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ORIGINAL ARTICLE

Prevalence, Pattern and Correlates of Underage Alcohol Drinking among Secondary School Students in Orlu, Imo State

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Keywords

Adolescents;

Mental health;

Underage alcohol drinking;

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ABSTRACT

Background: Alcohol is one of the most commonly used substances among young people. Early initiation of alcohol drinking has been linked to an increase in mortality, morbidity, and the risk of developing alcohol use disorder later in life. As a result, underage drinking has been regarded as one of the leading public health issues globally. This study aimed to determine the prevalence, pattern, and socio-demographic correlates of alcohol drinking among secondary school students in Orlu, Imo State, Nigeria.

Methods: The study was a cross-sectional descriptive study of 240 secondary school students, selected through a multistage sampling technique. Socio-demographic data and pattern of alcohol consumption was collected using a self-administered structured questionnaire. Data was analyzed using SPSS version 21.

Results: The lifetime, 12-month, and 30-days prevalence of underage alcohol drinking was 67.9%, 59.6%, and 55.8%, respectively. Twenty-nine (12.1%) of the respondents had engaged in binge drinking. In the past 12 months, 60 (42%) of the respondents drank alcohol less than once a month. Alcohol drinking was associated with being male (p=0.001), older age (p=0.001), having an unemployed caregiver (p=0.04), parental alcohol drinking (p=0.001) and intimate partner drinking (p=0.001).

Conclusion: Underage alcohol drinking is common among students in Orlu, Imo State. We recommend educating students and their caregivers on the growing problems of alcohol consumption.

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INTRODUCTION

Alcohol is one of the most commonly used substances among young people.[1] Among young people, the use of alcohol is associated with far-reaching and diverse negative impacts on the physical, social and emotional health of the user, the family, and the society.[1,2] These include disruption of interpersonal relationships especially within the family, criminal behaviour, academic failure, and underachievement.[3,4] Early initiation of drinking has been linked to an increase in the risk of developing alcohol use disorder later in life.[5] Excessive drinking is responsible for significant mortality and morbidity among young people.[6,7] As a result, underage alcohol drinking (drinking among

those aged less than 18 years in Nigeria) has been regarded as one of the leading public health issues globally.[1]

Various rates of drinking have been reported in different studies. This can be attributed to socio-cultural differences and differences in the population studied. Globally alcohol has been reported to be one of the commonest psychoactive substances used by young people, with age of initiation ranging between 12-16 years.[8] Data from 36 countries show that the prevalence of weekly alcohol drinking among adolescents ranges from 2 to 29%, with European countries having the highest rates of alcohol drinking.[8]A study of vulnerable youths in some disadvantaged settings in five cities (Baltimore, USA; Delhi, India; Ibadan, Nigeria; Johannesburg, South Africa; and Shanghai, China) found the rate of alcohol use among young people aged 15-19 years to be 44.6%.[9] A study carried out in Ethiopia found that about 23% of high school students drank alcohol.[10,11] In Kenya, it was found that 48.6% of students have used alcohol in their lifetime with 34.7% reporting alcohol consumption in the last month.[12] A systematic review of alcohol use among young people in eastern Africa found alcohol use to be very common.[13] In Nigeria, the rate of alcohol drinking is much lower in some of the northern states of Nigeria where the use of alcohol is prohibited.[14,15] In Nigeria, the rate of drinking among secondary school students was found to range between 25% to 77.2%.[16, 17, 18]A study carried out in Port Harcourt among secondary school students reported that about 38.1% of the students drank to the point of intoxication in the past 30 days, while 17.2 % reported being very frequently drunk.[16] More than 90% of young people binge drink, but boys are more likely to binge drink compared to girls.[19,20]

In Nigeria, the drinking pattern among the underage varies by jurisdiction, because legally the age of purchase of alcohol is eighteen years in Abuja, Nigeria's capital city, and states in the southern parts of Nigeria.[15]But the age limit is rarely enforced.[15] Studies have reported an early age of alcohol use initiation with a mean age of initiation of 13-14 years.[9, 21] Male gender, older age, absence of a caring father figure, having friends who drink, and living with someone who drinks increased the odds of drinking.[9,10,22]

