

Predictors of Alcohol Use among In-School Adolescents in a Community of Ikenne Local Government Area, Ogun State, Nigeria

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Abstract

Objective: This study examined the predictors of alcohol use among in-school adolescents in a community of Ikenne Local Government Area (LGA), Ogun State, Nigeria.

Methodology: The study adopted a quantitative cross-sectional study design. A 56-item semi-structured questionnaire was used to collect data from 364 in-school adolescents by Multistage sampling technique, validated at Cronbach alpha of 0.81. Data collected were analyzed using SPSS version 23 to compute descriptive statistic and logistic regression model fixed at 0.05 significant level was conducted to give statistical responses to the research questions and hypotheses

Results: More than half (53.3%) of the respondents were between the ages of 13-16. More than half (56.3%) of the respondents were female. Having knowledge on alcohol use scored mean of 5.2±2.1, perception on alcohol scored mean of 19.2±3.2. The respondents' environmental factors of scored mean of 5.8, the respondents enabling factors scored mean of 20.29±6.95. Result showed a prevalence of alcohol use of 26%. The regression results showed that media influence, age of respondents, their knowledge of alcohol and family type were factors which significantly influenced alcohol use while enabling factors and respondents' perception with respect to alcohol consumption were significant variables with negative influence on alcohol use among adolescents.

Conclusion: In-school adolescents' knowledge on alcohol use was generally low; while they remained highly susceptible to media influence. Thus, a health education intervention with assertive training would help remediate this knowledge gap, diminish the impact of enabling factors, and empower adolescents to take decisions devoid of negative peer influences.

Keywords: Alcohol use, Community, Environmental factors, Influencing, In-school adolescents.

Introduction

Alcohol use by adolescents is an enduring public health issue worldwide. Alcohol use vary around the world and are substantial in several countries¹⁹. The World Health Organization (WHO) reported that more than 3 million people died worldwide as a result of alcohol use, accounting for 1 in 20 global deaths and representing the world's third largest risk for disease and disability¹⁹. Specifically, the use of alcohol accounted for 28.7% of deaths due to injuries, 21.3% of digestive diseases, 19% of cardiovascular diseases, and 12.6% of cancers globally¹⁹. Up to 51% of secondary school students have consumed alcohol at one point in time¹.

Alcohol is formed when fruits, vegetables and grains are fermented. Fermentation is a process that uses yeast or bacteria to change the sugars in

the food into alcohol. Fermentation is used to produce many essential items ranging from cheese to medications. Alcohol has different forms, and it can be used as a cleaner, an antiseptic or a sedative². In recent years, the pattern, quantity and reason for consumption are changing rapidly, especially among adolescents as opined by³ and this has resulted in an increased burden of alcohol-related problems. Adolescence is the age period during which alcohol and drug use are typically initiated and experimented by youngsters. This is as a result of the different bodily changes they experience at this stage of life⁴.

According to the World Health Organization, adolescents are individuals in the 10-19 years age group (WHO),²¹. Adolescence is a transitional stage of physical, psychological development that generally occurs during the period from puberty to legal adulthood²². The early stage of adolescence is critical and it involves

developmental stage that is characterized by multiple psycho-social and biological changes⁵, as well as, exploration and experimentation with new prosocial and antisocial behaviors^{6,7}. During this stage, alcohol is seen as a coping mechanism among adolescent^{8,9}, which is alarming considering the negative correlation between the age of alcohol consumption and long-term alcohol use problems¹⁰. The use of alcohol in young people particularly during the period of adolescence can be associated with functional and structural changes in the brain that significantly increases the risk for developing alcohol use problems in adult life¹¹ and many of these young drinkers indulge in binge drinking, drinking games as well as other hazardous alcohol use practices¹².

In Nigeria and some African countries, alcohol is culturally accepted during festivities and ceremonies, especially in the absence of any religious restrictions¹³. Ikenne Local Government Ogun State is not left out, alcohol is taken mainly for relaxation and enjoyment and mostly consumed at almost all ceremonies including cultural festivals such as Isanbi Day, Ereke Day, and Akesan Day. Nigeria led Africa in alcohol per capita consumption and it was reported that Nigerians consume around 13.4 liters per capita. Environmental factors have been found to influence alcohol use among in-school adolescent¹⁴.

