

# Alcohol Knowledge and Consumption among Medical Students in Lagos ,Nigeria

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**Abstract** Alcohol consumption has been linked to the risk of developing cancers and other Non communicable diseases. The knowledge, attitude and practices of alcohol use among the next generation of health care professionals will affect efforts to prevent alcohol related diseases. The aim of this study was to assess the knowledge, attitude and practices of medical students regarding alcohol consumption. It is a descriptive cross-sectional study conducted among a representative sample of 240 students using self administered questionnaires. Majority (83. 3%) of the respondents had good knowledge about alcohol however less than half (46.6%) recognized that alcohol was a risk factor for cancer. About a third (33.3%) of the respondents drinks alcohol. The majority (73.8%) of the respondents who consumed alcohol did so “to have fun with friends”. Most (66.3%) of the respondents that did not consume alcohol did not do so because it is against their religion. The senior level students had better knowledge on alcohol than the junior students ( $p<0.05$ ). However, this did not influence their practice. ( $p<0.05$ ). Alcohol consumption was more prevalent among males than females ( $p<0.05$ ). Education on alcohol needs to be given more emphasis to prepare them for work in alcohol control.

**Keywords** Alcohol Knowledge, Alcohol Consumption, Students

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## 1. Introduction

Worldwide Non Communicable diseases (NCDs) represent over 60% of all deaths, now making it the leading cause of mortality globally. Developing countries have the worst impact and many of these deaths could have been prevented.<sup>1</sup> Alcohol use has been identified as one of the four most important risk factors of Non Communicable diseases (NCDs), and it is the third largest global disease burden risk factor. Every year, the harmful use of alcohol kills 2.5 million people, including 320 000 young people between 15 and 29 years of age.<sup>2</sup>

Alcohol consumption is the least addressed of all four

NCD risk factors. In recognition of this, WHO is calling upon countries to promote the implementation of the WHO global strategy to reduce the harmful use of alcohol. Part of strategies to do this is raising the awareness of the problems caused by the harmful use of alcohol among young people and promoting the production, training and retention of health workers with a view to facilitating adequate deployment of a skilled health workforce within countries and regions.<sup>2</sup>

Alcohol consumption has been linked to the risk of developing cancers, cardiovascular diseases, liver disease and mental health disorders. Alcohol has been linked to eight different cancers; mouth cancer, nasopharynx cancer , oropharynx cancer , oesophageal cancer, colon and rectum cancer, liver cancer and breast cancer.<sup>3,4,5,6</sup> The risk increases with the amount of alcohol a person drinks.<sup>5,6</sup>

Globally, alcohol consumption has increased in recent decades. Most of that increase is in developing countries with few methods of prevention, control or treatment. The rise in alcohol consumption in developing countries provides ample cause for concern over the possible advent of a matching rise in alcohol related problems in those regions of the world most at risk. Some reasons for the limited attention given to the risks associated with alcohol consumption are the protective effects of alcohol in ischaemic disease in the middle and older age groups, the confusion on whether it is beneficial for other cardiovascular diseases, its use for socio-cultural purposes, gatherings, and its use among the affluent and policymakers.<sup>7</sup> On the other hand, alcohol consumption is less likely to be reported by users and more likely to be overlooked when collecting information because of religious and cultural norms. Apart from the effects of harmful alcohol consumption on health, alcohol has social consequences such as drunkenness which may result in car crashes, domestic violence, alcohol/ drug dependence and unintentional injuries to self or others.<sup>2</sup>

Due to the epidemic increase in non communicable diseases, especially in low and middle income countries, it is important that health care professionals are trained to be opinion leaders who will positively impact on the community with health promotion programs. Research on alcohol and its translation is important to provide the

knowledge base for ongoing national and global action. Health professionals are in an excellent position that allows them to have a role in alcohol control. They can intervene to prevent and demand reduction measures related to alcohol dependence as they reach a high proportion of the population through education, communication and campaigns that raise awareness regarding effects of alcohol on health. They have opportunities to give guidance and answers related to the effects of alcohol use. Medical students who are the future doctors therefore have a role to play in efforts to control alcohol use.

The aim of this study was to determine the level of knowledge and attitude to alcohol consumption amongst medical students in Lagos, Nigeria and to find out their level of alcohol consumption. These medical students are part of the future health work force and their perceptions and practices influence the communities in which they serve. In addition they are young people a vital group at which health promotion strategies is targeted. The results of this study contributes to the data base needed for evidence based decision making in developing the needed programmes to reduce harmful alcohol use and ultimately reduce the burden of cancers and other Non communicable diseases.