Scholars have shown that living in a family where family members consume alcohol increases the risk of drinking.[23] Parents who drink more and who view drinking favourably may have children who drink more.[24] It is indicated that among the youngest adolescents the usual drinking place was the home.[25] Also, perceived availability is commonly associated with adolescent alcohol use and this appears to be shaped by the adolescents' social environment.[23]

Many studies report greater alcohol drinking among male students. Others, especially in developed countries, report remarkably small differences in alcohol drinking rates between males and females of school age.[26] Globally, a wide variation has been reported in alcohol drinking among school age males and school age females with rates ranging from 1.2% to 74.0% in boys and zero to 73.0% in girls.[26] A recent study in Morocco reported significantly more drinking among male adolescents.[27] A study on alcohol consumption among adolescents in Ibadan reported a lifetime rate of 71.9% among the males compared to 32.5% of the females.[23] The same study reported a current rate of 47.2% among males compared to a 15.8% rate among females.[23] Another study among secondary school students in mixed schools in Delta state southern Nigeria showed that though there was a narrow gap there were more male (35%) than female (20%) drinkers.[18]

The need to belong in a group is very strong in adolescence and this compelling need to fit into and belong to a group of friends may be a motivating factor in alcohol use.[28] This leads to the use of alcohol due to exposure by their friends and peers.[28] It has been found that an adolescent girl with an older or adult boyfriend is more likely to use alcohol and other drugs and engage in delinquent behaviours.[24] However, it has been reported that there is no association between peer pressure and alcohol drinking but an association with socioeconomic status has been reported.[23]

Underage drinking among secondary school students is a cause for public health concern because of its association with psychosocial problems. Studying and identifying the factors which influence underage drinking among secondary school students in Orlu Local Government Area (LGA), Imo State will provide data that could be used in the development of preventive strategies. The study evaluated the prevalence, patterns and socio-demographic correlates of underage drinking among secondary school students.

METHODOLOGY

Study design

The study was a school-based descriptive cross-sectional study carried out among secondary school students aged below 18years in Orlu Local Government Area, Imo State.

Area of study

Orlu LGA has a semi-urban setting. There are 18 secondary schools in the local government area. Out of these, ten are public secondary schools while eight are private schools with a total student enrolment of about 2000.

Study population

The study population comprised secondary school students enrolled in schools in Orlu LGA, Imo State.

Eligibility criteria

Students were eligible for the study if they were enrolled in secondary schools in Orlu LGA and are aged below 18 years. Those who were absent from school at the time study took place were excluded.

Sample size and sampling technique

The minimum sample size was calculated using a sample size calculator which is based on the Cochran formula for populations less than 10,000.[29]

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

A total of 240 respondents were included in the study based on a 95% confidence level, a margin of error of 5%, and a prevalence of 77.2% representing the rate of drinking among secondary school students from a previous study conducted in Nigeria.[17]

In the study, a two stage sampling technique was used for the selection of respondents. Stage one was the selection of schools. The secondary schools in Orlu LGA served as the sampling frame. Four secondary schools were selected using a simple random technique of balloting. Two of these were government owned while the other two were private schools. Stage two was the selection of respondents. The total calculated sample size was distributed to the selected schools and then the classes (JSS1-SS3) proportionately based on number of students enrolled in each of the schools and in each class. Eligible respondents were then selected from each class using simple random sampling by balloting to make up the required sample size. The male to female ratio in each class was also considered during the selection such that a proportionate number of both sexes were selected.

Instruments

A pre-tested self-administered questionnaire was used to collect information from the respondents. Section A had questions on socio-demographic data while Section B contained questions on drinking patterns and reasons for drinking.

Procedure

Copies of the questionnaire were administered during general classes that bring students of a particular class together and collected after completion. The students were separated while filling the questionnaires. This was to promote privacy and to encourage honest response.