Environmental risk factors may include male gender and older age¹⁵, influence of the peer group¹⁶, lack of peer support, parental substance use and lack of parental support^{17,18,19}. In addition, adverse life events, such as experiencing hunger, bullying victimization, fighting or aggressive behaviour and injury^{20,21,22}. Other factors may include tobacco use and illicit drug use, school truancy and frequent consumption of sugary drinks^{23,24,25}.

Alcohol use in adolescents is associated with alterations in verbal learning, visual-spatial processing, memory and attention, as well as with deficits in development and integrity of grey and white matter of the central nervous system²⁶. Alcohol use is a risk factor for non-communicable diseases such as cardiovascular disease, cancers, trauma/injuries and chronic liver disease, which have been on the increase²⁷. It is also known that about 4.5% of the global burden of disease, measured by disability-adjusted life years (DALYs) is due to alcohol; 25% of these are due

to the relationship of alcohol to liver cirrhosis, cardiovascular diseases and cancers²⁸

Nigeria has a regulation (advertising code) with regard to alcohol marketing and a federal law specifying the minimum purchasing age²⁹, there are no documented alcohol control policies to regulate the production and marketing as well as use and misuse of alcohol³⁰.

There are paucity in literature on adolescent's knowledge, attitude and perception of alcohol use, this study made a difference from previous studies by applying the PRECEDE-PROCEED Model as a theoretical framework because it is a cost-benefit evaluation framework used to help health program planners, policy makers and other evaluators, analyze situations and design health programs to influence alcohol use. The study tends to examine the Predictors of Alcohol use among in-school adolescents in a community of Ikenne Local Government Area, Ogun State Nigeria.

Therefore the study proposes the following hypotheses

1. There will be a significant relationship between respondents' personal predisposing factors (age, sex, family type) and alcohol use.
2. There will be a significant relationship between reinforcing environmental factors (media influence, family influence, peer influence, socioeconomic status) and alcohol use.

Materials and methods

Study design, population and location

The study adopted a quantitative cross-sectional study design. Multistage sampling technique was used to select participants for the study. In the first stage, stratified sampling of the schools into Government owned secondary schools and private in a community in Ikenne Local Government Area (LGA), Ogun State

There are 2 government secondary schools and 6 private secondary schools in the study area. In the second stage, the 2 government schools were selected because of their peculiarity as the only 2 Government owned Secondary school in the community. Also, 2 Private Secondary schools were selected out of the 6 schools by balloting.

Stage 3, further stratification of the 4 schools selected to the 3 senior classes (SS1, SS2, and SS3) was done. Finally, the simple random sampling technique was applied to select a total of 364 in-school adolescent in the study area.

Instrument for the Study

A 56-item validated questionnaire with 6 sections which focused on the objectives of the study and Cronbach alpha of 0.81 was used to collect information from respondents; this instrument was prepared in English Language as participants were students taught in English.

Section A addressed Socio-Demographic characteristics of the participants such as age, sex, class, religion, ethnicity, family type, family income, who the adolescent lived with; section B assessed Personal Predisposing factors such as knowledge of Alcohol use among in-school adolescents, perception on alcohol use; section C Environmental Reinforcing Factors influencing in-school Adolescents alcohol use. Comprising of peer influence, Family Influence and Media Influence; D assessed enabling factors that will discourage in-school Adolescents alcohol use; section E, self-reported of alcohol use among in-school adolescents. The PRECEDE-PROCEED Model was considered as a theoretical framework during the development of the questionnaire for the study.

Measures of variables

The socio demographic characteristics of participants in the study includes; age, sex, class, religion, ethnicity, family type, family income. Knowledge on alcohol use variable was measured on a 10-point rating scale, perception on alcohol use measured on a 28-point, environmental factors that would reinforce alcohol use measured on a 36-point rating scale, enabling factors on alcohol use measured on a 28-point rating scale and alcohol use among respondents measured a 30-point rating scale. Descriptive statistic and logistic regression model fixed at 0.05 significant level was conducted to give statistical responses to the research questions and hypotheses using Statistical Package for Social Sciences (SPSS) version 23.

Data Analysis

The data was collected, coded and analyzed appropriately using Statistical Package for Social Sciences (SPSS) version 23. 0. The data was analyzed to give descriptive frequencies and percentages. The logistic regression model was used to analyze the hypotheses. The model is appropriate because the dependent variable is a dummy variable (binary, scored as 0 for non-use and 1 for use of alcohol). The Logit regression

model is computationally the easiest of the logistic regression models, hence this study adopted the Logit regression model.

