(6), 904-919.
- Hall, W., & Degenhardt, L. (2007). Prevalence and correlates of cannabis use in developed and developing countries. *Current Opinion in Psychiatry*, 20(4), 393-397.
- Hetolang, L. T., & Amone-P'Olak, K. (2017, June 1). The associations between stressful life events and depression among students in a university in Botswana. *South African Journal of Psychology*, Advance online publication. <https://doi.org/10.1177/0081246317711793>.
- Horwood, L. J., Fergusson, D. M., Coffey, C., Patton, G. C., Tait, R., Smart, D., ... & Hutchinson, D. M. (2012). Cannabis and depression: an integrative data analysis of four Australasian cohorts. *Drug & Alcohol Dependence*, 126(3), 369-378..
- IBM Corp. (2015). IBM SPSS Statistics for Windows (Version 24.0). Armonk, NY: Author.
- Iversen L (2012). How cannabis works in the human brain. In: Castle D, Murray R, D'Souza DC, editors. Marijuana and madness. Cambridge, Cambridge University Press1–11.
- Johnston, L. D., O'Malley, P. M., Miech, R. A., Bachman, J. G., & Schulenberg, J. E. (2016). Demographic subgroup trends among adolescents in the use of various licit and illicit drugs, 1975-2015.
- Kandel, D., & Kandel, E. (2015). The Gateway Hypothesis of substance abuse: Developmental, biological and societal perspectives. *Acta Paediatrica*, 104(2), 130-137.
- Korb, I., & Plattner, I. E. (2014). Suicide ideation and depression in university students in Botswana. *Journal of Psychology in Africa*, 24, 420–426. doi:10.1080/14330237.2014.997010.
- Lac, A., & Luk, J. W. (2017). Testing the Amotivational Syndrome: Marijuana Use Longitudinally Predicts Lower Self-Efficacy Even After Controlling for Demographics, Personality, and Alcohol and Cigarette Use. *Prevention Science*, 1-10.
- Lee, C. M., Neighbors, C., & Woods, B. A. (2007). Marijuana motives: Young adults' reasons for using marijuana. *Addictive Behaviors*, 32(7), 1384-1394.
- Lubman, D.I., Cheetham, A., & Yucel, M. (2015). Cannabis and adolescent brain development. *Pharmacological Therapy*, 148, 1-16.
- Ludick, W. K., & Amone-P'Olak, K. (2016). Temperament and the risk of alcohol, tobacco, and cannabis use among university students in Botswana. *African Journal of Drug and Alcohol Studies*, 15(1), 21- 35.
- Moitlakgola, K. K., & Amone-P'Olak, K. (2015). Stressful life events and alcohol use among university students in Botswana. *African Journal of Drug and Alcohol Studies*, 14, 81–93.
- Moitra, E., Christopher, P. P., Anderson, B. J., & Stein, M. D. (2015). Coping-motivated marijuana use correlates with DSM-5 cannabis use disorder and psychological distress among emerging adults. *Psychology of Addictive Behaviors*, 29(3), 627.

- Morutwa, G., & Plattner, I. E. (2014). Self-control and alcohol consumption among university students in Botswana. *African Journal of Drug and Alcohol Studies*, 13, 69–78.
- Parry, C. D. H., Carney, T., & Petersen Williams, P. (2017). Reducing substance use and risky sexual behaviour among drug users in Durban, South Africa: Assessing the impact of community-level risk-reduction interventions. *SAHARA-J: Journal of Social Aspects of HIV/AIDS*, 14(1), 110-117.
- Simons, J., Correia, C. J., Carey, K. B., & Borsari, B. E. (1998). Validating a five-factor marijuana motives measure: Relations with use, problems, and alcohol motives. *Journal of Counseling Psychology*, 45(3), 265.
- Sobesky, M., & Gorgens, K. (2016). Cannabis and adolescents: exploring the substance misuse treatment provider experience in a climate of legalization. *International Journal of Drug Policy*, 33, 66-74.
- Spriggs, L., & Hides, L. (2015). Patterns of cannabis use, psychotic-like experiences and personality styles in young cannabis users. *Schizophrenia Research*, 165(1), 3-8.
- Volkow, N. D., Swanson, J. M., Evins, A. E., Delisi, L. E., Meier, M. H., Gonzalez, R., ... & Baler, R. (2016). Effects of cannabis use on human behavior, including cognition, motivation, and psychosis: a review. *JAMA Psychiatry*, 73(3), 292-297.
- UNODC (2015). *World drug report 2015*. Vienna: United Nations Office on Drugs and Crime.
- WHO (2010). *ATLAS on substance use (2010): resources for the preventions and treatment of substance use disorders*. Geneva: World Health Organization.
- Zvolensky, M. J., Vujanovic, A. A., Bernstein, A., Bonn-Miller, M. O., Marshall, E. C., & Leyro, T. M. (2007). Marijuana use motives: A confirmatory test and evaluation among young adult marijuana users. *Addictive Behaviors*, 32(12), 3122-3130.

**KNOWLEDGE OF ALCOHOL RELATED HARM AND PATTERN
OF CONSUMPTION AMONG RURAL AND URBAN SECONDARY
SCHOOL ADOLESCENTS IN IBADAN, NIGERIA**

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ABSTRACT

The growing involvement of adolescents in alcohol consumption is a public health concern in Nigeria. This study assesses the knowledge differentials and alcohol consumption pattern between rural and urban adolescents in Ibadan, Nigeria. A descriptive cross-sectional survey was conducted using a four-stage random sampling technique to select 237 and 263 students from four rural and urban secondary schools respectively. A 14-point knowledge scale questionnaire on patterns of alcohol use was used for data collection. Knowledge scores of ≤ 7 and ≥ 8 were considered low and high respectively. Chi square and t-test were used for data analysis with the level of significance set at 5%. Overall, mean knowledge score of the respondents was 5.5 ± 3.2 ; the mean score of rural and urban respondents were 5.8 ± 3.4 and 5.2 ± 3.1 , respectively. The findings also showed that more urban respondents (60.8%), than their rural counterparts (54.2%) had ever taken alcohol. Adolescents' knowledge of alcohol was generally low, and the prevalence of alcohol abuse cut across both residential settings. Health education interventions, including peer education and counselling, need to address the prevailing alcohol abuse concerns among these adolescents.

Keywords: Adolescents, Alcohol abuse, Alcohol-related knowledge, Alcohol consumption patterns, Alcohol exposure

INTRODUCTION

Alcohol and other drug use among our nation's youth remain a major public

health problem and one of the most disturbing health-related problems among them (Adeyemo, 2007). Epidemiological data from school surveys in Nigeria show

a rising prevalence of consumption of locally available substances (Abasiubong et al., 2014), alcohol (Rehm et al., 2010) with a decreasing age of onset of alcohol abuse (Eneh et al., 2004).

Alcohol related harm is correlated with the quantity of alcohol consumed, pattern of consumption (Rehm et al., 2010) and seldom on the quality of alcohol consumed (World Health Organization, 2014). Other factors such as age of initiation, especially before age fourteen (Fatoye et al., 2002) or below (Eneh et al., 2004) gives a prediction of alcohol dependence and abuse in older age (Beil-Gawelczyk et al., 2014).

These concerns have led to studies on the knowledge and pattern of alcohol consumption among young people worldwide. In sub-Saharan Africa, much of the evidence focuses on the links between alcohol consumption with drug use (Onohwosafe et al., 2008), substance use among secondary school students from different regions in Nigeria (Eneh et al., 2004; Fatoye et al., 2002; Peltzer, 2009) and sexual behavior and sexually transmitted diseases in adolescent population.

Other studies on substance abuse among youths found the habit to start in the school (Eneh et al., 2004), consequently, the best place for early detection and prevention of substance abuse is the adolescent population.

However, there is paucity of studies that explore the knowledge differentials and pattern of alcohol consumption among rural and urban secondary school adolescents in Nigeria (Kabiru, Beguy et al. 2010). Yet knowledge of alcohol related harm and pattern of consumption among rural and urban secondary school adolescents in Ibadan is important as this is a needed prerequisite to proffer an intervention (World Health Organization, 2014).

To reduce these risks, it is critical to develop a better understanding of the risk factors for initiating alcohol use in adolescence. Preliminary steps in this process are to establish what is currently known regarding these risk factors and to identify what is needed to learn.

These gaps in knowledge constituted the focus of this study among in-school adolescents in Ibadan, Nigeria. Results obtained can be used to facilitate the design and development of behavioural change communicating materials that are sensitive to the peculiar needs of adolescents in rural and urban settings.

The study therefore assessed knowledge of alcohol related harm and pattern of consumption among rural and urban secondary schools students in Ibadan.

Adolescent's knowledge of alcohol related harm

There are few studies that examined determinants of adolescent alcohol consumption, particularly ones that examined adverse effects of childhood alcohol use in in sub-Saharan Africa (Kabiru et al., 2010), hence there is a compelling need for additional school surveys on knowledge of adolescents' alcohol related harm and consumption in Nigeria (Kabiru, Beguy et al. 2010). This will allow for comparison of determinants of adolescents' alcohol consumption from different localities bearing in mind possible prevailing social differences from various cities in Nigeria.

In addition, there is paucity of studies that explore the knowledge and pattern of alcohol consumption among rural and urban secondary school adolescents in Nigeria (Kabiru, Beguy et al. 2010). The outcome of this study will have implications for the formulation of

evidence-based policies that will constitute the framework for the implementation of alcohol control among in-school adolescents.

Pattern of adolescent alcohol consumption globally and in Nigeria

Alcohol abuse remains global alcohol problem, yet information on the accurate prevalence and pattern of use in Nigeria remain scant (Chikere et al., 2011). This is worsened by aggressive promotion of the product throughout society (Aina et al., 2008).

However, prevalence of alcohol consumption among secondary school students in rural – urban communities in South West, Nigeria by (Fatoye et al., 2002) was 13.4%, while in Abakaliki, South East, Nigeria, (Anyanwu et al., 2016) found in – school adolescent alcohol prevalence was 29.0%. On the contrary, alcohol consumption prevalence among undergraduate students in Owerri, South-East, Nigeria by (Chikere et al., 2011) was 78.4%.

The vast difference in the prevalence may be accounted for by the level of students researched were rural – urban secondary school students (13.4%), in Abakaliki, (29%) secondary school Owerri and among undergraduate students, prevalence was (78.4%). Also, other determinants include the locality, availability of alcohol, the sophisticated and unchecked manner of promotion in the marketing of the product may have contributed to the different prevalence in settings in (Aina et al., 2008; Dumbili, 2013).

Pattern of exposure of in – school adolescent alcohol in rural – urban settings

Decision to drink and patterns of drinking are largely culturally determined

(Bonomo, 2005). Children are introduced to drinking alcoholic beverages early within the family by integrating drinking into commonplace activities (Adenugba et al., 2012). Other sources of exposure to alcohol use include friends' homes, schools, as well as commercial alcohol outlets (Aina et al., 2008) and events centers (Fatoye, 2003).

In Nigeria, the use of commercial centres for alcoholic consumption are higher among secondary school students, especially in urban settings where restrictive laws are relatively weak or non-existing (Eneh et al., 2004).

Ages at first consumption of alcohol

In Nigeria, (Fatoye et al., 2002), observed that majority of his respondents initiated alcohol consumption at a young age of fourteen years while (Eneh et al., 2004) observation was an extreme initiation of a mean age of alcohol of four (4) years. Drinking alcohol at a young age puts young people at risk of becoming alcohol dependent in later life (usually set at age 13 and younger) as well as alcohol related health problems (Ellickson et al., 2003).

METHOD

The study was a comparative, descriptive cross – sectional school - based survey conducted in four randomly selected senior and junior rural / urban public secondary schools. The sample consisted of 500 students of 11 to 19 years with overall mean age of 14.3 ± 2.1 years adolescents from Ido (rural) and Ibadan North (urban) LGAs. Using a multi – stage random sampling technique, a total of two hundred and thirty seven (237) and two hundred

and sixty - three students (263) selected using a four – stage sampling technique from a total number 9,064 and 8,432 from the rural / urban schools respectively. This is 2.9% of the total student population. The data collection lasted a period of two weeks and individual data collection lasted 35 to 45minutes to an hour.

Alcohol knowledge was measured using a Knowledge scores of ≤ 7 and ≥ 8 were considered low and high knowledge respectively and a 14-point knowledge scale questionnaire on pattern of alcohol use. Data was collected through using a pre- tested interviewer administer English questionnaire.

Pattern of alcohol consumption was elucidated by a measure of proximity to point of sales of alcohol, physical exposure of respondent to alcohol from his residence to the school premises using various indices. Other forms of Pattern of alcohol consumption elicited were prevalence of alcoholic beverage consumption and mean ages at consumption of various types of alcoholic beverages.

Permission and approval were obtained from the Commissioner for Education, Oyo State, and the Local Inspectorate of Education officers, in the local government areas. Subsequently permission and approval was sought from the Principals of the schools and informed written consent was obtained from the students after detailed disclosure of the study was thoroughly explained.

In order to ensure validity of the study instruments' for data collection, the instrument was pre-tested in two randomly selected secondary schools each in St. Gabriel commercial secondary school 1, both in the junior and senior secondary schools in North Local Government Area as an urban secondary school. It involved

the administration of 10% of the questionnaire to a study population with participants' of similar socio – demographic characteristics.

The Cronbach's Alpha Model technique yielded a coefficient reliability of 0.645 reliability hence, the instrument is reliable.

Data obtained from this study were properly managed, analyzed and stored using the following process:

Questionnaires were hand-coded by the researcher and entered into a computer, facilitated by the use of the SPSS software version 15 for analysis. The analysis of the data was done using descriptive and inferential statistical methods and Pearson's chi square was used for test of significance.

RESULTS

Socio-demographical characteristics of the sample

Overall, majority (76.0%) of the respondents lived with parents (77.6% in the rural and 74.5% in the urban). Out of this, 11.6% lived with mothers alone (12.2% living in rural and 11.6% living in the urban). Overall few (5.2%) respondents lived with fathers alone with rural-urban disparity being 4.2% and 6.1% respectively. Overall more than half (58.4%) were Christians and 81.4% were from monogamous families.

Knowledge of related harm of alcohol usage

The overall mean knowledge score of the respondents was 5.8 ± 3.2 on a 14-point knowledge scale. The mean knowledge scores of respondents relating to alcohol are summarized in figure 4.6. The mean knowledge score of rural-based

Table 1. Respondents' knowledge of alcohol-related diseases

Diseases related to alcohol use	Rural			Urban			Overall (%)
	No	%	N	No	%	N	
Disease of the liver							
Yes*	76	32.2	236	85	32.7	260	135 (27.2)
No	59	24.9		61	23.5		132 (26.6)
Don't know	101	42.8		114	43.8		229 (46.2)
Hypertension							
Yes*	56	23.6	237	59	22.7	260	84 (16.8)
No	83	35.0		73	28.1		163 (32.7)
Don't know	98	41.4		128	49.2		250 (50.1)
Measles							
Yes	40	16.9	237	28	10.8	260	105 (21.0)
No*	88	37.1		80	30.8		149 (29.8)
Don't know	109	46.0		152	58.5		243 (48.7)
Cancer of the throat							
Yes*	68	28.7	237	65	25.0	260	98 (19.6)
No	66	27.8		61	23.5		144 (28.8)
Don't know	103	43.5		134	51.5		255 (51.0)
Poliomyelitis							
Yes	26	11.0	237	30	11.5	260	84 (16.8)
No*	93	39.2		78	30.0		153 (30.6)
Don't know	118	49.8		152	58.5		259 (51.8)
Diabetes :							
Yes*	35	14.8	237	58	22.4	259	83 (16.6)
No	86	36.3		60	23.2		157 (31.4)
Don't know	116	48.9		141	54.4		257 (51.4)
Sickle cell disease							
Yes	50	21.1	237	48	18.5	260	139 (27.8)
No*	85	35.9		71	27.3		142 (28.4)
Don't know	102	43.0		141	54.2		216 (43.2)
Stomach ulcer							
Yes*	80	33.8	237	89	34.2	260	133 (26.7)
No	65	27.4		57	21.9		148 (29.7)
Don't know	92	38.8		114	43.8		216 (43.2)
Malaria							
Yes	42	17.7	237	53	20.4	260	199 (39.9)
No*	92	38.8		83	31.9		127 (25.5)
Don't know	103	43.5		124	47.7		172 (34.5)
Alcohol drinking can make one to start forgetting what one has learnt.							
Yes*	146	61.6	237	157	60.2	260	291 (58.3)
No	34	14.3		35	13.4		81 (16.2)
Don't know	57	24.1		69	26.4		127 (25.5)
One can get used to alcohol drinking such that without drinking one will no longer be able to feel comfortable or do things normally.							
Yes*	137	57.8	237	145	55.6	261	163 (32.7)
No	43	18.1		47	18.0		177 (35.5)
Don't know	57	24.1		69	26.4		159 (31.9)
Alcohol use makes people to think faster							
Yes	29	12.2	237	26	10.0	261	61 (12.2)
No*	128	54.0		134	51.3		270 (54.0)
Don't know	80	33.8		101	38.7		168 (33.7)
Alcohol use makes one to remember things faster							
Yes	29	12.2	237	32	12.3	261	154 (30.9)
No*	130	54.9		142	54.4		176 (35.3)
Don't know	78	32.9		87	33.3		169 (33.9)
Alcohol can make one misjudge distance							
Yes*	101	42.6	237	125	47.9	261	101 (42.6)
No	44	18.6		46	17.6		44 (18.6)
Don't know	92	38.8		90	34.5		92 (38.8)

* Correct responses

respondents was 5.8 ± 3.1 . The mean knowledge scores of males and females respondents were 5.4 ± 3.1 and 5.5 ± 3.3 respectively. Respondents in the senior classes had a higher mean knowledge score of 5.9 ± 3.1 compared with those in the junior classes with a score of 5.1 ± 3.3 with a significant difference. Overall proportions of respondents with good and poor alcohol-related knowledge were 35.2% and 64.8% respectively.

