

Prevalence and characteristics of cigarette smokers among undergraduates of the University of Ilorin, Nigeria

AE Fawibe, AO Shittu¹

Departments of Medicine and ¹Heamatology, College of Health Sciences, University of Ilorin, Ilorin, Kwara State, Nigeria

Abstract

Background: Smoking control is urgently needed to prevent the epidemic of tobacco-related diseases and deaths in developing countries. This requires data on smoking, especially among vulnerable groups like students. We have surveyed cigarette smoking among undergraduates of the University of Ilorin, in the North Central region of Nigeria.

Materials and Methods: This was a questionnaire-based survey among undergraduates of the University of Ilorin. A total of 1800 students were selected by multistage random sampling.

Results: A total of 1754 students (234 medical and 1520 non-medical students) completed the questionnaires. They were 1148 (65.5%) males and 606 (34.5%) females with a mean age of 21.6 ± 3.1 years. The prevalence rate of current smoking was 5.7% (males 7.7%, females 2.0%) and of ever smoking was 17.1% (males 22.9%, females 6.2%). Smoking was more common in non-medical students. Eighty-three (83.8%) of the smokers had already started smoking by their eighteenth birthday. Fifty-one (51.5%) of them smoked ≤ 5 sticks of cigarettes daily. Most of them were influenced into smoking by peer pressure and commercial advertisements. Sixty-seven (67.6%) of them believed that smoking could never have a negative impact on their health status and quality of life and just 39 (39.4%) smokers were willing to quit.

Conclusions: Despite the low prevalence rate of smoking in the studied population, a majority of them were not willing to quit because of a low perception of the negative effects of smoking on their health and quality of life. Comprehensive antismoking campaigns were urgently needed to control cigarette smoking among University undergraduates in Nigeria.

Key words: Cigarette smoking, Nigeria, undergraduates

Date of Acceptance: 18-Mar-2011

Introduction

Tobacco use, mainly in the form of cigarette is one of the major public health disasters of the twentieth century. It is one of the largest causes of preventable death worldwide and the leading cause of premature death in industrialized countries. It has been estimated that about a third of the world's population, aged 15 years above, are smokers.^[1] In the twentieth century, the tobacco epidemic was estimated to have killed about 100 million people worldwide, but unless urgent action is taken, the number of deaths could increase to one billion in this century.^[2] By 2030, more than 80% of these deaths will be in developing countries which

are now the prime target for transnational countries tobacco companies' market expansion activities.^[3] Unfortunately, most African countries, including Nigeria did not respond appropriately to the growing epidemic because of the revenue generated from tobacco, forgetting the enormous burden of cigarette-related diseases on health budgets.

Although there are many obstacles and constraints to smoking control in developing countries, appropriate

Address for correspondence:

Dr. A. E. Fawibe,
P. O. Box 4923 GPO Ilorin 240001, Kwara State, Nigeria.
E-mail: drdemola@yahoo.com

Access this article online

Quick Response Code:



Website: www.njcponline.com

DOI: 10.4103/1119-3077

PMID: 21860140

control measures are urgently needed to prevent smoking-related diseases. Smoking control policies and programs require data on smoking, especially among vulnerable groups such as students. Although there are studies on cigarette smoking among students of higher institutions of learning in Nigeria, some of the studies may not reflect the current trend of smoking among the students because they are old studies.^[4,5] Furthermore, some of the recent studies have been done in other regions of the country such as the South West^[6,7] and South South.^[8] Therefore more recent studies are necessary in other regions for epidemiological and comparative purposes. The aim of this study is to study the prevalence and characteristics of smokers among undergraduates of the University of Ilorin in North Central region of Nigeria.

Materials and Methods

This was a descriptive cross-sectional study among undergraduate students of the University of Ilorin, Kwara State in the North Central region of Nigeria. Data were collected in April 2009. A minimum sample size of 400 was estimated using the formula of Fishers *et al.*^[9] but 1800 students were surveyed in order to allow for possible incomplete data and non-responses.

Selection of participants

The participants were 250 medical and 1550 non-medical students selected by multistage random sampling technique. They were first stratified into medical students (from College of Health Sciences) and non-medical students (from the remaining seven faculties with undergraduates). The medical students were stratified into classes and 50 consenting students were randomly selected per class from the second to the sixth years. The first year medical students were not included here because the newly admitted medical students usually spent their first year in the faculty of sciences. Next, the non-medical faculties were stratified into various departments. Two departments were selected by simple random sampling from each of the seven faculties, making a total of 14 departments. Twenty-five students per class were selected by simple random sampling from the first to the final year in each of the 14 selected departments. The random selection at each stage was by balloting for yes or no. Only those that selected yes were included in the study.

