

Prevalence of the use of alcohol and tobacco among adolescent students at Enugu Nigeria.

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Abstract

Background: The use of recreational and illicit psychoactive substances constitutes a huge public health problem in the world. Cigarette smoking leads to cancer, cardio-pulmonary diseases, stroke and other illnesses and causes the death of about 8 million people worldwide annually. Tobacco is used not only as cigarettes but also as pipe, cigar or tobacco snuff (tobacco leaves ground to powdery). Harmful use of alcohol causes lots of problems including ill health, loss of job, broken homes and millions of deaths annually. In Nigeria there is paucity of current statistics on illicit and recreational drug use by adolescents. The objective of this study was to investigate the prevalence of the use of alcohol and tobacco among teenage students Enugu town, Nigeria.

Materials and Methods: We carried out a cross-sectional study from March to May 2017 involving six secondary schools located in Enugu, Nigeria. The schools were chosen by systematic stratified random sampling to include schools owned by the government as well as those owned and operated by private entrepreneurs. Pre-validated self-administered anonymous questionnaire were given to students in Senior Secondary school class 2 (SS2) with the permission of school authorities. Each respondent who consented to complete the questionnaire did so confidentially without any coercion or inducement. Data was analyzed using the IBM SPSS version 20 (IBM corporation, New York, USA). Statistical significance of any differences was determined at $p \leq 0.05$.

Results: Only a small proportion of respondents had ever used tobacco (for boys:1.6% for tobacco snuff; 1.8% pipe, 3.2% cigar, and 9.2%) but higher percentages had taken alcohol (42.4% and 13.9% had ever taken beer and whiskey respectively). The use of these substances was less among female students than among the males. The observed differences were statistically significant for beer, cigar, and tobacco snuff with $p = 0.00$, 0.0005 , and 0.01 respectively.

Key words: Alcohol, tobacco, drug abuse, cigarette, adolescent, youth, Nigeria.

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I. Introduction

The use of recreational and illicit psychoactive substances constitutes a huge public health problem in the world. The dangers of the use of illicit and addictive substances are many and include: drug dependence, psychosis, memory impairment, mental depression, cardio-pulmonary disorders, road traffic accidents, and involvement in crime, amongst others^{1, 2, 3}. Besides, involvement in the use of psychoactive drugs in adolescence is associated with drug addiction, dependence, and drug-related early death in adulthood⁴⁻⁸. The substances known to be used illegally or abused worldwide include alcohol, tobacco, heroine, cannabis, opiates including codeine, barbiturates, hallucinogens, inhalants (volatile substances and glue), cocaine, and amphetamine, among others⁹⁻¹³.

Cigarette smoking leads to cancer, cardio-pulmonary diseases, stroke and other illnesses and causes the death of about 8 million people worldwide annually¹⁴. Tobacco is used not only as cigarettes but also as pipe, cigar or tobacco snuff (tobacco ground to powdery form for inhalation or application to the gum and teeth).

Harmful use of alcohol causes lots of problems including ill health, loss of job, poor marital relationship and broken home. Damage done to the human body by alcohol abuse results from underlying inflammation, increased oxidative stress, aberrations in protein synthesis, increased catabolic processes, and derangements in lipid metabolism^{9, 10, 15}. Though the liver is the main organ for alcohol metabolism, hepatitis,

and in extreme cases liver cirrhosis, mental impairment and death¹¹⁻¹³. According to World Health Organization (WHO), three million people die yearly worldwide as a result of harmful use of alcohol amounting to 5.3% of all deaths. Deleterious effect of alcohol consumption depends on how much is taken and the pattern of consumption of alcohol¹⁶.

The involvement of adolescents in drug abuse is a very worrisome public health problem globally. The concern is partly because commencement of alcohol consumption at a youthful age is a key risk factor for dependence in later life and most adult smokers started smoking during their teenage years^{4, 5, 17}.

