

Cigarette Smoking Prevalence and Awareness amongst Undergraduate Students of the University of Nigeria, Nsukka

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ABSTRACT

Context: Smoking incidence among youths in Nigeria is on the rise and cigarette smoking is considered one of the largest causes of preventable morbidity and mortality globally. **Aims:** To assess the prevalence and awareness of cigarette smoking amongst undergraduates of the University of Nigeria, Nsukka. **Settings and Design:** This study was a cross-sectional and descriptive survey conducted among undergraduates in the University of Nigeria, Nsukka from June to August 2016. **Methods and Material:** Data were collected by the 44-item structured, self-administered questionnaire. **Statistical Analysis used:** The data were analyzed using the Statistical Package for Social Sciences (SPSS) for Windows version 16.0 (SPSS Inc, Version 16.0, Chicago, USA). P-value \leq 0.05 was considered statistically significant. **Results:** A total of 570 questionnaires were completed and returned. Only 49.6% of the students had adequate knowledge of cigarette smoking and its health implications while the same percentage had good attitudes (i.e., attitudes that could make them never smoke or quit smoking) towards cigarette smoking. Of the 180 students who claimed to have smoked cigarette before, one-fifth smoked on a daily basis. More students who resided off-campus had smoked cigarette before (36.5%) compared to those in hostels (25.7%) ($\chi^2=7.594$; $df=1$; $P=0.006$). **Conclusion:** Approximately half of the respondents had good knowledge about cigarette smoking and its health

implications. More than a fifth of the respondents had smoked cigarette before. Students who resided off campus exhibited a greater tendency to start smoking compared to those who resided in hostels on campus. Peer pressure and close associations could influence cigarette smoking habits.

Key words: Awareness, cigarette smoking, prevalence, undergraduates, university of Nigeria Nsukka

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Quick Response Code:



INTRODUCTION

Tobacco use kills about six million people yearly and remains the leading cause of preventable deaths globally, with lots of economic implications.^[1] Tobacco smoking is practiced by more than one billion of the world's population, with cigarette smoking being the most common.^[2] The incidence of smoking in Nigeria is on the increase especially among the youths.^[3,4] It is a huge public health threat.^[5]

Developing countries form a huge market for tobacco companies and it is estimated that by 2030, it would account for more than 80% of tobacco-related deaths.^[6] Most African countries, including Nigeria, failed to respond appropriately to the growing epidemic because of the revenue generated from tobacco and are now paying the price for the enormous burden of cigarette-related diseases on health budgets.^[7]

Both direct tobacco use and second-hand smoke are lethal as it has been established that they cause serious medical conditions such as cardiovascular and respiratory diseases, including coronary heart disease and lung cancer. It causes low birth weight and sudden death in pregnant women and infants, respectively.^[5]

The general objective of the study was to evaluate the prevalence and awareness of cigarette smoking amongst undergraduates of the University of Nigeria, Nsukka. The specific objectives were: (i) To determine the prevalence of cigarette smoking among undergraduates (ii) To assess the level of knowledge of students as regards cigarettes, risks of cigarette smoking and its control (iii) To assess the attitudes of undergraduates towards cigarette smoking (iv) To determine the difference between demographic variables in their mean, knowledge and attitude scores (v) To evaluate the association between demographic variables and the knowledge, attitudes towards cigarette smoking.

SUBJECTS AND METHODS

This study was a descriptive cross sectional study conducted within a duration of three (3) months, (June to August 2016), to assess the prevalence and awareness of cigarette smoking amongst undergraduates of the University of Nigeria, Nsukka. The University of Nigeria Nsukka, (Nsukka Campus) is located on 871 hectares of hilly savannah in the

town of Nsukka about eighty kilometers north of Enugu State. In 2015 the student population was 15,439, comprising 8,690 males and 6,749 females. The Nsukka Campus houses the faculties of Arts, Agriculture, Biological Sciences, Education, Engineering, Pharmaceutical Sciences, Physical Sciences, Social Sciences and Veterinary Medicine, as well as Postgraduate programs. The study participants were second to final year undergraduate students of the University of Nigeria, Nsukka Campus, willing and able to participate. First year students, as well as students and members of staff of the University of Nigeria Enugu Campus (UNEC) were excluded from the study.