Table 2 presents respondents' level of knowledge of alcohol by rural-urban disparity. The result revealed that higher proportion (68.8%) of respondents in the urban setting had poor knowledge of alcohol compared with 60.3% in the rural setting.

The various settings where alcoholic beverages were taken and the pattern of use of alcoholic beverages in the settings are shown in the Table 5. The table reveals that overall equal proportions of respondents took alcohol once a month, in friends' house (54.4%) and at special ceremonies (54.4%). Slightly above fifty-one percent (51.4%) indicated they took alcoholic beverages once a month in beer palours. See Table 2 for the rural-urban disparity in pattern of alcohol consumption by settings among the respondents.

Respondents' responses on pattern of purchasing alcohol for consumption. Overall, the proportion of respondents

who had ever spent their pocket money or part of it to buy alcohol for drinks was 28.8% (rural, 18.2%; urban, 39.4%). Slightly above sixty-three percent (63.2%) reported that they still spent their money to purchase alcohol to drink (rural, 50.%; urban, 69.2%). Respondents who had ever bought alcohol for friends constituted 13.0% overall (rural, 15.2%; urban, 11.5%). Respondents who still indulged in the purchase of alcohol for friends were 58.1% overall (rural, 46.7%; urban, 68.8%).

DISCUSSION

Knowledge of Alcohol related harm

The knowledge of alcohol related harm is measured by its implication on the etiology on disease causation and alcohol use-related experiences among respondents. The respondents' knowledge of alcohol use was generally poor. Majority of them for instance, did not know that alcohol consumption could be implicated in etiology of hypertension, cancer of the throat and diabetes. Oshodi et al. (2010) similarly reported three-quarters of their respondents were unaware of the negative implication of alcohol abuse. Chikere et al., (2011) study participants' demonstrated awareness of alcohol consumption-related risks but awareness cannot

Table 2. Knowledge of alcohol by respondents' residential setting

Respondents setting	Knowledge level		
	Poor	Good	Total
Rural	143 (60.3%)	94 (39.7%)	237 (100.0%)
Urban	181 (68.8%)	82 (31.2%)	263 (99.0%)
Total	324 (64.8%)	176 (35.2%)	500 (100.0%)

Chi Square (X^2) = 3.934; p value = 0.047

Table 3. Respondents' pattern of alcohol consumption by settings

Settings	Rural			Urban			Overall (%)
	No	%	n	No	%	N	
Home							
Everyday	3	10.0		10	15.9		13 (14.0)
Once a week	15	50.0	30	21	33.3	63	36 (38.7)
Once a month	12	40.0		32	50.8		44 (47.3)
Friend's house							
Everyday	2	7.4		3	10.0		5 (8.8)
Once a week	8	29.6	27	13	43.3	30	21 (36.8)
Once a month	17	63.0		14	46.7		31 (54.4)
Special ceremonies/festivals							
Everyday	3	9.4		3	7.1		6 (8.1)
Once a week	11	34.4		13	31.0		24 (32.4)
Once a month	18	56.3	34	26	61.9	42	31 (54.4)
Beer parlour							
Everyday	4	33.3		1	4.3		5 (14.3)
Once a week	3	25.0	12	9	39.1	23	12 (34.3)
Once a month	5	41.7		13	56.5		19 (51.4)
Pepper soup eatery							
Everyday	5	26.3		4	21.1		9 (23.7)
Once a week	6	31.6	19	8	42.1	19	14 (36.8)
Once a month	8	42.1		7	36.8		16 (39.5)
From hawkers on my way to school							
Everyday	2	25.0		2	20.0		4 (22.2)
Once a week	3	37.5	8	5	50.0	10	8 (44.4)
Once a month	3	37.5		3	30.0		6 (33.3)
From hawkers who sell outside school premises							
Everyday	1	4		1	11.1		1 (7.1)
Once a week	3	60.0	5	3	33.3	9	6 (42.9)
Once a month	2	40.0		5	55.6		7 (50.0)
Within school premises secretly							
Everyday	1	14.3	7	1	9.1	11	2 (11.1)
Once a week	3	42.9		6	54.5		9 (50.0)
Once a month	3	42.9		4	36.4		7 (38.9)

be taken to be knowledge on alcohol related harm. Besides, the difference could be linked to the fact that Chikere et al., (2011) respondents were students in tertiary institutions who were supposed to be better informed than the younger adolescents about the adverse consequences of alcohol abuse.

Many of the respondents erroneously believed that alcohol use makes people to think faster. This is a misconception associated with alcohol use. Yet other respondents were of the perception that road

traffic accidents in Nigeria are caused by carelessness only and not by excessive use of alcohol. This is obviously a reflection of the respondents' poor knowledge of the effects of alcohol on human activities including driving. It has been noted that alcohol impairs the function of the mind and body (Hingson et al., 2006). The extent of the impairment depends, however, upon the quantity, quality of alcohol in the blood (World Health Organization, 2014).

The other factors which can influence the effect of action on the human body in-

clude drinker's body weight (French et al., 2010) gender and amount (Oshodi et al., 2010) and pattern of drinking (Eneh et al., 2004; Naimi et al., 2015).

Others, erroneously believed that alcohol consumption can lead to the occurrence of malaria.

Pattern of Alcohol consumption

Alcohol addiction is often characterized by increased tolerance, causing the abuser to drink greater amounts to achieve the same desired effect. When an alcoholic stops drinking, he or she will typically experience the symptoms of withdrawal. The unbearable withdrawal symptoms force the alcoholic to drink again in spite of the associated harmful physical, psychological and social consequences (Brown et al., 2004).

Compulsive drug seeking and use despite harmful consequences characterize alcohol-related intoxication by long-lasting chemical changes in the brain which interfere with the person's ability to think clear, exercise good judgment and control behaviour. A major consequence of this was the respondents' inability to remember some of the things that happened the previous day or night. Bonomo, (2005) had a similar result which showed that a fifth of young people aged 16–24 drank to intoxication most times and that many (42%) alcohol drinkers reported memory loss after drinking (Brown et al., 2004). In-school adolescents need to be aware that alcohol could have a more immediate and severe effect on young people because their muscle mass is smaller than that of adults. Adolescents also need to be informed that individual differences have roles to play regarding the adverse effects of alcohol.

Findings from this study show that respondents who misuse alcohol always

become less interested in people or things after ingesting alcohol. This psychosocial effect is characteristic of several psychoactive substances including alcohol (Oshodi et al., 2010).

Few respondents in this study reported having much energy to do things after consuming alcohol. It has been reported that some men anticipate feeling more powerful, sexually active and aggressive after drinking alcohol (George et al., 2006). The reported adverse effects of alcohol use documented in this study include the following: loss of balance, vomiting, making of inappropriate statements which they have to apologize for after the effects of alcohol have worn away.

This is obviously a reflection of the respondents' poor knowledge of the effects of alcohol on human activities including driving. It has been noted that alcohol impairs the function of the mind and body (Hingson et al., 2006). The extent of the impairment depends, however, upon the quantity, quality of alcohol in the blood (World Health Organization, 2014). The other factors which can influence the effect of action on the human body include drinker's body weight (French et al., 2010) gender and amount (Oshodi et al., 2010) and pattern of drinking (Eneh et al., 2004; Naimi et al., 2015).

Limitations of the Study

This study only involved students from 8 public co-educational schools (4 junior secondary schools, two from urban and two from rural LGAs; and 4 senior secondary schools, two from urban and two from rural LGAs). Although the sample is ethnically and socioeconomically diverse, generalization of result beyond the target population should be avoided.

As is typical in school-based surveys, dropouts and regular absentees were likely to be drinkers who spend more time watching music videos than being in regular school classes. This category of respondents may have been missed out during the study period. This situation has affected the magnitude of the association between rural and urban populations in terms of alcohol use and abuse.

Participation in the study was open; no attempt was made to exclude eligible respondents from the study since appropriate scientific steps were taken in the sampling of the respondents, the results are adjudged to be a fair reflection of the study.

CONCLUSION

A lot of factors such as peer group pressure, influence of family members and wrong perceptions, and alcohol advertisement may, undoubtedly, be responsible for the indulgence of the respondents in alcohol use in both rural and urban schools. Knowledge differentials of alcohol related harm and pattern of consumption among rural and urban secondary school adolescents in Ibadan is poor.

Therefore, achievement of prevention of alcohol abuse among adolescent becomes a task for all these stakeholders.

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REFERENCES

- Abasiubong, F., Udobang, J. A., Idung, A. U., Udoh, S. B., & Jombo, H. E. (2014). A comparative study of pattern of substance use in two Nigerian cities located in the Southern and Northern Nigeria. *African Research Review*, 8(2), 52-67.
- Adenugba, A. A., & Ijagbone, I. O. (2012). Correlates of Alcohol Consumption among Adolescents in Ibadan North Local Government Area of Oyo State, Nigeria. *Mediterranean Journal of Social Sciences*, 3(2), 251.
- Adeyemo, D. (2007). Interpersonal factors as correlates of alcohol use among secondary school adolescents in Oyo State, Nigeria. *Anthropologist*, 9(4), 321-326.
- Aina, O. F., & Olorunshola, D. A. (2008). Alcohol and substance use portrayals in Nigerian video tapes: an analysis of 479 films and implications for public drug education. *International quarterly of community health education*, 28(1), 63-71.
- Anyanwu, O. U., Ibekwe, R. C., & Ojinna, N. C. (2016). Pattern of substance abuse among adolescent secondary school students in Abakaliki. *Cogent Medicine*, 3(1), 1272160.
- Beil-Gawelczyk, J., Bratek, A., Banach, M., & Beil, S. (2014). EPA-1511—Association of early drinking onset with subsequent alcohol abuse. *European Psychiatry*, 29, 1.

- Bonomo, O. (2005). Adolescent alcohol problems: whose responsibility is it anyway? *Medical Journal of Australia*, 183(8), 430.
- Brown, S. A., & Tapert, S. F. (2004). Health consequences of adolescent alcohol involvement. *National Research Council and Institute of Medicine, ed. Reducing Underage Drinking: A Collective Responsibility*. City and Publisher???
- Chikere, E. I., & Mayowa, M. O. (2011). Prevalence and perceived health effect of alcohol use among male undergraduate students in Owerri, South-East Nigeria: a descriptive cross-sectional study. *BMC Public health*, 11(1), 118.
- Dumbili, E. (2013). Changing patterns of alcohol consumption in Nigeria: an exploration of responsible factors and consequences.
- Ellickson, P. L., Tucker, J. S., & Klein, D. J. (2003). Ten-year prospective study of public health problems associated with early drinking. *Pediatrics*, 111(5), 949-955.
- Eneh, A., & Stanley, P. (2004). Pattern of substance use among secondary school students in Rivers State. *Nigerian journal of medicine: journal of the National Association of Resident Doctors of Nigeria*, 13(1), 36-39.
- Fatoye, F. (2003). Psychosocial correlates of substance use amongst secondary school students in south western Nigeria. *East African Medical Journal*, 80(3), 154-158.
- Fatoye, F., & Morakinyo, O. (2002). Substance use among secondary school students in rural and urban communities in south western Nigeria. *East African Medical Journal*, 79(6), 299-305.
- French, M. T., Norton, E. C., Fang, H., & Maclean, J. C. (2010). Alcohol consumption and body weight. *Health economics*, 19(7), 814-832.
- George, W. H., Stoner, S. A., Davis, K. C., Lindgren, K. P., Norris, J., & Lopez, P. A. (2006). Postdrinking sexual perceptions and behaviors toward another person: Alcohol expectancy set and gender differences. *Journal of sex research*, 43(3), 282-291.
- Hingson, R. W., Heeren, T., & Winter, M. R. (2006). Age at drinking onset and alcohol dependence: age at onset, duration, and severity. *Archives of pediatrics & adolescent medicine*, 160(7), 739-746.
- Kabiru, C. W., D. Beguy, J. Crichton and A. C. Ezeh (2010). Self-reported drunkenness among adolescents in four sub-Saharan African countries: associations with adverse childhood experiences. *Child and adolescent psychiatry and mental health* 4(1): 17.
- Naimi, T. S., Siegel, M., DeJong, W., O'Doherty, C., & Jernigan, D. (2015). Beverage-and brand-specific binge alcohol consumption among underage youth in the US. *Journal of substance use*, 20(5), 333-339.
- Onohwosafe, P. S., Egenegbe, J. A., & Blinkhorn, A. S. (2008). Drug use among secondary school children in Central Delta State, Nigeria. *International journal of health promotion and education*, 46(1), 33-34.
- World Health Organization (2014). *Global status report on alcohol and health*. Geneva: WHO.
- Oshodi, O., Aina, O., & Onajole, A. (2010). Substance use among secondary school students in an urban setting in Nigeria: prevalence and associated factors. *African journal of psychiatry*, 13(1), 52-57.

- Peltzer, K. (2009). Prevalence and correlates of substance use among school children in six African countries. *International Journal of Psychology*, 44(5), 378-386.
- Rehm, J., Baliunas, D., Borges, G. L., Graham, K., Irving, H., Kehoe, T., Poznyak, V. (2010). The relation between different dimensions of alcohol consumption and burden of disease: an overview. *Addiction*, 105(5), 817-843.

EFFICACY OF COMPASSION-FOCUSED THERAPY IN A SAMPLE OF YOUTH WITH SUBSTANCE USE DISORDER IN OGBOMOSO, NIGERIA

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ABSTRACT

The problem of substance use disorder among the young population in recent times remains a significant threat to the psychosocial and economic fabrics of the entire society, despite several efforts channelled towards its amelioration. The present study investigated the efficacy of compassion-focused therapy on substance use disorder among youth in Ogbomoso, Nigeria. This pre-test post-test control group experimental study compared a compassion-focused therapy (CFT) plus treatment-as-usual (TAU) to TAU-alone in 20 young individuals with substance use disorder. Participants were purposively selected and randomly assigned to treatment (CFT+TAU) and comparison (TAU-alone) groups. Participants' mean age was 21.08 ± 1.86 years. Assessments occurred at intake, 10-weeks, and 1-month follow-up with a standardized questionnaire. Independent-sample t-test, 2x2 analysis of covariance and one-way repeated measure of ANOVA were used for analyses at 0.05 significant level. Individuals in the CFT+TAU group reported significantly lower substance use disorder symptoms compared to those in the TAU-alone group. There was an overall significant difference between the SUD means of participants that received CFT+TAU at pre-test, post-test, and 1-month follow-up. CFT provide effective treatment of substance use disorder among Nigerian population; its utilization is therefore recommended.

Keywords: Compassion-focused therapy, substance use disorder, youth, Nigeria

INTRODUCTION

The use and abuse of psychoactive substances by the young population in recent times has become a serious psychosocial problem in contemporary society.

This behaviour has been on the increase among Nigerian youth as reported in the past decade (Adamson, Onifade & Ogunwale, 2010; Adekeye 2012; Ekpenyong & Aakpege, 2014; West Africa Commission on Drugs, 2014).

According to Gore, Bloem, Patton et al., (2011), global illicit drug use contributes 2% cause-specific disability-adjusted life-years (DALYs) for young people aged 10-24 years. Furthermore, several public health and social problems such as delinquency, criminality, psychological and behavioural problems (Abdu-Raheem, 2013), high risk sexual behaviour and vandalism (Ekpenyong et al., 2014), as well as high mortality (WHO 2011) have been associated with this phenomenon.

Despite efforts and resources dedicated to studying the cause and finding lasting solution to substance use disorder in the contemporary society, the problem remains a major concern globally. Furthermore, it has been shown that substance use disorder treatment outcome has been unimpressive over the years (Winfred & Amy, 2005; Wong, 2013; Abikoye, Eze & Solarin, 2014).

Complementing standard treatment as usual (TAU) with other forms of interventions has been demonstrated to improve treatment outcome especially for difficult-to-treat mental illnesses such as emotional dysfunction (Ross et al, 2011), and trauma induced mental illness (Heide & Smid, 2015).

In the recent time, CFT has received credibility for producing better treatment outcome when combined with other forms of therapy such as cognitive behavioural therapy. Gale, Gilbert, Read, and Goss, (2014), introduced compassion focused therapy to a standard treatment programme for people receiving treatment for eating disorders, and demonstrated that CFT is applicable and safe among the target population and effective in improving eating disorder symptomatology. In a similar way, Beaumont, Galpin and Jenkins (2012) concluded that

introducing CFT to existing treatment as usual in order to increase the self-compassion of patients is a precursor to better treatment outcome.

