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Research Article

Prevalence of Alcohol Consumption among Primary and Secondary School Adolescents in Obiaruku Community in Delta State, Southern Nigeria

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ABSTRACT

Consumption of alcohol by underage teenagers and adolescents is a major public health problem confronting many developing countries including Nigeria. Studies have shown the increasing rate of alcohol consumption among these high risk groups. The objective of the study was to determine the prevalence of alcohol use among Primary and Secondary School teenagers in Obiaruku Community. The study employed a descriptive cross sectional study among pupils and students in primary and secondary schools in Obiaruku community. The study utilized random sampling technique in selecting 326 pupils and students from both primary and secondary schools in Obiaruku community. The instrument for data collection was a semi-structured questionnaire. The collected data was analysed with SPSS version 21 and presented in percentages and frequencies, with Chi-Square used to analysed association between demographic characteristics and prevalence of alcohol with level of significance set at $P < 0.05$. The findings show that almost half of the respondents 150(46.88%) were between the ages of 13-15 years and 220(68.75%) were males. The prevalence of alcohol consumption was 25.0%, with being a male more likely to increase alcohol consumption ($P < 0.05$). Furthermore, about 20(25.0%) of the respondents could not stop drinking when they want to and more than one third do get drunk. Furthermore, age showed a significant relationship with use of alcohol ($p < 0.05$). The study showed prevalence of alcohol consumption among the respondents and therefore recommended schools should organize seminars for students to provide education on the health-related issues surrounding alcohol consumption.

Keywords: *Prevalence of alcohol, Alcohol consumption, Pupils, Students, Primary School, Secondary School*

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INTRODUCTION

Globally, alcohol consumption is becoming a modern public health problem. This is because an estimated 3 million deaths every year result from harmful use of alcohol, which represents about 5.3 % of all deaths (World Health Organisation, 2018). Furthermore, alcohol consumption causes death and disability relatively early in life. Consequently, consumption of alcohol by underage adolescents is a major public health problem shown to be confronting many high, middle and low income countries globally (World Health Organization, 2014). According to the Global status report on alcohol and health 2018, more than a quarter (26.5%) of all 15–19-years-old are current drinkers, amounting to 155 million adolescents. Furthermore, the report states that Prevalence rates of current drinking are highest

among 15–19-year-olds in the WHO European Region (43.8%), followed by the Region of the Americas (38.2%) and the Western Pacific Region (37.9%) (World Health Organization, 2018). Prevalence of Heavy Episodic Drinking (HED) (defined as 60 or more grams of pure alcohol on at least one occasion at least once per month), despite decreasing worldwide from 22.6% in 2000 to 18.2% in 2016, stills remains high among drinkers, in parts of Eastern Europe and in some sub-Saharan African Countries (World Health Organization, 2018). In Nigeria, alcohol has been reported to be the most commonly used psychoactive drug among young people (Gureje *et al.*, 2007; Adekeye *et al.*, 2015). Furthermore, in Nigeria it is not unusual to find students consuming alcoholic drinks particularly among secondary and undergraduate students. For instance, a study carried out in Port Harcourt in Southern Nigeria shows the prevalence of

current alcohol consumption among secondary school students to be 30.6% and that 38.1% of current drinkers had also been drunk in the past 30 days, with 17.2% being drunk very frequently (Alex-Hart *et al.*, 2015). A similar study in Lagos South-Western Nigeria showed the prevalence of alcohol consumption to be 29.10% making it the most consumed psychoactive substance among the study participants (Okonkwo *et al.*, 2010). Another study in Lagos showed the annual prevalence for alcohol consumption on 6 occasions and above to be 57.90%, while prevalence for consumption on 3 to 5 occasions was 9.20% (Ani, 2014). Similarly, another study among undergraduate students in Minna North Central Nigeria showed the prevalence of alcohol consumption to be 17.0% (Essien, 2010).

This makes alcohol consumption among the younger population to be a problem which should be given maximum attention. Furthermore, most of the reported studies among the younger population in Nigeria focused more on secondary school students neglecting primary school pupils which could be the breeding ground for most of the observed habit among secondary and university students. This is even more urgent in order to prevent the consequences of alcohol consumption which in 2016 resulted in some 3 million deaths (5.3% of all deaths) worldwide and 132.6 million disability-adjusted life years (DALYs) (World Health Organisation, 2018). Therefore, this study was designed to assess the prevalence of alcohol use among primary and secondary school teenagers in Obiaruku Community in Ukwuani Local Government Area of Delta State.