The total population for the sample size was sought from the Department of Academic Planning Unit of the University of Nigeria, Nsukka. There were 10,849 undergraduate students, with 4,748 females. From this population the sample size was determined using the Raosoft[®] sample size calculator to be at 372 at 95% confidence interval and 5% margin of error, assuming 50% of the participants responded. The multi-stage sampling method was utilized. For convenience of sampling, the sample size was increased to 1000. In the first stage, stratified random sampling was used to determine the number of male and female students to participate. This number was further stratified into various departments in each faculty. Then simple random sampling was used to select the participants in the various levels in each department in the various faculties.

Before the questionnaires were distributed, both oral and written consents were obtained from the study participants. A 44-item well-structured self-administered questionnaire was disseminated to participants to assess demographic information, awareness, prevalence

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Cite this article as: Amorha KC, Jiburu EM, Okonta MJ, Nduka SO. Cigarette Smoking Prevalence and Awareness amongst Undergraduate Students of the University of Nigeria, Nsukka. J Basic Clin Pharma 2017;8:239-244.

as well as their attitude towards cigarette smoking. To ensure quality of the data, questions were adapted from previously conducted studies and changes made based on the local context. The questionnaire was validated from the responses of the respondents who were not included in the study. The selected participants filled the questionnaire in their classes within 10 minutes, without the consultation of any reference material. Confidentiality was maintained as the names of the respondents were not requested for.

Data were coded and analyzed using the Statistical Package for Social sciences (SPSS) for Windows version 16.0 (SPSS Inc, Version 16.0, Chicago, USA). Descriptive statistics were used to summarize data. The independent t-test and analysis of variance (ANOVA) were utilized to determine the differences between the demographic variables in their mean knowledge and attitude scores. The Pearson chi-square test and Pearson correlation test were used, where applicable, to show the association and relationship between variables. For all results p-value \leq 0.05 was considered statistically significant.

RESULTS

A total of five hundred and seventy questionnaires were completed and returned, representing a participation rate of 57.0% (570/1000). Majority of the respondents were males (62.8%), between the ages of 21-25 years (52.7%), Nigerian (99.3%), Christian (97.2%) with more than half residing off-campus (55.2%). About 44.2% had friends who smoke and many grew up in South-Eastern Nigeria (68.8%) [Table 1]. In general, only 49.6% of the students had good knowledge of cigarette, cigarette smoking and its health implications [Table 2]. About 49.6% of the respondents had attitudes (classified as 'good') that could make them never smoke or quit smoking cigarettes [Table 3]. A proportionately much larger number of respondents (70.2%) noticed anti-cigarette campaigns in newspapers, TV or radio [Figure 1]. About 31.6% of the respondents had smoked a cigarette before, even if it meant trying a few puffs once or twice. Of this percentage, 12.8% had smoked in the last month while only 6.3% smoked cigarette daily [Table 4]. In Table 5, more female students had good attitudes towards cigarette smoking (i.e., would never start smoking cigarettes or those who smoke were more likely to quit smoking) compared to their male counterparts. Students who resided off-campus had better knowledge scores on cigarette smoking than those who resided in hostels. Students who had neither smoking fathers nor smoking siblings/friends had better attitudes towards cigarette smoking (i.e., would never start smoking cigarettes or those who smoke are more likely to quit smoking) than those who did.

Although the one-way ANOVA showed a significant difference between the mean scores on knowledge for the different faculties, the Post-Hoc multiple comparisons with Scheffe did not show the pattern of the difference between the Faculties.

There was also a significant difference between the mean attitude scores for the different faculties and the Post-Hoc multiple comparisons with Scheffe showed a significant difference between: Biological sciences students and Physical Sciences students ($P < 0.001$); Biological Sciences and Social Sciences students ($P = 0.026$); Physical Sciences and Education ($P = 0.032$). Biological Sciences had better attitudes than Physical Sciences and Social Sciences while the Physical Sciences had better attitudes than Education.

