

OF DUTCH COURAGE AND MOBILE CHIMNEYS: PATTERN AND PREDICTORS OF ALCOHOL AND TOBACCO USE AMONG UNIVERSITY STUDENTS IN NIGERIA

B. O. Olley¹ & A. O. Alade²

¹Department of Psychology, Faculty of the Social Sciences, University of Ibadan, Nigeria

²Department of Counseling and Human Development Studies, Faculty of Education, University of Ibadan, Nigeria

ABSTRACT

Previous studies in Nigeria have associated alcohol and tobacco use among students with certain socioeconomic and educational achievement variables, albeit its determinants among university students remain largely unknown. This study examined current patterns and predictors of alcohol and tobacco use with a model involving socio-demographic factors among 708 undergraduate students. Participants included 280 males and 428 females; mean age was 21.4±4.4. The students were assessed with a questionnaire including living arrangement, satisfaction with course of study, current alcohol and tobacco use and parental educational levels. Overall, the prevalence of alcohol and tobacco use was 24.0% and 5.5% respectively. Inter-correlation of discrete variables with Cramer's V showed: gender ($\phi_c = .23$, $p < .000$); level of study ($\phi_c = .16$, $p < .01$); father education ($\phi_c = .11$, $p < .02$); satisfaction with course of study ($\phi_c = .11$, $p < .01$); having sex in the last three months (Cramer, $= .26$, $p < .000$) were associated with alcohol use. Gender ($\phi_c = .20$, $p < .000$); polygamous family structure ($\phi_c = -.074$, $p < .06$); satisfaction with course of study ($\phi_c = .09$, $p < .04$); having sex in the last three months ($\phi = .11$, $p < .005$) and mothers higher education ($\phi_c = .12$, $p < .004$) were associated with tobacco use. Binary logistic regression analysis revealed two variables: male gender (OR= 2.93; 95% CI = 1.95 – 4.42), level of study (OR= 0.82; 95% CI = 0.67-0.98), ethnicity (OR= 0.76; 95% CI = 0.62-0.92) satisfaction with course of study (OR= 0.65; 95% CI = 0.43-0.97), father education (OR= 1.5; 95% CI = 1.10-.2.06) and having sex 3 months prior survey (OR= 2.96; 95% CI = 1.93 – 4.54) significantly predicted alcohol use. Similarly male gender (OR= 7.71; 95% CI = 3.27 – 18.1), polygamous family structure (OR= 0.40; 95% CI = 0.97 – 0.92), satisfaction with course of study (OR= 0.54; 95% CI = 0.29 – 0.99) and increased mother education (OR= 3.33; 95% CI = 1.76 – 5.92) significantly predicted tobacco use. These data underscore the role of gender, sexual activity and mother's educational level in drug use among Nigerian students. It also highlights the need for continuous drug education.

Key words: Alcohol use, tobacco use, university students, Nigeria

INTRODUCTION

Alcohol use continues to top the most recreational drug of choice and abuse in Nigeria as indicated in a national survey, where 58% prevalence rate was found (Gureje, Degenhardt, Olley, Uwakwe, Udofia, et al, 2007). Confirming this, the National Drug Law Enforcement Agency recently reported that almost one quarter of Nigerian adults use alcohol (NDLEA, 2014). Tobacco use, like alcohol, has also witnessed a steady increase from 8.9% to 16.8% (Degenhardt, Chiu, Sampson, Kessler et al, 2008). Gureje et. al. (2007) found a prevalence rate of 17% in a national survey and 22.6% was found among adult heads of household in the north central communities of Nigeria (Obot, 1990). Higher rates of about 32% have been reported more recently in the north eastern region of the country (Desalu, Olokoba, Danburam, Salawu & Issa, 2008).

Adolescents and young adults continue to represent a greater statistic in drug use involvement worldwide (WHO, 2004; Odejide, 2006; Degenhardt et al, 2008; Olley, 2008b). The magnitude and the health impact of this problem have made most countries to put in place measures towards education and outright legislation prohibiting illicit use. For example, in Nigeria, there are laws banning smoking in public places and sale of alcohol to underage (NDLEA, 2008). In spite of these stringent access barriers, alcohol and tobacco are still commonly used, especially among students of tertiary institutions in Nigeria (Babalola et al 2014; Onifade et al, 2014; Adekeye et al, 2015). For example, documenting pattern of drug use among medical students, Babalola et al (2014) found 64.4% alcohol and 15% tobacco use prevalence respectively. Similarly,