Compassion focused therapy (CFT) was developed for people with traumatic and difficult background especially such that are specific to childhood experience and leading to them being highly shame focused, self-critical and find it difficult to be kind and forgiving, supportive or reassuring to themselves (Gilbert & Iron 2005; Irons, Gilbert, Baldwin & Palmer 2006; Gilbert 2005a, 2005b).

CFT aims to help such individuals respond to self-criticism with self-kindness and compassion, with the goal of treatment being improved psychological well-being. In compassion-focused therapy compassion is understood in terms of specific attributes and skills (Gilbert 2005a, 2009). CFT encourages individuals to develop compassion motivation and practise compassionate behaviours to access the soothing systems.

Central to compassion-focused therapy is compassionate mind training designed to help people develop and work with experiences of inner warmth, safeness and soothing, via compassion and self-compassion (Gilbert 2009). In working with clients to overcome their difficulties, therapists in CFT engages several skills which include compassionate attention, compassionate reasoning, compassionate behaviour, compassionate imagery, compassionate feeling, and compassionate sensation.

CFT has been found effective in reducing depression, anxiety, self-criticism, shame, inferiority and submissive behaviour (Gilbert & Procter, 2006). Leary, Tate, Adams, Allen, and Hancock (2007) asserted that compassionate letter writing to oneself tend to greatly improve coping with life-

events and reduces depression. Furthermore, self-compassion has been found to be associated with symptom severity and quality of life (Van Dam, Sheppard, Forsyth, & Earleywine, 2011), well-being (Neely, Schallert, Mohammed, Roberts, & Chen, 2009), and decrease in psychiatric symptoms, interpersonal problems and personality pathology (Schanche, Stiles, McCullough, Svartberg, & Nielsen, 2011).

There is now emerging evidence for the effectiveness of CFT in the treatment of SUD. For instance, in a study by Kelly et al. (2010) among a population of 119 smokers, two experimental groups and a control were studied. Imagery-based self-talk exercises designed to stimulate the self-soothing system was administered to the group receiving CFT. The treatment received was found to be effective in reducing the smoking behaviour of the experimental groups when compared to the control group at post-test. They however reported no significant difference between the two experimental groups. In addition, Kelly et al. (2010) found the self-compassion intervention reduced smoking at a quicker rate for: those low in readiness-to-change; those high in self-criticism; and those with more vivid imagery.

However, this promising line of treatment is unpopular and underutilized in Nigeria. The present study therefore investigated the efficacy of CFT in youth with substance use disorder in Ogbomoso, Nigeria. We hypothesized that individuals in the CFT+TAU group will report significantly less substance use disorder symptoms at post-test compared to those in the TAU-alone group. We also hypothesized that participants in the CFT + TAU group will report significantly lower SUD at post-test and 1-month-follow up than they did at pre-test.

METHOD

Design

A pre-test post-test control group design was used comparing CFT + TAU with TAU alone. Both groups were pre-tested on the measure of substance use disorder and then post-tested after the treatment conditions have been administered. In order to assess the stability of the effect of CFT, both groups were tested at 1-month follow-up.

Setting

The study was conducted at the Drug Rehabilitation Unit of Bowen University Teaching Hospital (BUTH), Ogbomoso, Nigeria. The unit operates on an Intensive Outpatient basis. Treatment modality of the unit is based on the disease model of psychoactive substance use, the disorder being regarded as a chronic one requiring long term and holistic treatment approach. Major treatment components are drug education, Twelve-Steps, relapse prevention and social skills training, spiritual therapy, and counselling. Treatment is delivered via Group therapy, individual therapy, and family therapy. The therapeutic team of the unit consists of doctors (psychiatrists), nurses, psychologists, social workers, and spiritual therapists.

Participants

Participants were drawn from young individuals receiving treatment for substance use disorder on an intensive-outpatient basis at BUTH, Ogbomoso, Nigeria. To be included in the study, participants must be aged between 18 and 24 years, be a user of at least one psychoactive substance, and understand and able to communicate in English language. Those who met the inclusion criteria and consented to participate

in the study were recruited. Twenty (20) individuals comprising of 17 males and 3 females, with age range between 18 and 24 years ($M = 21.08$, $S.D. = 1.86$) purposively selected participated in the study.

Instrument

A structured questionnaire containing instruments with sound psychometric properties was used to collect data in this study.

Section one comprised of information on demographic attributes of respondents which include the gender, age, marital status, employment status, and living situation.

Section two contains the DSM-5 Diagnostic Checklist for Substance Use Disorder. This is an 11-item scale that combined both items on substance abuse and dependence in making substance use disorder according to the revised Diagnostic and Statistical Manual of Mental Disorders 5th revision (APA, 2013). This is

a widely accepted and used measure of substance use disorder with strong psychometric properties. Cronbach's alpha .809 was established in the present study.

CFT Module

A CFT module adapted and delivered according to the guidelines provided by Gilbert (2005a, 2009) and Saulsman, Campbell, & Sng, (2017) was used in this study. This module was developed to address key themes derived from qualitative study earlier conducted by the researchers among youth with substance use disorder in Nigeria. Treatment was administered for 10 weekly sessions of 1.5hr. Each session had a theme and learning objectives, and compassionate mind training (CMT) exercise for the participants. Participants were instructed to practice CMT exercise 6 days per week for approximately 30 minutes per day. Compliance was assessed by attendance and homework diaries.

Module summary

- Module 1 **Introduction and familiarization to the programme**
- Module 2 **Psycho-education on evolutionary model and affect regulation systems**
- Module 3 **Psycho-education on CFT formulation of SUD**
- Module 4 **Overcoming the Curiosity Drive**
Intervention strategy explored: Self-compassionate quiz
- Module 5 **Dealing with boredom**
Intervention strategy explored: Acting Opposite Guide, Weekly Activity Schedule
- Module 6 **Building confidence for social interaction and task performance**
Intervention strategy explored: Compassionate Image
- Module 7 **Developing positive self-esteem**
Intervention strategy explored: Compassionate image
- Module 8 **Overcoming peer pressure**
Intervention strategy explored: Compassionate communication
- Module 9 **Coping with negative emotions**
Intervention strategy explored: Compassionate Thought Diaries, Compassionate Letter Writing
- Module 10 **Relapse prevention - Self-compassionate living and closing of group**

Procedure

Ethical approval was obtained from the BUTH Research Ethics Committee to conduct the study. Participants were recruited from the Drug Unit of the BUTH by consulting the records of the unit. Potential participants were contacted physically and through mobile phone to seek their interest for participation in the study. Meetings were later arranged with individuals who showed interest in the study, during which the purpose and modality of the study were discussed. Detailed statement of informed consent that contained the purpose, procedures, potential risk(s) (if any) and benefits of participating in the study was later given and explained to each of the participants. Individuals who consented voluntarily to participate in the study were involved in the study. To ensure confidentiality, participants' names were not included on questionnaires; identification was made possible by special research codes.

Participants were randomly assigned into two groups – experimental group which was received 10-sessions of CFT in addition to treatment as usual, and comparison group which received treatment as usual alone. Participants were instructed not to share information about their various group activities while the study last. Data was analysed with analysis of

covariance and one-way repeated measure analysis of variance.

RESULTS

Hypothesis 1

Hypothesis one stated that there will be significant treatment effect on substance use disorder among youths in Ogbomoso, Nigeria. The hypothesis was tested with a 2x2 analysis of covariance.

The result in Table 1 showed a significant main effect of treatment on substance use disorder after controlling for the pre-test score ($F(1, 13) = 6.98, p < .05$). The result implied that the addition of CFT to TAU was effective in producing better treatment outcome. The effect size 0.35 further indicated that about 35% of the treatment effect on SUD was accounted for by the CFT administered.

Follow-up test was conducted to see group differences on substance use disorder symptoms at post-test. The result on Table 2 revealed that there is a significant difference between the CFT + TAU and TAU alone group ($p < .05$). In order to establish the magnitude of the mean difference between the two groups, the result of the adjusted mean score was used. With a total adjusted mean score of 2.76, participants in the CFT + TAU

Table 1. Summary table of analysis of covariance of substance use disorder according to treatment and gender

Source	Sum of Squares	Df	Mean Square	F	p	η_p^2
Pre-test	8.111	1	8.111	7.833	<.05	.376
Treatment	7.222	1	7.222	6.975	<.05	.349
Gender	.247	1	.247	.238	>.05	.018
Treatment * Gender	.003	1	.003	.003	>.05	.000
Error	13.461	13	1.035			
Total	34.278	17				

group reported less SUD at post-test compared to their counterparts in TAU alone group.

Hypothesis 2

Hypothesis two which stated that participants that received CFT + TAU will report significantly lower substance use disorder symptoms after treatment and follow-up than before treatment was tested with one-way repeated measure ANOVA.

The results presented in Table 3 indicated that there was an overall significant

difference between the SUD means of participants that received CFT + TAU at the different time points i.e. intake, 10-weeks post-test, and 1-month follow-up ($F(1.104, 8.832) = 51.116, p < .01$).

The results of the Bonferroni post hoc test in Table 4 revealed the points and specificity of the differences in SUD that occurred. It was shown that there was a significant difference in SUD between post-test and pre-test ($p < .001$), and between 1-month follow-up and pre-test ($p < .001$), but no significant difference between 1-month follow-up and post-test

Table 2. Pairwise differences between the two groups on substance use disorder

(I) groups	(J) groups	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
CFT	Control	-1.541*	.583	.020	-2.802	-.280
Control	CFT	1.541*	.583	.020	.280	2.802

*. The mean difference is significant at the .05 level.

Table 3. One-way ANOVA for repeated measures of SUD at pre-test, post-test, and 1-month follow-up

Source	Sum of Squares	Df	Mean Square	F	p	η_p^2
Time	44.963	1.104	40.726	51.116	<.01	.865
Error time	7.037	8.832	.797			

Table 4. Pairwise Comparisons of SUD at pre-test, post-test, and 1-month follow-up

(I) time	(J) time	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
Pre-test	Post-test	2.889*	.423	.000	1.613	4.165
	1-month Follow-up	2.556*	.294	.000	1.669	3.442
Post-test	Pre-test	-2.889*	.423	.000	-4.165	-1.613
	1-month Follow-up	-.333	.167	.242	-.836	.169
1-month Follow-up	Pre-test	-2.556*	.294	.000	-3.442	-1.669
	Post-test	.333	.167	.242	-.169	.836

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

($p > .05$). Participants that received CFT + TAU reported lowest level of SUD at post-test ($M = 2.78$), followed by at 1-month follow-up ($M = 3.11$). This implies that periodic exposure to contents of CFT may be necessary to maintain effect of treatment.

Hypothesis 3

Hypothesis three stated that participants that received TAU alone will report significant lower substance use disorder symptoms after treatment and follow-up than before treatment. The hypothesis was tested with one-way repeated measure ANOVA.

The results presented in Table 5 indicated that there was no overall significant difference between the SUD means of participants that received TAU alone at the different time points i.e. intake, 10-weeks post-test, and 1-month follow-up ($F(1.14, 6.83) = 2.90, p > .05$). The hypothesis was therefore not confirmed.

DISCUSSION

The present study investigated the efficacy of compassion-focused therapy (CFT) as treatment for substance use disorder among youth in Ogbomoso, Nigeria. It was established from our findings that compassion-focused therapy is effective in the treatment of substance use disorder. At the end of the treatment, patients in the CFT + TAU group reported

less SUD symptoms than those in the TAU alone. Our finding is in agreement with previous studies that reported that combining CFT with TAU produced better treatment outcome. Beaumont et al. (2012) investigated the efficacy of CBT plus CFT as compared to CBT alone in clients who had experienced trauma. The authors concluded that introducing CFT to existing treatment as usual to increase the self-compassion of patients is a precursor to better treatment outcome. In a similar vein, Gale et al. (2014), introduced compassion focused therapy to a standard treatment programme for people receiving treatment for eating disorders, and demonstrated that CFT is applicable and safe among the target population and effective in improving eating disorder symptomatology.

Furthermore, we found that individuals that compared to the substance use disorder reported at pre-test, participants who received CFT + TAU were found to present with significant lower substance use disorder at post-test and 1-month follow-up than those who received TAU alone. This indicated stability of the CFT effect in the individuals. In a similar study by Kelly et al. (2010) among a population of 119 smokers, two experimental groups and a control was studied. Imagery-based self-talk exercises designed to stimulate the self-soothing system was administered to the group receiving CFT. The treatment received was found to be effective in reducing the smoking behaviour of the

Table 5. One-way ANOVA for repeated measures of SUD at pre-test, post-test, and 1-month follow-up

Source	Sum of Squares	Df	Mean Square	F	p
Time	6.95	1.14	6.10	2.90	>.05
Error time	14.38	6.83	2.10		

experimental groups when compared to the control group at post-test. They however reported no significant difference between the two experimental groups. In addition, Kelly et al. (2010) found the self-compassion intervention reduced smoking at a quicker rate for: those low in readiness-to-change; those high in self-criticism; and those with more vivid imagery.

Strengths and limitations of the present study

Randomization in sampling and assignment of participants to groups in the experimental phase of the study is considered as one of the strengths of this present study. This procedure allowed for control of extraneous variables that may distort the specificity of the findings of the study. Nevertheless, the researcher could not rule out the possibility of participants sharing information about activities in their various groups to participants in other groups. This could be a source of confounding variable which the researcher could not control for because the researcher could not have confined the study participants in different secluded places just for the purpose of the study.

Conclusion

It was demonstrated from the findings of the present study that CFT is effective in the treatment of substance use disorder among Nigerian population. We therefore recommend the utilization of CFT in the treatment and management of young people with substance use disorder especially as adjunct to treatment as usual. This is a move towards multi-modal treatment approach which has been found effective in providing better treatment outcomes.

REFERENCES

- Abdu-Raheem, B. O. (2013). Sociological Factors to Drug Abuse and the Effects on Secondary School Students' Academic Performance in Ekiti and Ondo States, Nigeria. *Contemporary Issues in Education Research*, 6 (2), 233 – 240.
- Abikoye, G. G., Eze, C. U. & Solarin, A. M. (2014). Challenges in the Management of Substance Use Disorders in Bayelsa State. A paper presented at the XI Biennial International Conference on Drugs, Alcohol and Society in Africa. 21st August, 2014.
- Adamson, T.A., Onifade, P.O. & Ogunwale, A. (2010). Trends in socio-demographic and drug abuse variables in patients with alcohol and drug use disorders in a Nigerian treatment facility. *West African Journal of Medicine*, 29(1), 12-18.
- Adekeye, O. A. (2012). Knowledge Level and Attitude of School Going Male Adolescents towards Drug Use and Abuse. *Kotangora Journal of Education*, 12, 122-130.
- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders*. 5. Arlington, VA: Author
- Beaumont, E., Galpin, A., & Jenkins, P. (2012). 'Being kinder to myself': A prospective comparative study, exploring posttrauma therapy outcome measures, for two groups of clients, receiving either Cognitive Behaviour Therapy or Cognitive Behaviour Therapy and Compassionate Mind Training. *Counselling Psychology Review*, 27, 31-43.
- Ekpenyong, N. S. & Aakpege, N. Y. (2014). Alcohol Consumption Pattern and

- Risky Behaviour: A Study of University of Port Harcourt. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, 19(3, 1), 25-32. Retrieved from www.iosrjournals.org
- Gale, C., Gilbert, P., Read, N., Goss, K. (2012). An evaluation of the impact of introducing compassion-focused therapy to a standard treatment programme for people with eating disorders. *Clinical Psychology & Psychotherapy*. 21(1), 1–12. <https://doi.org/10.1002/cpp.1806>.
- Gilbert, P. (2005a). Compassion and cruelty: A biopsychosocial approach. In P. Gilbert (Ed.), *Compassion: Conceptualisations, research and use in psychotherapy*,(9–74). London: Routledge.
- Gilbert, P. (2005b). Social mentalities: A biopsychosocial and evolutionary reflection on social relationships. In M.W. Baldwin (Ed.), *Interpersonal cognition*. (299–335). New York: Guilford.
- Gilbert, P. (2009). The nature and basis for compassion focused therapy. *Hellenic Journal of Psychology*, 6, 273 – 291.
- Gilbert, P., & Irons, C. (2005). Focused therapies and compassionate mind training for shame and self-attacking. In P. Gilbert (Ed.), *Compassion: Conceptualisations, research and use in psychotherapy* (263–325). London: Routledge.
- Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism. A pilot study of a group therapy approach. *Clinical Psychology and Psychotherapy*, 13, 353–379.
- Gore, F.M., Bloem, P.J., Patton, G.C., Ferguson, J., Joseph, V., Coffey, C., Sawyer, S.M., & Mathers, C. D. (2011). Global burden of disease in young people aged 10-24 years: A systematic analysis. *Lancet*, 377(9783), 2093- 2102.
- Irons, C., Gilbert, P., Baldwin, M.W., Bacus, J.R., & Palmes, M. (2006). Parental recall attachment relating and self-attacking/self-reassurance: Their relationship with depression. *British Journal of Clinical Psychology*, 45, 297–308.
- Kelly, A.C., Zuroff, D.C., Foa, C.L., & Gilbert, P. (2010). Who benefits from training in self-compassionate self-regulation? A study of smoking reduction. *Journal of Social and Clinical Psychology* 29, 727–755.
- Leary, M. R., Tate, E. B., Adams, C. E., Allen, B. A., & Hancock, J. (2007). Self-compassion and reactions to unpleasant self-relevant events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology*, 92, 887-904.
- Neely, M.E., Schallert, D.L., Mohammed, S.S., Roberts, R.M., & Chen, Y.J. (2009). Self-kindness when facing stress: the role of self-compassion, goal regulation, and support in college students' well-being. *Motivation and Emotion*, 33, 88–97.
- Saulsman, L., Campbell, B., & Sng, A. (2017). *Building Self-Compassion: From Self-Criticism to Self-Kindness*. Perth, Western Australia: Centre for Clinical Interventions.
- Schanche, E., Stiles, T.C., McCullough, L., Svartberg, M., & Nielsen, G.H. (2011). The relationship between activating affects, inhibitory affects, and self-compassion in patients with Cluster C personality disorders. *Psychotherapy (Chicago, Ill.)* 48, 293–303.
- Van Dam, N.T., Sheppard, S.C., Forsyth, J.P., & Earleywine, M. (2011). Self-

compassion is a better predictor than mindfulness of symptom severity and quality of life in mixed anxiety and depression. *Journal of Anxiety Disorders*, 25, 123–130.