Furthermore, there was a significant difference in the mean knowledge scores between the different age groups. The Post-Hoc multiple comparisons with Scheffe showed that those between 21-25 years had better knowledge than those aged 16 -20 years ($P = 0.019$). Although there was a significant difference between the mean knowledge scores for the different regions for childhood upbringing, the Post-Hoc multiple comparisons with Scheffe did not show the pattern of the difference between the regions. Tables 6 shows that a proportionately

much larger number of students who reside off-campus had better knowledge on cigarette smoking (53.8%) compared to those who reside in the hostel (on-campus) (45.1%). A proportionately much larger number of female students had better attitudes towards cigarette smoking (57.1%) compared to their male counterparts (45.3%). Also, those who resided in the hostels had better attitudes towards cigarette smoking (54.5%) compared to those who resided off-campus (45.8%).

Furthermore, a proportionately larger number of students with fathers who did smoke had good attitudes towards cigarette smoking (51.3%) compared to those with fathers who smoke (33.3%). Students who

Table 1: Socio-demographic details of participating students

Variables	n (%)
Gender	
Male	358 (62.8)
Female	212 (37.2)
Age (in years)	
16-20	158 (28.0)
21-25	354 (52.7)
26-30	46 (8.1)
>30	7 (1.2)
Year of Study	
2 nd	178 (31.3)
3 rd	169 (29.8)
4 th	141 (24.8)
5 th	74 (13.0)
6 th	6 (1.1)
Faculty	
Agricultural Sciences	27 (4.7)
Arts	18 (3.2)
Biological Sciences	66 (11.6)
Education	41 (7.2)
Engineering	114 (20.0)
Pharmaceutical Sciences	67 (11.8)
Physical Sciences	54 (9.5)
Social Sciences	154 (27.1)
Veterinary Medicine	28 (4.9)
Nationality	
Nigerian	560 (99.3)
Non-Nigerian	4 (0.7)
Religion	
Christianity	550 (97.2)
Muslim	6 (1.1)
Others	10 (1.8)
Residency	
Hostel	253 (44.8)
Off-campus	312 (55.2)
Family Setting	
Smoking father	51 (8.9)
Smoking mother	9 (1.6)
Smoking siblings	48 (8.4)
Close smoking relatives	68 (11.9)
Smoking friends	252 (44.2)
Place of childhood upbringing	
South-south	40 (7.3)
South-east	377 (68.8)
North-west	30 (5.5)
North-east	22 (4.0)
North-central	51 (9.3)
South-west	28 (5.1)

Table 2: Knowledge on Cigarette Smoking

Variables (correct option)	Number of correct responses (%)
What is the addictive drug in cigarette? (Nicotine)	493 (86.5)
Which cancer is more common among smokers than non-smokers? (Lung cancer)	493 (86.5)
The current slogan from the FMOH on tobacco smoking is? (Smokers are liable to die young)	510 (89.5)
Which of the following cannot aid cigarette smoking cessation? (Hookah)	147 (25.8)
How many sticks are in a cigarette pack? (20)	241 (42.3)
Non-smokers who are exposed to second hand smoke at home, work or school can develop heart disease (True)	413 (72.5)
The carbon monoxide and oxygen levels in your blood soon return to normal when you quit smoking (True)	366 (64.2)
Cigars are better than cigarettes (False)	292 (51.2)
Smokers face double the risk of heart attack compared to non-smokers (True)	479 (84.0)
Using a smokeless cigarette device is a good alternative to smoking (False)	202 (35.4)

* FMOH=Federal Ministry of Health

did not have smoking siblings had better attitudes towards cigarette smoking (52.1%) than those with smoking siblings (22.9%). Also, those who did not have smoking friends had better attitudes towards cigarette smoking (58.5%) compared to those who had smoking friends (38.5%).

Those in Pharmacy (61.2%) and Veterinary Medicine (67.9%) had adequate knowledge about cigarette smoking compared to other faculties. More students in Biological sciences (66.7%) had good attitudes towards cigarette smoking compared to other faculties.