Onifade et al (2014), found 34.8% and 11.9% prevalence of alcohol and tobacco use respectively in a study among students of three Universities in Nigeria. A recent report of students in some selected private universities in Nigeria (Adekeye et al, 2015) showed that a very high rate of 72% and 81% use alcohol and tobacco respectively. A low rate of 1.2% of current tobacco use was reported among medical students in Lagos. (Dania, Ozoh & Bandede 2015), and Babatunde et al (2012) reported 13.7% prevalence of current tobacco among university students in Ado Ekiti. Elsewhere, Eticha & Kidane (2014) in a study conducted among college of health sciences students in Mekelle University in Northern Ethiopia found 29.5% prevalence of current tobacco use. Another survey among undergraduate medical students at Addis Ababa University reported a lifetime smoking prevalence of 9% and the current smoking prevalence of 1.8% (Kebede, 2002).

University studentship is a time of independence and separation from parents and therefore, a time that affords exposure to a wide array of new experiences and choices, during which unhealthy behaviors are often initiated and developed. . Aside the recreational value of alcohol and tobacco to some students, many indulge in it to suppress academic stress (Peltzer & Malaka, 2001; Mphele, Gralewski & Balogun, 2013. Some use it due to peer-group pressure or to cope against dwindling academic performance, drugs accessibility, and violence or to enhance risky sexual behaviors (Gureje & Olley, 1992; Obot, 2000; Makanjuola, 2007; Onifade et al 2014).

Psychosocial predictors of alcohol and tobacco use among university students varies, and include being male (Adelekan

et al; 1992; Makanjuola, 2007; Yisa et al, 2009; Fawibe & Shittu, 2011; Babatunde et al, 2012; Babalola et al 2014; Adekeye et al 2015), age/year of study (Makanjuola, 2007; Yisa et al 2009; Adekeye, et al 2015; Eticha & Kidane; 2014) physical and mental health problems (Onifade et al 2014), frequency of religious activities (Babalola et al, 2014), sexual activeness and unsafe sex (Bamidele et al 2007; Olley, 2008a; Imaledo, Peter-Kio & Asuquo, 2012; Onifade et al 2014), living away from campus and/or living with parents, (Makanjuola, 2007) and having better health and health awareness/ having no prior education on the dangers of smoking (Babatunde et al, 2012).

There is a worrisome upward trend in the use of alcohol and tobacco among students in Nigeria, despite enlightenment and educational programs by both government and non-governmental organizations.

Studies regarding prevalence of alcohol and tobacco use are replete in Nigeria, there are however variability in the associated factors, which has made it imperative for behavioral scientist to continue to examine. For example, most studies lack information on the association of parental drug use and students use. Also, little is known about the relationship of sexual risk behavior and course of study of university students and drug use. The objective of this study was therefore to investigate the prevalence of self-reported alcohol and tobacco use and association to certain socioeconomic and educational achievement variables among undergraduate students of the University of Ibadan, Nigeria. Such effort could provide crucial information aimed at scaling up preventive programs in the control of drug use and other associated vices.

METHOD

Design

This study was a descriptive cross-sectional survey, utilizing a correlation design method, to investigate the relative contributions of certain socio-demographic factors (age, sex, levels of study, parental educational status, living arrangement, satisfaction with course of study, and parental factors (educational level, being alive, parent use of drugs) to current tobacco and alcohol use among a sample of undergraduate students in four faculties at the University of Ibadan, Nigeria.

Setting

The University of Ibadan was founded in 1948 as the premier tertiary institution in Nigeria. With a campus covering over 1032 hectares of land and a student population of approximately 29,000, the University of Ibadan is one of the largest universities in the country. There are 12 faculties and 57 departments in the University. Each faculty runs a variety of undergraduate and postgraduate courses leading to the award of diplomas and degrees.

Participants

Seven hundred and eight, full time academic students with mean age of 20.4 years (SD 1.33), who had an authentic matriculation and attended lectures at the time of the administration of questionnaire for the study, were recruited as participants. They were 280 (39%) males and 428 (62%) females, who registered for the 2014/15 academic session. Substantial majority (93.5%) was single; 43.5% and 23% were in their second and third years of study respectively. About ten and three per cent of the students respectively did

not like or were indifferent to their course of study, while 42.4% stayed off-campus. Forty per cent of mothers and 30% of fathers of the students did not have university education respectively.