## 2. Methodology

**Study Population** – This study was conducted among medical students in a college of Medicine in Lagos, Nigeria. At The time of the study there were 774 students studying medicine and Surgery ,which is a five year course spanning from 200 level (year 2) to 600 level (year 6) .

**Study Design** - This is a descriptive cross-sectional descriptive study. The minimum sample size was calculated to be 197 using the formula  $n = Z^2PQ/D^2$ . Simple random sampling by balloting was done and two levels were picked out of the five levels. The two levels picked were 200 and 500. There were 176 students in 200 level and 142 students in 500 level. All students in each class were recruited into the study.

**Data collection and analysis** – Data was collected using pre- tested, self administered questionnaires. The questionnaire was developed based on a review of literature on similar studies. Questions were developed and structured to meet the research objectives. The questionnaire was made up of 4 sections with questions on socio demographic characteristics (section A), knowledge (section B), attitude (section C) and practice (section D) related to alcohol use. Knowledge was assessed on the pharmacological properties of alcohol (focusing on the effects on the gastrointestinal system and the central nervous system) and the effect of alcohol on disease process. EPI info 6 statistical software was used for data entry and analysis. Frequencies and cross tabulations were generated. The  $\chi^2$  statistical test was used to compare proportions and to evaluate associations. Differences and associations yielding p values of less than 0.05 were considered statistically significant. Knowledge

was graded using 10 questions and one mark was awarded for each correct answer. Those who scored below half of the maximum score were graded as poor. Informed consent was obtained from all the respondents.

## 3. Results

A total of 300 questionnaires were administered, 240 were fully completed, returned and analyzed .There were 140 respondents (58.3%) in 200 level and 100 respondents (41.7%) in 500 level. The mean age of respondents was 17.2years. Majority (44.2%) of the respondents were in the age group 16-20years.Over half (55.4%) of the respondents were female. Almost all (96.7%) of the respondents were single. Majority (73.3%) of the respondents were Christians while about one quarter (25.6%) were Muslims.(Table 1 )

**Table1** Socio-demographic characteristics of respondents

Age distribution		
Age(yrs)	Frequency	Percent (%)
16-20	106	44.2
21-25	81	33.8
26-30	11	4.6
>30	2	0.8
Total	240	100
Sex distribution		
Sex	Frequency	Percent (%)
Male	107	44.6
Female	133	55.4
Total	240	100
Level of medical education		
Level	Frequency	Percent (%)
200 ( year 2)	140	58.3
500 (year 5)	100	41.7
Total	240	100
Religion distribution		
Religion	Frequency	Percent (%)
Christianity	176	73.3
Islam	62	25.8
Others	2	0.8
Total	240	100

All of the respondents were aware of alcohol consumption. Most (60.8%) of the respondents described alcohol as a stimulant, 42.5% of them described alcohol as a depressant , while 28.3% described alcohol as a pain killer. Their main source of information about alcohol was the media (82.5%) and books (63.8%), less than half (46.5%) of the respondents received information from family members.

About one quarter (25.4%) of the respondents stated that alcohol is good for the body. Majority (89.2%) of the respondents were aware that alcohol consumption can cause liver cirrhosis , majority (81.7%) of the respondents also

stated that alcohol could cause heart disease, while less than half (46.3%) of the respondents were aware that alcohol was a risk factor for cancer. Majority of the respondents (83.3%) had good knowledge about alcohol.(Table 2)

**Table 2.** Knowledge about alcohol

Diseases related to Alcohol consumption	Frequency	Percent (%) n=240
Liver cirrhosis	214	89.2
Cancer	111	46.3
Dementia	94	39.2
Heart disease	196	81.7
Overall knowledge about alcohol	Frequency	Percent (%)
Good	200	83.3%
Poor	40	16.7
Total	240	100

Some of the respondents (22.9% ) believed that it is good to consume alcohol, 45.0% of the respondents believes that drinking alcohol results in bad behavior among students,

while 28.8% of the respondents believe that moderate alcohol consumption among students is appropriate .Almost half of respondents (46.3%) strongly disagree to the statement that alcohol stimulates students to perform well in their academic work while few, 4.6%, strongly agree that alcohol stimulates students to perform well in their academic work. 40.4% of the respondents stated that alcohol is dangerous to one’s life no matter how small is consumed.(Table 3)