Ethical Consideration

Ethical approval was obtained from Babcock University Health Research Ethics Committee (BUHREC) to protect the participants' right. Informed consent was given through verbal communication and interaction with the students. Participants were allowed to voluntarily choose to participate. The information that was given from filling the instrument was strictly kept confidential and participants were told that there will be no penalty for filling the form and withdrawing at any time

Results

Socio-Demographic Characteristics of Respondents

The mean age of the respondents was 15.2±1.4 with minimum and maximum of 13 and 19 years respectively. More than half (53.3%) of the respondents were between the ages of 13-16. More than half (56.3%) of the respondents were female while 43.7% were male. Most (84.6%) of respondents were Christians. The predominant ethnic group among the respondents were Yoruba (73.6%). Other ethnic groups in Nigeria were also represented, while 18.4% of the respondents were from polygamous family. More than half (53.6%) lived with both parents, while 63.7% of the respondents were in SSSI, 27.5% were in SSS3 (see Table 1).

Knowledge of Alcohol

Almost 322 (88.5% see Table 2) of the respondents have heard of alcohol. More than half 186 (51.1%) of the respondents heard of alcohol from their schools followed by some 177 (48.6%) who got information from their friends. Less than 135 (37.1%) of the respondents heard of alcohol from home. Also, only 138 (37.9%) of respondents got information on alcohol from the media and socio-network platforms.

About 269 (73.9%) of the respondents classified Beer, as alcohol. Most 280 (76.9%) of the respondents classified Ogogoro/local gin as alcohol. Less than half 167 (45.9%) of the respondents classified palm wine as alcoholic beverage and only 82 (22, 5%) of the respondents classified Liquor drinks as alcohol. Majority of the respondents 299 (82.1%) knew that taking

alcohol is harmful to the body. More than half 209 (57.4%) of the respondents knew that alcohol is a depressant. However, 147 (40.4%) of the respondents agreed that alcohol can be used to treat mental disorders. The predominant effect of alcohol use agreed to by the majority of the respondents, especially as observed in their communities, include having unplanned sex 303 (83.2%), unplanned pregnancy 314 (86.3%), poor academic performance and failures 292 (80.2%), early parenthood as a result of unplanned pregnancy 305 (83.8%) and damaging of the liver 298 (81.9%).

The construct measuring level of knowledge was measured on a 10-point rating scale and result showed that the respondents scored mean of 5.2 ± 2.1 translated to the level of knowledge score of 53.0 % (see Table 4). From the result, we can deduce that the respondents had a relatively low level knowledge of alcohol use and implications.

Perception on Alcohol Use

About 308 (84.6% see Table 3) of the respondents agreed that excessive use of alcohol can result to addiction. Most 308 (84.6%) of the respondents agreed that alcohol use has serious health consequences. About 261 (71.7%) of the respondents agreed that abstinence from alcohol will yield good results. More than half 61 (66.5%) of the respondents disagreed that there is no harm in having alcohol during festivals. Less than half 128 (35.2%) of the respondents disagreed that alcohol use energizes one to enjoy sex. About 124 (80.7%) of the respondents disagreed that alcohol use shows that they are now adult. Most 313 (86%) of the respondents agreed that alcohol use may reduce quality of life.

The construct measuring the perception of the respondents was measured on a 28-point rating scale and showed that the respondents scored mean of 19.2 ± 3.2 translated to a perception score of 68.6% (see Table 4). From the result, we can say that the respondents had a fair perception on alcohol use.

Environmental factors (media, peer and family) to alcohol use

Less than 34 (9.4% see table 5) of the respondent agreed that they use alcohol because their friends do same. Most 276 (75.8%) of the respondents disagreed that alcohol is usually served to them during occasions in their neighborhood. Few 77 (21.2%) of the respondents

agreed that they like to pattern their life after their friends. Majority 303 (83.2%) of the respondents disagreed that drinking alcohol is a tradition in their family. Less than half 120 (33%) of the respondents disagreed that playing and listening to audio and videos that communicate alcohol consumption encouraged alcohol use. Few 51 (14%) of the respondents agreed that watching movies that showcase people taking alcohol encouraged them to alcohol use. The Environmental factors of the respondents were measured on a 36-point rating scale and showed that the respondents scored mean of 5.4 ± 2.8 translated to Environmental influence of 49.2 % (see Table 6).

From the result, we can deduce that the respondents had less environmental influence that contributed to alcohol use.