Instruments

Socio-demographic variables

The following variables were recorded: age, sex, family type, religious affiliation, level of study, accommodation arrangement, if both parents are alive, parents educational level and sexual activity in three months prior to study. Most of these variables have been implicated as determining factors for substance use among students. Alcohol and tobacco use were elicited by questions about whether students currently use any of the drugs. Responses were on a Yes or No format.

Procedure

The data collection was part of a larger project on student's mental health (SMH). It started after a clear instruction about the research and its purposes and after the distribution of the questionnaire. Participation was voluntary and participants were guaranteed confidentiality of responses they gave. Students who agreed to participate filled out questionnaire anonymously in the premises of the respective classrooms under the supervision of the researcher, before the start of a lecture. They were encouraged to fill the questionnaire independently and without any interference from the person sitting next to them. Instructions for filling in the questionnaire were inscribed on the questionnaire. Two graduate students of psychology assisted in retrieving completed questionnaires. No student refused completion of the questionnaire.

The exercise lasted approximately 45 minutes. The data were first coded based on scoring format, entered, and analyzed using Statistical Package for the Social Sciences version 18 software (SPSS Inc., Chicago, IL, USA). Inferential statistics were used for analysis of frequency, mean and standard deviation of continuous variables. Differences in categorical variables were compared for significance using the Cramer's V at $p < 0.05$ significance level. Multinomial regression analysis was used to assess the magnitude of associations between categories of socio-demographic factors and substance use.

RESULTS

Prevalence and Pattern of Alcohol and Tobacco Use

A prevalence rate of 24% of alcohol use and 5.5% tobacco use was found respectively among students. Bivariate analysis with Cramer's V (tables 1 and 2) showed that gender (.19; $p < 0.05$), satisfaction with course of study (.09; $p < 0.04$), sexual intercourse three months prior to study (.10; $p < 0.05$) and mother educational level (.12; $p < 0.04$) were statistically associated with tobacco use. Similarly gender (.23; $p < 0.000$), level of study (.16; $p < 0.001$), satisfaction with course of study (.11; $p < 0.01$), sexual intercourse three months prior to study (.26; $p < 0.0001$) and father higher educational level (.12; $p < 0.02$) were statistically associated with alcohol use.

Predictors of Alcohol and Tobacco Use

Tables 3 and 4 present the logistic regression analysis of the predictors of alcohol and tobacco use. Alcohol use predictors include: being a male (AOR = 29.3; 95% CI 1.95-4.42), higher level (second

Table1. Association of Alcohol Use and Socio-Demographic Factors (N=708)

Socio-demographic	Category	Alcohol Use		Cramer v	Sig
		YES	NO		
Age	15 - 17 YEARS	7(1.0%)	61(8.6%)	.119	.018
	18 - 30 YEARS	155(21.9%)	460(65.0%)		
	31 - 40 YEARS	7(1.0%)	11(1.6%)		
	41 - 49 YEARS	1(0.1%)	6(0.8%)		
Gender	MALE	102(14.4%)	178(25.1%)	.235	.000
	FEMALE	68(9.6%)	360(50.8%)		
Marital Status	MARRIED	15(2.1%)	31(4.4%)	.053	.158
	SINGLE	155(21.9%)	507(71.6%)		
Level of Study	100L	20(2.8%)	48(6.8%)	.164	.001
	200L	54(7.6%)	254(35.9%)		
	300L	39(5.5%)	124(17.5%)		
	400L	43(6.1%)	94(13.3%)		
	500L	14(2.0%)	18(2.5%)		
Religion	CHRISTIAN	146(20.6%)	462(65.3%)	.070	.327
	ISLAM	15(2.1%)	60(8.5%)		
	TRADITIONAL	6(0.8%)	8(1.1%)		
	NONE	3(0.4%)	8(1.1%)		
Birth Order	FIRST BORN	59(8.3%)	162(22.9%)	.085	.077
	MIDDLE BORN	57(8.1%)	233(32.9%)		
	LAST BORN	54(7.6%)	143(20.2%)		
Family Structure	MONOGAMY	133(18.8%)	438(61.9%)	.034	.361
	POLYGAMY	37(5.2%)	100(14.1%)		
Ethnicity	YORUBA	114(16.1%)	407(57.5%)	.092	.110
	IGBO	31(4.4%)	81(11.4%)		
	HAUSA	2(0.3%)	6(0.8%)		
	OTHERS	23(3.2%)	44(6.2%)		
Satisfaction with course of study	YES	138(19.5%)	479(67.7%)	.112	.012
	NO	22(3.1%)	47(6.6%)		
	NOT SURE	10(1.4%)	12(1.7%)		
Residence	ON CAMPUS	96(13.6%)	312(44.1%)	.013	.726
	OFF CAMPUS	74(10.5%)	226(31.9%)		
Sexual intercourse	YES	76(10.7%)	98(13.8%)	.263	.000
	NO	94(13.3%)	440(62.1%)		
Two parent alive	YES	129(18.2%)	396(55.9%)	.022	.555
	NO	41(5.8%)	142(20.1%)		
Mother educational level	POSTGRADUATE	39(5.5%)	98(13.8%)	.051	.397
	GRADUATE	66(9.3%)	221(31.2%)		
	NON GRADUATE	65(9.2%)	219(30.9%)		
Father educational level	POSTGRADUATE	61(8.6%)	134(18.9%)	.105	.020
	GRADUATE	63(8.9%)	238(33.6%)		
	NON GRADUATE	46(6.5%)	166(23.4%)		