MATERIALS AND METHODS

Study Design and Area: A descriptive cross sectional study was employed to determine the prevalence of alcohol use among Primary and Secondary School adolescents in Obiaruku Community. Obiaruku town is the headquarters of Ukwuani Local Government Area (LGA), Delta State, Nigeria. It is one of the major homeland of the Ukwuani speaking (akashiada) people. The population of Obiaruku, as at 2005 was 68,710, with 33,090 males and 35,620 females. The town has 16,205 households, and the population density of 168.

Study Population and Inclusion Criteria: The study population comprised of adolescents in both government primary and secondary schools in Obiaruku metropolis. The study focused on adolescents 13 years and above in both primary and secondary schools in Obiaruku Community.

Sample Size Determination: The formula for sample size calculation for single proportion was used for the study.

$$n = \frac{Z^2 P (100-P)}{D^2}$$

D₂

where n= the minimum sample size

Z= 1.96 at 95% confidence interval obtained from statistical table of normal distribution. P=30.60% i.e prevalence of current drinkers of alcohol in PortHarcourt (Alex-Hart *et al.*, 2015).

d= degree of accuracy desired (5%).

$$N = \frac{1.96^2 \times 30.60 (100-30.60)}{5^2}$$

N= 326

Therefore the sample size of the study was 326 pupils and students

Sampling Procedure: All the government primary and secondary schools in Obiaruku community were selected for the study. Obiaruku community has one government secondary school and six primary schools. Therefore the selected schools for the study were Esume-Uku Primary School Obiaruku, Emeni-Primary School, Ethiope Primary School, Eze-Egbuochu Primary School, Morka Primary School and Model Primary School. The secondary school was Obiaruku Grammer School. The respondents of the study were randomly selected after fulfilling the inclusion criteria of 13 years and above.

Instrument and Method of data collection: The instrument for data collection was a semi-structured questionnaire. The questionnaire comprised of two sections. Section A comprised the demographic characteristics of the respondents while section B contains questions that requested the pattern of alcohol consumption among the respondents. On the day of data collection, the researcher and two research assistants went to each of the schools. After securing approval from the various headmasters/headmistresses and principals, the researcher proceeded to the classrooms and after explaining the aim of the project to the pupils and students the questionnaire was administered to respondents that fulfilled the inclusion criteria. Overall 320 questionnaires were collected giving a response rate of 98%.

Table 1
Sampling procedure

S/N	Name of School	Population size	Sample size	Allotted sample size		Total
				Males	Females	
1	Esume-Uku Primary School	*80	9	6	3	9
2	Emeni-Primary School	*70	6	4	2	6
3	Ethiope Primary School	*85	7	4	3	7
4	Eze-Egbuochu Primary School	*75	5	4	1	5
5	Morka Primary School	*70	5	3	2	5
6	Model Primary School	*85	8	5	3	8
7	Obiaruku Grammer School	1500	280	194	92	286

*- only primary six populations were shown

Data Analysis and Ethical Considerations

The questionnaires were analyzed with Statistical Package for Social Sciences (SPSS) version 15.0. The analysed data were presented in tables, charts and inferential statistics such as Chi-square were used to test for associations between variables of interest set at $P < 0.05$. The study was carried out in line with the principles of ethics for research involving human subjects. The research proposal received ethical clearance from Novena University Ogume, Department of Public and Community Health, ethical Committee. Permission to carry out the study was granted by the Ukwuani Local Government Education Department and headmaster/headmistress, principal of each school.

RESULTS

Demographic characteristics of the respondents:

According to table 1 below, almost half of the respondents 150(46.88%) were age 13-15 years followed by 16-18 years 140(43.75%) while majority 220(68.75%) were males and more than half 170(53.13%) were in class JSS1-JSS3. Furthermore, majority of the respondents 280(87.50%) were from Obiaruku Grammer School, followed by Esume-Uku Primary School and Eze-Egbochu Primary School 10(3.13%).

Table 1:

Demographic characteristics of the respondents

Variable	Frequency	Percentage
Age		
13-15	150	46.88
16-18	140	43.75
19-21	30	9.37
Sex		
Male	220	68.75
Female	100	31.25
Class		
Primary Six	40	12.50
JSS 1-JSS 3	170	53.13
SS1-SS3	110	34.37
Respondents school		
Esume-Uku Primary School	10	3.13
Emeni-Primary School	5	1.56
Ethiophe Primary School	5	1.56
Eze-Egbochu Primary School	10	3.13
Morka Primary School	5	1.56
Model Primary School	5	1.56
Obiaruku Grammer School	280	87.50

Prevalence of alcohol consumption among the respondents: As shown in figure 1 below, 75% of the respondents affirmed not to have consumed alcohol while 25% affirmed to be consumers of alcohol.