- West Africa Commission on Drugs (2014). Not Just in Transit: Drugs, the State and Society in West Africa. An Independent Report of the. West Africa Commission on Drugs.
- Winfred, W., & Amy, J.K. (2005). Adolescent illicit drug use- understanding and addressing the problem.

- Retrieved April 16, 2016, from www.medscape.com/viewarticle/513024
- World Health Organization, (2011). *Alcohol: Fact sheet*. Retrieved from World Health Organization Web site: <http://www.who.int/mediacenter/factsheets/fs349/en/index.html>
- Wong, P. T. P. (2013). The positive psychology of meaning in life and well-being. In A. C. Michalos (Ed.), *Encyclopaedia of quality of life research*. New York, NY: Springer.

DYNAMICS OF DRUG USE AND EXPERIENCE OF STRESS AMONG STUDENTS OF TERTIARY INSTITUTIONS IN NIGERIA

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ABSTRACT

This study was carried out to investigate drug use dynamics and its role on stress experience among students of tertiary institutions in Akwa Ibom State, Nigeria. A sample of 280 drug users in a student population (175 male and 105 female) with mean age of 23.06 and standard deviation of 3.62 were purposively selected as participants for this study. To achieve this purpose, appropriate self-report instruments were used to collect data for drug use and experience of stress respectively. Descriptive analysis revealed that 180 (64%) of students reported use of drugs other than alcohol while 162 (57.86%) reported harmful use of drugs. A hierarchical linear regression analysis showed positive influence of drug use on stress levels among students, to the extent that 41% of variance in experience of stress was accounted for by the combined effects of drug use, gender and age; with drug use being the best predictor, accounting for 40% of the variance in the experience of stress among students. Based on the findings, implications and limitations were outlined while recommendations were made to the effect that drug abuse counseling is urgently needed as an integral part of tertiary institutions curriculum by focusing on high levels of stress experience arising from the use of drugs.

Keywords: Drug use, Undergraduates, Tertiary institution, Stress experience, Nigeria

Stress is a term frequently used in a variety of social and academic settings and everyone needs certain amount of pressure to perform at their best. However, when pressure exceeds a person's ability to cope, stress ensues. Stress is a concept that cannot be explained using a static definition thus it is important to be

aware that different descriptions exist in both recent and seminal literature. Delahaij, Dam, Gaillard and Soeters (2011) explained stress using a bio-psychosocial approach, suggesting that stressful reactions affect the emotional, physiological and cognitive state of an individual. This definition describes stress as a reaction.

Alternatively, Caltabiano, Sarafino and Byrne (2008) viewed stress as a discrepancy. They stated that stress occurs when there is a perceived discrepancy between the demands of a situation and an individual's resources available to deal with that demand (Caltabiano, Sarafino, & Byrne, 2008). Studies indicate that stress is part of daily life and shows further that university students experience increased stress due to the complexity of college life; especially as observed by Craig (2004), vulnerability to using alcohol and drugs increases with an increase in risk factors dominating a person's life. This seems to be particularly true for university students.

It is commonplace today that people use drugs or alcohol to relax, feel good, have fun with close ones around them, or just out of curiosity or to see what it's like. But for people who have experienced a stressful or traumatic event, drugs and alcohol can become more than just a way to relax, and have fun. Instead, using drugs or alcohol becomes a way to turn off the brain from stressful experiences and secondly, to numb painful memories and reactions – the latter being area of interest for the present study. For a while, it may even seem to work; but in the long run, alcohol and drugs just cause a lot of new problems, some of which may be even worse than the original traumatic event.

In today's education systems right from elementary to the tertiary level, students are faced with several challengers. University students have come to realize that the university can be demanding because of the amount of homework that is due in a short amount of time and therefore, it is easy to become overwhelmed. University system bombards students with assignments, quizzes, tests, papers, exams, and

project/dissertations etc. If time is not managed correctly to insure that all of these tasks are completed, many students will experience stress. Students also face multiple stressors such as academic overload, constant pressure to succeed, competition with peers and in some countries (especially Nigeria) financial burden as well as concerns about the future (Vaez, Ponce de Leon, & Laflamme, 2006). In our contemporary ultra competitive environment, students face more stress than ever, be it related to studying, examinations, peer, teacher or parental pressure (Sreeramareddy, Shankar, Binu, Mujhopadhyay, Ray, & Menezes, 2007). University students more often than not experience undue amounts of stress, which can have negative academic, emotional and health outcomes (Dahlin, Joneborg, & Runeson, 2005).

Ford (2007) observed that the university presents a significant transition period in a young adult's life. It is a time when students are often no longer under direct parental monitoring, and are faced with new social and academic pressures. It is also a time when they enter an environment where the use of drugs is normative. They are introduced to a new environment where they must navigate many unfamiliar social situations. During this time, they look to their new social groups (peer group) to help them determine what new attitudes and behaviors are expected or appropriate. Due to numerous pressures of the 21st century, students are having difficulty in coping, and are requesting for educational programs in tertiary institutions to help teach them how to cope with such stressors (Frydenberg et al., 2004).

This is because, it is really dangerous to let stress become student's way of living in

the university, because some stress levels can lead to a terrible effect that changes student's life completely and it may result to academic failure. Stress levels among university students are higher than those of people at any other stage of life, a poll has found. In addition, the poll found that university students have a higher predisposition toward experiencing depression sometime during their four years at the university (David, 2009).

According to Macmillan Social Sciences library research, 70% of university students say that their grades have a direct effect on their level of stress. Study conducted by Aasra (www.aasra.info/article-sandstatistics.html) reported that depression among youth has increased from 2 to 12% in the last five years. Globally, 3 out of every 5 visits to the doctor are for stress related problems. Seventy-six percent people under stress say that they have sleeping disorders and 58% suffer headaches. Further study results indicates that there is high level of use of psychoactive substances among young people and that that substance use is major risk factors for the development of psychiatric illnesses (Abiama, Abasiubong, Usen & Alexander, 2014).

As all this may lead to psychopathology, stress should therefore not be considered on its own, but rather should be associated with potential risk behaviors which drug use is a common one today. The onset risk of substance use and related problems is heightened during the university period and the most common substances used by young adults are alcohol, tobacco and cannabis (Caamano-Isorna, Mota, Crego, Corral, & Holguin, 2011; Underwood, Fox, & Manogue, 2010; Witkiewitz, et al., 2011). According to many reports, exposure to stress in young people is sig-

nificantly associated with the use of alcohol and drugs (Hoffmann, Cerbone, & Su, 2000; Shahmahmasebi & Berridge, 2009).

Concomitantly, cannabis intoxication impairs learning, driving and operation of machinery and chronic use is associated with cancer, immune system dysfunction, and respiratory and cardiovascular dysfunctions (Obot, 2012). The use of two or more of these substances simultaneously, known as poly-drug use, has received growing attention in the literature due to an increase in prevalence in early adulthood (Caamano-Isorna, Mota, Crego, Corral, & Holguin 2010). Furthermore, substance use is associated with immediate health problems such as academic difficulties, injuries, interpersonal violence (Hingson, Zha, & Weitzman, 2009), high-risk sexual behavior (Parks, Collins, & Derrick, 2012), depression and mental disorders (Squeglia, Pulido, Wetherill, Jacobus, Brown, & Tapert, 2012).

Stress in young adults is also often associated with the occurrence of substance-free addictions (also called behavioral addictions), such as cyber addiction, addiction to sex, workaholics, and addiction to shopping (Semaille, 2009; MacLaren & Best, 2010). Events that induce a stress response usually produce one or more conditioned or unconditioned emotional reactions, such as fear, anxiety, anger, excitement, pleasure and sadness. In so much as these reactions depend on the specific features of the situation, an appraisal of the event, available coping resources, and the prior emotional state of the individual; exposure to acute behavioral stress facilitates self administration of amphetamines (Piazza et al., 1990; Piazza & Le Moal 1996), morphine (Shaham & Stewart 1994) and cocaine (Miczek & Mutschler, 1996).

Previous study concludes that people take drugs when they are stressed out (Perkins, 1999; Okasaka, Morita, Nakatani, & Fujisawa, 2008) but in view of the foregone, no study takes into account the theory that people experience stress when they take drugs or after taking drugs coupled with the role drug use plays in experiencing stress among students. Most theories of drug dependence assume that stress plays an important role in increasing drug use and also in triggering relapse (Campbell, Szumlinski, & Kippin, 2009; Ungless, Argilli, & Bonci, 2010) but no study have considered the role drug use play in experience of stress. Hence, the purpose of this study was to determine the dynamics of drug use and experience of stress among students in selected universities of Akwa Ibom State, Nigeria in order to stimulate appropriate interventions to foster public health benefits. It was hypothesized that the level of stress experienced by students will be higher for those with harmful drug use/dependence than for students without harmful drug use.

METHOD

The study employed ex-post facto cross-sectional survey method to investigate the dynamics of drug use and experience of stress among students. The research scoping and assessment phase was conducted in Akwa Ibom State, Nigeria. Akwa Ibom State is one of the nine Niger Delta states in the country with a population of 3,902,025 and a land area of 7,081Km². Akwa Ibom State comprises of 31 Local Government Areas (LGAs) with Uyo, a rapidly growing urban area, as its capital (Federal Republic of Nigeria

Official Gazette, 2007; National Bureau of Statistics) and surrounded by several equally fast growing LGAs. Three tertiary institutions were selected; namely, University of Uyo, Uyo-Town Campus; Akwa Ibom State Polytechnic-Ikot Osurua and Akwa Ibom State College of Education - Afaha Nsit, Etinan.

Measures

Drug use was assessed using the Drug Use Disorders Identification Test (DUDIT) developed by Berman, Bergman, Palmstierna, and Schlyter (2003) which consists of 11 items. The purpose of the DUDIT items is to identify use patterns and various drug-related problems. Items 1-9 are scored 0, 1, 2, 3, and 4; while items 10-11 are scored 0, 2, and 4. Maximum score for the DUDIT items is 44 points and the minimum score is 0. In the present study, a Cronbach Alpha Coefficient of .85 was obtained, indicating a good and high internal consistency.

In order to measure stress, Depression, Anxiety, and Stress Scale (DASS) developed by Lovibond & Lovibond (1995) was employed. The DASS is a 42-item questionnaire which includes three self-report scales designed to measure the negative emotional states of depression, anxiety and stress. Each of the three subscales contains 14 items. The present study however adopted the stress sub-scale (14-items) which is sensitive to levels of chronic non-specific arousal. It assesses difficulty in relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Respondents are asked to use 4-point severity/frequency scales to rate the extent to which they have experienced each state over the past week. Scores of stress are calculated by summing the scores for

the relevant items. For the main study, Cronbach Alpha Coefficient of 0.85 was realized, again showing an impressive reliability.

Results

The participants were two hundred and eighty (280) respondents drawn from three universities in Akwa Ibom state; with the student population of the three universities unknown, sample size was determined by choosing a 95% confidence level, 0.5 standard deviation, and a margin of error (confidence interval) of +/- 6% and employing the formula = $(Z\text{-score})^2 * StdDev*(1-StdDev) / (\text{margin of error})^2$ a sample size of 266.77 was obtained. However, the researcher in order to be on a safe zone, overestimated and distributed 310 questionnaires, retrieved 295; whereas only 280 were properly filled representing 90% response rate.

The 280 respondents consist of 175 (62.5%) males and 105 (37.5%) females. Their ages ranged from 18–49 years with the mean age of 23.1 years (SD = 3.62). Participants were predominantly Chris-

tians, 256 (91.4%), 17 (6.1%) were Muslims, and 7(2.5%) belonged to other religions. Gender descriptive of stress analysis indicated that males suffered more stress than females as a result of drug use. Out of the 175 male, 33 had a normal stress experience, 37 had mild stress, 46 had moderate stress, 30 had severe stress and 29 had extremely severe stress. From the 105 female students, 33 were also in the normal stress category, 29 had mild stress, 29 had moderate stress, 12 had severe stress and only 2 female students had extremely severe stress.

In table 1 & 2, there was a trend toward a higher proportion of harmful drug users/drug dependency [182 (65%) harmful drug users/drug dependents] among respondents as compared to normal users 98 (35%) who were jointly categorized under stress severity rating such that out of 66 students under normal stress, 41 used drugs normally while 25 reported harmful use/drug dependence. Of the 66 mild stress category, 26 reported a normal use drugs while 40 reported otherwise. Out of the 75 under moderate stress,

Table 1. Differences Reported in Categorized Experience of Stress associated with Drug Use

Stress Severity Rating	N	Mean	SD	% of Total N	% of Total Sample
Normal Stress	66	1.38	0.49	23.6	19.7
Mild Stress	66	1.61	0.49	23.6	22.9
Moderate Stress	75	1.79	0.41	26.8	29.0
Severe Stress	42	1.71	0.46	15.0	15.6
Extremely Severe	31	1.90	0.30	11.1	12.8

Table 2. Differences Reported in Diagnosis of Drug Use among students

Diagnosis of Drug Use	N	Mean	SD	% of Total N	% of Total Sample
Normal Use	98	2.08	1.16	35.0	27.3
Harmful use/Drug dependence	182	2.98	1.25	65.0	72.7
Total	280	5.06	2.41	100.0	100.0

16 reported normal drug use while 59 used drugs harmfully. For the 42 severely stressed, 12 used drugs normally while 30 used drugs harmfully. Lastly, of the 31 extremely severe stressed students, only 3 reported having used drugs normally, while 28 did not. Non-drug users were excluded in the analysis as non-drug use was not in the purview of the current study.

Highlights in the manifestations of stress across participants (i.e., Table 3) indicates that 229 (81.0%) found it difficult to relax, while 201 (71.3%) were in a state

of nervous tension, and 180 (64.3%) were agitated. Extensive descriptive analysis indicates that 25.7% of participants were drug dependent while 14.3% reported harmful use over the past year. To a great extent therefore, there is high prevalence of drug use problems among students.

Regression analysis under the ANOVA summary indicated that a significant model exists; that is, drug use, gender, and age jointly influenced experience of stress, but did not fare so independently. Although the R^2 showed that the

Table 3. Item Analysis and Manifestations of Stress across participants as a result of Drug Use (N=280)

S/N	Experience of stress Items	X	SD	Did not apply to me at all N (%)	Applied to me to some degreeN (%)	Applied to me to a considerable degree N (%)	Applied to me very much N (%)
1	I found myself getting upset by quite trivial things	2.06	1.03	104(37.1%)	92(32.9%)	47 (16.8%)	37(13.2%)
2	I tended to over-react to situations	1.33	1.09	79 (28.1%)	86(30.7%)	60 (21.4%)	55(19.6%)
3	I found it difficult to relax	1.67	1.06	51 (18.2%)	65(23.2%)	89 (31.8%)	75(26.8%)
4	I found myself getting upset rather easily	1.77	1.12	45 (16.1%)	79(28.2%)	51 (18.2%)	105(37.5%)
5	I felt that I was using a lot of nervous energy	1.37	1.10	71 (25.4%)	98(35.0%)	47 (16.8%)	64(22.9%)
6	I found myself getting impatient when I was delayed in anyway (e.g., lifts, traffic lights, being kept waiting)	1.59	1.12	66 (23.6%)	60(21.4%)	78 (27.9%)	76(27.1%)
7	I felt that I was rather touchy	1.33	1.07	76 (27.1%)	88(31.4%)	63 (22.5%)	53(18.9%)
8	I found it hard to wind down	1.25	1.13	96 (34.3%)	72(25.7%)	57 (20.4%)	55(19.6%)
9	I found that I was very irritable	1.27	1.01	83 (29.6%)	72(25.7%)	92 (32.9%)	33(11.8%)
10	I found it hard to calm down after something upset me	1.43	1.09	68 (24.3%)	88(31.4%)	60 (21.4%)	64(22.9%)
11	I found it difficult to tolerate interruptions to what I was doing	1.79	1.06	44 (15.7%)	60(21.4%)	87 (31.1%)	89(31.8%)
12	I was in a state of nervous tension	1.55	1.81	79 (28.2%)	49(17.5%)	71 (25.4%)	81(28.9%)
13	I was intolerant of anything that kept me from getting on with what I was doing	1.38	1.11	79 (28.2%)	75(26.8%)	66 (23.6%)	60(21.4%)
14	I found myself getting agitated	1.11	1.03	100(35.7%)	85(30.4%)	60 (21.4%)	35(12.5%)

predictor variables contributed to 41% of the explanation of stress experience, only drug use and gender were significant predictors of stress experience while age did not predict stress experience. Further regression analysis using the 'Enter Method' revealed that drug use was the best predictor of stress accounting for 40% of the variance.