Majority (74.6%) of the respondents have friends that drink alcohol while about a third (33.3%) of the respondents drink alcohol. (Table 4) Most (53.8%) of the respondents that drink alcohol do so occasionally, while 13.8% drink alcohol daily. Majority (73.8%) of the respondents who drink alcohol say they do so to have fun with friends, 22.5% drink alcohol to feel better when depressed while 26.3% of the respondents consume alcohol to make them feel bold. Most (66.3%) of the respondents that do not drink alcohol say they do not do so because it is against their religious beliefs while 41.9% of the respondents believe it is against moral standard.(Table 5)

**Table 3.** Respondents attitude towards alcohol consumption

Variable	Strongly agree	Agree	Not sure/neural	Disagree	Strongly Disagree
Alcohol stimulates students to perform well in their academic work	11(4.6%)	26(10.8%)	37(15.4%)	52(21.7%)	114(46.3%)
Alcohol consumption is dangerous to one’s health	0(0.0%)	97(40.4%)	41(17.1%)	80(33.3%)	22(9.2%)
Any students that does not drink alcohol is perceived as immature	7(2.9%)	24(10.0%)	8(3.3%)	74(30.8%)	126(52.5%)

**Table 4.** Respondents practice of alcohol consumption

Drink alcohol	Frequency	Percent (%)
Yes	80	33.3
No	160	66.7
Total	240	100

**Table 5.** Respondents reasons for alcohol drinking practice

Reasons for drinking	Frequency	Percent (%) n= 80
To have fun with friends	59	73.8
To feel better when depressed	18	22.5
To fit in and be accepted among friends	15	15.0
Reasons for not drinking	Frequency	Percent (%) n=160
It is against my religious beliefs	106	66.3
None of my parents drink	53	33.1
Makes one to misbehave	58	36.3
Labels one bad person	49	30.6
Student’s drinking is against moral standard	67	41.9

(Multiple responses were allowed)

There was statistically significant association between level of study and overall knowledge of respondents. The more senior students (500 Level) students had better knowledge of alcohol. ( $X^2=50.585$ ,  $p<0.0001$ ). There was statistically significant association between sex and alcohol consumption of respondents. ( $p <0.05$ ) alcohol consumption was more prevalent among male students than the females. ( $X^2= 74.5$ ,  $p<0.0001$ ). There was statistically significant association between level of study and practice of alcohol consumption ( $p <0.05$ ). Alcohol consumption was more prevalent among senior students ( $X^2=31.520$ ,  $p <0.0001$ )

#### 4. Discussion

All the respondents knew about alcohol. This is expected as alcohol is widely available to adults and its use is legal and accepted in many societies.<sup>8</sup> Their major source of information were television, radio and books. The least represented source of information was from family members. The media has a major influence on alcohol use among young people.<sup>9</sup>

Most (60.8%) of the respondents described alcohol as a stimulant, others (42.5%) described alcohol as a mind depressant, and as a pain killer (28.3%). 40.4% of the respondents stated that alcohol is dangerous to one's health. Generally, majority of the respondents had negative views about alcohol however about one quarter (25.4%) of the respondents stated that alcohol is good for the body. Beliefs about alcohol are established very early in life, even before the child begins elementary school. Before age 9, children generally view alcohol negatively and see drinking as bad, with adverse effects. By about age 13, however, their expectancies shift, becoming more positive. As would be expected, adolescents who drink the most place the greatest emphasis on the positive and arousing effects of alcohol.<sup>10</sup>

Many 83.3% of the respondents had overall good knowledge about alcohol. This level of knowledge was expected considering their level of education and course they are studying. Similarly in a study carried out in Uganda, the study participants demonstrated some awareness of the short-term and long-term problems associated with excessive alcohol use. They were fully aware that alcohol use and particularly, excessive use could have a detrimental impact on an individual's health and quality of life and were able to identify general health problems associated with excessive alcohol consumption.<sup>9</sup>

Although alcohol consumption has occurred for thousands of years, many of the varied health effects have been discovered fairly recently. Alcohol consumption has health and social consequences via intoxication, dependence, and other biochemical effects. Overall there is a causal relationship between alcohol consumption and more than 60 types of disease and injury. Liver disease is the most common medical complication of alcohol abuse. Therefore as expected Majority (89.2%) of the respondents were aware that alcohol causes liver cirrhosis and 81.7% of the

respondents also stated that alcohol could cause heart diseases. Alcohol has complex effects on the cardiovascular system. Although the deleterious effects of excessive alcohol use on the cardiovascular system are well established, there is controversy over the effects of moderate drinking (one to three drinks per day) on the incidence of coronary heart disease (CHO). A number of observational studies concluded that moderate alcohol consumption actually prevents CHD and even reduces mortality.<sup>5</sup>

