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### **Cigarette Smoking Practices and Its Determinants Among University Students in Southwest, Nigeria**

**OA Babatunde** (Department of Community Medicine, Federal Medical Center, Ido-Ekiti, Nigeria)

**OE Elegbede** (Department of Community Medicine, Federal Medical Center, Ido-Ekiti, Nigeria)

**LM Ayodele** (Department of Behavioral Sciences, Federal Medical Center, Ido-Ekiti, Nigeria)

**OA Atoyebi** (Department of Community Medicine, Federal Medical Center, Ido-Ekiti, Nigeria)

**DO Ibirongbe** (Department of Community Medicine, Federal Medical Center, Ido-Ekiti, Nigeria)

**AO Adeagbo** (Department of Community Medicine, Federal Medical Center, Ido-Ekiti, Nigeria)

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## Cigarette Smoking Practices and Its Determinants Among University Students in Southwest, Nigeria

### Abstract

#### Author (s)

##### OA Babatunde

Department of Community Medicine,  
Federal Medical Center, Ido-Ekiti,  
Nigeria.

E-mail: [wolleking@yahoo.com](mailto:wolleking@yahoo.com)

##### OE Elegbede

Department of Community Medicine,  
Federal Medical Center, Ido-Ekiti,  
Nigeria.

E-mail: [segunelegbedeng@yahoo.com](mailto:segunelegbedeng@yahoo.com)

##### LM Ayodele

Department of Behavioral Sciences,  
Federal Medical Center, Ido-Ekiti,  
Nigeria.

E-mail: [majekayod@yahoo.com](mailto:majekayod@yahoo.com)

##### OA Atoyebi

Department of Community Medicine,  
Federal Medical Center, Ido-Ekiti,  
Nigeria. E-mail: [delato\\_pet@yahoo.com](mailto:delato_pet@yahoo.com)

##### DO Ibirongbe

Department of Community Medicine,  
Federal Medical Center, Ido-Ekiti,  
Nigeria. E-mail: [talk2demilade@yahoo.com](mailto:talk2demilade@yahoo.com)

##### AO Adeagbo

Department of Community Medicine,  
Federal Medical Center, Ido-Ekiti,  
Nigeria. E-mail: [dayo802000@yahoo.ca](mailto:dayo802000@yahoo.ca)

**Background:** Tobacco smoking is one of the largest causes of preventable morbidity and mortality globally, and is responsible for many causes of premature deaths. This study seeks to find out cigarette-smoking practices among University Students in Ekiti State, Nigeria and identify its determinants. **Methodology:** This study was a descriptive cross-sectional study of young adults in tertiary institutions. The sample size was 300 while multi stage sampling technique was adopted to select the students that were interviewed. The pre-tested questionnaire was semi structured and it was self administered. Data analysis was done using Epi-Info version 3.4.1. Frequency tables and cross-tabulations were generated with a statistical significance p-value pre-determined at less than 0.05. **Results:** The prevalence of students that ever smoked was 66 (22.0%) while those that currently smoke are 41 (13.7%). Of the students that smoked, largest proportion (53.0%) smoked for pleasure. The mean age at onset of smoking was  $15.14 \pm 4.34$  while the mean number of sticks smoked per day was  $4.46 \pm 4.59$ . Introduction to smoking was mainly by friends at home (48.6%), colleagues in school (33.3%) and siblings (18.1%) The factors that were positively associated with smoking habits were male sex, alcohol consumption, having a friend/relative that smokes, having no prior education on the dangers of smoking. They were all statistically significant. **Conclusion:** Peer influence is a very important source of cigarette smoking among the youths. Previous education on dangers of smoking and the perception that smoking is risky to health significantly reduced the prevalence of smoking. It is therefore recommended that health education on the risks associated with smoking be introduced to young adults early.

**Keywords:** Cigarette, Smoking

### Introduction

Tobacco use is injurious to the health of the consumers. Tobacco smoking is one of the largest causes of preventable morbidity and mortality globally, and is responsible for many

causes of premature deaths.<sup>1</sup> It is the leading cause of deaths in the United States, responsible for more than 400,000 deaths annually.<sup>1</sup> Tobacco use has become a rapidly growing problem of public health concern globally as it has been estimated that about a

third of the world's population, aged 15 years above, are smokers.<sup>2</sup> The prevalence is on the rise especially in developing countries.<sup>1</sup>

Smoking is a behavior that mostly starts in adolescence.<sup>3</sup> Many smokers are initiated into the habit between the ages of 13 and 15 years.<sup>4,6</sup> Half of persistent smokers who start smoking in adolescence will die from use of tobacco.<sup>7</sup> Tobacco smoking is a major risk factor for non-communicable diseases such as stroke, ischemic heart diseases, and various cancers.<sup>7</sup> It is particularly a major contributor to death from lung cancers and cancers of the airway, as well as cardiovascular diseases. It is estimated that every 6 seconds, someone dies of a smoking-related disease.<sup>8</sup> This figure would be on the rise unless adequate measures are taken to control the tobacco epidemic.