DISCUSSION

About half of the students had adequate knowledge of cigarette, cigarette smoking and its implications and just half of them had bad attitudes towards smoking (i.e., attitudes that could make them start smoking or not quit smoking cigarettes). More than a fifth of the respondents had smoked cigarette before, even if it meant trying a few puffs once or twice. Of this, about a tenth had smoked in the last month and less smoked cigarette daily. Students who resided off campus exhibited a greater tendency to start smoking compared to those who resided in hostels on campus. Peer pressure and close associations could influence cigarette smoking habits.

Knowledge scores were summed up to give the total knowledge score for each respondent. Knowledge scores ranged from 0 (minimum) to 10 (maximum). These knowledge scores were categorized such that those who scored above the median 6 of the total knowledge scores had adequate knowledge of cigarette smoking. Also, the attitude scores were summed to give the total attitude score for each respondent with range from 0 (minimum) to 11 (maximum). Respondents who had above the median (7) of the total attitude scores were categorized as having good attitude.

Majority of the respondents knew that the addictive drug in cigarette is nicotine. Addiction, tension reduction, pleasure and automatism were predictors of smoking behavior among the smoking undergraduate students in Malaysia.^[8] Addiction is common among youths resulting to difficulty in quitting smoking.^[9]

Most of the respondents had good knowledge on the health risks of cigarette smoking. More than half of them knew that non-smokers exposed to second hand smoke can develop heart disease. They also knew that lung cancer is more common in smokers than non-smokers, and smokers face double the risk of a heart attack compared to non-smokers. This contradicts a survey conducted in China where few people understood the specific health risks of tobacco use.^[2] It is noteworthy that although young smokers know the health hazards associated with smoking, they may express a sense of invincibility to these health implications. Thus, they may engage in a pattern of risk

minimization so as to suppress the negative perception of smoking.^[10,11]

The prevalence of smoking was categorized to avoid respondents denying the habit. Of the total number of students who claimed to have smoked cigarette before, about 40% had smoked cigarette in the past month while one-fifth smoke on a daily basis, mostly 1-5 sticks. This was a lot higher than the relatively low prevalence of current cigarette smoking among medical students in Lagos.^[12] Most of the respondents took their first puff between the ages of 12 and 18 when they must have been in secondary school. Adolescents/youths are very prone to peer pressure which can significantly influence their tobacco use.^[4,13] The influence of friends extends to university years as one of the major reasons in this study for smoking cigarettes was because friends smoke.

Some students who smoke occasionally believe they are immune to the health risks of smoking. It is important to highlight the after-effects of occasional smoking to these ones, before nicotine dependence sets in.^[14] Light and intermittent smokers do not like to be labelled as smokers and often deny their habit and may go undetected if the questions posed to them are not appropriately phrased.^[14,15] A study in an American College showed that non-daily and daily smokers reported mostly similar health risk behaviors.^[16] Even stable light smoking has notable health risks and is not a healthy long-term choice.^[14] Students who are passive smokers should be encouraged to quit completely.

There was poor knowledge on cigarette smoking cessation. In another study in a university community, the level of awareness of smoking cessation products was low.^[17] This might be due to the poor publicity that these products such as nicotine gums, nicotine patches and e-cigarettes have in Nigeria. Not many community pharmacies stock them and when they do, the prices are usually high. Smoking cessation is the only known primary therapy that can significantly decrease cancer and obstructive lung disease risks.^[14]

More than half of the respondents had tried quitting smoking with possible health hazards being the major reason. This contradicts a study among undergraduates of the University of Ilorin, Nigeria where majority were not willing to quit because of a low perception of the negative effects of smoking on their health and quality of life.^[7]

Counseling by health professionals was the least reason why the respondents had tried to stop smoking suggesting that health professionals may not be actively involved with this. Community pharmacists are well positioned to assist those willing to cease smoking. Counseling and medication can more than double the chance that a smoker who tries to quit smoking will succeed.^[2] Seminars/workshops could be conducted on campuses to enlighten students on the hazards of cigarette smoking. In an evaluation of students in a Nigerian city, those who had received lectures on smoking were significantly willing