Chronic alcohol use increases the risk for some cancers.<sup>5,6</sup> Alcohol consumption has been identified as carcinogenic for cancers of the colo-rectum, female breast, larynx, liver, oesophagus, oral cavity and pharynx. The higher the consumption of alcohol, the greater the risk for these cancers.<sup>5,8</sup> However less than half (46.3%) of the respondents were aware that alcohol could be a risk factor for cancer. This low level of awareness of alcohol as a risk factor for cancer among these respondents shows that there are gaps in their knowledge of harmful alcohol use and it is necessary to focus on bridging this gap to make them appropriately educated to make the needed contribution towards reducing the scourge of cancers linked to alcohol consumption.

There was a statistically significant association between the level of study of the respondents ( $p=0.0001$ ) and their level of knowledge, with the more senior five hundred level students having a better knowledge than the students in two hundred level. This is expected and attributable to the fact that the 500 level students have had clinical postings which would make them more knowledgeable on health related issues including alcohol.

Many (46.3%) of the respondents strongly disagreed that alcohol stimulates students to perform well in their academic work while a few either strongly agreed (4.6%) or agreed (10.8%) that alcohol stimulates students to perform well in their academic work. This misconception needs to be dispelled. Alcohol consumption can hinder academic performance in students.<sup>11,12</sup> Alcohol and academics do not form a favourable combination.

There are many reasons for placing an emphasis on education and information, including the notion that a population should know about and understand harmful alcohol use and associated health risks, even though the evidence base indicates that the impact of alcohol-education programmes on harmful use of alcohol is small.<sup>2</sup> This may explain the finding in this study that despite the fact that the senior students had better knowledge of the harmful effects of alcohol, alcohol consumption was more prevalent amongst them. To be effective, education about alcohol needs to go beyond providing information about the risks of harmful use of alcohol to promoting the availability of effective interventions and mobilizing public opinion and support for effective alcohol policies.<sup>2</sup>

One third (33.3%) of respondents stated that they consume alcohol. This is lower than was reported in a study among out of school youths in Lagos, in which 70.1% of them reported that they consume alcohol.<sup>13</sup> The lower prevalence found in

this study may be due to the educational level of the students as out of school youth report more high risk behavior . A survey among young people in England found that less than half of pupils (43%) had ever drunk alcohol.<sup>14</sup> Besides volume of alcohol, the pattern of the drinking is relevant for the health outcomes. Concerning the frequency of consumption this study, Most (53.8%) of the respondents that drink alcohol do so occasionally, and 13.8% of them drink alcohol daily which increases their risk of cancers and other alcohol related diseases. 28.8% of them drank alcohol within the last week , which is lower than reported in a study carried out among medical students in the United states of America, which showed that 78% of the respondents consumed alcohol the week before the study.<sup>15</sup> A survey among young people in England found that Around half of pupils aged between 11 and 15 said that they had drunk alcohol recently.<sup>14</sup>

In this study, among those who drink, their main reason for consuming alcohol was to have fun with friends (73.8%). 26.3% of the respondents consumed alcohol to make them bold ,and 22.5% of the respondents consumed alcohol to feel better when depressed This result is similar to a study carried out in Uganda which stated that respondents consumed alcohol in order to escape problems.<sup>9</sup>Alcohol has been cited as a coping strategy for stress, a way to escape problems, and a means to overcome idleness and boredom.<sup>9</sup> There are various influences that lead people to drink alcohol. These include inadequate parental controls, the environment in which children are raised, social events, the need to prove masculinity and peer pressure.<sup>9</sup> Majority (74.6%) of the respondents had friends that consume alcohol and this could influence their drinking habits . Among those that did not consume alcohol, their major reason for not doing so was related to religion. 66.3% stated that they did not do so because it was against their religious beliefs, and this is in agreement with a study carried out among medical students in the united states which stated that strong religious identity was associated with abstinence from alcohol.<sup>15</sup> Countries where Islam is practiced extensively have very low value of pure alcohol per capita.<sup>8</sup> 41.9% of respondents stated that alcohol consumption was against moral standard while 33.1% stated that they did not consume alcohol because their parents did not do so. Children whose parents use and abuse alcohol are likely to do so when they became adults.<sup>9</sup>