Data collection

A self-designed questionnaire was used to obtain information from the participants. The questionnaires contained questions on demographic characteristics, cigarette smoking status, average number of cigarettes smoked daily, age at initiation of smoking, offer of free cigarette by the tobacco company, factors(s) that led to smoking, why smoking was stopped/continued, desire to stop smoking, perceived effect of smoking on health

and quality of life, exposure to antismoking/prosmoking advertising and possession of objects with a cigarette brand Logo on it. The questionnaires were administered by trained assistants.

Ethical approval was given by the University of Ilorin Teaching Hospital (UITH) Ethical Review Committee and in addition informed consent was obtained from the participants.

Definitions

Current smokers were those participants who had smoked cigarette within the last 30 days preceding this survey.

Former smokers were those who had smoked for up to 1 year in the past, but had not smoked in the last 30 days preceding this survey.

Experimenters were those who experimented with cigarette smoking, even one or two puffs, but stopped thereafter.

Ever smokers were those who satisfied any of the above criteria.

Never smokers were those who had never tried or experimented with cigarette smoking, even one or two puffs.

Data analyses

Statistical analyses of the data obtained were performed using the SPSS program version 13.0. Numerical variables were expressed as mean \pm standard deviation and the *t*-test was used to compare the differences for statistical significance. Categorical variables were expressed as percentages and the Chi square (χ^2) test was used to test for statistical significance of the observed difference. *P* value $<$ 0.05 was taken as significant.

Results

Of the 1800 questionnaires administered 1754 (234 medical students and 1520 non-medical students) were duly completed and returned giving a response rate of 97.4%. There were 1148 (65.5%) males and 606 (34.5%) females; with a male : female ratio of 1.9 : 1.0. Their mean age was 21.6 ± 3.1 years with a range of 16-43 years. They were predominantly (1130; 64.4%) Christians, 609 (35.6%) of them were Muslims, while the remaining 25 were of other religions, such as, traditional and atheists. Most of them (1681, 95.8%) were single.

The prevalence rates of cigarette smoking among the respondents, by sex, are highlighted in Table 1. The male to female prevalence ratio among current smokers was 3.8 : 1. Of the 99 current smokers, 95 (96.0%), made up of 84 (88.4%) males and 11 (11.6%), females had smoked

Table 1: Prevalence of cigarette smoking by sex among undergraduates of the University of Ilorin

Characteristic	Total (1727) (%)	Male (N = 1128) (%)	Female (N = 599) (%)	χ^2	P value
Current smokers	99 (5.7)	87 (7.7)	12 (2.0)	23.60	< 0.001*
Former smokers	49 (2.8)	42 (3.7)	7 (1.2)	9.26	0.002*
Experimenters	148 (8.6)	130 (11.5)	18 (3.0)	36.24	<0.001*
Ever smoked	296 (17.1)	259 (22.9)	37 (6.2)	77.60	<0.001*

*Statistically significant differences

for more than one year. The prevalence rate of current smoking was significantly ($\chi^2 = 11.64$, $P = 0.001$) lower among medical students (2/234; 0.9%) compared to other students (97/1520; 6.4%).

The mean age at initiation of smoking for males (15.4 ± 2.9 , range 10-22years) was not significantly different ($t = -0.25$, $P = 0.80$) from that in females (15.6 ± 3.3 , range 10-19 years). Eighty-three (83.8%) of the current smokers had already started smoking by their eighteenth birthday.

The males smoked 6.7 ± 5.2 , with a range of 1 - 20 cigarettes per day, compared to 3.6 ± 1.9 , range 2 - 8 cigarettes per day in the females ($t = 3.85$, $P = 0.000$). Overall, 51 (51.5%) of the current smokers smoked ≤ 5 sticks of cigarettes per day.