DISCUSSION

The major aim of this study was to investigate the dynamics of drug use and experience of stress among tertiary students of selected tertiary institution in Akwa Ibom State, Nigeria. The generated data were carefully processed and analyzed; subsequently, the results revealed that there is a significant influence of illicit drug use on stress experience of students. The research finding agrees with the study of Campbell, Szumlinski, & Kippin, (2009) who posited that stress plays an important role in increasing drug use. Findings were also in consonance with David (2009) who found that university students have a higher predisposition toward experiencing stress and depression sometime during their four years at the university.

Finding further tilted towards the studies of Hoffmann, Cerbone, & Su, (2000) and Shahtahmasebi & Berridge, (2009) who separately found that exposure to stress in young people is significantly associated with the use of drugs. Possible and plausible explanation of the finding is hinged on the fact that students resort to drugs to reduce academic and social stress the school environment portends, but still finds themselves in more stress due to the adverse or negative effects of such

drug(s). Hence, the predominant findings in literature that stress predisposes students to take drugs is incomplete from the novel findings of this study which shows that taking of drugs to reduce stress is as good as treating the symptom or effect of a disease rather addressing the cause and eradicating the disease for good; in so doing, the stress gets even worse for such an individual. To further buttress this finding, additional analysis revealed that students with harmful drug use/dependence experienced more stress than students without harmful drug use. In other words, virtually all students had one form of stress or the other no doubt; however, more stress was observed among students with excessive drug use.

From all indication, drug use has a detrimental effect on human behavior which can cause severe emotional breakdown to the person involved. It endangers the academic pursuit of the students, increasing their tendency to be depressed and experience severe stress which affects their study habit and their potential of being responsible members of the society. It has gone a long way to create several psychological health problems. Students are the leaders of tomorrow and they deserve proper direction, adequate social support and a drug-free quality education. To this end, drug abuse counseling is urgently needed as an integral part of tertiary institutions curriculum as a preventive tool and by focusing on high levels of stress experience arising from the use of drugs.

This study had some clear limitations. Because the sample was relatively small; other limitations were related to the available variables. The survey did not include measures of diet, personality, body image, or exercise—factors that have been proposed to be important in

predicting stress experience and other psychosomatic diseases. Also, the issue of masking undesirable responses and revealing desirable behaviors could have played a role in confounding the findings. Therefore, generalization should be done with caution. These results, if replicated, have implications for the manner in which the effects of stress experience are communicated to the public. They suggest that usual stress (sometimes, eustress) are necessary for optimal performance and should not be suppressed by the use of drugs which only presents a significant risk for severe stress inimical to the psychological well-being of students who represents the young population of our nation – our hope and future leaders.

REFERENCES

- Aasra, Registered with Commissioner Trust, Govt. of Maharashtra, Registration No. E 2047. Retrieved September 17, 2017, from <https://aasra.info/articlesandstatistics.html>.
- Abiama, E. E., Abasiubong, F. Usen, K. B. & Alexander, U. E. (2014). Prevalence of substance use and association with psychiatric illness among patients in Uyo, Nigeria, *African Journal of Drug & Alcohol Studies*, 13, (2), 22-32.
- Caamano-Isorna, F., Mota, N., Crego, A., Corral, M., & Holguin, S. R. (2011). Consumption of medicines, alcohol, tobacco and cannabis among university students: a 2-years follow-up. *International Journal of Public Health*, 56, 247–252.
- Caamano-Isorna, F., Mota, N., Crego, A., Corral, M., & Holguin, S. R. (2010). Consumption of medicines, alcohol, tobacco and cannabis among university students: a 2-years follow-up. *International Journal of Public Health*, 56, 247–252.
- Caltabiano, M. L., Sarafino, E., & Byrne, D. (2008). *Health psychology* (2nd ed.). Milton: Wiley.
- Campbell J. C., Szumlinski K. K., & Kippin T. E. (2009). Contribution of early environmental stress to alcoholism vulnerability. *Alcohol*, 43, 547–554.
- Craig, R. J. (2004). Counseling the alcohol and drug dependent client: A practical approach. New York: Pearson Education Inc.
- Dahlin, M., Joneborg, N. & Runeson, B. (2005). Stress and depression among medical students: a cross-sectional study. *Medical Education*, 39, 594–604.
- David, M. (2009). Student life. Independent newspaper of Washington University in St. Louis. 30th October. Retrieved from <https://openscholarship.wustl.edu/studentlife/when?>
- Delahaij, R., van Dam, K., Gaillard, A. W. K., & Soeters, J. (2011). Predicting performance under acute stress: The role of individual characteristics. *International Journal of Stress Management*, 18, (1), 49-66.
- Federal Republic of Nigeria Official Gazette (2007). Akwa Ibom State: geography and location, Retrieved October 20, 2017, <http://www.aksonline.com/lga.aspx>.
- Ford, J. A. (2007). Alcohol use among college students: A comparison of athletes and non-athletes. *Substance Use and Misuse*, 42, (1), 1367- 1377.
- Frydenberg E, Lewis R, Bugalski K, Cotta A, McCarthy C, Luscombe-Smith N (2004). Prevention is better than cure: Coping skills training for adolescents

- at school. *Educational Psychology Practice*, 20 (2), 117-134.
- Hingson, R. W., Zha, W., & Weitzman, E.R. (2009). Magnitude of and trends in alcohol-related mortality and morbidity among U.S. college students ages 18-24, 1998-2005. *Journal Studies of Alcohol and Drug Supplements*, 16, 12-20.
- Hoffmann J. P., Cerbone F. G., & Su S. S. (2000). A growth curve analysis of stress and adolescent drug use. *Substance Use & Misuse*, 35, 687-716.
- MacLaren, V. & Best, L. (2010). Multive addictive behaviors in young adults: Students norm for the Sorter. *PROMIS Questionnaire*, 35, 252-255.
- Miczek, K. A., & Mutschler, N. H. (1996). Activation effects of social stress on IV cocaine self-administration in rats. *Psychopharmacology*, 128, 256-264.
- Obot, I. S. (2012). Alcohol in Sub-Saharan Africa: Current situation and trends. Paper presented at Global Alcohol Policy Conference, Nonthabari, Thailand, 13th-15th February, 2012.
- Okasaka, Y., Morita, N., Nakatani, Y., & Fujisawa, K. (2008). Correlation between addictive behaviors and mental health in university students. *Psychiatric Clinical Neuroscience*, 62, 84-92.
- Parks, K., Collins, R. L. & Derrick, J. L. (2012). The Influence of Marijuana and Alcohol Use on Condoms Behavior: Findings from a sample of young adult female bar drinkers. *Psychology of Addictive Behaviour, Psychology of Addictive Behaviors*, 26, 888-894.
- Perkins, H. W. (1999). Stress-motivated drinking in collegiate and post collegiate young adulthood: Life course and gender patterns. *Journal of Student's Alcohol*, 60, (2), 219-270.
- Piazza, P. V. & Le Moal, M. (1996). Pathophysiological basis of vulnerability to drug abuse: role of an interaction between stress, glucocorticoids, and dopaminergic neurons. *Annals of Pharmacology Toxicology*, 36, 359-378.
- Piazza, P. V., Deminiere, J. M., Le Moal, M. & Simon, H. (1990). Stress and pharmacologically induced behavioral sensitization increases vulnerability to acquisition of amphetamine self-administration. *Brain Res*, 514, 22-26.
- Semaille, P. (2009). The new types of addiction. *Review of Medical Studies*, 30, 335-357.
- Shaham, Y. & Stewart, J. (1994). Exposure to mild stress enhances the reinforcing efficacy of intravenous heroine self-administration in rats. *Psychopharmacology*, 114, 523-527.
- Shahtahmasebi, S. & Berridge D. (2009). A longitudinal analysis of teenage drinking patterns. *International Journal of Adolescent Medicine and Health*, 21, 371-385.
- Squeglia, L. M., Pulido, C., Wetherill, R. R., Jacobus, J., Brown, G. G., & Tapert, S. F. (2012). Brain response to working memory over three years of adolescence: influence of initiating heavy drinking. *Journal Studies of Alcohol and Drugs*, 73, 749-760.
- Sreeramareddy, C. T., Shankar, O. R., Binu, V. S., Mukhopadhyay, C., Ray, B., Menezes, U. B., Fox, K. et al., (2010). Tobacco, alcohol and drug use among dental undergraduates at one English university in 1998 and 2008, 1645.
- Ungless M. A., Argilli E., & Bonci A. (2010). Effects of stress and aversion on dopamine neurons: Implications for addiction. *Neuroscience and Bio-behavioral Reviews*, 35, 151-156.

- Vaez, M., Ponce de Leon, A., & Laflamme, M. (2006). Health related determinants of perceived quality of life: a comparison between first year university students and their working peers. *Work*, 26, 167–177.
- Witkiewitz, K., Desai, S., Steckler, G., Jackson, K. M., Bowen, S., Leigh, B. C., & Larimer, M. (2011). Concurrent drinking and smoking among college students: an event level analysis. *Psychological Addictive Behavior*, 3, (1), 649–654.

RESTORATIVE JUSTICE AS A COMMUNITY RESPONSE TO DRUG/SUBSTANCE USE: WHY NOT ADOPT THIS POLICY OPTION IN NIGERIA?

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ABSTRACT

There exists observable shortcomings in the drug policies/laws and futility in the war on drugs. This is because, despite the efforts of drug policymakers in State and non-State agencies such as schools, religious bodies, and families to combat drug use and its ensuing problems using various strategies, the phenomenon is still on the increase in Nigeria. This has necessitated the introduction of restorative justice as a policy option/alternative that could successfully address the problem. The predictions of social bonds and re-integrative shaming theories supported the promise and roles of this community-based psycho-socio-legal framework. Its official use in both formal and informal settings has a significant end in view which is that drug offenders are made to mend fences with individuals and institutions affected by their conduct. Instead of being in the traditional criminal justice system, they are treated and corrected in the community where the offensive behaviour originated. The programme stands to create a practical pathway and framework for handling the changing patterns of substance abuse in the local communities and neighbourhoods. It is a strong driving force and construct for achieving the long sought for drugs-source-control and treatment plans, and a plausible, reliable and accurate scale-of-justice-balancing measure that can direct the path to effective drug policy in Nigeria.

Keywords: Community Response, Drug/Substance Use, Nigeria, Policy Option, Restorative Justice.

INTRODUCTION

The use of psychoactive substances or drugs to escape reality and provide stim-

ulation, relief, or relaxation has been a common practice for thousands of years. Known as the 'plant of joy', opium, for instance, was used 4,000 years ago by the

Mesopotamian (Inciardi, 1986). Siegel (2008) reviewed a number of studies on mind-altering substances and came to the conclusion that many ancient societies knew and understood the problem of drug use. This study further revealed that the use of marijuana by the Arabs was common during the Crusades; natives of Mexico and South America chewed coca leaves and used 'magic mushrooms' (which contained powerful intoxicating agents) in their religious ceremonies; and that drug use (cocaine and heroin solutions precisely) was also accepted in Europe well into the 20th century. In African societies of old generally, and Nigeria in particular, only alcohol and local substances and, rarely marijuana, were commonly used, unlike in the Western world where the latter and synthetic drug use prevailed.

In the African continent, a plethora of research findings point to the fact that such substances as alcohol (especially palm wine and locally made gin and other indigenous brewed intoxicants), snuff, kola nuts and tobacco are often required as a custom in many native ceremonies and social events. Examples include traditional marriage rites, offering of prayers and libation, naming newborn babies and even wedding (Adelakan, 1989; Adelakan, & Ndon, 1997; Omigbodun, & Babalola, 2004; Obot, 2005; Gureje, Degenhardt, Olley, Uwak, Udofia, Wakil, Adeyemi, Bohnert, & Anthony, 2007; Ngesu, Ndiku, & Masese, 2008; Ajala, 2009; Abasiubong, Idung, Udoh, & Ekanem, 2012; Okogwu, 2014; Abasiubong, Udobang, & Idung, 2014; Nnam, 2016a). A salient thought, though implicit, common in the expressions of these scholars is that drugs/substances were so sparingly and cautiously used in ancient times that problems as-

sociated with their use were minimal compared to what is obtainable in recent times. The reason for this is not far-fetched: most traditional African societies are kin-knitted. They have a strong, unifying and binding community-based regulatory system, as evidenced by socialisation institutions, informal restorative justice programmes and 'collective sentiments' (norms, values, laws, and customs).

Granted, the problem of illicit drug use has been in existence for centuries and a common practice in most ancient cultures and civilisations, but its attendant negative effects were insignificant compared to the current situation. Indeed, there is a high degree of persistence in drug culture in present-day society. This complex problem manifests in so many diverse forms, one being that its current pervasive influence is universal and destructive, cutting across cultures, gender and social class. Kelly and Clarke (2003) acknowledged the fact that there is a strong relationship between drug use and antisocial conducts, and that the problem cuts across culture, class and gender lines. Information elicited from the repositories of the United Nations Office on Drugs and Crime (UNODC) reveals that drug use is a universal problem—that is—it is not limited to geographic boundaries (UNODC, 2007; Atkinson, McCurdy, Williams, Mbawambo, & Kilonzo, 2011).

There has been a significant increase in drug use worldwide, and risk factors associated with it are detrimental not only to the users, but also their families and the larger society. No society—whether urban or rural, developed or developing—is free; all are affected by one drug problem or another, with the youth population leading in this unhealthy behaviour. Kelly and Clarke (2003) contended that

drugs and illegal activities associated with their use are the cornerstones of youth misconducts in society. In the same way, Weisheit (1993) explained that urban areas are beset by drug-dealing gangs, and drug users engage in crime to support their drug habits and involvement in alcohol-related violence. The rural areas are important staging centres for the shipment of drugs and are often the production sites for synthetic drugs and marijuana farming (see also Siegel, 2008). The incidence of drug use has continued to be major risk behaviour across the globe. The abusers, who are mainly youths, suffer from physical (i.e. social, legal, economic, and psychological problems) to mental health complications (Mamman, Othman, & Lian, 2014).

Although drug problems are much felt in developing countries, their control is difficult even in advanced nations (UNODC, 2012). Nevertheless, the problem is particularly overwhelming in developing countries owing to myriads of associated social problems, reason being that health facilities are not equally distributed across nations (Obot, 2012; Abasiubong *et al.*, 2012). Admittedly, the attendant effect of substance use may be more pronounced and devastating in developing countries like Nigeria due to poor health-care delivery and uneven distribution of health facilities for the treatment of drug cases. However, it must be pointed out that this idea is not the only or main cause of the problem; hence, the major cause of substance use (i.e. dysfunctional drug policy and regulation) in the country seems to have largely been ignored. The predictor(s) of substance abuse and its resultant multiplicity of social problems are, without doubt, basically linked to the glaring inadequacies and weaknesses

observed in the existing drug policies and responses. Drug laws in Nigeria have limited application; for instance, both extant laws and current regulations on drugs are primarily, if not solely, focusing on drug trafficking/peddling and traffickers/peddlers (Iwarimie-Jaja, 2003; Igbo, 2007).

Clearly, much has been written on different drug policies, responses, treatment and care and many more are still coming up from national and international governments through their security, justice and correctional institutions. Despite punitive measures adopted by these agencies in curbing drug use and the public outcry against this social problem, particularly in Nigeria, there is still increasing violation of the act by individuals and groups, especially the youth population. This calls for an alternative remedy, an additional policy or response that are community-based to support the existing measures so as to effectively deal with this social malaise bedeviling human society. The justification is that most drug offences are committed in the community, so addressing the core of the problem from and/or where it originated will make for a serious reduction in the victims, offence and offenders. The subjecting argument, which becomes the thrust of this paper, is to initiate a critical discourse on the application of restorative justice by both the formal and informal agencies/agents of social control in combating substance use in Nigeria.

Theoretical Framework

Drug/Substance use is a complex problem, which presents as a common characteristic of modern societies. In essence, as implicated in the nature and extent of drug problems across the globe, a methodical theory deconstruction is

required to account for the state of this social problem in contemporary society. This therefore evokes the urgency for integrating social control and re-integrative shaming theories to build a strong theoretical framework that stands to elucidate the problem of drugs. Drawing inspirations from Walter Reckless' control theory, Travis Hirschi propounded social bond theory in 1969 to account for the prevalence of social problem in human society.