Table 2. Association of cigarettes/tobacco smoking with Socio-Demographic Factors (N=708)

Socio-demographic	Category	cigarettes/tobacco smoking		Cramer v	Sig
		YES	NO		
Age	15 - 17 YEARS	2(0.3%)	66(9.3%)	.058	.495
	18 - 30 YEARS	3(54.9%)	58(81.9%)		
	31 - 40 YEARS	2(0.3%)	16(2.3%)		
	41 - 49 YEARS	0(0.0%)	7(1.0%)		
Gender	MALE	31(4.4%)	249(35.2%)	.197	.000
	FEMALE	8(1.1%)	420(59.3%)		
Marital status	MARRIED	4(0.6%)	42(5.9%)	.037	.327
	SINGLE	35(4.9%)	627(88.6%)		
Level of study	100L	7(1.0%)	61(8.6%)	.081	.330
	200L	15(2.1%)	293(41.4%)		
	300L	6(0.8%)	157(22.2%)		
	400L	9(1.3%)	128(18.1%)		
	500L	2(0.3%)	30(4.2%)		
Religion	CHRISTIAN	32(4.5%)	576(81.4%)	.065	.395
	ISLAM	5(0.7%)	70(9.9%)		
	TRADITIONAL	2(0.3%)	12(1.7%)		
	NONE	0(0.0%)	11(1.6%)		
Birth order	FIRST BORN	16(2.3%)	205(29.0%)	.051	.393
	MIDDLE BORN	14(2.0%)	276(39.0%)		
	LAST BORN	9(1.3%)	188(26.6%)		
Family structure	MONOGAMY	27(3.8%)	544(76.8%)	.070	.063
	POLYGAMY	12(1.7%)	125(17.7%)		
Ethnicity	YORUBA	28(4.0%)	493(69.6%)	.038	.795
	IGBO	7(1.0%)	105(14.8%)		
	HAUSA	1(0.1%)	7(1.0%)		
	OTHERS	3(0.4%)	64(9.0%)		
Satisfaction with course of study	YES	29(4.1%)	588(83.1%)	.094	.044
	NO	8(1.1%)	61(8.6%)		
	NOT SURE	2(0.3%)	20(2.8%)		
Residence	ON CAMPUS	26(3.7%)	382(54.0%)	.044	.240
	OFF CAMPUS	13(1.8%)	287(40.5%)		
Sexual intercourse	YES	17(2.4%)	157(22.2%)	.107	.005
	NO	22(3.1%)	512(72.3%)		
Two parent alive	YES	26(3.7%)	499(70.5%)	.041	.272
	NO	13(1.8%)	170(24.0%)		
Mother educational level	POSTGRADUATE	15(2.1%)	122(17.2%)	.124	.004
	GRADUATE	15(2.1%)	272(38.4%)		
	NON GRADUATE	9(1.3%)	275(38.8%)		
Father educational level	POSTGRADUATE	12(1.7%)	183(25.8%)	.018	.896
	GRADUATE	16(2.3%)	285(40.3%)		
	NON GRADUATE	11(1.6%)	201(28.4%)		

Table 3. Logistic Regression Analysis showing Socio-Demographic Predictors Of Smoking Behavior N=708