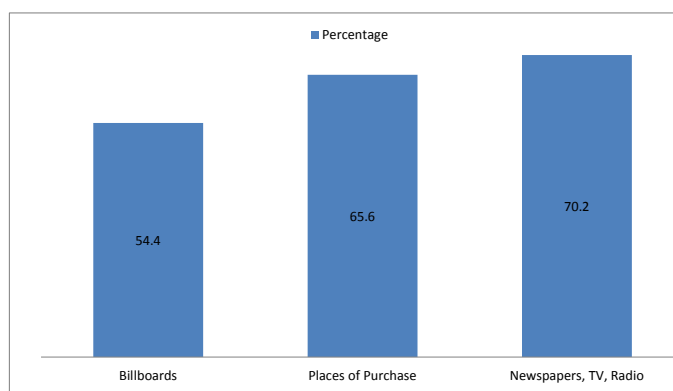


Figure 1: Anti-cigarette campaign awareness

Table 3: Attitudes towards Cigarette Smoking

Variables (attitude)	SA	A	D	SD
Cigarette smoking is pleasurable (bad)	96 (17.3)	118 (21.3)	133 (24.0)	208 (37.5)
Cigarette smoking can help one study better (bad)	37 (6.7)	63 (11.3)	200 (36.0)	256 (46.0)
Cigarette smoking can help one lose weight (bad)	108 (20.0)	162 (29.9)	143 (26.4)	128 (23.7)
Cigarette smoking is a waste of money (good)	233 (41.9)	161 (29.0)	86 (15.5)	76 (13.7)
Cigarette smoking makes one feel mature (bad)	42 (7.6)	82 (14.9)	169 (30.6)	259 (46.9)
Cigarette smoking can improve one's sexual performance (bad)	61 (11.2)	62 (11.3)	187 (34.2)	237 (43.3)
Pressure from friends can influence one's smoking habits (bad)	268 (48.4)	188 (33.9)	52 (9.4)	46 (8.3)
Cigarette smoking relieves stress (bad)	64 (11.7)	162 (29.5)	173 (31.5)	150 (27.3)
Cigarette smoking relieves boredom (bad)	51 (9.3)	163 (29.9)	176 (32.2)	156 (28.6)
Cigarette smoking boosts one's confidence (bad)	73 (13.3)	139 (25.3)	167 (30.4)	171 (31.1)
There should be a law to ban smoking on campus (good)	233 (42.1)	121 (21.9)	97 (17.5)	102 (18.4)

*SA= strongly agree; A= agree; D= disagree; SD= strongly disagree

Table 4: Prevalence of Cigarette Smoking

Variables	Yes	No	Never Smoked
Have you ever smoked a cigarette?	180 (31.6)	390 (68.4)	NA
Have you smoked a cigarette in the last 30 days?	73 (12.8)	108 (18.9)	389 (68.2)
Do you currently smoke cigarette on a daily basis?	36 (6.3)	141 (24.7)	393 (68.9)
How many sticks of cigarette do you smoke per day?			
1-5	62 (10.9)	NA	NA
6-10	16 (2.8)	NA	NA
11-20	10 (1.8)	NA	NA
>20	15 (2.6)	NA	NA
I've quit smoking	33 (5.8)	NA	NA
Never smoked	434 (36.1)	NA	NA
At what age (in years) did you take your first puff?			
<12	29 (5.1)	NA	NA
12-18	76 (13.3)	NA	NA
19-24	58 (10.2)	NA	NA
25-29	3 (0.5)	NA	NA
>30	1 (0.2)	NA	NA
Never smoked	403 (70.7)	NA	NA
What are your reasons for smoking?			
Tried to quit but couldn't	16 (2.8)	149 (26.1)	405 (71.1)
Helps control my weight	13 (2.3)	152 (26.7)	405 (71.1)
Relieves boredom	24 (4.2)	139 (24.4)	407 (71.4)
My friends smoke	50 (8.8)	115 (20.2)	405 (71.1)
Just feel like it	81 (14.2)	84 (14.7)	405 (71.1)
Smoke when drinking	37 (6.5)	128 (22.5)	405 (71.1)
Boosts my confidence	23 (4.0)	142 (24.9)	405 (71.1)
Have you ever tried quitting smoking?	102 (17.9)	55 (9.6)	413 (72.5)
What were your reasons for trying to quit?			
Health hazards	83 (14.6)	27 (4.7)	460 (80.7)
Relations and friends	24 (4.2)	85 (14.9)	461 (80.9)