Discussion

The respondents' age distribution indicated that most of the respondents were between the ages of 13-16 years which under the law are regarded as minors thus not expected to consume alcohol. At this age their welfare responsibility rest on the parents and the school. Furthermore, adolescents are usually vulnerable to peer influence at this age which is in line with that majority (94%) of the respondents agreed that peer group influence affected adolescent alcohol use in Nigeria²⁰. The gender distribution showed that there were more females than males. This may be as a result of the enrolment mix. However, the difference in the number of male and female participants is relatively low. Most of the respondents were Christians. The Christian faith largely forbids the consumption of alcohol especially among adolescents, however, since most of the respondents are Yoruba, they may be exposed to alcohol use especially during certain traditional festivals. Findings from this study also showed that many of the respondents are from poor homes and this may make a child susceptible to peer influence or band wagon effect.

Despite the fact that the respondents are below the age of alcohol consumption, the prevalence of alcohol use among the respondents in the study area was 26%. Most of the respondents are well familiar with beverages classified as alcohol but interestingly, many of them did not classify the local Palm wine as alcoholic drink. This may be because palm wine is readily available and affordable and often used for festival rites as

observed by the researcher. Most of these adolescents got their information about alcohol from school and their peers confirming the existence of peer influence among the study group. This result is similar with the findings from Nigeria where it was reported that majority (94%) of the respondents agreed that peer group influence affected adolescent alcohol abuse.¹⁹ Findings from the study showed that majority of the respondents have knowledge of the influence of alcohol on their academic health and to the body and that it may increase adolescent engagement in pre-marital sex and incidence of unplanned pregnancy. However, they believe alcohol intake helps in boosting sexual performance and does not impair judgment. On the whole, the perception and knowledge level of the respondents as regards influence of alcohol was low. This result apparently shows the need for intervention in the study area.

Findings from this study revealed that the respondents reported that environmental factors (Peer Influence, Media influence and family influence) contributed to alcohol use which corroborates with the that a vicarious learning effect can be induced by media exposure and this can through the observation of a mediated character experiencing a reward or punishment for a specific behavior, therefore viewers build attitudes toward this action and model their own behavior after it^{13, 14}. From the findings quite a number of the respondents were from homes where the parents consumed alcohol and this

might have influenced these young ones at the slightest opportunity.

Findings from the study revealed that alcoholic drinks are easily accessible to the respondents since they are readily sold around them. However, the strong zero tolerance to alcohol use policy in their schools served as a deterrent to alcohol use. Respondents also claimed that their parents corroborated the discipline upheld by the school. However, the media have not sufficiently portrayed the harmful effects of alcohol especially on the adolescents. On the whole, the score for enabling factor that promotes alcohol use in the study area is high and shows that alcohol use intervention programmes and policies are better channeled through the schools while carrying along the parents for reinforcement. This result agrees with the findings from Nigeria^{13, 14}.

Factors that can increase alcohol use among adolescent in the study area include media influence, age of respondents, their knowledge of alcohol (especially unguided), adolescents raised in polygamous homes, poor perception of the effect of alcohol consumption, and weak enabling factors such as relaxed school policies, uncensored media influenced and permissiveness at home. Based on the age composition of the respondents, although most of them are relatively young, the odds are high that the older adolescents may influence the younger adolescents to consume alcohol. The possibility of the media and socio-networks to be a source of influence on alcohol consumption in the study area is confirmed.

Table 1. Socio-demographic Characteristics of the participants in the study

Variable	Options	Frequency	Percent
Age in Years	13-16	194	53.3
	17-19	170	46.7
Sex	Male	159	43.7
	Female	205	56.3
Class	SSS 1	232	63.7
	SSS 2	32	8.8
	SSS 3	100	27.5
Religion	Christianity	308	84.6
	Islam	51	14.0
	Traditional belief	5	1.4
Ethnicity	Yoruba	268	73.6
	Igbo	88	24.2
	Hausa	4	1.1
	Others	4	1.1
Type of family	Monogamous	196	53.8
	Polygamous	67	18.4

	Single Parent	101	27.7
Family income	<20k	119	32.7
	20k-50k	94	25.8
	51-100k	78	21.4
	Above 100k	73	20.1
	Archives	2	.7
	Executive	2	.7
I live with	Father only	34	9.3
	Mother Only	102	28.0
	Both Parents	195	53.6
	Guardian	33	9.1