Despite its harmful effects on health, the prevalence of cigarettes smoking continues to increase especially among the younger age group in developing countries.<sup>2</sup> Among Turkish youth, the prevalence ranges between 30% and 63%.<sup>9</sup> In Brazil, studies conducted among high school students reveals a 14.2% prevalence of cigarette smoking.<sup>3</sup> A similar study among Secondary School students in Nigeria recorded a lifetime smoking prevalence of 26.4% and current smoking prevalence of 17.1%.<sup>10</sup> Other studies in Nigeria have shown smoking prevalence among adolescents between 3.93% to 32.8%.<sup>2,6,11,12</sup> There is need to determine factors responsible for this high prevalence, so as to plan strategic interventions to reverse the trend.

Many youths do not believe that tobacco is harmful to health.<sup>2,13</sup> Recent studies conducted in Borno, and Adamawa States, Nigeria revealed that adolescents continue to smoke even though they were aware of the health consequences of smoking.<sup>1,6</sup> There is a need to review the present content of health education targeted at the youth towards making the impact more felt in behavioral modification. The WHO MPOWER measures for tobacco control focuses on M-Monitoring of tobacco use, P-Protecting people from tobacco use, O- Offering help to quit tobacco use, W-Warning about dangers of tobacco, E-Enforcing bans on tobacco advertising and promotion, and R-Raising taxes on tobacco products.<sup>14</sup>

Peer and parental influence are very important sources of cigarette smoking initiation among the youths.<sup>10</sup> A study among students in Kwara State, Nigeria showed that more than half of current smokers (55.9%) were introduced to cigarette smoking by their friends, while 11.8% were introduced by their parents.<sup>12</sup> Male sex has also been found to be important in smoking habit, with women smoking less than men.<sup>5,15,16</sup> Factors associated with high prevalence of smoking among the youths include smoking by parents, siblings and friends/peer, and exposure to cigarette adverts.<sup>1,4-6,12,14,16-20</sup> Other factors are pleasure, stress, lower self-esteem, alcohol and marijuana use, involuntary unemployment, and absence of home-smoking restriction<sup>1,2,12,18,21,22</sup> Smoking behavior has also been shown to be significantly associated with alcohol and marijuana use, with a concomitant increase in morbidity and mortality from these risk behaviours.<sup>22</sup>

This study seeks to find out cigarette-smoking practices among University Students in Ekiti State, Nigeria and identify its determinants. Results of this study will serve as basis for planning appropriate intervention methods for the control of smoking among the youths.

## **Methodology**

This study was a descriptive cross-sectional study of young adults in tertiary institutions. The sample size was determined using the Fisher's formula;  $Z^2PQ/d^2$  and a sample size of 250 was arrived at while 300 was sampled. Multi stage sampling technique was adopted to select the students that were interviewed. There are two universities in Ekiti State: Afe Babalola University, Ado- Ekiti and University of Ado-Ekiti. In the first stage, University of Ado-Ekiti was selected by simple random sampling. In the second stage of sampling, five departments were selected from the university using simple random sampling technique by balloting.

In the third stage, systematic sampling was used to select the respondents. The total list of the students in the selected departments served as the sampling frame and the sampling interval was determined by dividing the sampling frame by the sample size. The respondents were identified by matriculation

numbers, departments, levels of education and the number on the sampling frame for easy tracing. Students that are not around during the time of the study or those that are not willing to participate were excluded from the study. Such students were replaced by the next person in the sampling frame.

The questionnaire was semi structured and it was self administered. It was designed to elicit information on socio-demographic characteristics, cigarette smoking practices and determinants of cigarette smoking. The questionnaire was pre-tested on 30 students of College of Education, Ikere Ekiti and necessary corrections were made thereafter. The questionnaires were edited manually for errors and entered into the computer for analysis using Epi-Info version 3.4.1. Ethical clearance for the study was sought from the Ethical Committee of the Federal Medical Centre, Ido-Ekiti.

## **Results**

There were a total number of 300 respondents interviewed in this study. They were students of university of Ado-Ekiti, Ekiti State, Nigeria within the age range of 18-30 years. 98 of the students (32.7%) were in the 18-20 age group, 183 (61.0%) were in the 21-25 age group while 19 (6.3%) were in the 26-30 age group. The mean age of the respondents was  $21.84 \pm 2.45$ .