The determinants of use of illicit drugs in youthful age include: presence of adults in the household who abuse drugs, male gender, family history of drug dependence, older age, poor relationship with teachers, absence of involvement in sporting activities, poor performance at school, peer pressure, absence of involvement in religious activities, and lack of parental supervision¹⁸⁻²³.

Many youths are drawn into the use of drugs initially by peer pressure, desire to meet up with expectation of some other people, curiosity and experimentation, and the influence of what are presented on television and social media^{22, 23, 24}.

In Nigeria, there is paucity of current statistics on illicit and recreational drug use by adolescents. The objective of this study was to investigate the prevalence and knowledge of the use of alcohol and tobacco among teenage students at Enugu Nigeria.

We hope that the results of the study would help policy makers, school officials, parents, healthcare providers, and other stakeholders, in planning and implementation of prevention, counseling and treatment programs for affected youths.

II. Methods

A cross-sectional study was carried out from March to May 2017 involving six secondary schools located in Enugu in Southeastern Nigeria. The schools were chosen by systematic stratified random sampling to include schools owned by the government as well as those owned and operated by private entrepreneurs. All the schools enrolled both boys and girls (co-educational secondary schools) and were located in Enugu metropolis.

The instrument of research was a pre-validated self-administered anonymous questionnaire. There were questions on whether the respondent had “ever seen” or “ever used” one or more out of a list of substances. There was also, among other questions, an enquiry on whether the respondent “had ever seen an age mate using” any of the drugs or forms of drugs listed on the questionnaire. The questionnaire did not ask for the names of the respondents or any identifying information in order to maintain anonymity. Each respondent completed the questionnaire confidentially without any coercion or inducement.

Approval to carry out the survey in each school was obtained from the school authorities but only those students who consented to complete the questions completed the questions and none was compelled to fill the questionnaires. The questionnaires were distributed in each of the schools to all the students in senior secondary school class 2 (equivalent to the 11th grade in the United States of America). Research personnel collected the completed questionnaires soon after they were completed and handed them over to the principal investigator for safe storage pending data entry and analysis. Data was analyzed using the IBM SPSS version 20 (IBM corporation, New York, USA). Statistical significance of any differences was determined at $p \leq 0.05$.

III. Result

Five hundred and eighty eight students completed the questionnaires out of about 600 questionnaires given out. As shown in Table 1, 231(39.3 %) respondents identified themselves as girls, 347 (59.0 %) as boys and 10 (1.7 %) did not indicate their gender. The age range of the majority of respondents was 11 years to 16 years, whereas 0.3 % (1 student) and 17.9 % (105 students) were below 11 years and 17 years to 19 years respectively. With respect to academic performance in the previous class, the majority indicated that they were above average, while 23 (3.9 %) did not rate their academic performance. Most of the respondents (72.8 %) resided in the urban areas of Enugu.

As shown in Table 2, over 50% of the respondents had seen all the listed forms of alcohol and tobacco. Apart from beer (4-6% alcohol by volume), less than 50% of the respondents had seen anyone about their age using any of the listed substances. Only a small minority had ever personally used any of the listed forms of alcohol or tobacco, with the exception of beer that had been used at least once by 42.9% of all respondents,

In Tables 3 to Table 7 the frequency distribution disaggregated by gender and school proprietorship (ownership of school) were presented respectively for students who had ever seen any of those drugs; those who had ever seen an age mate use any of the drugs; and for those who had personally ever used any of the drugs as listed.

The number of girls who had ever seen a cigarette was statistically lower compared to the boys as shown in Table 3. Only 6.5% and 12.1% of the girls and boys respectively had ever seen an age mate using tobacco snuff. The difference in this observation by gender was statistically significant as shown in Table 4. In

Table 5 the reports from public schools and from private schools on the number of students who had ever seen an age mate using any form of alcohol or tobacco. More positive responses came from the public schools than from private schools, and the difference was statistically significant.