Pattern of alcohol consumption among the respondents:

The pattern of alcohol consumption among the respondents shows that less than half of the respondents 35(43.75%) started consuming alcohol at the age of between 14-16 years while more than one third 30(37.50%) affirmed to start consuming alcohol due to peer pressure followed by influence of an adult 26(32.50%). Furthermore, majority of the respondents 65(81.25%) affirmed to be normal drinker while

25(31.25%) affirmed to drink once in a week and only 25(31.25%) affirmed to be binge drinkers (Table 2).

Pattern of alcohol consumption and sexual disposition of the respondents

As shown in table 3 below, about half of the respondents 40(50.0%) affirmed not to have had 5 or more drinks at a sitting within the last two weeks, however about one fourth 20(25.0%) affirmed to have had 5 or more drinks 1 to 3 times within the last two weeks, while majority 60(75.0%) affirmed to not be able to stop drinking when they want to and almost two third 50(62.50%) affirmed not to drink to get drunk

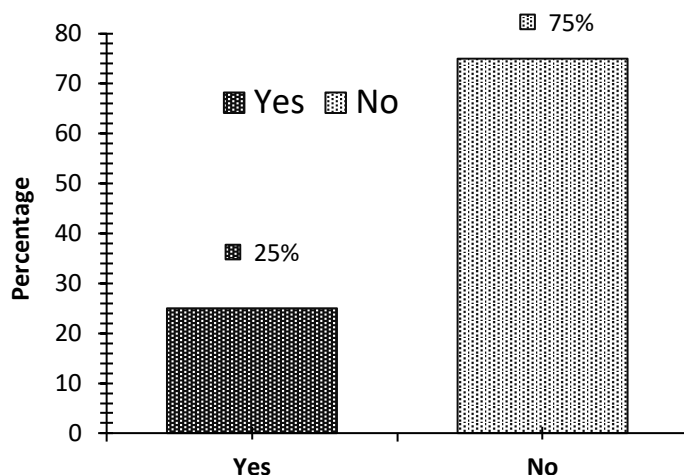


Figure 1:
Prevalence of alcohol Consumption

According to figure 2 below, 21.6% of respondents that have consumed alcohol were males while 3.40% were females. In addition, 43.80% were males while 31.30% were females.

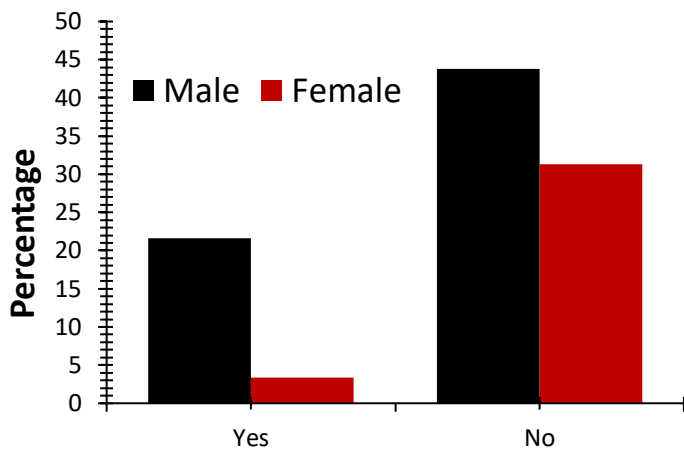


Figure 2:
Prevalence of alcohol consumption by sex

Table 2:
Pattern of alcohol consumption among the respondents

Variable	Frequency N=80	Percentage
At what age did you start consuming alcohol		
11-13	13	16.25
14-16	35	43.75
18-20	32	40.0
Why did you start consuming alcohol		
Peer pressure	30	37.50
Curiosity	15	18.75
Because you felt like it (Bored)	9	11.25
Influence of an adult	26	32.50
Do you feel you are a normal drinker		
Yes	65	81.25
No	15	18.75
How often do you drink		
Everyday	5	6.25
3-5 times a week	13	16.25
Once a week	25	31.25
Only on weekends	18	22.50
On special occasions	19	23.75
Do you engage in binge drinking (5 or more drinks in a sitting)		
Yes	25	31.25
No	55	68.75
Estimate the number of hours you drank the last time you socialized		
None	7	8.75
One hour	20	25.0
2-3 hours	35	43.75
4-5 hours	15	18.75
More than five hours	3	3.75
How many drinks did you have during that time		
0	0	0.0
1-2	20	25.0
3-4	38	47.50
5-6	13	16.25
7-9	9	11.25
More than 9	0	0.0

Sex of the respondents and prevalence of alcohol use:

There is no significant relationship between the sex of the respondents and prevalence of alcohol use. According to table 4 below, almost one fourth of the males 69(21.60%) were alcohol users as compared to few females 11(3.40%) who were alcohol users. Furthermore, there was a significant association between the sex of the respondents and their use of alcohol at $P < 0.05$. We therefore conclude that being male increases the likelihood of becoming an alcohol user than being a female.