There was a statistically significant relationship between the sex of the respondents and alcohol consumption ( $p < 0.05$ ) This is similar to what has been reported in other surveys that males tend to use alcohol more than females.<sup>8,9,16</sup> Existing gender norms largely influence the drinking habits of men and women and most social norms to regulate the use of alcohol tend to be gendered. It is generally agreeable for men to consume strong drinks and to have their drink anywhere. Women, on the other hand, are expected not to have strong drinks or drink away from their home. While use of alcohol among young boys is linked to masculinity, among girls it was associated with lack of respect .<sup>9</sup>However the finding in this study that almost 10% of female respondents are current

alcohol drinkers is of concern as alcohol consumption has been linked to the development of breast cancer. Even the consumption of two drinks per day causes an increased risk for breast cancer.<sup>8</sup> Drinking among young women will lead to a significant increase in breast cancer in the next half century .<sup>17</sup>

## 5. Conclusion and Recommendation

Alcohol consumption is a prevalent practice among medical students and there are gaps in their knowledge on risks of alcohol consumption. As future health professionals, they are in a position that allows them to have a role in alcohol control. Medical Students should be educated about health effects of harmful use of alcohol especially its link with cancers to equip them appropriately to give guidance to their future patients and the general population on harmful alcohol use.

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## REFERENCES

- [1] United Nations.Political declaration of the high level meeting of the general assembly on the prevention and control of NCDs. 2011. Sixty –sixth session. Agenda item 11
- [2] WHO . World Health Organization .Global strategy to reduce the harmful use of alcohol . WHO 2010
- [3] Rehm J, Baliunas D, Borges GL, Graham K, Irving H, Kehoe T, Parry CD, Patra J, Popova S, Poznyak V, Roerecke M, Room R, Samokhvalov AV, Taylor B . The relation between different dimensions of alcohol consumption and burden of disease: an overview. *Addiction*.2010. 105(5): 817-43.
- [4] Parry CD, Patra J, Rehm J Alcohol consumption and non-communicable diseases: epidemiology and policy implications. *Addiction*.2011. 106(10): 1718-24.
- [5] American Cancer Society .Alcohol and cancer. American Cancer Society. 2007.Inc No. 3000212.
- [6] National cancer institute. Alcohol and cancer risk. Fact sheets. National Cancer Institute at the National Institute of Health.2013
- [7] Room R, Rehm J, Parry C Alcohol and non-communicable diseases (NCDs): time for a serious international public health effort. *Addiction*.2011 106(9): 1547–8.
- [8] World Health Organization .Global status report on alcohol and health.2011
- [9] Kafuko A, Bukuluki P. Qualitative Research in Uganda on Knowledge, Attitudes and Practices Concerning Alcohol. *Soul beat Africa* .2009
- [10] Dunn, M.E., and Goldman, M.S . Age and drinking-related differences in the memory organization of alcohol expectancies in 3rd, 6th, 9th, and 12th grade children. *Journal of Consulting and Clinical Psychology*.1998. 66:579–85.

- [11] CASA Columbia . Teen tipplers; Americas underage drinking epidemic .Natural centre on addiction and substance abuse.2003. [www.hscic.gov.uk](http://www.hscic.gov.uk)
- [12] Mc kinney A, Coyle K .Alcohol hangover effects on measures of affect the morning after a normal night's drinking. Alcohol and Alcoholism .2006.41 (1): 54-60.
- [13] Odeyemi KA ,Osibogun A. Sexual behaviour and associated risk factors among adolescent /young adult male transport workers at yaba bus stop, lagos. The Nigerian Postgraduate Medical Journal. 2007. vol 14(1); 21-24
- [14] HSCIC . Smoking, Drinking and Drug Use Among Young People in England - 2012 [NS] 2013.Available at ;
- [15] Baldwin DC, Hughes PH, Conrad SE, Storr CL, Sheehan DV Substance abuse among senior medical students. A survey of 23 medical schools. JAMA 1991. 265:207-48
- [16] Finger W.R. Some cultures tolerate risky male behaviour. Network family health international. 2000. 20(3): 21-3.
- [17] Collaborative Group on Hormonal Factors in Breast Cancer , Alcohol, tobacco and breast cancer- collaborative re analysis of individual data from 53 epidemiological studies including 58515 women with breast cancer and 75067 women without the disease. British journal of cancer 2002 .87 1234- 45