Research Article

Substance Abuse among Adolescents: Prevalence and Patterns of Alcohol consumption among senior secondary school students in Abraka, Delta State, Nigeria

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Abstract: The prevalence in the use of alcohol calls for concern especially in the hands of adolescents. This study therefore sought to determine the Prevalence and Patterns of Alcohol Use among Senior Secondary School Students in Abraka, Delta state, Nigeria. This was a cross sectional study among 456 respondents drawn from 4 randomly selected mixed secondary schools in Abraka. The respondents were Senior Secondary School Students who were selected through multi-stage random sampling. Data collected were analysed with SPSS Version 20. Majority (97%) of the respondents were aged 11-20 years; 52% were males; 95% were Christians and 77% lived with both parents. Alcohol use prevalence was 55%; there were more male(35%) than female(20%) drinkers; 66% consumed beer, 86% of them consumed alcoholic wine; 45% began drinking at 11-15 years; 42% drank at ceremonies; 10% drank for pleasure; 22% drank because they feel it was a sociable thing to do; 4% and 2% respectively drink because their parents and friends also drank.71% were currently drinking; Alcoholic wines are most favoured. Alcohol drinking habit was associated with gender but not with religion and class specialization. In conclusion, alcohol use prevalence among senior secondary school students in Abraka was quite high, with most of the students initiating the habit at an early age. The prevalent socio-cultural environment and traditions appeared to be a key factor in this community. There is need, therefore, to develop viable underage preventive programmes on alcohol use for adolescents in this community.
Keywords: Adolescents, Alcohol, Initiation age, Patterns, Prevalence, Substance abuse.

INTRODUCTION

The use of alcoholic beverages has been an integral part of many cultures for thousands of years [1]. Alcohol is a psychoactive substance with dependence-producing properties that has been widely used in many cultures for centuries. The harmful use of alcohol causes a large disease, social and economic burden in societies [2]. The high prevalence in the use of these substances calls for concern especially in the hands of adolescents. Escalation of alcohol use may be unusually rapid during adolescence. Compared with individuals initiating drug use in adulthood, adolescent-onset individuals have been shown to have "accelerated dependency courses, with shorter times from first exposure to dependence for alcohol and cannabis and shorter times between their first and second dependencies [3]. Another reason for concern about adolescence alcohol use is the risk of serious social, medical, and legal problems that can result from alcohol consumption, such as impaired performance at school or work; interpersonal problems with friends, family members, teachers, and supervisors; physical and psychological impairment; and drunken driving [4].

Many studies have indicated an alarming rise in adolescence usage of alcoholic beverages [5-7]. Adolescence is a segment of the population with age range between 10-24 years. Most senior secondary school students in Nigeria are usually within the adolescent age range of 10-20 years [8]. As alcohol consumption is such a high prevalence behavior among young people, an understanding of the contextual situation of drinking is sine qua non to developing appropriate interventions.

The objectives of this study were therefore to determine the prevalence and patterns of alcohol use, and to document the reasons for indulgence among senior secondary students in Abraka, Delta State Nigeria.

METHOD
Study Site
Abraka is a town in Delta State, South-South of Nigeria. The town lies on latitude 5^0 46' 54" north of the equator and longitude 6^0 05' 59" east of the Greenwich meridian. Abraka is one of the 25 Urhobo kingdoms in Delta State, Nigeria. It is located in Ethiope East Local Government Area of Delta State. It is mostly known as a university town and has the main campus of the Delta State University located here. The total number of secondary schools in Abraka at the time of this study was 11. There were 3 state- owned schools and 8 privately- owned schools. All the schools were co-educational. The total number of secondary school students in Abraka was estimated at 10,778 while the total number of senior secondary school students was 4,178 which is 38.8% of the total number of students. As at study time, two private schools were yet to admit students into senior secondary classes. The study was carried out between February and April, 2014.

Study Design
A cross-sectional study design was employed in the survey.

Study Population
The respondents were drawn from 4 senior secondary schools that were purposefully selected being relatively large and popular. These were Abraka Grammar School, Delsu Demonstration School, Aunty Rose Group of Schools, and Erhimu Secondary School.