Data Analysis

Data was entered and analyzed using IBM SPSS.[30] Frequency tables, percentages, mean and standard deviation were used to summarize the data. A Chi-square test was used to assess alcohol use across the socio-demographic characteristics and the level of significance was set at $p \leq 0.05$.

Lifetime drinking was defined as having drunk alcohol at least once during the lifetime; 12-month drinking was defined as having drunk alcohol at least once in the preceding 12-months while current drinking was defined as having drunk alcohol at least once in the preceding 30 days. The outcome variable "drinking alcohol" was dichotomized into yes/no.

Ethical Considerations

Ethical approval was obtained from the research and Ethics Committee of Imo State University Teaching Hospital, Orlu with reference number IMSUTH/CS/121.Verbal permission was obtained from the head of each selected school. Informed consent was obtained from the parents/guardians. Confidentiality was ensured. It was explained to the respondents that participation was purely voluntary and they were free to withdraw at any time from the study.

RESULTS

Table 1 shows the socio-demographic distribution of the respondents. The mean age of the respondents was 15.15 ± 2.19 years. More of the respondents were males 139 (57.9%). One hundred and forty-five (60.4%) of the respondents attended privately owned schools. One hundred and sixty-six (69.1%) of the respondents were in senior secondary class. The majority of the respondents, 99 (41.3%) were Catholics, and 143 (59.6%) resided in owned-apartment with their parents or guardians. Most, 166 (69.2%) were from families where the parents were still married to each other. Most, 123 (51.2%) were sponsored in school by both parents. The majority of their caregivers 138 (57.5%) were self-employed. The mean number of people in each household was 4.87 ± 2.30. The majority of the respondents were second born in their family, 75 (31.3%).

Table 2 shows the lifetime, 12-month, and 30 days use of alcohol to be 67.9%, 59.6%, and 56.3% respectively. Significantly more males drank alcohol compared to females during the lifetime (X^2=4.53, p=0.04), past 12-months (X^2=14.28, p=0.001) and 30 days (X^2=13.25, p=0.001).

Table 3 shows that for lifetime use, alcoholic wine was the most consumed type of alcohol 50 (30.7%) while beer was the most consumed in the past 12 months, 48 (33.6%). In the past 12 months most of the respondents, 60 (42.0%) consumed alcohol less than once a month. One hundred and seventeen (86.7%) of the current drinkers drank alcohol 1-9 times in the past 30 days. Seventeen (12.6%) had more than five drinks at a sitting in the past 30 days.

Table 4 shows parental and peer influence on drinking in the past 12 months. Of the 143 respondents who had drank alcohol in the past 12 months, 102 (71.3%) reported parental drinking of alcohol, 86 (60.1%) were offered alcohol by their parents and palm wine was the most common drink offered, 32 (37.2%). Seventy (49.0%) reported parental awareness of their drinking while 95 (66.4%) reported that their parents are not aware of how much they drink. Among those that drank alcohol in the past 12 months, fifty-seven (39.9%) were permitted to drink alcohol at home by their parents. Fifty-seven (32.2%) of those that drank alcohol in the past 12 months, reported that their parents complained about their drinking habit.

In the past 12 months, 102 (71.3%) of the respondents had an intimate partner. Sixty-one (42.7%) of the intimate partners used alcohol and most of these, 43 (30.1%) encouraged the respondents to drink. One hundred and fourteen (79.7%) of the respondents had a friend who drank alcohol. Eighty-two (57.3%) of these reported that their friends encouraged them to drink alcohol and 84 (58.7%) would not be willing to remain friends if the respondents did not drink.

Table 5 shows the association between socio-demographic variables and the use of alcohol in the past 12 months. Being male (X^2=14.28, p=0.001), schooling in a government-owned school (X^2=7.82, p=0.005), being an older student (t=4.8, p=0.001), being in senior secondary school (X^2=18.48, p=0.001), living in a rented apartment (X^2=6.56, p=0.04), and having a major caregiver who is unemployed (X^2=6.62, p=0.04) were significantly associated with drinking in the past 12 months. Parental alcohol drinking (X^2=27.69, p=0.001) and parental offering of alcohol to the respondent (X^2=49.68, p=0.001) were significantly associated with drinking alcohol.