The central question posed by this theory is: 'why do people obey the law instead of otherwise'? In other words, as applied in this paper, why do people engage/persist in substance use instead of desisting or aging out? Hirschi (1969) responded that, it amounts to exercise in futility to continue to identify what pushes or pulls people to engage in antisocial behaviour (like illicit drug use). This is because human beings are inclined to violate laws, especially if and/or when such conduct norms have not been socially and morally instilled into them as part of the legal and moral code of conduct and socialisation processes of their society. Applying social bond theory to the subject of discussion, it is clear that people use and experiment with illicit drugs, perfect in using or abusing them and even get addicted to the act when their social bond to the society is or has been broken, weakened, or absent.

Social bond theory is anchored in four basic principles: attachment, commitment, involvement and belief. These four variables are determinants of substance use and, on the other hand, insulators from/against this aberrant behaviour. That is to say, the motivation for drug use is dependent upon the level and type (whether prosocial or antisocial) of attachment, commitment, involvement and belief an individual ascribes or subscribes

to his/her familial and societal values. The proponent of this theory explained the four variables thus: "elements of social bonding which include *attachment* to families, *commitment* to social norms and institutions (e.g. school, places of work and worship), *involvement* in prosocial activities, and the *belief* that these things are important" (Hirschi, 1969, p. 16). From the theory, the strength and durability of an individual's bonds or commitments to conventional culture (not drug [sub]culture) in society inhibit social deviance, delinquency, crime, and other morally and socially abhorred acts like drug abuse (see also Hirschi, 1969; Simpson, 1976).

Still on this, Siegel and McCormick (2006) indirectly accentuated the importance of Hirschi's four elements of social bonds in explaining the burgeoning trends in drug use in society. They provided insightful promise and strong foundation upon which the vexed issue of substance use in Nigeria, as in most societies of the world, can best be understood and explained for consequent policy development and implementation. Firstly, individuals' positive *attachment* to people from within or outside their families and immediate environment promotes sanity and conformity. Secondly, sincere *commitment* to productive activities is a safety valve that guards against offending. Thirdly, *involvement* entails activities that serve to further the bond of individual to others and leave limited time to become involved in deviant, criminal activities. The fourth and last variable is the *belief* in wider societal norms and values, which checks and balances human conducts. In summary, Siegel and his associates believed that these four aspects of social bond are control mechanisms which

interact with one another to protect an individual from engaging in antisocial behaviour (drug use), or being attached to law violators (drug users).

Following from these, it is clear from the predictions of social bond theory that the predictors of drug use are essentially influenced and determined by people's attitudes towards the Hirschi's (1969) four explanatory 'crime-causative-prevention/control' variables. That is, the strength of people's social bonds is a determinant of the type of life (prosocial or antisocial) they (will) live. The tendency of individuals' involvement in drug offences tends to decrease or weaken if the level and nature of their attachment, commitment, involvement and belief in prosocial community events is high. Even when the social bonds are available and strong, some members of the society will still require capable guardians to direct them, or else they will be attracted to use drug or get involved in socially and morally unacceptable drug-related activities. Therefore, the ideals of social bonds should be inculcated and internalised through quality 'social osmosis' (constant, intensive, and heuristic psychosocial learning). With this, societal members can acquire and build strong social control traits and thoughts that could go a long way in deterring them from using drug. This is believed to be more effective and sustained, since the basic assumptions of social bonds theory are intertwined with the dynamics of restorative justice.

Having discussed social bond theory and its relevance to the study of drug use in some depth, it becomes necessary to introduce re-integrative shaming theory in order to build a robust integrated theoretical framework that has direct bearing and impact on the subject under

investigation. This theory also complements the basic tenets of social bonds theory, as it directs the path to a holistic analysis of restorative justice models as suitable framework for responding to the problem of substance use. Re-integrative shaming theory was propounded by John Braithwaite in 1989. According to Braithwaite (1989), re-integrative shaming only takes place when people's antisocial behaviour is condemned, but their self-esteem and confidence are upheld through positive comments about them and gestures of forgiveness and re-acceptance. The proponent of this theory strongly opposed the idea of disintegrative or stigmatic shaming, warning that it may not yield positive and important results in restoring justice and social harmony. This theorist added that victims and some of their supporters, offenders and some of their supporters, and other concerned community members appear before an experienced community facilitator to discuss the incident and what should be done about it (Braithwaite, 2001; Braithwaite, 2002).

The implication of the preceding argument is that the issue of substance use can be successfully tackled without recourse to official involvement of narcotics agents or any other arm of the conventional criminal justice system. Rather, it is better addressed at the community level where the act is said have taken place. Following Braithwaite (1989), Yekini and Salisu (2013) asserted that, when members of the community are the primary controllers of crime (drug use) through active participation in shaming offenders (drug users) and, having shamed them through concerted participation in ways of reintegrating the offender back into the community of law abiding citizens, crime

(illicit substance use) is best controlled. Low crime societies, these authors further argued, are societies where communities prefer to handle their own crime problems rather than handing them over to professionals in the traditional criminal justice system. Similarly, Nnam (2016b) posited that the outcome of re-integrative shaming, as a social gesture of restorative justice mechanisms, is bound to be a reflective of public policy, interest and safety, especially when influential and people of high moral rectitude in the community (including victims' and offenders' family members) actively participate in the restoration process or exercise.

For clarity of purpose, Nnam (2016b) defined the concept of shaming as a successful attempt to make or direct law violators in a humane manner to show remorse, imbibe attitudinal change and make up for their antisocial behaviour as a way of restoring justice, law and order in the community. He further explained that the process of shaming offenders or law violators (i.e. substance users) does not entail exclusion, humiliation and stigmatisation as the name implies. Rather, the community, through its justice facilitators, not only punctiliously 'shamed' (corrected) the antisocial behaviour of people but also follow them up to guarantee their proper re-integration and necessary aftercare services. Implicitly supporting re-integrative shaming, Hirschi (1969) and other advocates of social bond theory like Whitehead and Lab (2012) provided a convincing explanation to substance use when they maintained that, when the social bonds to society are strong, they (social bonds) prevent or limit crime (drug use). But when the social bonds are weak, they increase the probability of deviance and crime. Although this causal

relationship is self-evident and quite direct and simple to comprehend, the underlying principles of this theory emphasize that there is a significant relationship between attitudes and behaviour. This is where the two theories formed a correlate and synergy to account for community responses to the rapidly increasing rate of drug use in both rural and urban communities in Nigeria; hence, the primary reason for their integration.

ROLE OF RESTORATIVE JUSTICE IN THE PREVENTION AND CONTROL OF DRUG/SUBSTANCE USE

When a crime is committed, the scale of justice cannot weigh equal again except justice is restored. The scale must be balanced, but should be carefully done through a humanistic and constructive legal approach to avoid causing further harms and injustices, or even escalating or exacerbating the cause(s) of the original criminal behaviour. Among modern approaches to handling social problems in a democratic society, restorative justice programmes seem to be more advantageous. Particularly, when it comes to the issue of drug use and its related problems, this model appears to be making more headway compared to other interventions and policy development. Known by many terms or concepts, among which are, "'communitarian justice', 'making amends', 'positive justice', 'relational justice', 'reparative justice', and 'community justice'" (Miers, 2001, p. 88), facilitators and agents of social control apply the social democratic principles and practices offered by restorative justice to systematically balance the scale of justice that was made uneven by drug use and users.

The 2006 United Nations Office on Drugs and Crime (UNODC) report shows that restorative justice is a way of responding to criminal behaviour by balancing the needs of the community, the victims and the offenders. It is an evolving concept that has given rise to different interpretation in different countries, one around which there is not always a perfect consensus. Also, because of the difficulties in precisely translating the concept into different languages, a variety of terminologies are often used (UNODC, 2006). Restorative justice has been an important approach to understanding offending behaviours (like substance use) in recent years. Yet there are so many diverse programmes which are described as 'restorative' that there is still no single definition of what constitutes restorative justice (Presser, & Voorhis, 2002). In a laconic manner, another criminologist attested that the concept of restorative justice "is often hard to define because it encompasses a variety of programmes and practices (Siegel, 2008, p. 189).

Even at that, Zehr (2002), like other ardent supporters of this ideology (Karp, & Breslin, 2001; Elechi, 2006; UNODC, 2006; Okwendi, & Nwankwoala, 2014; Nnam, 2016b), averred that restorative justice requires that society addresses victim's harms and needs, holds offenders accountable to put right those harms, and involves victims, offenders, and communities in the process of healing. No wonder Siegel (2008) defined restorative justice as a process of using humanistic, non-punitive strategies to right wrongs and restore social harmony, and that it has grown out of a belief that the traditional justice system has done little to involve the community in the process of dealing with crime and wrongdoing (including drug use).

Over the years, studies and war on drugs have been centred upon punitive measures, and growing emphasis is on the policy or idea of 'getting tough on drugs'. Yet no real and significant result has been achieved using these procedures. The global debate over the legalisation of drugs and the control of alcohol has greatly favoured the apologists of criminalisation philosophy. This has regrettably exacerbated the situation as the incidence of substance abuse is currently soaring like the eagle, thereby casting aspersions on the strengths and usefulness of State narcotics agents/agencies in particular and allied institutions in general. Stevenson (2011, p. 2) suggested that the "criminalisation of improper drug use has resulted in increased use of harsh, punitive sanctions imposed on drug offenders and dramatic increase in the rate of incarceration. These policies have had limited impact on eliminating or reducing illegal drug use and may have resulted in adverse consequences for social and community health".

Moreover, Stevenson (2011) stated that the criminal justice system has proved to be an ineffective forum for managing or controlling many aspects of drug trade and the problem of illegal drug use. In recent years, some progress has been reported when governing bodies have managed drug use and addiction as a public health problem which requires treatment, counselling and medical interventions rather than incarceration. Stevenson (2011) was indirectly referring to the constructs and dictates of restorative justice when he made this statement. Given the far-reaching success in most countries of the world (such as US, Britain, etc), and particularly the impact and role of the age-long informal 'restorative justice' initiatives in

most Africa societies (like Nigeria) in ensuring conformity and public safety, this approach undoubtedly holds great promise for maximum reduction in substance use and other related offences if timely and objectively applied in Nigeria. Elechi (2006) agreed that restorative justice programmes exist in most African traditional societies like Afikpo community, and are more effective and legitimate in conflict resolution, justice and drug control. Like most African societies, Afikpo indigenous justice system employs restorative, transformative and communicative principles in conflict resolution and addressing societal problems like drug use.

Restorative justice is one of the global philosophies of modern 'punishment' (treatment) in penology that are seriously struggling to gain currency in terms of official attention, recognition and dominance in the sphere of criminal justice administration. It is a non-punitive and humanistic approach employed at the community level to restore social justice, and enforce and maintain law and order in society (Nnam, 2016b). The traditional criminal justice system almost always advocates strict adherence to the idea that 'tough on drugs' involves an effective system of coerciveness, punishment, custody and imprisonment and, that, this alone would address the problem of drug use. As reported by Downen (2011) and Nnam (2016b), the standing belief by crime fighters and some members of the public was that the punitive aspects of imprisonment would deter further crime and effectively hold offenders accountable for their decision to commit crime.

Although there is little literature directly connecting restorative justice with prevention of alcohol and other drug problems, circumstantial evidence for the

preventive potential of these practices abound. For instance, risk factors diminish as a result of restorative practices, and protective factors increase (Page, 2013). Again, huge success has been recorded in the use of this alternative penological ideology in reducing the menace of substance use and its concomitant problems to the barest minimum. Alluding to the view of Siegel (2008), the researcher explained that many schools and communities in the United States, for instance, have come to realise the importance of restorative justice techniques in dealing with students who are involved in drug and alcohol use without resorting to such more harsh and coercive punishment measures as outright rustication, suspension, or handing them over to the formal criminal justice system for processing.

Experts' opinions attest that some schools are now trying to involve students in 'relational rehabilitation' (an integral aspect of restorative justice) programmes that strive to improve individuals' relationships with key figures in the community who may have been harmed by their actions (Karp, & Breslin, 2001; Siegel, 2008). For restorative justice practices to succeed in tackling drug offences, Morozini (2011) insisted that they should be based on the following premises:

The drug 'offenders' should not be called as such, but should be recognised as human beings, worthy of respect and as vulnerable parts of the society, who need empowerment through treatment, through the interaction with drug users and non-drug users and, above all, who need acceptance. State actors, the whole community, counsellors, doctors, families should unite and form units

of dialogue, understanding, where all the people affected by drug use will be able to share stories, talk about their experiences and reintegrate in society through activities, job training and team projects. In this way, there would be an obvious effort for a repair of the harm, but between victims and not by placing offenders and victims in clearly distinguished adversary camps. In other words, everyone will work in its own way and together with others towards the repair of the harm, without stigmatising drug users as criminals (Morozini, 2011, n. p.).

In relation to the prevention and control of drug use, restorative justice can assume many dimensions, but two are outstanding: (1) healing and peace circles and (2) family and community group conferencing. Braithwaite (2001) illustrated that the healing process might contribute to the treatment of drug use because it can deliver the love and care to motivate holistic change in a life. Restorative justice is about repairing injustice, and there are important ways that drug use is implicated in the generation of injustice. Braithwaite (2001) made these two illustrations to substantiate his argument. Firstly, a restorative justice approach to substance abuse can catalyse confrontation of a profound community injustice. Secondly, confronting injustice can help tackle substance abuse. The import is that drug offenders are not treated with unnecessary leniency; their act is actually condemned and disciplinary, correctional treatments (not punishment) are usually applied during family and community group conferencing. It follows that a strong but constructive condemnation of drug use (not

the user) is an indispensable tool that should be extensively used in the course of justice restoration.

The art of healing and conferencing are major justice restoration dynamics for tackling drug use. These models, together with other psycho-socio-legal therapeutics, make for a far-reaching success in healing the harm caused by drug users and ultimately restore peace and social order. Several reports of restorative conferences show that, victims (of theft) bearing the burden of injustice out of love for the offender, offering support from one friend or family member to another, moved substance abusers to want to be part of healing the relationships (Braithwaite, 2001). Braithwaite and other avid supporters of conferencing as a principle of restorative justice maintained that, because substance users routinely steal from loved ones and friends who protect them by declining to lodge complaints and because users often suffer unacknowledged shame for putting their loved ones in this position, restorative justice programmes outside the State criminal justice system can provide an opportunity for these hurts to be healed. The hope is that the process of confronting hurts and acknowledging shame to loved ones who care about will motivate a commitment to rehabilitation in a way that meetings with more unfamiliar victims would not. The love-empathy paradigm is greater in restorative justice conferences than in court cases, and empathy predicts success in restorative justice processes (Maxwell, & Morris, 1999; Ahmed, Harris, Braithwaite, & Braithwaite, 2001).

The family is the first and primary agent of socialisation and, as a result, the most influential and effective agent of social control across cultures. It is therefore, the

best staging point and springboard for the promotion of restorative justice practices. Restorative justice practitioners/administrators/facilitators are much aware that most societies of the world, especially in Nigeria where extended family and lineage/descent system is practiced, no family members would want to bring shame to his or her family or community because of the cultural values placed on individual's conduct. While maintaining bonds of respect (this further supports social bond theory), family life teaches us that shaming (i.e. referring to re-integrative shaming theory), as well as 'punishment' (corrections and rehabilitation) is possible. This attests to the fact that a properly understood re-integrative shaming by both participants and observers is vital to the success of restorative justice (Braithwaite, 1989; Braithwaite, & Braithwaite, 2001; Okwendi, & Nwankwoala, 2014). That is, it strives to bring back social harmony and reestablish justice and order which were previously harmed or strained by substance use. This notion is a clear reassertion and further validation of the adoption and application of social bond and re-integrative shaming theories which we coalesced to form a suitable integrated theoretical framework for examining the causes, effects and control of improper drug use and its attendant social problems.

CONCLUSION AND POLICY IMPLICATIONS

Restorative justice initiatives have been widely and officially used in (re) solving crime and drug problems in many societies of the world, excluding Nigeria. Rather, ours is a society where this

forward-looking emerging policy option is applied only in an informal context to right wrongs, mend fences, and curtail deviance, delinquency and crime. The Nigerian government and its drug policymakers and fighters should, as a matter of urgency and necessity, consider the paramount importance of restorative justice in the fight against substance use. This programme may not actually end the war on drugs, but certainly will go a long way in reducing the menace to the barest minimum. This is because most Nigerian communities still, to a large extent, retain their strong collective sentiments and informal criminal justice system, including old models of indigenous restorative justice and other native, local social control and regulatory agencies

Of course, restorative justice philosophy as a humanistic, treatment-oriented (not coercive or custodian punishment) and community-based socio-legal approach holds good promise since most drug and alcohol problems originate from the community where users are also members. Here, justice restoration and maintenance of social order and harmony are not only possible but also faster at the community level where the primary, secondary and vicarious victims of substance abuse are residing and, sometimes, even belong to the same primary group—whether nuclear or extended. This emerging global best practice is emphatic and realistic and consequently stands to make a sweeping change and therefore success in the war against substance use and users. This becomes realisable only if it is formally adopted and widely implemented by both the State and non-State actors because it is geared towards ensuring a near drug-free society (a complete drug-free society is utopia).

The universal application/adoption of restorative justice programmes is, among other interventions or policies, a strong driving force and construct for achieving the long sought for drugs-source-control and treatment plans.