Figure 1 shows the various factors that led the smokers to smoke. They continued to smoke for various reasons such as pleasure 34 (34.3%), addiction 20 (20.2%), pressure/stress 14 (14.1%), habit 11 (11.1%), and others 3 (3.0%). The former smokers gave the factors displayed in Figure 2 as their reasons for quitting smoking. Only 39 (39.4%) of the current smokers expressed their willingness to quit. Forty (40.4%) smokers agreed that they were addicted to smoking while the rest erroneously believed that they were not. Almost all of them (92; 92.9%) rated their current health status as being good, and 67 (67.6%) of them believed that smoking could never have a negative impact on their health status and quality of life.

Table 2 shows the exposure of current smokers and other students (non-smokers, former smokers, and experimenters) to tobacco-related advertisements in the last 30 days preceding this study. Of those who saw antismoking messages, 16 (32.3%) out of 50 smokers and 37 (just 5.8%) of the 687 other students saw it on cigarette packs ($\chi^2 = 49.46$, $P = 0.000$). On the other hand prosmoking messages were seen mainly on television by both current smokers (31/52; 59.6%) and other students (255/469; 54.4%), but the difference was not statistically significant: $\chi^2 = 0.15$, $P = 0.70$.

Discussion

The prevalence rate of self-reported current cigarette smoking in this study was lower when compared with the earlier studies on students of a higher institution of learning

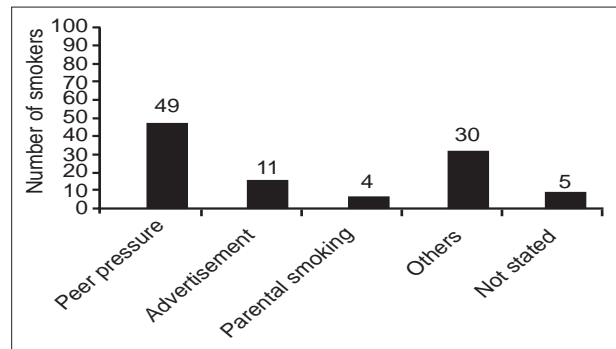


Figure 1: Reasons for initiation of cigarette smoking among undergraduates of the University of Ilorin

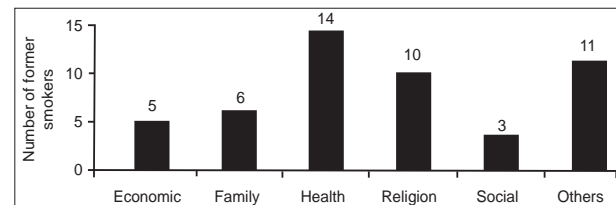


Figure 2: Reasons for quitting cigarette smoking among undergraduates of the University of Ilorin

in Nigeria^[5] and South Africa.^[10] The study by Onadeko, *et al.*^[5] was done over a decade ago, so it may not reflect the current trend of smoking among undergraduates in Nigeria. The difference between this study and that of Awotedu *et al.*^[10] could be due to the higher prevalence of cigarette smoking among the general population in South Africa compared to Nigeria.^[2] The prevalence rates of current smoking in this study (7.7% for males; 2.0% for females) were similar to the national prevalence rates (9.0% for males; 0.2% for females) reported earlier in the World Health Organization (WHO) global tobacco epidemic report.^[2] The slight difference in the findings from this study and the national survey could be due to the fact that this present study was limited to a specific group. Furthermore, the slightly higher prevalence rate of female smokers in this study compared to the national survey, suggested that female smoking could be more common among educated, females but further studies are needed to confirm this. Expectedly, the prevalence of smokers was significantly lower among the medical students when compared with the non-medical students. However, the number of smokers among the medical students was too small for any further comparison.

Table 2: Exposure to tobacco-related advertisement among undergraduates of the University of Ilorin

Parameter	Current smokers			other students		
	Yes (%)	No (%)	Missing (%)	Yes (%)	No (%)	Missing (%)
Antismoking	50 (50.5)	48 (48.5)	1 (1.0)	687 (41.5)	911 (55.1)	56 (3.4)
Prosmoking	52 (52.5)	46 (46.5)	1 (1.0)	469 (28.4)	1119 (67.7)	66 (4.6)
Object*	53 (53.5)	44 (44.5)	2 (2.0)	236 (14.3)	1349 (87.6)	69 (4.2)