The numbers of male students who had ever taken beer, smoked cigar, or used tobacco snuff were higher than those of the girls who had ever done so and the observed differences were statistically significant with $p = 0.00, 0.0005, \text{ and } 0.01$ respectively.

More male students used alcohol and tobacco than the female students. Experience with these recreational drugs was significantly higher in schools owned by the government (public schools) than in private schools. Overall, less than 7.9% of the respondents of both gender had ever taken tobacco or gin/whiskey, but 51.3% and 30.7% of male and female students respectively reported that they had taken beer at least once.

IV. Discussion

The abuse of recreational drugs among adolescents and young adults is a key source of concern among parents, teachers, healthcare givers, health policy makers and other stakeholders. Part of the reasons for the concern are the wide array of repercussions and complications of harmful use of alcohol, tobacco, and other such drugs including drug addiction and dependence, damage to health, poor human relationships, and death^{9, 16, 17, 23}.

Only a small proportion of respondents in this study had ever used tobacco (1.7% for tobacco snuff, 1.9% pipe, 2.9% cigar, and 7.8% cigarette) whereas 12.1% and 42.9% had ever taken beer and whiskey respectively. Beer was more popular among the respondents than gin or whiskey). Although the majority of students who participated in this cross-sectional survey were familiar with alcohol and tobacco, the use of tobacco and alcohol among them was low compared to the reports from some other studies where as much as 90% of adolescents had experimented with alcohol and tobacco^{3, 23, 26}.

With respect to gender differences, there was some similarity between the results of this study and those of another study carried out in Cape Town, South Africa²⁶ where the prevalence rates for alcohol and tobacco use were lower for girls than for the boys.

Another study carried out in Trinidad and Tobago found that drug use among adolescent students was associated with low school grades. In our study most of the respondents indicated that they were above average in academic performance.²⁷ A limitation of studies such as this is that the results are dependent on unverified answers volunteered by the respondents.

We found that drug use was higher among students in public secondary schools than those in private schools. This was unlike a study in Puerto Rico where teenage drug use was higher in private schools than in public schools²⁸. However whereas the Puerto Rican private schools studied were elitist schools patronized by the rich, the private schools in our study were not exclusively for the rich.

V. Conclusion

The teenage students who participated in this cross-sectional survey were familiar with different forms of tobacco and alcohol available in their environment. Majority of them were above average in academic performance and only a minority had personally indulged in the use of alcohol and tobacco.

More studies are required to survey a larger youth population in both urban and rural neighborhoods, and to document the age of commencement of drug use and the quantities of drugs consumed by users.

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Table1: General Characteristics of the Respondents (n=588)

Characteristics	Frequencies (%)
Gender	
Male	347(59.0)
Female	231(39.3)
No response	10 (1.7)
Age (years)	
Less than 11	1 (0.3)
11-13	79 (13.4)
14-16	394 (67.0)
17-19	105 (17.9)
No response	8 (1.4)
Residence	
Enugu Urban	428 (72.8)
Rural Area	46 (7.8)
Out Side Enugu	22 (3.7)
Overall performance in previous class	
Don't Know	23 (3.9)
Less than average	30 (5.1)
Average	186 (31.6)
Above average	154 (26.2)
Excellent	177 (30.1)
No response	18 (3.1)

Table 2: Percentage distribution of students: ever seen; ever seen age mate using it; and ever personally used any of the listed substances (n=588)

Drug/ Substances	Frequencies (%)		
	Ever seen	Seen age mate using it	Used personally
Beer (4%-6% alcohol)	522 (88.8)	424 (72.1)	252 (42.9)
Gin/whiskey (≤ 40% alcohol)	330 (56.1)	146 (24.8)	71 (12.1)
Cigarette	513 (87.2)	272 (46.3)	46 (7.8)
Cigar	310 (52.7)	124 (21.1)	17 (2.9)
Tobacco pipe	187 (31.8)	41 (7.0)	11 (1.9)
Tobacco snuff (ground tobacco)	269 (45.7)	60 (10.2)	10 (1.7)