Age of the respondents and prevalence of alcohol use:

There is no significant relationship between the age of the respondents and prevalence of alcohol use. As shown in table 5 below, alcohol consumption seems to increase with age with respondents between the ages of 19-21 years 33(10.30%) consuming alcohol more than respondents between the ages of

16-18 years 28(8.80%) and 13-15 years 19(5.90%) respectively at ($P < 0.05$).

Table 3:
Pattern of alcohol consumption and sexual disposition of the respondents

Variable	Frequency N=80	Percentage
In the last two weeks how many times have you had 5 or more drinks at a sitting		
0	40	50.0
1-3	20	25.0
3-5	8	10.0
5-7	9	11.25
More than 7 times	3	3.75
Are you always able to stop drinking when you want to		
Yes	20	25.0
No	60	75.0
Do you ever drink to get drunk		
Yes	30	37.50
No	50	62.50
Have you ever passed out or experienced memory loss due to drinking (Blackout)		
Yes	27	33.75
No	53	66.25
Have you ever had unprotected sex while under the influence of alcohol		
Yes	25	31.25
No	55	68.75
Were you ever taken advantage of why under the influence of alcohol		
Yes	15	18.75
No	65	81.25
Have you ever sexually taken advantage of someone else while they were under the influence of alcohol		
Yes	5	6.25
No	75	93.75

Table 4:
Association between the sex of the respondents and the prevalence of alcohol

Sex	Prevalence of alcohol use		Chi-Square	df	Sig.
	Yes	No			
Male	69(21.60%)	140(43.80%)	20.640	1	0.000
Female	11(3.40%)	100(31.30%)			

Table 5:
Association between age of the respondents and their use of alcohol

Age	Prevalence of alcohol use		Chi-Square	df	Sig.
	Yes	No			
13-15	19(5.90%)	70(21.90%)	32.046	2	0.000
16-18	28(8.80%)	140(43.80%)			
19-21	33(10.30%)	30(9.40%)			

Relationship between the class of the respondents and prevalence of alcohol use: According to table 6 below, the consumption of alcohol also increases with the class of the respondents as those between SS1-SS3 45(14.10%) consumed alcohol more than respondents in JSS1-JSS3 17(5.30%) and primary six 18(5.60%) at ($P < 0.05$).

Table 6:

Association between the class of the respondents and their use of alcohol

Class	Prevalence of alcohol use		Chi-Square	df	Sig.
	Yes	No			
Primary	18(5.60%)	17(5.30%)	24.239	2	0.000
Six					
JSS1-	17(5.30%)	113(35.30%)			
JSS3					
SS1-	45(14.10%)	110(34.40%)			
SS3					

DISCUSSION

The findings of the study showed that the respondents were between the ages of 13-21 years old. This finding was similar to the findings of the study in Port Harcourt where the respondents were between the ages of 11-25 years (Alex-Hart *et al.*, 2015). The study was slightly different from the study in Central Nigeria which had the ages of the respondents to be between 11-20 years (Obot *et al.*, 2001). Furthermore, majority of the respondents in the study were males 68.75% when compared with females 31.25%. This finding was different from the finding in South-Western Nigeria which had more females in their study than males (Fatoye & Morakinyo, 2002). The study was however, different from a study in South-Eastern Nigeria which had equal males and females (Eze *et al.*, 2017). The finding of the study was also different from the study in Port Harcourt which had more females than males in their study (Alex-Hart *et al.*, 2015). This observed differences and similarities with other studies might be due to differences in study design and study location. Furthermore, the addition, of primary school in the current study also made it differ from other studies which focused more on respondents from secondary schools (Eze *et al.*, 2017; Alex-Hart *et al.*, 2015; Fatoye & Morakinyo, 2002; Eke, 1997).