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Age	.016	.043	.136	1	.712	1.016	.934	1.106
Gender	1.967	.443	19.740	1	.000	7.148	3.002	17.021
Martsta	.672	.655	1.052	1	.305	1.959	.542	7.077
Level	.034	.177	.037	1	.848	1.034	.732	1.462
Religion	.009	.305	.001	1	.976	1.009	.555	1.834
Birthord	.304	.236	1.648	1	.199	1.355	.852	2.153
Famstru	-.919	.423	4.715	1	.030	.399	.174	.914
Ethic	-.044	.199	.049	1	.825	.957	.648	1.414
Satcour	-.541	.317	2.900	1	.089	.582	.313	1.085
Accom	.269	.407	.436	1	.509	1.309	.589	2.908
Sex	.587	.387	2.297	1	.130	1.799	.842	3.843
Paretog	-.237	.391	.368	1	.544	.789	.367	1.697
Motedu	1.165	.308	14.347	1	.000	3.206	1.754	5.858
Fatedu	-.322	.292	1.214	1	.270	.725	.409	1.285
Constant	-3.124	2.173	2.066	1	.151	.044		

Nagelkerke R Square .226 Cox & Snell R Square .079 Chi-square 244.001^a df 14, p<.001

Table 4. Logistic Regression Analysis showing Socio-Demographic Predictors Of Alcohol Use. N=708

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Age	-.014	.026	.310	1	.578	.986	.937	1.037
Gender	1.076	.209	26.643	1	.000	2.934	1.950	4.416
Martsta	.255	.394	.417	1	.518	1.290	.596	2.793
Level	-.206	.096	4.581	1	.032	.814	.674	.983
Religion	-.036	.179	.040	1	.842	.965	.679	1.371
Birthord	-.094	.129	.528	1	.467	.911	.708	1.172
Famstru	-.248	.254	.952	1	.329	.781	.475	1.284
Ethic	-.270	.100	7.271	1	.007	.764	.628	.929
Satcour	-.426	.205	4.313	1	.038	.653	.437	.976
Accom	-.099	.211	.221	1	.638	.906	.599	1.369
Sex	1.086	.218	24.817	1	.000	2.963	1.933	4.544
Paretog	.420	.233	3.237	1	.072	1.521	.963	2.403
Motedu	.173	.165	1.105	1	.293	1.189	.861	1.643
Fatedu	.414	.158	6.839	1	.009	1.513	1.109	2.063
Constant	-2.121	1.315	2.600	1	.107	.120		

Nagelkerke R Square = .207, Cox & Snell R Square = .138, Chi-square = 675.200^a df = 14, p<.001

year to penultimate year) (AOR = .81; 95% CI .64-.98), ethnicity (AOR = .76; 95% CI .62-.92), non satisfaction with course being studied (AOR = .65; 95% CI .43 - .97), sexual activity (AOR = .2.96; 95% CI .1.933 – 4.5) and father's higher education (AOR = 1.5; 95% CI 1.10-2.06). For Tobacco use, predictors include: being a male (AOR = 7.1; 95% CI 3.00–1.11), polygamy family structure (AOR = .39; 95% CI .17-.91) and mother's higher education (AOR = 3.2; 95% CI 1.75-5.85).

DISCUSSION

In an effort to upscale existing knowledge of alcohol and tobacco use among university students in Nigeria, this study sought to examine patterns and predictors of alcohol and tobacco use among students in Ibadan, Nigeria. Significant findings were that: (1) 24% and 5.5% of the students reported alcohol and tobacco use respectively; (2) being male, lower level of study, father's higher level of education, satisfaction with course of study, having sex three months prior to the study were associated with alcohol use; (3) being male, polygamous family structure, satisfaction with course of study, having sex three months prior to the study and mother's higher education were associated with tobacco use; (4) predictors for alcohol use are male gender, level of study, satisfaction with course of study, father's education and having sex 3 months prior to the survey; (5) predictors of tobacco use are male gender, polygamous family structure, satisfaction with course of study, and mother's higher level of education.