Religion	22 (3.9)	87 (15.3)	461 (80.9)
Warnings on cigarette packs	18 (3.2)	91 (16.0)	461 (80.9)
After counseling by health professionals	10 (1.8)	98 (17.2)	462 (81.1)
For those who have never tried quitting:			
Are you planning to quit in the next 6 months?	21 (3.7)	37 (6.5)	512 (89.8)

*NA= Not Applicable

Note: When asked, 72.3% of the respondents were willing to help cigarette smokers quit

Table 5: Mean Difference Analysis

Variable	N	Mean Knowledge Score (SD)	95 % Confidence Interval	P-value	Mean Attitude Score (SD)	95 % Confidence Interval	P-value
Gender^b							
Male	358	6.46(1.66)	-0.085 - 0.50	0.165	6.63(2.85)	-1.22-0.28	*0.002
Female	212	6.25(1.78)			7.38(2.70)		
Faculty^a							
Agriculture	27	6.07(1.62)	5.44- 6.71	*0.001	7.41(2.76)	6.31-8.50	*<0.001
Arts	18	5.56(2.64)	4.24-6.87		6.50(3.13)	4.94-8.06	
Biological Sciences	66	6.83(1.97)	6.35-7.32		8.38(2.53)	7.76-9.00	
Education	41	6.44(1.50)	5.97-6.91		7.71(2.23)	7.00-8.41	
Engineering	114	6.11(1.64)	5.81 -6.42		6.89(2.79)	6.38-7.41	
Pharmaceutical Sciences	67	6.96(1.62)	6.56-7.35		6.75(2.44)	6.15-7.34	
Physical Sciences	54	6.56(1.63)	6.11 - 7.00		5.37(3.01)	4.55-6.19	
Social Sciences	154	6.12(1.61)	5.87 - 6.38		6.69 (2.68)	6.26-7.11	
Veterinary Medicine	28	6.86 (1.15)	6.41 – 7.30		6.71 (3.69)	5.28-8.15	
Nationality^b							
Nigerian	560	6.39 (1.70)	0.47 - 3.82	*0.012	6.95 (2.80)	-1.57-3.96	0.396
Non-Nigerian	4	4.25 (1.89)			5.75 (3.77)		
Age(in years)^a							
16 – 20	158	6.01 (1.83)	5.73-6.30	*0.007	7.06 (2.98)	6.60-7.53	
21 – 25	354	6.53 (1.63)	6.36- 6.70		6.90 (2.74)	6.61 -7.19	
26 – 30	46	6.59 (1.73)	6.07-7.10		6.33 (2.81)	5.49- 7.16	
>30	7	5.57 (1.72)	3.98-7.16		6.86 (3.44)	3.68-10.04	
Religion^a							
Christianity	550	6.38 (1.71)	6.24 – 6.52	0.566	6.92 (2.80)	6.69–7.16	0.436
Muslim	6	6.33 (2.07)	4.17 – 8.50		6.00 (3.74)	2.07–9.93	
Others	10	5.80 (1.75)	4.55 – 7.05		6.00 (3.23)	3.69–8.31	
Residency^b							
Hostel	253	6.21 (1.76)	-0.58 –-0.02	*0.038	7.10 (2.90)	-0.12–0.82	0.143
Off-Campus	312	6.51 (1.66)			6.75 (2.73)		
Year of Study^a							
2 nd	178	6.37 (1.78)	6.11 – 6.63	0.704	6.97 (3.15)	6.51 – 7.44	0.527
3 rd	169	6.27 (1.68)	6.02 – 6.53		7.08 (2.42)	6.71 – 7.44	
4 th	141	6.45 (1.77)	6.15 – 6.74		6.57 (2.81)	6.10 – 7.04	
5 th	74	6.41 (1.52)	6.05 – 6.76		6.91 (2.73)	6.27 – 7.54	
6 th	6	7.17 (0.41)	6.74 – 7.60		7.67 (4.18)	6.328 – 12.05	
Smoking Father^b							
Yes	51	6.47 (1.69)	-0.39–0.59	0.688	5.96 (3.16)	-1.85 – -0.24	*0.011
No	519	6.37 (1.71)			7.00 (2.76)		
Smoking Mother^b							
Yes	9	5.78 (1.99)	-1.74–0.52	0.287	5.22 (4.27)	-3.57 – 0.14	0.07
No	561	6.39 (1.70)			6.94 (2.78)		
Smoking Siblings^b							
Yes	48	6.25 (1.60)	-0.65–0.37	0.585	5.38 (3.03)	-2.50 –-0.85	*<0.001
No	522	6.39 (1.72)			7.05 (2.76)		
Close Smoking Relatives^b							
Yes	68	6.62 (1.74)	-0.16–0.70	0.219	6.81 (2.92)	-0.83 – 0.60	0.751
No	502	6.35 (1.70)			6.92 (2.80)		
Smoking Friends^b							
Yes	252	6.33 (1.64)	-0.38–0.19	0.505	6.21 (2.94)	-1.70 –-0.79	*<0.001