Table 2. Respondents' knowledge of alcohol and its effect

	Frequency*	Percent
Knowledge		
I know what alcohol is	322	88.5
Alcohol is used to treat mental disorders	147	40.4
Taking Alcohol is harmful to the body	299	82.1
Alcohol is a depressant	209	57.4
Effects of alcohol use		
Anxiety	54	14.8
Poor judgment	102	28.0
Death	280	76.9
Increased appetite	267	73.4
Cancers	130	35.7
Addiction	213	58.5
Being intoxicated	259	71.2
Having unplanned sex	303	83.2
Spreading of sexually transmitted infections/HIV	168	46.2
Unplanned pregnancy	314	86.3
Septic Abortion	233	64.0
Failure in Examination	292	80.2
Early Parenthood	305	83.8
Damaging ones liver	298	81.9
Alcohol use include the following		
Beer	269	73.9
Palm wine	167	45.9
Ogogoro (local gin)	280	76.9
Liquor drinks	82	22.5
Water	48	13.2
Source of knowledge of alcohol		
Family members	135	37.1

Friends	177	48.6
Media and social network	138	37.9
School	186	51.1

* Multiple choice available

Table 3. Respondents Perception on Alcohol Use

Statements for Consideration	A	D
Excess use of alcohol can result to addiction	308(84.6%)	56 (15.4%)
Alcohol use has a serious health consequence	308(84.6%)	56(15.4%)
Abstinence from alcohol use will yield good result	261(71.7%)	103(28.3%)
There is no harm in having alcohol during festivals in my community	122(33.6%)	61(66.5 %)
Use of alcohol energizes one to enjoy sex	236(64.9%)	128(35.2%)
Alcohol use shows that you are now an adult	70(19.2%)	124(80.7%)
Adolescent alcohol use may reduce quality of life	313(86%)	51(14%)

Table 4. Summary of Descriptive Statistics of Mean, Prevalence and Standard deviation of predisposing variables

Variables	Max point on scale of measure	Mean	% of Max point	Std. Deviation
Level of Knowledge	10	5.2472	53.0	2.13669
Perception Measures Predisposing factors	28	19.2113	68.6	3.17459

Table 5. Respondents Environmental factors of alcohol use

Statements for Consideration	A	D
Peer Influences		
My friends drink alcohol, I think it is ok if I join them	34(9.4%)	330(90.7%)
During occasions in my neighborhood alcohol is usually served to adolescents	88(24.2)	276(75.8)
I like to pattern my life after some of my friends	77(21.2%)	287(78.8%)
Family Influences		
Drinking alcohol is a tradition in my family	61(16.8%)	303(83.2%)
My parents do not drink alcohol	209(47.5%)	155(42.5%)
None of my relatives or friend have ever discouraged me from drinking	69(18.9%)	295(81.1%)
Media Influences		
Enjoy playing/listening to audio/Videos that communicate alcohol consumption encourages adolescents alcohol use	120(33%)	231(63.5%)
When I watch movies/films that show people taking alcohol, I usually feel like taking alcohol too.	51(14%)	300(82.5%)
I like watching alcohol use advertisement	91(25%)	260(71.5%)

Table 6. Summary of Descriptive Statistics of Reinforcing (Environmental) variables

Variables	Max point on scale of measure	Mean	% of Max point	Std. Deviation
Respondents Environmental Factors on Alcohol use				
Peer Influence	12	5.2170	43.3	3.66198
Family Influence	12	5.8489	49.2	2.10384
Media Influence	12	5.2253	43.3	2.61671

Table 7. Distribution of respondents by alcohol use/ consumption

	Frequency	Percent
No	257	70.6
Yes	95	26.1
Total	364	100.0

Conclusion

In conclusion, in studying the predictors of alcohol use among in-school adolescents in a community in Ikenne LGA, Ogun State, Nigeria, it was discovered that their knowledge of the influence of alcohol use was generally low, while they remained highly susceptible to media influence. Thus, a health education intervention with assertive training would help remediate this knowledge gap, diminish the impact of enabling factors, and empower adolescents to take decisions devoid of negative peer influences.

Based on the findings of the study, the following are therefore recommended.

1. The school management should provide students with adequate information about policies and services available to reduce alcohol use.
2. Health education intervention with assertive training from primary schools will go a long way in proving qualitative knowledge on effects of alcohol use and empowering adolescents to take right decisions independent of their peers.
3. Incorporation of parents participation should be added to the framework of interventions on ameliorating alcohol use among adolescents
4. The school administration should strengthen the enforcement of law regarding alcohol use and deepen the counseling of children from polygamous homes.
5. The school management should organize orientation to sensitize students on the dangers of alcohol use in order to improve their perceptions.

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