The findings of the study showed the prevalence of alcohol consumption to be 25.0%. Furthermore, alcohol consumption was more among males than females. The finding of the study was similar to the study in South-West Nigeria which had the prevalence rate of current users of alcohol to be 13.40%. However, the prevalence rate of lifetime alcohol users was higher than the current study 26.40%. Similarly, the proportion of consumption of alcohol among males 33.30% and females 20% was however similar to the current study (Fatoye & Morakinyo, 2002). The prevalence of alcohol use in the current study was however higher than that of a study among university students in Ilorin North-Central Nigeria 18.50%. The gender ratio of alcohol users was however similar with more males 24.0% consuming alcohol than females 17.0% (Adelekan *et al.*, 2000). In addition, the finding of the study was lower than a study conducted among out of school male adolescents in Central Nigeria which had a lifetime consumption rate of 38.70% (Obot *et al.*, 2001). The study was also similar to the findings of the study in Ebonyi and Enugu States which reported alcohol consumption among males than females (Eze *et al.*, 2017). The study in Port Harcourt reported a higher prevalence of 30.60% (Alex-Hart

et al., 2015), while a previous study reported higher prevalence of alcohol consumption among males than females (Lasebikan & Ola, 2016).

The finding shows that age of initiation into alcohol consumption was more of 14 years and above. The finding was similar to previous study which had average age of self-initiative drinking of 13.20 years. Furthermore, peer pressure and influence of adult were the major reasons indicated by the respondents why they started consuming alcohol. This finding was slightly different from the study in Port Harcourt which reported experimentation and socialization with friends as the major reasons why students drink alcohol (Alex-Hart *et al.*, 2015). The pattern of alcohol consumption among the respondents shows that majority reported to be normal drinkers, drinking ones in a week, with most not engaging in binge drinking and more taking between 3-4 bottles each time they socialize.

Furthermore, the respondents showed addiction to alcohol as about one quarter of them affirmed not to be able to stop drinking when they want to. Furthermore, more than one third agree to get drunk with about one third affirming to pass out or experience memory loss due to drinking. The prevalence rate of been drunk was slightly lower than the study in Port Harcourt 38.10% (Alex-Hart *et al.*, 2015).

Several studies demonstrate that drinking increases the likelihood of risky sexual behaviour (Cooper & Orcutt, 1997; O' Hare, 1999), with an association between alcohol consumption and multiple and casual partners (Cooper, 2002; Santelli *et al.*, 2001) and less consistent condom use (Weinhardt & Carey, 2000). The findings of study showed that almost one third of the respondents affirmed to have had unprotected sex while under the influence of alcohol while few reported ever taken advantage of why under the influence of alcohol. The finding of this study was consistent with the findings of a study in New York City which reported 62.0% of sexual activity under the influence of alcohol (Brooke *et al.*, 2010).

Furthermore, the sex of the respondents had a significant relationship with the use of alcohol, with being a male improving the likelihood of engaging in alcohol use. The finding was similar to the findings of previous studies (Eze *et al.*, 2017; Alex-Hart *et al.*, 2015). In addition, age also showed a significant relationship with use of alcohol as there was increase of alcohol with increasing age. This finding was however different from the study in Port Harcourt which did not show a significant relationship between age and use of alcohol (Alex-Hart *et al.*, 2015).

In conclusion the study showed the prevalence of alcohol consumption with more males consuming alcohol than females. Also the prevalence of alcohol consumption among primary school pupils should be a concern to education authorities as well as teachers alike. This calls for implementation of programs targeting high risk groups in primary schools and males who are more vulnerable to be initiated into alcohol consumption. Furthermore, the study showed the reasons for consuming alcohol by the respondents were peer pressure, influence of an adult, curiosity and because they felt like it. In addition, the study showed some of the respondents were addicted to alcohol and even gets drunk while drinking. Finally, the study showed some of the

respondents have had unprotected sex while under the influence of alcohol, have been taken advantage of sexually and also have taken advantage of others sexually while under the influence of alcohol.

Based on the findings of the study the following recommendations were suggested:

- Health education teachers, school health counselors, and school administrators should combine their professional experiences to promote health education interventions and health counseling programs aimed at reducing students' engagement in alcohol consumption.
- Schools should organize seminars for students to provide education on the health-related issues surrounding alcohol consumption. In addition, addiction counselors should also organize awareness campaigns to orient Nigerian secondary school students to the damages caused by alcohol consumption.
- Parents should properly monitor and counsel their adolescent children on matters relating to alcohol consumption and its effect on their health.
- Alcohol prevention programs should be implemented by both the Delta State Government and the Ukwuani Local Government Area starting from primary school. The Federal Government of Nigeria should enforce the legal drinking and purchasing age of 18 years of alcohol

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