No	318	6.41 (1.76)			7.46 (2.59)		
Place of childhood upbringing^a							
SS	40	5.80 (1.54)	5.30 – 6.29	*0.036	6.60 (2.37)	5.84 – 7.36	0.193
SE	397	6.40 (1.62)	6.23 – 6.56		7.04 (2.79)	6.76 – 7.32	
NW	30	6.23 (2.10)	5.45 – 7.02		6.93 (2.79)	5.89 – 7.798	
NE	22	5.64 (2.30)	4.62 – 6.66		7.00 (2.71)	5.80 – 8.20	
NC	51	6.67 (2.00)	6.11 – 7.23		6.35 (3.24)	5.44 – 7.26	
SW	28	6.79 (1.47)	6.21 – 7.36		5.82 (2.98)	4.67 – 6.98	

* P ≤ 0.05 shows statistical significance

Tests conducted: a=ANOVA; b=Independent student's t-test; SD=Standard Deviation

Table 6: Association between Demographic Variables and Knowledge, Attitudes towards Cigarette Smoking

Variables	Poor Knowledge	Adequate Knowledge	χ ²	P-value	Bad Attitudes	Good Attitudes	χ ²	P-value
Gender			1.176	0.278			7.447	*0.006
Male	174	184			196	162		
Female	113	99			91	121		
Residency			4.35	*0.038			4.242	*0.039
Hostel	139	114			115	138		
Off-campus	144	168			169	143		
Smoking Father			0.040	0.842			5.965	*0.015
Yes	25	26			34	17		
No	262	257			253	266		
Smoking Siblings			0.305	0.581			14.983	*<0.001
Yes	26	22			37	11		
No	261	261			250	272		
Smoking Friends			1.064	0.302			22.492	*<0.001
Yes	133	119			155	97		
No	154	164			132	186		
Faculty			21.992	*0.005			19.463	*0.013
Agricultural Sciences	16	11			10	17		
Arts	11	7			10	8		
Biological Sciences	28	38			22	44		
Education	19	22			15	26		
Engineering	67	47			58	56		
Pharmaceutical Sciences	26	41			35	32		
Physical Sciences	20	34			35	19		
Social Sciences	90	64			86	68		
Veterinary Medicine	9	19			15	13		

to quit compared with those who had not received such lectures.^[18] Lectures could be delivered on public advocacy days to draw awareness e.g., World No Tobacco Day.