The idea of using the conventional criminal justice procedures as a leading or sole strategy for fighting illicit drug use has not yield much positive result in Nigeria. The disconcerting changing patterns of drug use that is pervasive in our local communities and neighbourhoods is a testament to the futility of rigidly holding, depending or applying punitive policies and reactions to drug problems in the country. Even at that, many people, particularly the youth still persist in the act, refusing to accept desistance from and aging out of drugs, irrespective of the dangers and risk factors of this social pathology. The use of State social control actors does not help matters since most incidents of drug use take place in the local communities. An alternative intervention is necessary to stem the tide. The alternative is to promote a unifying and binding restorative justice as a plausible, reliable and accurate scale-of-justice-balancing measure that can direct the path to effective drug policy and control.

The theoretical framework provided a strong basis for grappling with the predictors of substance use. There is a strong relationship between the four identified interrelated elements of Hirschi's (1969) social bond theory and drug culture in Nigeria. A breakdown in one or more of these bonds or a total absence of them may predispose affected individuals to pursue activities, such as drug use, which are harmful to the growth and development of society. For instance, if an individual ceases to engage in prosocial activi-

ties, and maintains a criminogenic contact and network (i.e. negative involvement and attachment) with other individuals of antisocial background and belief, such a person may, over time, be exposed to or induced by opportunities and other intervening variables to indulge in substance use and associated problems. In a similar way, the strengths and usefulness of re-integrative shaming theory in explaining the growing incidence of substance use is discussed at length in relation to restorative justice models. Of great essence here is the message that, drug use instead of the users should be condemned. The perpetrators are not in any way to be rejected, eliminated or incarcerated, but rather should be reconciled with their individual victims, their families and community as vicarious victims.

REFERENCES

- Abasiubong, F., Idung, A. U., Udoh, S. B., & Ekanem, U. S. (2012). Parental influence on substance use among young people in the Niger Delta region, Nigeria. *African Journal of Drug and Alcohol Studies*, 11(1), 9-16.
- Abasiubong, F., Udobang, J. A., & Idung, A. U. (2014). Pattern of psychoactive substance use in the northern region of Nigeria. *African Journal of Drug & Alcohol Studies*, 13(2), 107-115.
- Adelakan, M. L. (1989). Self-reported drug use among secondary school students in the Nigerian State of Ogun. *United Nations Office on Drugs and Crime Bulletin on Narcotics*, 109- 116.
- Adelakan, M. L., & Ndon, R. J. (1997). Trends in prevalence and pattern of substance use among secondary school pupils in Ilorin, Nigeria. *West*

- African Journal of Medicine*, 16(3), 157- 164.
- Ahmed, E., Harris, N., Braithwaite, J., & Braithwaite, V. (2001). *Shame management through reintegration*. Cambridge, UK: Cambridge University Press.
- Ajala, O. A. (2009). A study of some causative factors of substance abuse among secondary school students in Ibadan, Nigeria. *The African Symposium*, 10(2), 1-9.
- Atkinson, J., McCurdy, S., Williams, M., Mbwambo, J., & Kilonzo, G. (2011). HIV risk behaviours, perceived severity of drug use problems and prior treatment experience in a sample of young heroin injectors in Dar es Salaam, Tanzania. *African Journal of Drug and Alcohol Studies*, 10(1), 1-9.
- Beirne, P., & Messerschmitt J. (2000). *Criminology* (3rd ed.). Boulder Colorado, London: Macmillan.
- Braithwaite, J. (1989). *Crime, shame and reintegration*. Cambridge: Cambridge University Press.
- Braithwaite, J. (2001). Restorative justice and a new criminal law of substance abuse. *Youth and Society*, 33(3), 227-248.
- Braithwaite, J. & Braithwaite, V. (2001). Shame, shame management and regulation. In E. Ahmed, N. Harris, J. Braithwaite & V. Braithwaite (Eds.), *Shame management through reintegration*. Cambridge: Cambridge University Press.
- Braithwaite, J. (2002). Restorative justice and responsive regulation. In J. Braithwaite (Ed.), *Does restorative justice work?* (pp. 45-71). New York: Oxford University Press.
- Downen, D. P. (2011). Restorative justice: Transforming corrections. Available at <http://www.corrections.com/news/article/29594-restorative-justice-transforming-corrections>. Accessed 12 February, 2016.
- Elechi, O. E. (2006). *Doing justice without the state: The Afikpo (Ehugbo) Nigeria model*. New York: Routledge.
- Gureje, O., Degenhardt, L., Olley, B., Uwakwe, R., Udofia, O., Wakil, A., Adeyemi, O., Bohnert, K. M., & Anthony, J. C. (2007). A descriptive epidemiology of substance use and substance use disorders in Nigeria during the early 21st century. *Drug and Alcohol Dependence*, 91(1), 1-9.
- Hirschi, T. (1969). *Causes of delinquency*. Berkeley: University of California Press.
- Igbo, E. U. M. (2007). *Introduction to criminology* (2nd ed.). Nsukka: University of Nigeria Press.
- Inciardi, J. (1986). *The war on drugs*. Palo Alto, California: Mayfield.
- Iwarimie-Jaja, D. (2003). *Criminology: The study of crime* (2nd ed.). Owerri: Springfield.
- Karp, D. R., & Breslin, B. (2001). Restorative justice in school communities. *Youth & Society*, 33, 249-272.
- Kelly, D. H., & Clarke, E. J. (2003). *Deviant behaviour: A text-reader in the sociology of deviance* (6th ed.). New York: Worth Publishers.
- Lanier, M., & Henry, S. (2004). *Essential criminology* (2nd ed.). United States of America: Westview Publishers.
- Mamman, H., Othman, A. T., & Lian, L. H. (2014). Adolescents and drug abuse in Nigeria. *Journal of Biology, Agriculture and Healthcare*, 4(1), 22-38.
- Maxwell, G. M., & Morris, A. (1999). *Reducing reoffending*. Wellington, New Zealand: Victoria University of Wellington, Institute of Criminology.

- Miers, D. (2001). *An international review of restorative justice*. Crime Reduction Research Series Paper 10. London (U.K.): Home Office.
- Morozini, S. (2011). Can restorative justice be the right response to drug offences? Available at <http://www.talkingdrugs.org/can-restorative-justice-be-the-right-response-to-drug-offences>. Accessed 4 August, 2017.
- Ngesu, L. M., Ndiku, J., & Masese, A. (2008). Drug dependence and abuse in Kenyan secondary schools: Strategies for intervention. *Educational Research and Review*, 3(10), 304-308.
- Nnam, M. U. (2016a). The game has changed: A criminological analysis of substance abuse among youths in Nigeria. *A Paper Presented at the 12th Biennial International Conference on Drugs, Alcohol and Society in Africa, organised by the Centre for Research and Information on Substance Abuse at Reiz Hotel, Abuja, Nigeria, on 21-22 September*.
- Nnam, M. U. (2016b). Responding to the problem of overcrowding in the Nigerian prison system through restorative justice: A challenge to the traditional criminal justice system. *International Journal of Criminal Justice Sciences*, 11(2), 177-186.
- Obot, I. S. (2005). Substance use among students and out-of-school youths in urban area of Nigeria. In I. S. Obot & S. Saxena (Eds.), *Substance use among young people in urban environment* (pp.133-146). Geneva: World Health Organisation.
- Obot, I. S. (2012). Alcohol in sub-Saharan Africa: Current situation and trends. *A Paper Presented at the Global Alcohol Policy Conference in Bangkok, Thailand*.
- Okogwu, F. I. (2014). The role of libraries in curbing drug abuse among adolescent boys in Nigeria: A theoretical explanation. *International Journal of Development and Management Review*, 9(1), 24-33.
- Okwendi, J. S., & Nwankwoala, R. (2014). The role of restorative justice in complementing the justice system and restoring community values in Nigeria. *Asian Journal of Humanities and Social Sciences*, 2(3), 101-118.
- Omigbodun, O. O., & Babalola, O. (2004). Psychosocial dynamics of psychoactive substance misuse among Nigerian adolescents. *Annals of African Medicine*, 3(3), 111-115.
- Page, K. W. (2013). Restorative justice: Unsung ally in the prevention of adolescent alcohol and other drug use. Available at <https://ontrackconsulting.org/wp-content/uploads/2013/02/Restorative-Justice-by-K.-Page.pdf>. Accessed 4 August, 2017.
- Presser, L., & Voorhis, V. P. (2002). Values and evaluation: Assessing processes and outcomes of restorative justice programmes. *Crime and Delinquency*, 48, 162-189.
- Siegel, L. J. & McCormick, C. (2006). *Criminology in Canada: Theories, patterns, and typologies* (3rd ed.). Toronto: Thompson.
- Siegel, L. J. (2008). *Criminology: The core* (3rd ed.). Belmont, California: Thomas Higher Education.
- Simpson, A. L. (1976). Rehabilitation as the justification of a separate juvenile justice system. *California Law Review*, 64(4), 984-1017.
- Stevenson, B. (2011). Drug policy, criminal justice and mass imprisonment. *A working paper prepared for the first meeting of global commission on*

- drug policies* held in Geneva on 24-25 January, pp. 1-10.
- United Nations Office on Drugs Crime. (2006). *Handbook on restorative justice programmes: Criminal justice handbook series*. New York: United Nations publication.
- United Nations Office on Drugs and Crime. (2007). *The 2007 world drug report*. Vienna: United Nations Office on Drugs and Crime.
- United Nations Office on Drugs and Crime. (2012). *The 2012 world drug report*. Vienna: United Nations Office on Drugs and Crime.
- Weisheit, R. (1993). Studying drugs in rural areas: Notes from the field. *Journal of Research in Crime and Delinquency*, 30, 213-232.
- Whitehead, J., & Lab. S. (2012). *Juvenile justice: An introduction*. New York: Elsevier.
- Yekini, A. O., & Salisu, M. (2013). Probation as a non-custodial measure in Nigeria: Making a case for adult probation service. *African Journal of Criminology and Justice Studies*, 7(1 & 2), 101-118.
- Zehr, H. (2002). *The little book of restorative justice*. Intercourse, PA: Good Books.

**PATTERNS OF DRUG USE AND THE PERPETUATION OF INTIMATE PARTNER
VIOLENCE AMONG PUBLIC SERVANTS IN UYO, NIGERIA**

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ABSTRACT

Despite the high incidence of intimate partner violence in Nigeria, empirical research on the psychological and emotional aspect is very scanty. A review of the few available studies shows a lacuna in research regarding the implication of drug use on the perpetuation of intimate partner violence. The present study was aimed at bridging this gap with a view towards making recommendations to stakeholders so that proactive steps could be taken. In the cross-sectional survey, residents of Uyo (N = 249) were employed, using standardized measures of drug use and perpetuation of intimate partner violence. Results indicated that drug use, age, marital status, religion, ethnic group and gender jointly predicted perpetuation of intimate partner violence [$F(6,242) = 19.52; P < .05$]. However, only drug use and age of the participants independently predicted perpetuation of intimate partner violence; whereas gender, religion, ethnicity, and marital status did not predict perpetuation of intimate partner violence. The study concluded that exposure to drugs accelerates the perpetuation of intimate partner violence and subsequent psychological ill-health of families affected and this should be a source of concern for clinical psychologists and other stakeholders in the behavioral sciences. Implications and recommendations were made which were in line with previous findings.

Keywords: Drug use, intimate partner violence, public servants, perpetuation.

INTRODUCTION

Intimate partner violence (IPV) has been identified as an issue of global concern (Adekeye, 2008). IPV is a major societal problem, though commonly ignored and underreported in many countries

(WHO, 2013); while violence among men and women is a universal problem in many countries, physical violence in particular is very common among intimate partners in both developed and developing countries, (Eze-Anaba, 2005). Intimate partner violence can therefore happen to

anyone regardless of race, age, sexual orientation, religion, or gender and can take many forms, including physical abuse, sexual abuse, emotional, economic, and psychological abuse (Yusuf, Arulogun, Oladepo, & Olookeere, 2011).

While the level of violence against Nigerian women remains poorly mapped, pilot studies conclude it is —shockingly high, (Eze-Anaba, 2005). Again in Nigeria, reports reveal outrageous level of violence against women (Afrol News, 2007) while in the international community, Amnesty international (2007) reported that a third and in some cases two-thirds of women are believed to have been subjected to physical, sexual and psychological violence carried out primarily by husbands, partners and fathers while girls are often forced into early marriage and are at risk of punishment if they attempt to escape from their husbands. More pathetic is the revelation of gross under reporting and non-documentation of domestic violence due to cultural factors (Oyediran & Isugo, 2005).

Project alert (2001), in a survey on violence against women conducted interviews with women working in the markets and other places of work and girls and young women in secondary schools and universities, in Lagos state, Nigeria. About 64.4% of 45 women interviewed in the work place said they had been beaten by a partner (boyfriend or husband), 56.6% of 48 interviewed market woman admitted experiencing such violence. The incidence of intimate partner violence or domestic violence is high.

In a study carried out by Obi and Ozumba (2007) on the factors associated with domestic violence, in South East, Nigeria, 70% of respondents reported abuse in their family with 92% of the victims being female partners and the remaining

8% being male. The common forms of abuse reported were shouting at a partner (93%), slapping or pushing (77%) and punching and kicking (40%). However, most issues of gender based domestic violence has been centered on men as the perpetrators of domestic violence, thereby, making it appear as if cases of men being victims of intimate violence do not exist. Men can be, and frequently are, also victims of abuse in the home at the hands of their female partners. Some studies such as that of Richard (2003) and Katy (2009) mentioned that men are less likely to report being victims of intimate partner violence due to social and cultural associated stigmas. Other sources, like Trudy (2010) however, argued that the rate of intimate partner violence against men is often inflated due to the practice of including self-defense as a form of intimate partner violence.

In the same light, a study by researchers with the Centers for Disease Control and Prevention in 2007, found that women are slightly more likely to be victimized in non-reciprocal violence, whereas men are slightly more likely to be victimized in reciprocal violence. The study also found that almost three quarters of non-reciprocal violence is perpetrated by women. In a similar study, women are more likely to be injured in non-reciprocal violence and men are more likely to be injured in reciprocal violence. The great reluctance of many men and boys to report domestic violence makes it very difficult to accurately assess its scope worldwide.

Drugs on the other hand are chemical substances that destroy the body cell, depending on how it is used. According to Orija (2008), a drug dependent person unknowingly damages his/herself and the society. He goes further to say that peo-

ple who depend on drugs become more absent minded, drop in academic performance, more irritable and moody. In such a state, the tendency to be violent is very high. Ogunsakin (2007) opined that drugs like Indian hemp have the power to impair mental activities and decreases the male sex hormone, damages the heart and causes heart attack, even affecting the menstrual cycle in women.

Psychoactive substance use and violence is not limited to geographic boundaries (Atkinson, McCurdy, & Williams, et al., 2011). There is no doubt that rapid socioeconomic changes including urbanization and globalization appear to have contributed to the use of these substances. However, one major factor militating against its control in many developing countries is poverty (Omigbodun & Babalola, 2004; Obot, 2005; Gureje et al., 2007; Parry, 2005). Illiteracy and ignorance have also contributed significantly to a fair share of this social problem in many rural communities. In Nigeria, the presence of some of these substances in large quantities in traditional functions and ceremonies implies that the use is not restricted. This is because of the traditional importance attached to them. Substances like alcohol in the form of palm wine and local gin; kolanuts, tobacco and snuff are local substances often required as a custom in many traditional ceremonies (Adelekan & Ndon, 1997; Obot, 2005; Gureje et al., 2007). Failure to provide them in such functions may be regarded as an offence and usually attract penalties.

Coming to Akwa Ibom State of Nigeria, myriad of social problems exists; there is disruption of interpersonal relationship, especially within the family, criminal behavior, school failure, acute and chronic health problems, social and psychological

problems, bad study habits by students and failure to achieve normal adolescents' milestones, (Eno & Ekaete, 2015). All these social problems in most cases have a way of triggering drug use as an 'escape option' and eventually violence among intimate partners.

On the wider spectrum, Nigeria in recent times seems like a culture where social order and the extended family structure may have broken down. The emerging trend of use of alcohol and other substances has assumed a dangerous proportion. The socioeconomic impact has been widely reported and youths and young adults are at risk. The dramatic resurgence of social and economic phenomena with risk of people developing mental illness and being violent has been attributable to the use of these substances (Adamson, Adebawale, & Jinadu et al., 2000; Igwe & Ojinnaka, 2010). Some of these social problems have been associated with the use of habit-forming substances such as alcohol, cannabis, cocaine and heroin (Abasiubong, Bassey, Atting, & Ekott, 2008; Abasiubong, Abasiatai, Bassey, & Ogunsemi, 2013).

In addition to the aforementioned problems, the paucity of empirical data to properly assess the situation and create enabling grounds for proper policy implementation has been a cause for concern; hence, the imperativeness of the study. Although previous studies have attempted to assess mainly the physical aspect of perpetuation of violence, but in so doing, have sidelined the psychological aspect, which in all indication is as important as the physical counterpart. In light of the forgone, the present study seeks to investigate the patterns of drug use and the perpetuation of intimate partner violence among public servants within Uyo metropolis.