*Object = Possession of object with cigarette brand logo on it

The lower rate of smoking observed among the females compared to their male counterparts was similar to earlier reports among students of higher learning^[5,10] and in the general population.^[2,11] A wide gender prevalence ratio of 3.8 in males: 1 in females among the current smokers, in this study, was similar to the global ratio of 4.8 in males : 1 in females. This wide gender gap in smoking rates is a feature of the early stages of a tobacco epidemic which is most obvious in developing countries like ours.^[12] This is contrary to observations in the developed countries, where a narrow gender gap has been reported. Thompson *et al.*^[13] have reported a male-to-female prevalence ratio of 1.1 (18.6%): 1.0 (16.6%) in the United States of America. Except as drastic measures are taken to check the menace of cigarette smoking, the gender gap may likely reduce, as more females take up the habit in response to strong advertisement by transnational tobacco companies, whose main targets are the minors and women in educational institutions.^[14]

There was no significant difference in age at initiation of smoking between males and females in this study. This seemed to support the observation made by Imhonde *et al.*^[15] that females who smoked did not see themselves as females first, but rather as individuals who were capable of doing things that any other individuals could do. However, this was different from an earlier report, which showed that females engaged in smoking earlier than males.^[8] Overall, smoking was initiated between the ages 10 - 22 years, with 83.8% of them already into smoking before their eighteenth birthday. This is similar to a report by Oladele *et al.*^[11]

Males smoke significantly more cigarettes daily compared to females, but overall more than 51.5% of them are light smokers who smoke one to five cigarettes daily. This is consistent with findings among the general population in Nigeria^[11] and Ghana^[16] as well as reports from students of higher institutions of learning in Nigeria^[5] and South Africa.^[10] However, this consumption rate is far lower than in Kuwait.^[17]

Similar to other reports^[6,10,11] most of the smokers were influenced into smoking by peer pressure and commercial advertisements, which were seen largely on television by 59.6% of them, despite the banning of tobacco advertisements on television and sporting venues by the Advertising Practitioners Council of Nigeria, since 2001. Parental smoking played an insignificant role (4.0%) in smoking initiation in our study, unlike in previous ones.^[7] Similar to findings by Oladele *et al.*,^[6] just 34.3% of the

smokers continued to smoke to derive pleasure, contrary to argument advanced by transnational tobacco industry that all smokers do so to derive pleasure. Saloojee and Dagli^[18] had shown that contrary to this argument, documents dating back to the mid 1950s proved beyond a doubt that the industry had known for decades that tobacco was addictive and had manipulated it to make it more addictive.

The smokers were equally exposed to prosmoking (52%) and antismoking (50%) messages. Most of the antismoking messages were the Ministry of Health warnings on the cigarette packs and other forms of advertisements. In a previous report by Oladele *et al.*,^[6] a majority of the students indicated that such Ministry of Health warnings were not meaningful to them. Despite the impressive wordings of these warnings, they allowed for interpretations favorable to the industry. For example, vague warning on cigarette packets such as, "the Federal Ministry of Health warns that tobacco is dangerous to health," appears as if the industry does not believe in this warning, but is rather compelled to put it. This may partly explain why a majority of the smokers do not believe that smoking can have negative effects on their health status and quality of life. Therefore it is not surprising that only 39.4% of them are ready to quit smoking. The majority of them are not aware of the fact that most of cigarettes' damage to health does not become evident until years or even decades after the onset of use, by which time it may be too late. Hammond *et al.*^[19] had earlier reported a significant gap in the smokers' understanding of the risks of smoking.

Most (71.4%) of the former smokers stopped smoking because of health, religious, family and economic reasons. These former smokers should be involved in active antismoking campaigns and the factors that made them quit should be taken into consideration when designing antismoking measures.

There are some limitations to this study. First of all, this survey was limited to just one out of all the Universities in Nigeria. Second, the data were collected among students that were available on the day of the survey, who duly completed and returned the questionnaire. It is difficult to determine the extent to which the result of this study was affected by bias, attributable to absence or incomplete responses. Finally, the data were self-reported by the students who might mis-report their cigarette smoking status. How far this might have biased this study cannot be

determined from the data.