Many respondents were willing to help cigarette smokers quit. These responses included both smokers and non-smokers and shows the relevance of health clubs where strategies to promote cigarette smoking cessation can be discussed and practiced. Similarly, a study among medical students of the Niger Delta University, Bayelsa State, Nigeria, had 76.4% of the respondents willing to help smokers quit smoking.^[19]

The respondents were exposed to pro-smoking and anti-smoking messages and advertisements; such as warnings from the Federal Ministry of Health (FMOH). More than three-quarters of them got the question on the current slogan from the FMOH on tobacco smoking correctly. This is similar to an earlier study conducted.^[19] However, the study reported that majority of the students interpreted the warnings in ways favorable to them. For example the previous warning on cigarette packs 'Smokers are liable to die young' was seen as though the industry did not believe it but was compelled to put it.^[19] Anti-cigarette campaign awareness was majorly from newspapers, television and radio. Mass media campaigns can reduce tobacco consumption

by influencing people to protect non-smokers and convincing youths to stop using tobacco.^[5] Health warnings change social beliefs about tobacco, which will reduce tobacco use and increase support for tobacco control measures.^[11] Anti-tobacco advertisements and graphic pack warnings reduce the number of children who begin smoking and increase the number of smokers who quit.^[5]

Tobacco companies spend billions of dollars yearly on tobacco advertising, promotion and sponsorship.^[11] Anti-cigarette campaigns in places of purchase are very necessary. Data from the United Kingdom show that youth exposed to display of tobacco products in shops are more susceptible to starting smoking.^[11] In many countries, people are more aware of tobacco advertising in stores than other advertising channels. Point-of-sale advertising, product displays and signage, in retail stores may influence smoking behavior.^[20] Tobacco products can be kept out of public view, so that customers must ask specifically if the store sells them. The extra effort required to ask a retailer for tobacco products may deter some purchases and assist with cessation efforts. Youths are less likely to attempt a purchase in stores where tobacco products are hidden from view.^[20-22]

There is also the indirect tobacco marketing where clothing or other

items feature a brand name or logo of a cigarette company.^[1] Youths wear these clothing, for instance, oblivious of the messages they pass across. Cigarette smoking can also be promoted through television, as data from six European countries show that youth exposed to smoking in films are more likely to try smoking.^[1] The government can regulate these as they are charged with the responsibility of protecting the health and rights of their people.^[1]

More than half of the females had more likelihood of quitting/never starting smoking. This could be attributed to the greater social disapproval of women who smoke and greater social pressure to quit.^[4,23] More female students had better attitudes than their male counterparts towards smoking. This finding is similar to a study done in Cross River State, Nigeria.^[12] Ladies less likely smoke in public places in Nigeria.

More students who had smoking fathers, mothers, relatives and friends had smoked before compared to those who didn't have. This finding corresponds with other studies that indicated smoking habits are influenced by close smoking relatives and peer pressure.^[4,13]

Students who resided on campus had better attitudes towards smoking compared to those who stayed off-campus. This could be due to more exposure off-campus. Students who reside off-campus have more liberty with greater access to stores where cigarettes are sold.

This study only included students from the University of Nigeria Nsukka and the results might not be generalized to the whole student population or other universities. The information was collected by self-reports, hence the possibility of response bias. Cigarette smoking is commonly perceived as a bad habit so students who smoke might have reported otherwise due to social desirability. Furthermore, since there were more undergraduate males, the prevalence of cigarette smoking may have been higher since males are more likely to smoke than females. Some students were unwilling to participate in the study due to their on-going exams.

CONCLUSION

This study revealed that undergraduate students are more likely to smoke cigarettes when they reside off-campus. Also, peer pressure and close associations could influence cigarette smoking activities. Hence, more male hostels should be available on campus. Seminars/workshops should be conducted on campuses to enlighten students on the hazards of cigarette smoking. Lectures could be delivered on public advocacy days to draw awareness.

Key messages

Students who resided off campus were more likely to start smoking compared to those who resided in hostels on campus. Peer pressure

and close associations could influence cigarette smoking habits.

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