Having an intimate partner (X^2=15.14, p=0.001) or a friend who drank alcohol (X^2=23.12, p=0.001) and encouraged the respondent to drink was significantly associated with drinking in the past 12 months. There was no significant association between religion, parental marital status, the relative that the patient lives with, and use of alcohol in the past 12 months (p>0.05).

Table 6 shows that the predictors of alcohol use were having parents who offer alcohol [AOR= 9.47, 95% CI=3.73-24.05, p=0.001), having an intimate partner who encouraged the use of alcohol (AOR=5.57, 95% CI=1.18-26.39, p=0.03), and having friends that encouraged drinking (AOR=3.19, 95% CI =1.24-8.21, p<0.02).

DISCUSSION

This paper assessed the pattern and correlates of underage drinking among secondary school students in Orlu. It found a high rate of alcohol use. The rates found in this study were about twice that reported some years ago in some previous studies conducted in Nigeria and other major cities in Africa and Asia.[9,10-13, 16] The differences in rates could be due to socio-cultural factors and differences in the availability of alcohol. Also, Nigeria has been reported as one of the countries with the highest consumption of alcohol in Africa.[31] Beer and alcoholic wine were the most frequently consumed beverages. This is similar to what has been previously reported in Nigeria among students.[18] This is possibly due to wide availability, preference, and cost. A previous study conducted some years ago in Lagos Nigeria showed that almost 60% of the secondary school students studied drank alcohol only on 6 occasions and above in a year.[17] This is much lower than what was found in our study in which the students drank several times in a month. This also reiterates the increasing level of consumption among Nigerian students over time.

We found that significantly more males drank alcohol compared to females. This is similar to what has been reported in Nigeria and other countries.[9, 10, 23, 27, 32] This trend of more male use appears to be unchanged over the years but we had a wide gap in the rate of drinking between the genders, with the male students being twice more likely to drink than their female counterparts.[18, 33] Our finding is consistent with the World Health Organization report on alcohol consumption in Africa in which they found alcohol consumption to be twice as high among men compared to women.[26]

Parental permissiveness and supply of alcohol, intimate partner, and peer influence significantly predicted the use of alcohol. This is similar to what has been previously reported that parental norms and attitudes towards the use of alcohol influenced, predicted, and shaped adolescent alcohol use with permissiveness increasing the risk of alcohol use.[34, 35, 36] It was previously reported that out of the different sources of supply of alcohol (parental, family member, friend, own supply, or other sources) that parental supply of alcohol was the strongest predictor of alcohol use among adolescents.[36]

With the disturbingly high rate of alcohol and drug use in our environment, it is suggested that studies be conducted locally to evaluate and compare the effects of parental and peer influence on alcohol and other psychoactive substance use with the intent to find out which one carries greater weight and ways to utilize these in preventive measures.

Limitations of the study: This was a cross-sectional study, so causality cannot be determined. Alcohol drinking was determined through self-report, so 100% objectivity cannot be guaranteed. There was no validity check to ensure correct or true recall of alcohol drinking with the possibility of under-reporting. This study was conducted only in Orlu LGA, so findings cannot be generalized to schools in other zones in the state and in Nigeria.

Conclusion: A large number of students consume alcohol. Hence, we recommend implementing community and school-based intervention programs, such as training school guidance and counsellors to counsel students on the dangers of alcohol drinking to tackle the growing problems of alcohol consumption among underage students.