Despite these limitations, this study has shown that although the prevalence rate of cigarette smoking is low in the studied population, a majority of the smokers were not willing to quit because of the low perception of the negative effects of smoking on their health status and quality of life. Therefore, it is important to develop effective antismoking campaigns targeted toward this group based on the newly introduced WHO MPOWER antismoking policy package.^[2]

References

1. Corrao MA, Guindon GE, Cokkinides V, Sharma N. Building evidence base for global tobacco control. *Bull World Health Organ* 2000; 78: 884-90.
2. World Health Organization. WHO Report on the global tobacco epidemic, 2008. The MPOWER package 2008. Available from: http://www.who.int/tobacco/mpower/mpower_report_full_2008.pdf. [Last accessed on 2009 March 30th].
3. Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002-2030. *PLoS Med* 2006; 3: e442.
4. Elegbeleye OO, Femi-Pears D. Incidence and variables contributing to onset of cigarette smoking among secondary school children and medical students in Lagos, Nigeria. *Br J Prev Soc Med* 1976; 30: 66 -70.
5. Onadeko BO, Awotodu AA, Onadeko MO. Smoking patterns in students of higher institutions of learning in Nigeria. *Afr J Med Med Sci* 1987; 16: 9-14.
6. Oladele PO, Asaolu TO, Toriola AL, Arogbonlo S, Moselakgomo VK. Perception of Nigerian University students about the influence of cigarette advertisement on smoking habit: A questionnaire analysis. *African Journal for Physical, Health Education, Recreation and Dance* 2007; 13: 505-23.
7. Osungbade KO, Oshiname FO. Determinants of cigarette smoking among senior secondary school students in a rural community of Southwest Nigeria. *Nig J Med* 2008; 17: 40-44.
8. Momoh SO, Imhonde HO, Omeigbe E. The role of gender, self-efficacy, age and extroversion on smoking behaviour among Ambrose Alli University students, Ekpoma, Nigeria. *Journal of International Women's Studies* 2008; 10: 134-40.
9. Fisher AA, Laing JE, Stoeckel JE, Townsend JW. Handbook for family planning operations research design. NEW YORK: Population Council; 1998.
10. Awotodu AA, Jordan ER, Ndukwana OZB, Fipaza NO, Awotodu KO, Martinez J et al. The smoking habits, attitudes towards smoking and knowledge regarding anti-smoking legislation of students in institutions of higher learning in Eastern Cape Province of South Africa. *SA Fam Pract* 2006; 48: 14. [Last accessed from <http://www.safpj.co.za> on 6/4/2009].
11. Ayankogbe OO, Inem VA, Bamigbala OA, Roberts OA. Attitudes and determinants of cigarette smoking among rural dwellers in Southwest Nigeria. *Nigerian Medical Practitioner* 2003; 44: 70-74.
12. World Health Organization. Gender and tobacco control: A policy brief 2007. Available from http://www.who.int/tobacco/resources/publications/general/policy_brief.pdf. [Last accessed on 6/5/2008]
13. Thompson B, Coronado G, Chen L, Thompson LA, Halperin A, Jaffe R et al. Prevalence and characteristic of smokers at 30 Pacific Northwest Colleges and Universities. *Nicotine Tob Res* 2007; 9: 429-38.
14. Campaign for Tobacco-free Kids. Tobacco industry targeting of women and girls. CTFK factsheet, 2007.
15. Imhonde HO, Afolabi AO, Ehon A. The influence of self-efficacy, duration of smoking and gender on perceived smoking cessation. *Nigerian Journal of Psychology* 2001; 18: 123-33.
16. Ghana statistical service. Noguchi memorial institute for medical research and ORC Macro 2004. Ghana demographic and Health survey 2003. Ghana statistical service: Accra Ghana, 2004. Available from <http://www.popline.org/docs/1533/279751.html>. [Last accessed on 8/9/2009].
17. Memon A, Moody PM, Sugathan TN, el-Gerges N, al-Bustan M, al-Shatti A, et al. Epidemiology of smoking among Kuwaiti adults: Prevalence, Characteristics and attitudes. *Bull World Health Organ* 2000; 78: 1306-15.
18. Saloojee Y, Dagli E. Tobacco industry tactics for resisting public policy on health. *Bull World Health Organ* 2000; 78: 902-10.
19. Hammond D, Fong GT, McNeill A, Borland R, Cumming KM. Effectiveness of cigarette warning labels in informing smokers about the risks of smoking: Findings from International tobacco control four country survey. *Tobacco Control* 2006; 15: iii 19-25.

How to cite this article: Fawibe AE, Shittu AO.

Prevalence and characteristics of cigarette smokers among undergraduates of the University of Ilorin, Nigeria. *Niger J Clin Pract* 2011; 14: 201-5.

Source of Support: Nil, **Conflict of Interest:** None declared.