Table 3: Percentage distribution of students on the Drugs/ substances ever seen disaggregated by gender (n=578)

Drug/ Substance	Frequency (% among gender)		Chi-Square/ Fisher's Exact values	P- Value
	Male (n=347)	Female (n= 231)		
Beer	304 (87.6)	210 (90.9)	1.53	0.21
Gin or whiskey	194 (55.9)	129 (55.8)	0.000	0.98
Cigarette	292 (84.1)	213(92.2)	8.16	0.003*
Cigar	179 (51.6)	125 (54.1)	0.35	0.55
Tobacco pipe	110 (31.7)	71 (30.7)	0.06	0.80
Tobacco snuff	156 (45.0)	107 (46.3)	0.10	0.74

Table 4: Percentage distribution of students on “ever seen age mate using it” disaggregated by gender (n=578)

Drug/ Substances	Frequency (% among gender)		Chi-Square/ Fisher's Exact values	P- Value
	Male (n=347)	Female (n= 231)		
Beer	255 (73.5)	164 (71.0)	0.43	0.51
Gin or whiskey	94 (27.1)	49 (21.2)	2.57	0.11
Cigarette	162 (46.7)	107 (46.3)	0.007	0.93
Cigar	75 (21.6)	45 (19.5)	0.38	0.53
Tobacco pipe	28 (8.1)	10 (4.3)	3.15	0.07
Tobacco snuff	42 (12.1)	15 (6.5)	4.91	0.02*

Table 5: Percentage distribution of students on “ever seen age mate using it” disaggregated by Ownership of schools (n=588)

Drug/ Substances	Frequency (% among gender)		Chi-Square/ Fisher's Exact values	P- Value
	Government owned (n=380)	Private owned (n= 208)		
Beer	297 (78.2)	127 (61.1)	19.54	0.00*
Gin or whiskey	117 (30.8)	29 (13.9)	20.44	0.00*
Cigarette	213 (56.1)	59 (28.4)	41.45	0.00*
Cigar	101 (26.6)	23 (11.1)	19.46	0.00*
Tobacco pipe	31 (8.2)	10 (4.8)	2.32	0.12
Tobacco snuff	44 (11.6)	16 (7.7)	2.21	0.13

Table 6: Percentage distribution of students: “ever personally taken a substance” disaggregated by gender (n=578).

Drug/ Substances	Frequency (% among gender)		Chi-Square/ Fisher's Exact values	P- Value
	Male (n=347)	Female (n= 231)		
Beer	178 (51.3)	71 (30.7)	23.90	0.00*
Gin or whiskey	47 (13.5)	22 (9.5)	2.13	0.14
Cigarette	28 (8.1)	16 (6.9)	0.25	0.61
Cigar	15 (4.3)	1 (0.4)	7.79	0.005*
Tobacco pipe	9 (2.6)	2 (0.9)	2.21	0.13
Tobacco snuff	9 (2.6)	0 (0.0)	6.08	0.01*

Table 7: Percentage distribution of students: “ever personally used a substance” disaggregated by Ownership of schools (n=588)

Drug/ Substances	Frequency (% among gender)		Chi-Square/ Fisher's Exact values	P- Value
	Government owned (n=380)	Private owned (n= 208)		
Beer	161 (42.4)	91 (43.8)	0.10	0.74
Gin or whiskey	53 (13.9)	18 (8.7)	3.54	0.06
Cigarette	35 (9.2)	11 (5.3)	2.86	0.09
Cigar	12 (3.2)	5 (2.4)	0.72	0.60
Tobacco pipe	7 (1.8)	4 (1.9)	0.005	0.94
Tobacco snuff	6 (1.6)	4 (1.9)	0.09	0.75

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