The prevalence of alcohol and tobacco use as identified in this study confirmed

existing rate among Nigerian university students. Our reported prevalence of alcohol use is lower than that reported by other studies (Adelekan, 1992; Yisa et al 2009 Babalola et al, 2014; Onifade et al, 2014; Adekeye et al, 2015,) but higher than the rate reported among medical students (Makanjuola, et al 2007; Dania et al 2015). Tobacco use rate in our study is comparable to the 5.7% found among university students in Ilorin (Fawibe & Shittu, 2011), higher than 3.2% among medical students (Makanjuola et al, 2007), but quite lower than other studies among students (Adelekan, 1992; Yisa et al 2009 Babalola et al, 2014; Onifade et al, 2014; Adekeye et al, 2015). Differences in methodology or contextual factors could explain the differences.

Being a male predicts alcohol and tobacco use in this study. This confirms existing the finding that more male than female use substances (Makanjuola et al, 2007; Babalola et al 2014; Yisa et al 2014; Adekeye et al 2015). Our finding of the association of sexual activity three months prior to study and alcohol and tobacco use is consistent with previous studies among students where sexual activity and unsafe sex was associated with alcohol use (Bamidele et al 2007; Olley 2008a; Imaledo et al 2012; Onifade et al 2014). Studies from other African settings (Kebede, 2002; Eticha & Kidane 2014) also confirm the association between substance use and increased sexual activity among students.

Additional major finding emerging from this study is that parental factors such as father's higher education is predictive of alcohol use, while mothers' higher education and polygamy predicts tobacco use among the students. Studies have revealed that the parental attitudes

of children's smoking or alcohol use were important risk factors as well as parental smoking or drinking behaviors. For example, Eticha & Kidane, 2013, document that, lack of University education of mothers of Mekelle university students in Ethiopia was associated with both alcohol and tobacco use among the students. We suggest further exploration of these factors in future studies. Meanwhile, the finding of the link between polygamous family structure and alcohol use confirms the findings of Mekanjuola et al (2007).

The finding that student's satisfaction with their course of study, predicts alcohol and tobacco use among them was surprising. The reverse of the case would have been expected. Perhaps some other intervening variables that were not considered in this study could have played some roles in this present pattern. These are issues for further research considerations.

LIMITATIONS

Some limitations were observed in this study. First, data collection occurred in a classroom environment. Privacy to responses by the participants may have been compromised in this regard. Again, we also relied entirely on self-reported data within the constraints of a brief and anonymous survey. Thirdly, the study is limited to the university of Ibadan students only, making generalization to other campus of higher learning difficult.

CONCLUSION

In conclusion, our findings provide evidence that alcohol and tobacco use are still prevalent among Nigerian tertiary

students and that certain factors such as gender, sexual activity and mother's educational level are related to it. We also provide evidence that satisfaction with course of study and sexual activity are related to alcohol and tobacco use. These supported earlier documentations about the preponderance of male and sexual activity in drug use among university students. It further brings to the fore, why parental factors such as educational level and the level of satisfactory of course of study be closely considered among variables of study of drug use. As a result, our study has implication for continuous drug education, firstly as a means of prevention to those non users but vulnerable and secondly to users, who lack knowledge about the harmful effect of drugs to both their academics and health. Our findings underscore the need to incorporate mental health specialist, with substantial experience in drug studies in counseling or help centers around campuses of higher learning in Nigeria. In doing this, early detection of complicated or vulnerable cases can be identified and treated. Periodic drug screening can be undertaken by such help centers to ascertain the magnitude of the problem for a more policy focused intervention.

ACKNOWLEDGEMENTS

I acknowledge Dr Yinka Egbokhare for editorial input, Dr Razak Olajide for assisting in data collection and Ajibola Ishola for Statistical Analysis.

REFERENCES

Adelekan, M. L., Abiodun, O. A., Obayan, A. O., Ogunremi, O. O., (1992).