This research work will be of relevance to public servant and people in general as it will help them to discover their risk in being a victim or perpetrator of intimate partner violence, to rediscover themselves and to be able to handle any challenges they come across in life. The study will also add to the body of knowledge regarding the psychological aspect of IPV. The following main hypothesis was tested: Participants with drug dependence will be more likely to perpetuate intimate partner violence compared to those with drug-related problems.

METHOD

A descriptive cross-sectional survey design was utilized for the study. Cross-sectional survey design draws from the population of public servants in Uyo, making it possible to explore the relationship between related variables (Fife-Schaw, 2006). Surveys allowed the collection of a large amount of data in a relatively short period of time and for the assessment of information on a wide range of things such as participant's personal facts, thoughts, opinions, feelings, and attitudes on intimate partner violence among adult women and men in Uyo metropolis of Akwa Ibom State. Descriptive and inferential statistics such as means, standard deviations, independent t-test, and multiple regressions were used to summarize quantitative variables while qualitative variables were summarized by proportions and percentages.

Setting/Participants

The study was conducted in Uyo, the capital of Akwa Ibom State, Nigeria. The study adopted a purposive sampling

technique to select to obtain data from a heterogeneous population in Uyo metropolis after randomly distributing 300 questionnaires. A total of 249 usable questionnaires were utilized in this study. Out of the 249 participants, 107 were male and 142 were female. The married among them were 142, singles were 101, widowed were 2, and divorced were 4. Participants were further analyzed based on their age groups and it was discovered that ages 15-19 were 6, 20-24 were 41, 25-29 were 52, 30-34 were 60, 35-39 were 36, 40 and above were 54. Of the 249 participants, 246 were found to be Christians, 2 were Muslims, and 1 from Eckankar. With regards to participants' ethnicity, 168 were Ibibio, 32 were Efik, 22 were Igbo, 17 were Annang, 4 were Oron, 1 was Tiv, and 5 were Yoruba.

Measures

The following variables were recorded as socio-demographic factors of the participants and were collected using open-ended items in the first part of the questionnaire: sex, age, marital status and highest educational qualifications. Most of these socio-demographic variables have been implicated as determining factors for drug use among young adults which generally constitutes the bulk of public servants.

Perpetuation of Intimate Partner Violence was assessed using a 17-item psychological abusive behavior questionnaire which is a subscale of Abusive Behavior Inventory developed by Shepard & Campbell (1992). Adequate psychometric properties have been reported for the scale with evidence of convergent, discriminant, criterion, and factorial validity (Shepard & Campbell, 1992) including an average reliability of .88. The scale is scored along a five-point Likert-format

with options ranging from Never (1) to Very Frequently (5) as high scores denotes perpetuation of intimate partner violence. The mean score of these items is computed by summing the values of the items and dividing by the applicable number of items.

Pattern of Drug Use was measured using the Drug Use Disorders Identification Test (DUDIT) developed by Berman, (2005). The 11-item scale has a combination response Likert format of 5-points and 3-points. Items 1–9 are scored on scale of 0-1-2-3-4 points and Items 10 and 11 are scored on scale of 0-2-4 points. The DUDIT is scored directly and distinguishes between drug-related problems (lower scores) and dependence (higher scores) on one or more drugs. The scale has been widely used and has robust psychometric properties. In the present study, a mean score of 4.65 was obtained for the scale. In other words, those who scored above the mean are dependent on one or more drugs, whereas those who scored below the mean are categorized as people with drug-related problem.

Procedure/Sampling

The cross-sectional survey was conducted within Uyo metropolis. A

purposive sampling technique was used to select participants. Data collection for the study was conducted only in Federal and State agencies/organizations located in Uyo. Participation was made voluntary and the participants were assured of the confidentiality of their responses. Four (4) research assistants helped in the administration of questionnaire. A total of 300 questionnaires were distributed within the period of one month. Out of the number of questionnaires distributed, 289 questionnaires were returned, but only two hundred and forty nine (249) questionnaires that were appropriately filled were used for the data analysis representing a response rate of 83%.

RESULTS

Hypothesis one stated that drug use, age, marital status, religion, ethnic group and gender would independently and jointly predict perpetuation of intimate partner violence among public servants in Uyo; it was tested with the linear multiple regression. Summary of the result is presented in Table 1.

Table 1 showed that there was a joint prediction of drug use, age, marital status,

Table 1. Summary of multiple linear regressions showing independent and joint prediction of drug use, age, marital status, religion, ethnic group and gender on perpetuation of intimate partner violence

Model	R	R ²	B	T	p	F	p
Predictors	.57	.33	40.64	9.46	<.05	19.52	<.05
Drug Use			.81	9.65	<.05		
Age			-1.06	-2.50	<.05		
Marital Status			-0.20	-0.31	>.05		
Religion			-3.30	-1.22	>.05		
Ethnic Group			-0.16	-0.36	>.05		
Gender			-2.18	-1.84	>.05		

religion, ethnic group and gender on perpetuation of intimate partner violence [$F(6,242) = 19.52; p < .05$]. The joint prediction further showed that all the predictor variables jointly accounted for 33% of variance in perpetuation of intimate partner violence. Also, in terms of independent prediction drug use independently predicted perpetuation of intimate partner violence [$\beta = .81; t = 9.65; p < .05$]. Age of the participants independently predicted perpetuation of intimate partner [$= -1.06; t = -2.50; p < .05$]. However, marital status did not predict perpetuation of intimate partner violence [$\beta = -.26; t = -.31; p > .05$].

Further, religion did not predict perpetuation of intimate partner violence [$\beta = -.330; t = -1.22; p > .05$]; while ethnic affiliation of the participants did not also predict perpetuation of intimate partner violence [$\beta = -.16; t = -.36; p > .05$]. Finally, Gender did not predict perpetuation of intimate partner violence [$\beta = -2.18; t = -1.84; p > .05$]. The stepwise linear regression was also carried out and it showed that drug use was the best predictor of

perpetuation of intimate partner violence accounting for 30.0% variance alone; while age was the second best predictor in perpetuating intimate partner violence. Both drug use and age accounted for 31.1% variance in perpetuation of intimate partner violence.

Hypothesis two states that participants with drug dependence issues will score high on perpetuation of intimate partner violence than those with drug-related problem; it was tested with Independent sample subject t-test. Result indicates that there is a statistically significant difference in drug use between drug dependent and drug-related participants [t calculated= 6.95, $P < 0.05$]. The result also shows that participants categorized under drug dependence had a mean score of 39.83 higher than those under drug-related problems who scored 29.32. Therefore, the hypothesis that stated that participants with drug dependence issues will score high on perpetuation of intimate partner violence than those with drug-related problem stands confirmed.

Table 2. Summary of Drug Use Patterns among Public Servants in Uyo Metropolis

S/N	ITEMS					
1	Drug use other than alcohol.	Never=165 (66.27%)	Once a month =53 (21.29%)	2-4 times a month =12 (4.82%)	2-3 times a week= 12 (4.82%)	4 times a week or more =7 (2.81%)
2	Heavy influence on drug.	Never=195 (78.31%)	Less often than once a month=25 (10.04%)	Every month=15 (6.02%)	Every week=8 (3.21%)	Daily=6 (2.41%)
3	Drug use after heavy use the day before.	Never=189 (75.90%)	Less often than once a month=25 (10.04%)	Every month=17 (6.83%)	Every week=12 (4.82%)	Almost every day= 6 (2.41%)
4	Harm to oneself and others due to drug use.	No=209 (83.94%)	Yes, but not over the past year=31 (12.45%)	Yes, over the past year=9 (3.61%)		
5	Concerns from relatives and friends as a result of drug use.	No=201 (80.72%)	Yes, but not over the past year=33 (13.25%)	Yes, over the past year=15 (6.02%)		

Tables 2 indicates that out of the sampled 249 public servants, 165 (66.27%) never used drugs other than alcohol; indicating that 84 (33.73%) used drugs other than alcohol and using descriptive statistic, Table 3 below further itemized the types of drugs used by the eighty-four (84) respondents.

DISCUSSION

This study examined the patterns of drug use and the perpetuation of intimate partner violence among public servants within Uyo metropolis. In the initial analysis, the finding showed that drug use, age, marital status, religion, ethnic group and gender jointly predicted perpetuation of intimate partner violence. However, only drug use and age of the participants independently predicted perpetuation of intimate partner violence. This suggests that the more drugs that workers use, the more they abuse their spouse or close ones; and the likelihood that the intimate violence will continue.

In support of this finding is Orija (2008), who opined that a drug dependent person unknowingly damages his/herself and

the society. He goes further to say that people who depend on drugs become more absent minded, drop in academic performance, more irritable and moody. In such a state, the tendency to be violent is very high.

The statistically significant difference in drug use between drug dependent and drug-related participants was supported by the study of Eno & Ekaete (2015) and Abasiubong et al., (2008) who found that there is disruption of interpersonal relationship, especially within the family, criminal behavior, school failure, acute and chronic health problems, social and psychological problems, bad study habits by students and failure to achieve normal adolescents' milestones; and these social problems in most cases have a way of triggering drug use as an 'escape option' which eventually leads to violence among intimate partners.

The findings of this study have a major implication for improvement on psychological adjustment among public workers. To remedy the intimate partner violence situation in Nigeria, all hands must be at deck – the communities, religious groups, institutions, and government at all levels. People should be made to understand

Table 3. Types of drugs used by public servants in Uyo

Type of Drugs used	Frequency (%)
Cannabis	34 (40.48%)
Kola nuts	11 (13.10%)
Solvents	4 (4.76%)
Cocaine	3 (3.57%)
Heroin	6 (7.14%)
Other inhalants	7 (8.33%)
Hashish	5 (5.95%)
Tobacco/snuff	9 (10.71%)
Others	5 (5.95%)
Total	84 (100%)

that adults can change the social norms that justify intimate partner violence by (1) being role models and working together to end violence in the home (2) modeling non-violent relationship (3) disseminating information which condemns intimate partner violence in homes and encouraging partners to use disciplinary measures, which are non-violent if need be on their partners; otherwise, these violent acts are witnessed by their children and, thereby, they oil the wheel of intimate partner violence for future generations. Churches and mosques should organize seminars and outreach programs where professional counselors are invited to enlighten the people on the need for violence free society with the home as the cradle.

This may include seminars, workshops, and symposiums propagating the anti-intimate partner violence campaign, should be organized especially during August occasions or yuletide period. There is the need to create awareness at these forums, to underscore the fact that violence in the home serves as a breeding ground for violence in the society. Young couples planning to get married should be guided on the ways to avoid violence in the intimate relationship of marriage. Finally, the study has some characteristics that may limit the freedom of generalization. The study used a sample of participants within Uyo; suggesting the results may not be generalized to Nigerians as residents of Uyo may not be a true representation of Nigerians. The study used self-reported measures of drug use and perpetuation of intimate partner violence which could be susceptible to measurement errors and personal biases. In this regard, future research should consider using interviewing to collect robust data from the participants.

REFERENCES

- Abasiubong, F., Abasiatai, A. M., Bassey, E. A., & Ogunsemi, O. O. (2013). Demographic risk factors in domestic violence among pregnant women in Uyo, A community in Niger Delta Region, Nigeria. *Health Care for Women International Journal*, 31, 10, 891-901.
- Abasiubong, F., Bassey, E. A., Atting, I.A., & Ekott, J. U. (2008). A comparative study of knowledge and substance use in two secondary schools in Akwalbom State, Nigeria. *Nigerian Journal of Clinical Practice*, 11, 1, 45-51.
- Abikoye, G. & Fusiogboye, A. (2007). Psycho-spatial predictors of hazardous drinking among motor drivers in Ibadan, Nigeria: Implications for preventing vehicular accidents. *International Journal of Alcohol and Drugs Research*, 9, 2, 17-26.
- Adamson, T. A., Adebawale, T. O., Jinadu, J. A., Ibikunle, A., Ajayi, A & Alatishe, A. (2000). Drug use, GHQ and MMPI profiles of cult-members in South-Western Nigeria Proceedings of the Annual Conference of the Association of Psychiatrists in Nigeria (pp. 87-95), Calabar. The Association of Psychiatrists in Nigeria.
- Adekeye, O. A. (2008). Prevalence and Patterns of Gender Violence: Major Variables in the Exposure to HIV/AIDS among Women in Nigeria. *Gender and Behaviour*, 6, 2, 1827-1840.
- Adelakan, M.L. (1989). Self-reported drug use among secondary school students in the Nigerian State of Ogun. *UNODC Bulletin on Narcotics*, 41, 1-2, 109-116.
- Adelakan, M. L., & Ndon, R. J. (1997). Trend in prevalence and pattern of

- substance use among secondary school pupils in Ilorin, Nigeria. *West Africa Journal of Medicine*, 16, 3, 157-164.
- Afrol News (2007). Half of Nigeria's women experience domestic violence. Retrieved 2nd July, 2012 from www.afro.com/articles/16471.
- Amnesty International (2007). Violence against women. Retrieved 30th June, 2012 from www.amnesty.org/en/report2007.
- Atkinson, J., McCurdy, S., Williams, M., Mbwambo, J., & Kilonzo, G. (2011). HIV risk behaviors, perceived severity of drug use problems and prior Treatment experience in a sample of young heroin injectors in Dar Es Salaam, Tanzania. *African Journal of Drug and Alcohol Studies*, 10, 1, 1-9.
- Eno, E. I. & Ekaete, N. (2015). Illicit drug use and emotional behaviour of senior secondary students in public schools in Akwalbom State, Nigeria. *International Journal of Education, Learning and Development*, 4, 1, 52-59.
- Eze-Anaba, I. (2005). Half of Nigeria's women experience domestic violence. *Afrol News*. Legal Defence and Assistance Project (LEDAP)
- Federal Republic of Nigeria Official Gazette (2007). Akwalbom State: Geography and Location. <http://www.aksonline.com/lga.aspx>. Retrieved 15 May 2013.
- Fife-Schaw, C. (2006). Surveys and sampling issues. In Breakwell, G. M., Hammond, S., & Fife-Schaw, C. (Eds.). *Research Methods in Psychology: Second Edition*, London: Sage
- Gureje, O., Degenhardt, L., Olley, B., Uwakwe, R., Udofia, O., Wakil, A., Adeyemi, O., Bohnert, K.M., & Anthony, J.C. (2007). A descriptive epidemiology of substance use and substance use disorders in Nigeria during the early 21st century. *Drug and Alcohol Dependence*, 91, 1, 1-9.
- Igwe, W.C., & Ojinnaka, N.C. (2010). Mental Health of Adolescents who abuse Psychoactive substances in Enugu, Nigeria-A Cross-sectional study. *Italian Journal of Pediatrics*, 12, 1, 36-53.
- Katy, B. (2009). The hidden side of domestic abuse; men abused in intimate relationship. Retrieved on 25th May, 2012. www.pandys.org/articles/ledo-mesticviolence. Lagos: NERDC Press.
- Obi, S. N. & Ozumba, B. C. (2007). Factors associated with domestic violence in South-East Nigeria. *Journal of Obstetrics and Gynecology*, 27, 1, 75-78.
- Obot, I. S. (2005). Substance use among students and out-of-school youth in urban area of Nigeria. In I. S. Obot & Amp, S. Saxena (Eds), Substance use among young people in urban environment (pp.133-146). Geneva: WHO.
- Ogunsakin, E. A. (2007). The Psychological Basis for Drugs use among School Athletics. Lagos: NERDC Press.
- Omigbodun, O. O. & Babalola, O. (2004). Psychosocial dynamics of psychoactive Substance misuse among Nigerian Adolescents. *Annals of African Medicine*, 3, 3, 110-115.
- Orija, S. (2008). Dimensions of Mental Health, University of Ibadan Inaugural Lecture.
- Oyediran, K. A. & Isiugo-Abanihen, U. C. (2005). Perception of Nigerian women on domestic violence: Evident from 2003 Nigerian demographic and health survey. Retrieved 15th July, 2012 from www.bioline.org.br/request.

- Parry, C. D. (2005). A review of policy-relevant strategies and interventions to address the burden of alcohol on individuals and society in South Africa: original article. *South African Psychiatry Review*, 8, 1, 20-24.
- Project Alert (2001). Prevalence of domestic violence. Retrieved 10th July, 2012 from www.ajol.info/index.php
- Richard, F. (2003). The reporting of domestic violence and sexual assault by non-stranger to the Police. Retrieved 28th July 2012. www.ngs.gov/pdf-files1/
- Shepard, M. F. & Campbell, J. A. (1992). The Abusive Behavior Inventory: a measure of psychological and physical abuse. *Journal of Interpersonal Violence*, 7, 291–305.
- Trudy, S. (2010). Domestic violence another perspective. Retrieved 25th May, 2012. [www.menstulf.org/issues/byissue/domestic violence.html](http://www.menstulf.org/issues/byissue/domestic%20violence.html).
- UNFPA (2002). World Report on Violence and Health. Geneva.
- World Health Organization. (2013). Global and regional estimates of violence against women: Prevalence and health effects of intimate partner violence and non-partner sexual violence. Geneva: World Health Organization.
- Yusuf, O. B., Arulogun, O. S., Oladepo, O. & Olookeere, F. (2011). Physical violence among intimate partners in Nigeria: A multi-level analysis. *Journal of Public Health and Epidemiology*, 3, 5, 240-247.

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