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Table 1: Socio-demographic distribution of respondents

Variable	Frequency (n=240)	Percent
Gender		
Male	139	57.9
Female	101	42.1
Age (years)		
10-12	36	15.0
13-15	79	32.9
≥16	125	52.1
Mean Age ±S.D (years)	15.15±2.19	
Type of school		
Government-owned	95	39.6
Private owned	145	60.4
Class in school		
Junior secondary	74	30.9
Senior secondary	166	69.1
Religion		
Catholic	99	41.3
Pentecostal	80	33.3
ATR*	20	8.3
Others	41	17.1
Residence		
School Hostel	40	16.7
Owned-apartment	143	59.6
Rented apartment	57	23.7
Parent's marital status		
Married	166	69.2
Divorced	32	13.3
Separated	42	17.5
Major Caregiver		
Both parents	123	51.2
Mother	49	20.4
Father	27	11.3
Guardian	25	10.4
Sibling	16	6.7
Occupation of major caregiver		
Unemployed	29	12.1
Self-employed	138	57.5
Civil servant	73	30.4
Mean No. of people in the household ± S.D	4.87±2.30	
Birth position		
First	65	27.1
Second	75	31.3
Others	100	41.7

Table 2: Prevalence of alcohol use among the respondents

Variable	Frequency	Percent
Lifetime use of alcohol (n=240)		
Yes	163	67.9
No	77	32.1
Lifetime use of alcohol (n=163)		
Male	102	62.6
Female	61	37.4
12 months use of alcohol (n=240)		
Yes	143	59.6
No	97	40.4
12 months use of alcohol (n=143)		
Male	97	67.8
Female	46	32.2
30 days use of alcohol(n=240)		
Yes	135	56.3
No	105	43.7
30 days use of alcohol (n=135)		
Male	92	68.1
Female	43	31.9

Table 3: Pattern of drinking among the respondents

Variable	Frequency	Percent
Lifetime type of alcohol used (n=163)		
Alcoholic wine	50	30.7
Palm wine	49	30.1
Beer	48	29.4
Hot drink	16	9.8
Type of alcohol used in the past 12 months (n=143)		
Beer	48	33.6
Alcoholic wine	44	30.8
Palm wine	37	25.9
Hot drink	14	9.8
Frequency of alcohol used in the past 12 months (n=143)		
Less than once a month	60	42.0
Once a month	46	32.2
Once a week	24	16.8
Nearly everyday	10	7.0
Everyday	3	2.1
Frequency of use in the past 30 days (n=135)		
1-9	117	86.7
10-19	13	9.6
>20	5	3.7
Binge drinking in the past 30 days (n=135)		
No	118	87.4
Yes	17	12.6

Table 4: Parental and peer influence on drinking in the past 12 months

Variable	Frequency (n=143)	Percent
Parental drinking		
Yes	102	71.3
No	41	28.7
Parental offering of alcohol		
Yes	86	60.1
No	57	39.9
Type of alcohol offered (n=86)		
Hot drink	6	7.0
Beer	22	25.6
Alcoholic wine	26	30.2
Palm wine	32	37.2
Parental awareness of drinking		
Yes	70	49.0
No	73	51.0
Do your parents know how much you drink		
Yes	48	33.6
No	95	66.4
Parental permission of drinking at home		
Yes	57	39.9
No	86	60.1
Parental complaint about your drinking		
Yes	57	39.9
No	86	60.1
Have an intimate partner		
Yes	102	71.3
No	41	28.7
Intimate partner use of alcohol		
Yes	61	42.7
No	82	57.3
Intimate partner encouraging drinking		
Yes	43	30.1
No	100	69.9
Friends that drink alcohol		
Yes	114	79.7
No	29	20.3
Friends encouraging drinking		
Yes	82	57.3
No	61	42.7
Friends willingness to remain close if you do not drink with them		
Yes	59	41.3
No	84	58.7