Study Sample
The sample size was determined using fisher's formula

$$N= \frac{Z^2 pq}{d^2}$$

Z = Standard normal deviation (1.96)
p = Population in the target population estimated to have a
Particular characteristic (in this case, prevalence= 0.51)
q = 1.0 – p
d = degree of accuracy required (0.05)

$$N = \frac{1.96^2 \, p \, (1-p)}{0.05^2}$$
$$N = \frac{1.96^2 \, x \, 0.51 \, x \, 0.49}{0.05^2}$$
$$= \frac{0.9600}{0.0025}$$
$$= 384 \approx (400)$$

The calculated sample size of approximately 400 was further increased to 456 to make up for cases of attrition.
Respondents were selected by multistage random sampling technique. Applying equal allocation technique, 114 questionnaires were allotted to each of the four schools. At each of the four selected schools, the students were first stratified into the three levels – SS1, SS2 and SS3. Also, with equal allocation technique, 38 questionnaires were allotted to each of the three levels. Each level was further stratified into Art and Science classes and 19 questionnaires were allotted to each class. Consenting students were recruited consecutively as they presented till the sample size requirement was met.

Data Collection
A structured questionnaire containing two sections (A and B) and forty six questions in all was used to collect data. Section A dealt with personal information like sex, age, class, religion and family structure while Section B contained questions on alcohol drinking habits and reasons for indulgence. The survey was conducted within a two day period in each of the selected schools, and a total of 8 visits were made to the schools. Anonymity was strictly ensured as the respondents were not required to write their names. Full explanations were provided for respondents who had problems in understanding some of the questions.

Validity
The instruments were peer-reviewed and also pre-tested to ensure face and content validity.

Data Analysis
Data were analyzed using SPSS version 20. Simple frequency tables were generated as well as cross-tabulation (as appropriate) to check for levels of statistical significance

Ethical Clearance
Permission to conduct the survey was sought and obtained from the school principals and the students.

RESULTS AND DISCUSSIONS
A total of 456 questionnaires were collected from the secondary schools although only 420 were considered valid for data analysis giving a response rate of 92.1%.

Demographic Characteristics of Respondents
In this study, majority (97%) of the respondents fell within the age group of 11-20 years and there were slighly more males (52%) than females (48%). Majority (95%) of the respondents were Christians and they were about equally distributed into SS1 (35%), SS2 (32%) and SS3 (33%). There was also near equal distribution into Science (49%) and Art (51%) classes whilst 77% live with both parents (Table 1).

The study population truly represented the adolescent age as a large majority (97%) of the respondents fell within the age group of 11-20 years [9]. A male to female ratio of 1.1:1 was recorded in this study which is at variance with other studies conducted in Oshogbo, Ibadan and Ilorin, all in Nigeria, where higher male/female ratios of 1.5:1; 1.4:1; and 1.3:1

were reported respectively [9,10]. The fact there is a large majority of Christians (95%) tallies with the predominance of Christians among the inhabitants of Abraka. However, this is contrary to the report of the Nigeria demographic and health survey (2003) where 51.8% and 48.2% of Nigerians were Muslims and Christians respectively [11].

Table-1: Demographic Characteristics of respondents

Variables	Frequency (n =400)	Percentage (%)
Gender		
Male	208	52
Female	192	48
Age (years)		
11-15	192	48
16-20	196	49
>20	12	3
Religion		
Christian	380	95
Muslim	20	5
Class		
SS1	140	35
SS2	128	32
SS3	132	33
Class(specialization)		
Science class	196	49
Art class	204	51
Nature of family		
lives with both parents	308	77
lives with a single parent	92	23

Prevalence and Patterns of Alcohol Use.

The Prevalence and Patterns of Alcohol consumption are presented in Table 2. This study recorded a prevalence of alcohol consumption of 55%. This is similar to a prevalence report of 44.9% [12] but much higher than a prevalence rate of 21% that was reported in similar population in Benue state of Nigeria very recently [13]. Higher rates (up to 80%) have been reported [14-18] . Most of the studies conducted in Nigeria have reported high prevalence rates. It is quite worrisome to see such a large number of adolescents indulging in alcohol use.

There is evidence worldwide that alcohol use among young people begins at increasingly early ages [13, 19, 20]. This study showed that more adolescent drinkers (76%) began this habit when they were 15 years and below similar to other age-related reports of alcohol use [21]. This emphasizes that alcohol drinking habit occurs very early in childhood and efforts should therefore be directed at preventing its onset. It has also been reported that, on average, boys start drinking earlier than girls [22].