Most of the students interviewed were males (202) constituting 67.3% of total respondents while 98 of them (32.7%) were females. The predominant religion of respondents was Christianity with 279 of the interviewed students being Christians (93.0%) and 21 (7.0%) being Muslims. The distribution by monthly expenditure in Naira revealed 107 (35.7%) respondents spent less than or equal to ₦5000 monthly, 146 (48.7%) spent between ₦5001- ₦10000 monthly while 47 respondents (15.7%) spent > ₦10000 monthly. The average monthly expenditure was ₦8820± ₦6606.

The response of the interviewed students showed varying levels of practices and determinants of smoking. 66 of the interviewed students (22.0%) said they had smoked cigarettes in the past while 41 of the

250 (13.7%) currently smoked cigarette and 215 respondents (71.7%) believed smoking is risky to health. 104 (3.47%) of the respondents also consumed alcohol while 19 (6.3%) were involved in marijuana use. 200 (66.7%) had a relative or friend who smoked and 168 (56.0%) of the respondents have had prior education on the dangers of smoking. Thirty five of the respondents (53.0%) said they smoked for pleasure while 18 (27.3%), 10 (15.2%) and 3 (4.5%) smoked to relieve stress, due to addiction and to reduce weight respectively.

A total of 66 students out of the 250 interviewed had ever smoked cigarettes. Thirty five of these respondents (53.0% of those who ever smoked) said they smoked for pleasure, 18 (27.3%) said they smoked to relieve stress, 10 (15.2%) indicated they smoked because they are addicted and 3 (4.5%) said they smoked to reduce weight. Also, 32 (48.6%) of them were introduced to smoking by their friends at home, 22 (33.3%) by colleagues in school and 12 (18.1%) by their siblings. The age at onset of smoking for those who ever smoked varied. 10 began smoking while less than 10 years, 21 started when they were between 11 and 15 years of age, 27 of them began smoking between the ages of 16 and 20 while 8 began at or after 20 years. The average age of onset of smoking of respondents that ever smoked was  $15.14 \pm 4.34$ .

Most (24) of the current smokers (58.6%) smoked between 3-4 sticks of cigarette per day, 11 (26.8%) smoked 1-2 sticks while 6 of them (14.6%) smoked  $\geq 5$  cigarettes daily.(range is 2- 20 sticks per day).

## **Discussion**

This study investigated the practices and determinants of cigarette smoking among University students in Ekiti State, Nigeria. The prevalence of smoking among the respondents was found to be 22% for ever smoked and 13.7% for current smokers. This is consistent with findings in other studies in Nigeria in which the prevalence of cigarette smoking among youths was found to be between 3.93% and 32.8%<sup>2,6,11,12</sup>.

It was discovered that male sex and alcohol consumption were significantly associated with cigarette smoking. These were in keeping with findings in a similar study done in Malawi in which male gender was found to be one of the predictors of cigarette smoking.<sup>16</sup> Also, the prevalence of alcohol consumption was significantly higher in smokers versus non-smokers. This is also consistent with several previous studies done.<sup>22</sup>

In a paper on socioeconomic and drug use determinants of smoking status in a Canadian urban adult population of black African descent,<sup>22</sup> Jill et al pointed out that alcohol use has been associated with an increased likelihood of being a smoker and also associated with a decreased likelihood of quitting smoking. This same study by Jill et al also showed there is an association between cigarette smoking and marijuana use. This is similar to the results of this survey in which there is a significant association between cigarette smoking and marijuana use.

Most of the current smokers 53.0% indicated they smoked for pleasure. This is consistent with findings in a survey carried out by Fawibe and Shittu in Ilorin, Nigeria in which 34.3% of smokers smoked for pleasure.<sup>2</sup> Previous studies revealed that many smokers were initiated into the habit between the ages of 13 and 15 years.<sup>4,5,6</sup> In a similar study done in Tunisia,<sup>5</sup> the first smoking experience was initiated at a mean age of 13.8 (SD 2.3) years. This is consistent with the findings in this study in which the mean age of onset of smoking is 15.14 (SD 4.34) years. The slight increase in mean age at onset of smoking in this study may be attributed to the nature of the group of respondents. While the Tunisian study was carried out among adolescents, this study was carried out among university students. Most of the students who ever smoked were introduced to cigarette smoking by their friends at home (48.6%). This is in line with the findings in a study done in Northeast Nigeria which revealed that the influence of friends and relatives played a significant role in initiation into cigarette smoking.<sup>6</sup> It is also consistent with the results of a study done in Kwara, Nigeria in which 55.9 % of smokers were introduced to cigarette smoking by

friends<sup>12</sup> and another study done in Maiduguri in which 57% were introduced by friends and peers.<sup>6</sup>