Table 5: Association between socio-demographic factors and 12-month alcohol use

Variable	Use of alcohol in the past 12 months		Test stat	p-value
	Yes (%)	No (%)		
Gender				
Male	97 (69.8)	42 (30.2)	X^2=14.27	0.001*
Female	46 (45.5)	55 (54.5)		
Type of school				
Government school	67 (70.5)	28 (29.5)	X^2=7.82	0.005*
Private school	76 (52.4)	69 (47.6)		
Mean age± S.D(years)	15.69±1.92	14.35±2.33	t=4.8	0.001*
Class in school				
Junior secondary	29 (39.2)	45 (60.8)	18.48	0.001*
Senior secondary	114 (68.7)	52 (31.3)		
Religion				
Catholic	56 (56.6)	43 (43.4)	X^2=0.64	0.43
Others	87 (61.7)	54 (38.3)		
Place of residence				
School Hostel	26 (65.0)	14 (35.0)	X^2=6.56	0.04*
Rented apartment	41 (71.9)	16 (28.1)		
Owned apartment	76 (53.1)	67 (46.9)		
Parents marital status				
Married	92 (55.4)	74 (44.6)	X^2=3.87	0.06
Divorced	51 (68.9)	23 (31.1)		
Occupation of major caregiver				
Unemployed	22 (75.9)	7 (24.1)	X^2=6.62	0.04*
Self-employed	85 (61.6)	53 (38.4)		
Civil servant	36 (49.3)	37 (50.7)		
Parental drinking				
Yes	102 (73.9)	36 (26.1)	X^2=27.69	0.001*
No	41 (40.2)	61 (59.8)		
Parental offering of alcohol				
Yes	86 (86.0)	14 (14.0)	X^2=49.68	0.001*
No	57 (40.7)	83 (59.3)		
Have an intimate partner				
Yes	102 (69.4)	45 (30.6)	X^2=15.14	0.001*
No	41 (44.1)	52 (55.9)		
Intimate partner use of alcohol				
Yes	61 (82.4)	13 (17.6)	X^2=23.12	0.001*
No	82 (49.4)	84 (50.6)		
Intimate partner encouraging				
Yes	43 (93.5)	3 (6.5)	X^2=32.9	0.001*
No	100 (51.5)	94 (48.5)		
Friends' use of alcohol				
Yes	114 (73.5)	41 (26.5)	X^2=35.4	0.001*
No	29 (34.1)	56 (65.9)		
Friends encourage drinking				
Yes	82 (84.5)	15 (15.5)	X^2=42.1	0.001*
No	61 (42.7)	82 (57.3)		

**Statistically significant*

Table 6: Predictors of alcohol use in the past 12 months

	B	Std. Error	p-value	AOR	95% C.I	
					Upper	Lower
Constant	3.11	2.37	0.19			
Age	0.09	0.14	0.53	1.09	0.83	1.44
Gender						
Male	0.703	0.38	0.07	2.02	0.96	4.27
Female[a]	0			1		
Type of school						
Government school	0.75	0.40	0.06	2.11	0.96	4.61
Private school[a]	0			1		
Class in school						
Junior secondary	0.23	0.62	0.71	0.79	0.24	2.65
Senior secondary[a]	0			1		
Occupation of major caregiver						
Unemployed	1.05	0.68	0.12	2.86	0.76	10.82
Self employed	0.76	0.44	0.08	2.15	0.91	5.05
Civil servant[a]	0			1		
Parental drinking						
Yes	0.311	0.43	0.47	1.37	0.59	3.15
No[a]	0			1		
Parental offering of alcohol						
Yes	2.248	0.48	0.001*	9.465	3.725	24.048
No[a]	0			1		
Have an intimate partner						
Yes	0.61	0.47	0.20	0.55	0.22	1.37
No[a]	0		.	1		
Intimate partner use of alcohol						
Yes	0.33	0.53	0.54	1.39	0.49	3.92
No[a]	0			1		
Intimate partner encouraging drinking						
Yes	1.72	0.79	0.03*	5.57	1.18	26.39
No[a]	0			1		
Friends' use of alcohol						
Yes	0.81	0.44	0.06	2.25	0.95	5.33
No[a]	0			1		
Friends encouraging drinking						
Yes	1.16	0.48	0.02*	3.19	1.24	8.21
No[a]	0			1		

**Statistically significant*
[a]Reference category

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