With regards to situational contexts of drinking, alcohol users in this study indulged in the habit daily (34%) , weekly (18%), at ceremonies (42%) and in the company of friends (22%). Studies have also found that alcohol was most commonly consumed at home, at family celebrations, in company of friends and at parties [23,24]. It is on record that in many parts of Nigeria, the production and consumption of alcoholic beverages was organized around traditional rituals, festivals and other social activities which included arrangements around marriages, childbearing and child-naming, weekly market days, and settling of quarrels between families and communities. Presenting or offering alcoholic beverage was also an expression of hospitality to visiting guests [25]. The culture of this study setting is predominantly "ceremonial" with various avenues to indulge in consumption of alcoholic beverages. A significant number of research in the environmental and cultural spheres has indicated that increased availability of substance increases the likelihood of its use especially among young people [26].

About 71% of the respondents were current drinkers at the time of the study and 97% of those who had stopped drinking did so within the past year.

The worrisome high figure for current drinkers in this study is in contrast to a much lower prevalence (13.4%) that was recorded in a previous survey conducted in among 542 secondary school students in rural and urban communities in southwestern Nigeria[27]. Another study in brazil, however, showed that the prevalence of current alcohol use ranged from 23.0% to 67.7% (mean 34.9%) [19]. Itis therefore highly expedient to put in place effective strategies to reduce this habit among adolescents in this community.

First, to dissuade current users, and then to discourage new users among the current life-time abstainers and even those that have recently given up the habit. This is largely because alcohol, being a psychoactive substance with dependence-producing properties, its harmful use causes a large disease, social and economic burden in societies [2]. Further, adolescence alcohol use is fraught with a high risk of serious social, medical, and legal problems [4].

Types of alcoholic drinks

Literature reports indicate that young consumers tend to prefer beer over wine and spirits in addition to a wide range of products with a relatively low alcohol content, such as alcopops, coolers, fortified wines with spirits to raise the alcohol content to 20%, cider and energizing drinks [28] . This study showed that respondents mostly drank three types — alcoholic wine (47%), beer (36%), and local gin –ogogoro (17%). This is at variance with most global reports. A study among Southwestern Nigerian students reported that the most commonly used alcoholic beverage was palm wine (60.1%), followed by beer (20.8%), locally fermented wine and locally distilled gin (14.7%) [27]. Wines and Beer are the commonest liquors that are used in the various ceremonies in this peri-urban setting.

Table-2: Prevalence and Patterns of Alcohol consumption.

Variables		Frequency N=400	%
Do you drink? (n=400)	Yes	220	55
	No	132	33
	Missing	48	12
Age of initiation	0-11	68	31
	12-15	99	45
	16-20	53	24
How often do you drink?	Daily	75	34
(n=220)	Weekly	40	18
	Others	85	38
When do you drink?	At Ceremonies	92	42
(n=220)	With Friends	48	22
	Others	80	36
Are you still drinking presently?	Yes	156	71
If No, when did you stop?	No	64	29
(n=64)	Last week	8	12
	Last month	19	30
	Sometime this year	35	55
What form of alcohol do you	I cant remember	2	3
take?	Beer	144	66
(n=220)	Alcoholic wine	188	86
	Local gin/spirit	68	31
Do your parents know you drink?			
(n=220)	Yes	125	57
Gender (n=220)	No	95	43
	Male drinkers	140	64
Religion (n=220)	Female drinkers	80	36
	Christian drinkers	204	93
	Muslim drinkers	16	7
Class specialisation			
(n=220)	Science	84	38
	Art	136	62

Demographic Associations with alcohol use

Of the alcohol users, 64% were males, 93% were Christians and 62% were in the Art class. The effect of socio-demographic characteristics on alcohol use habit is shown in Table 3. There was a significant gender difference in the number of drinkers, with males having a higher proportion indicating that drinking is primarily a male behavior. Studies among Nigerian and US students have also reported a higher prevalence among male students [13,27,29]. An association between gender and alcohol use was also recorded in this study (X^2= 4.459; p =0.035*).

Overall, there were 95% Christians and 5% Muslims indicating that all the students belonged to one religion or the other. The two religions have been posited to influence people's drinking behavior [19] and studies have reported a correlation between religious association and reduced substance use [25,30,31].This study did not, however, show any significant associations

between religion and alcohol use behaviour of the students ($X^2 = 0.693$; p=0.405).

One is forced to querry the religiosity of these a dolescents and parental supervision and guidance parents provided for their wards especially as up to 77% lived with both parents. Further, parents of 57% of alcohol users in this study were aware that their wards indulged in the habit.