The mean number of sticks smoked per day by current smokers in the university was found to be 4.46 (SD 4.59) and 85.4 % of these current smokers smoked less than 5 cigarettes per day. This is also consistent with the study done in Northeast Nigeria in which 78 % of current smokers smoked less than 10 cigarettes daily.<sup>6</sup>

Peer influence is a very important source of cigarette smoking among the youths. Previous education on dangers of smoking and the perception that smoking is risky to health significantly reduced the prevalence of smoking. It is therefore recommended that health education on the risks associated with smoking be introduced to adolescents early.

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**Table -1** Socio-demographic characteristics of respondents

<b>Variable</b>	<b>Frequency (Percentage) N=300</b>
<b>Age Group (Years)</b>	
18-20	98 (32.7)
21-25	183 (61.0)
26-30	19 (6.3)
Mean Age: 21.84±2.45 (Range: 18-30)	
<b>Sex</b>	
Male	202 (67.3)
Female	98 (32.7)
<b>Religion</b>	
Christianity	279 (93.0)
Islam	21 (7.0)
<b>Monthly Expenditure (Naira/Dollars)</b>	
≤ 5000 (≤31.42 US Dollars)	107 (35.7)
5000-10000 (31.43-62.83 US Dollars)	146 (48.7)
> 10000 (>62.83 US Dollars)	47 (15.7)
Mean Monthly Expenditure: 8,820 (55.42 US Dollars) ± (41.51 US Dollars)	

**Table -2** Cigarette Smoking Practices and its determinants

<b>Variable</b>	<b>Frequency (Percentage) N=300</b>
Ever Smoked	66 (22.0)
Currently Smokes	41 (13.7)
Smoking Risky to Health	215 (71.7)
Alcohol consumption	104 (34.7)
Marijuana use	19 (6.3)
Relative/Friend who smokes	200 (66.7)
Past Education on dangers of smoking	168 (56.0)

**Table -3** Characteristics of smokers

<b>Characteristic</b>	<b>Frequency (Percent) N=66</b>
<b>Why did/do you smoke?</b>	
For pleasure	35 (53.0)
Relieve stress	18 (27.3)
I am addicted	10 (15.2)
Weight reduction	3 (4.5)
<b>Who Introduced you to smoking?</b>	
Friends at home	32 (48.6)
Colleagues in school	22 (33.3)
Siblings	12 (18.1)
<b>Age at onset of smoking (years)</b>	
≤ 10	10 (15.2)
11-15	21 (31.8)
16-20	27 (40.9)
≥20	8 (12.1)
Mean age at onset: 15.14±4.34 (Range: 7 years to 22 years)	
<b>Number of sticks smoked per day by current smokers</b>	



**Table -4** Determinants of cigarette smoking practices

	<b>Ever Smoked N=300</b>		<b>X<sup>2</sup> value</b>	<b>p-</b> <b>value</b>
	<b>Yes</b>	<b>No</b>		
<b>Sex</b>				
Male	62 (30.7)	140 (69.3)	25.7	0.0000
Female	4 (4.1)	94 (95.9)		
<b>Alcohol Consumption</b>				
Yes	45 (43.3)	59(56.7)	42.0	0.0000
No	21 (10.7)	175(89.3)		
<b>Age Group</b>				
18-20	22 (22.4)	76 (77.6)	1.6	0.4571
21-25	42 (23.0)	141(77.0)		
26-30	2 (10.5)	17 (89.5)		
<b>Monthly Expenditure (Naira/US Dollars)</b>				
≤ 5000 (≤31.42 USD)	23(21.5)	84 (78.5)	3.4	0.184
5000-10000 (31.43-62.83 USD)	28 (19.2)	111 (80.8)		
> 10000 (>62.83 USD)	15 (31.9)	32 (68.1)		
<b>Smoking Risky to Health</b>				
Yes	60 (27.9)	155 (72.1)	15.4	0.0000
No	6 (7.1)	79 (92.9)		
<b>Relative/Friend Who Smokes</b>				
Yes	56 (28.0)	144 (72.0)	12.6	0.0004
No	10 (10.0)	90 (90.0)		
<b>Education on dangers of Smoking</b>				
Yes	50 (29.8)	118 (70.2)	13.4	0.0003
No	16 (12.1)	116 (87.9)		

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