- Prevalence and pattern of substance use among undergraduates in a Nigerian university, *Drug and Alcohol dependence*, 29(3), 2551-2561.
- Adekeye, O. A., Adeusi, S. O., Chenube, O. O., Ahmadu, F. O., Sholarin, M. A., (2015). Assessment of alcohol and substance use among undergraduates in selected private universities in southwest Nigeria, *Journal of Humanities and Social Sciences*, 20(3), 1-7.
- Babalola, E. O., Akinhanmi, A. O., Ogunwale, A., (2014). Who guards the guards: drug use pattern among medical students in a Nigerian University. *Annals of medical and health sciences research*, 4(3), 397 – 403.
- Babatunde, O. A., Elegbede, O. E., Ayodele, L. M., Atoyebi, O. A., Ibirongbe, D. O., et al. (2012). Cigarette Smoking Practices and Its Determinants Among University Students in Southwest, *Nigeria. J Asian Sci Res*, 2(2), 62–69.
- Bamidele, J. O., Asekun-Olarinmoye, E. O., Odu, O. O., Amusan, O. A., Egbewale, B. E., (2007). Socio demographic characteristics and health risk behaviors among students of a tertiary institution in south western Nigeria. *Afr J Med Sci Jun*, 36(2), 129-136.
- Dania M. G., Ozoh, O. B., Bandele, E. O., (2015). Smoking habits, awareness of risks, and attitude towards tobacco control policies among medical students in Lagos, Nigeria. *Ann Afr Med.*, May 20 (14), 1-7.
- Degenhardt, L., Chiu, W. T., Sampson, N., Kessler, R. C., Anthony, J. C., Angermeyer, M, et al (2008). Toward a global view of alcohol, tobacco, cannabis, and cocaine use: Findings from the WHO World Mental Health Surveys. *PLoS Med*; 5, 141.
- Desalu, O. O., Olokoba, A. B., Danburam, A., Salawu, F., Issa, B. M., (2008). Epidemiology of tobacco smoking among adult population in North East Nigeria. *Internet J Epidemiol*, 6, 1.
- Fawibe, A. E., Shittu, A. O., (2011). Prevalence and characteristics of cigarette smokers among undergraduates of the University of Ilorin, Nigeria, *Niger J Clin Pract*, 14, 201-205.
- Gureje, O., Olley, B.O., (1992). Alcohol and Drug Abuse in Nigeria: A review of the literature. *Contemporary Drug Problems*, 19(3), 491 – 504.
- Imaledo, J. A., Peter-Kio, O. B., Asuquo, E., O., (2012). Pattern of risky sexual behavior and associated factors among undergraduate students of the University of Port Harcourt, Rivers State, Nigeria. *Pan African Medical Journal*, 1, 1937- 8688.
- Kebede, Y., (2002). Cigarette smoking and Khat chewing among college students in North West Ethiopia. *Ethiop J Health Dev*, 16(1), 9–17.
- Makanjuola, A. B., Daramola, T., Obembe, A. O., (2007). Psychoactive substance use among medical students in Nigerian university. *World psychiatry*, 6(2), 112-114.
- Mphele, SBM, Gralewski, C & Balogun, S (2013) Stress and Alcohol Use among College Students: A Case of Molepolole College Students. *IOSR Journal Of Humanities And Social Science (IOSR-JHSS) Volume 8, Issue 3 , PP 01-06.*
- National Drug Law Enforcement Agency, (2014). Drug data collection. Data collection division, *Drug Demand and Education Unit publication.*
- Obot, I. S., (1990). The use of tobacco products among Nigerian adults: a general population survey. *Drug Alcohol Depend*, 26, 203–208.

- Obot, I. S., (2000). The measurement of drinking patterns and alcohol problems in Nigeria. *Journal of Substance Abuse*, 12(1&2), 169-181.
- Odejide, A. O., (2006). Status of drug use/abuse in Africa: A review. *International Journal of Mental Health*, 4, 87-102.
- Olley, B.O (2008a). Child Sexual Abuse, Harmful Alcohol Use and Age as determinants of Sexual Risk Behaviors among Freshmen in a Nigerian University. *African Journal of Reproductive Health*, 12(1) 62-75.
- Olley, B. O., (2008b). Social skills training for Secondary drug prevention in High risk adolescents in Ibadan, Nigeria. *Nigerian Journal of Clinical Psychology*, 6 (1&2), 90-100.
- Onifade, O., Somoye, E. B., Ogunwobi, O., Fadipe, B., Fela-Thomas, A. L., (2014). Drug use, consequences and perceived accessibility in three Nigerian Universities. *Open journal of psychiatry*, 4, 1.
- Peltzer, K. & Malaka, D. (2001). Psychological correlates of substance abuse among South African University Students. *Social Behavior and Personality*, 29 (8), 799-806.
- World Health Organization, (2004). Code of practice on tobacco control for health professional organizations. Geneva: World Health Organization; 2004. [Last accessed on 2010 Oct].
- Yisa, I. O., Lawoyin, T. O., Fatiregun, A. A., Emelumadu, O. F., (2009). Pattern of substance use amongst senior students of command secondary schools in Ibadan, Nigeria. *Niger journal of medicine*, 18(1), 98-102