One could claim to be a Christian or Muslim without adhering to the tenets of their religion, and this can be prevalent among adolescents. Studies among undergraduate students in Ilorin, Nigeria have demonstrated a correlation between lack of religiosity and the use of alcohol, cigarette and cannabis [30].Similarly, Studies in Tennessee, USA on adolescents aged 12-19 years showed that as attendance of religious service increased, alcohol and other drug abuse decreased [32].

Respondents in this study were almost equally distributed into the Art and Science classes. However, there were more drinkers in the Art Class (62%) than Science Class (38%). Could this be a result of curriculum differential resulting in a more positive impact of knowledge / information on practice? This may therefore open up veritable avenues for strategic intervention if further investigations support this premise.

There was, however, no significant association between class specialization and alcohol drinking habits of the students ($X^2 = 1.043$; p = 0.307). This is in contrast to an earlier study we conducted on the same population which showed a significant association between class specialization and smoking habits (unpublished data).

Table-3: Cross tabulation with student's Demographic data

Ever Drank alcohol?	YES	NO	TOTAL	X^2	df	P value
Gender						
Male	140 (70%)	60 (30%)	200 (100%)	4.459	1	0.035
Female	80 (51.3%)	76 (48.7%)	156 (100%)			
Religion						
Christian	204 (61.4%)	128 (38.6%)	332 (100%)	0.693	1	0.405
Muslim	16 (80%)	4 (20%)	20 (100%)			
Specialization						
Science	84 (53.8%)	72 (46.2%)	156 (100%)	1.043	1	0.307
Art	136 (70.8%)	56 (29.2%)	192 (100%)			

Reasons for Alcohol Use

The study showed that 15% of respondents drank to relieve stress, 16% to think faster; 19% to forget their worries; 9% to help them read better; 28% to stay awake all night; 26% because of cold weather; 44% for great pleasure; 77% because it was a sociable thing to do; 15% and 12% respectively because their parents and friends also drank; 8% to boost their intelligence level while 29% because drinking increased their self esteem (Table 4). These reasons represent major reflections of the general belief, perceptions and conceptual understanding of adolescents in this setting.

Most of these reasons actually fall within the known motivations for alcohol use: *social, enhancement, coping, and conformity* [33,34].

Curiosity and social conformity have also been seen as the main drivers of young people's initial engagement with alcohol. Alcohol has been shown to facilitate social interactions within groups, making an evening together much more fun. Alcohol was also used to boost confidence, to reduce inhibitions, to facilitate having a laugh with friends and to reduce stress [35, 36].

Table-4: Reasons why students drink

Variables	Frequency (N=220)	Percentage (%)
It relieves me of stress	32	15
It makes me think faster	35	16
It helps me forget my worries	42	19
It helps me read better	20	9
It helps me stay awake	62	28
Because of cold weather	56	26
It gives me great pleasure	96	44
It is a sociable thing to do	170	77
Because my parents drink	32	15
Because my friends drink	26	12
It boosts my intelligence level	18	8
It increases my level of self esteem	64	29

CONCLUSION

A male to female ratio of 1:1.1 was recorded in this study. There were more christians and the respondents were largely within the adolescent age group. The prevalence of alcohol use was quite high, with most of the students initiating the habit at below 16 years of age. A large majority were also current users of alcohol. About a third of the respondents use alcohol on a daily basis. Alcoholic wines and beer were the favoured drinks which were consumed mainly at parties and in the company of friends. Alcohol consumption was significantly associated with gender but not with religion or class specialization. However, the prevalent socio-cultural environment and traditions appear to be a key factor in this community. Abraka being a University town, will expose these adolescents to the various social vices that are common among undergraduates.

Thus, contextualizing the individual's usual consumption patterns along with modulating factors like religion, gender, and school curriculum may provide valuable information and direction for evolving better, specific, goal-directed and target group focused preventive actions.

The major strategic targets for intervention from this study are the students themselves, parents, guardians, religious groups and the social environment. There is a dire need to dissuade current alcohol users, to discourage new users among the current life-time abstainers and to ensure that those who recently gave up the habit are not tempted to resume the alcohol drinking habit. This could be achieved through various means which will include the establishment of health clubs in our secondary schools through which continuous health education can be provided, public health campaigns targeted at adults and adolecents alike with special messages to parents and guardians on their roles and responsibilties, and encouraging religious houses and the media (print and electronic) to help disseminate vital (health) information that will compliment all efforts to reverse the high prevalence of alcohol consumption among adolescents in this community especially and elsewhere in general.

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