

**Original Research Article**

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**SMOKING PREVALENCE AND KNOWLEDGE ABOUT ITS HEALTH****IMPLICATIONS AMONG HEALTH CARE PROFESSIONAL STUDENTS IN EKITI  
STATE, SOUTH-WESTERN NIGERIA****ABSTRACT**

This study examined smoking prevalence and knowledge about its health implications among health care professional students in Ekiti State, South-Western Nigeria. The Precede-Proceed Model was the theoretical framework for the study. The research design for the study was quantitative. The sample size was determined using the rule of thumb. Simple random sampling technique was used in choosing the participants and sampling techniques was purposive and convenience. Self-developed questionnaire was the instrument used for data gathering. Data from the study was analyzed using both descriptive and inferential statistics. The findings revealed that 21.6% of the participants have ever smoked cigarette and the majority (77.3%) smoked daily while 89.7% of the participants indicated that they smoke less than 10 cigarettes stick a day and 6.9% smoked more than 30 sticks daily. One-third (34.4%) of the participants commenced smoking between the age of 18 to 21 years while 27.6% between age 16 to 17 years. Almost half (45.2%) of the participants were introduced to cigarette smoking by their peers. The majority (55.0%) of the participants get their cigarette supply from friends while 35.0% normally buy from the shops. Almost all (99.1%) of the participants are aware of the health risks that are associated with cigarette smoking, almost all (99.1%) and 81.8% of the participants indicated lung cancer while the remaining 18.2% highlighted cancer of the bladder. Also, 93.6% indicated that there was no tobacco treatment centre in their institution. The study recommended that Nurses and Midwives should ensure that comprehensive individual and group education is done in the clinics and

27 during school health visits, to increase adolescents' knowledge regarding the health effect of  
28 cigarette smoking.

29 **Key words:** knowledge, smoking prevalence, health effects,

30

### 31 INTRODUCTION

32 Globally, between 82,000 and 99,000 young people start smoking everyday (McGee *et al.*,  
33 2015). Smoking poses many health risks including different types of cancers, cardiovascular  
34 disease as well as respiratory disease, and imposes a significant financial and social burden  
35 on the society. Therefore smoking prevention remains an important public health concern  
36 (McGee *et al.*, 2015). Tobacco smoking is one of the leading causes of diseases and  
37 mortality, between 1950 and 2000 approximately 70 million people died from tobacco use  
38 (Awopeju *et al.*, 2012).The smoke from tobacco contains nicotine and harmane which is a  
39 monoamine oxidase (MAO) inhibitor, and the combination of both result in addictive  
40 stimulant and euphoriant properties.

41 Cigarette smoke is a complex mixture of chemicals produced by burning tobacco and the  
42 additives, its smoke contains tar, which has more than 4,000 chemicals and many of these  
43 chemicals are known to cause cancer. Thus, cigarette smoking can result in some fatal  
44 respiratory disorders like chronic obstructive lung disease (emphysema and chronic  
45 bronchitis), lung cancer, ischaemic heart disease, cancer of the bladder cancer, upper  
46 respiratory tract cancers and pancreatic cancer (Desalu *et al.*, 2011).

47 Globally, during the last two decades cigarette production has increased at an average of  
48 2.2% each year, out spacing the population growth rate of 1.7% and the prevalence of  
49 smoking in Nigeria is reported to be 8.9% in the general population (Awopeju *et al.*, 2012).  
50 However, the distribution of smoking is not the same across all the strata of the society. It  
51 varies from 7.7% among female secondary schools, 17.1% among secondary school students,

52 17.7% among health professional students, 37.9% among the general population in northern  
53 part of the country (Irabor *et al.*, 2012).

54 According to Awopetu *et al.* (2012), health-care professionals represent an important part of  
55 the population as they are the care providers, who are expected to advance the anti-smoke  
56 message to the general public. Therefore, health care providers who indulge in smoking are  
57 regarded as poor example of people who are promoting positive health behaviours and they  
58 have the potential to unintentionally affect the smoking behaviours of others through  
59 modelling. It was estimated that about 70% of smokers visit physicians each year with  
60 substantial opportunity to influence smoking behaviour. Medical advice to quit smoking can  
61 produce a year abstinence rate of up to 5-10%, which would have a significant public health  
62 impact if it were provided. However, many barriers are responsible for the reduction in the  
63 effectiveness or willingness of health care professionals to provide patient counselling and  
64 they include, time constraints during consultation as well as the smoking status of the health  
65 care professional (Erabor *et al.*, 2012).

66

67 Abdalla *et al.* (2012), indicated that smoking is a real problem among medical students  
68 irrespective of the level in which they are enrolled. Smoking often starts in early adolescence  
69 and addiction can occur rapidly (McGee *et al.*, 2015). Smoking is socially patterned, with  
70 high smoking prevalence among people of low socio-economic status, smoking is the leading  
71 cause of health inequalities. Addressing inequalities in tobacco use is therefore a public  
72 health priority (McGee *et al.*, 2015). The health consequences of cigarette smoking can be  
73 slow, gradual, or cumulative. Tobacco smoke is mild enough to be inhaled in an overdose  
74 quantities and its addiction has historically been one of the hardest addictions to break.  
75 Although the hazards of smoking are well-known, the number of smokers among adolescent  
76 students is still high. According to Ebirim *et al.* (2014) and McGee *et al.* (2015), factors

77 influencing adolescent students to smoke include their socio-economic status, the  
78 environment and having parents, siblings or friends who smoke.

79

80 The adverse effect of tobacco smoking on health has been established and on an average,  
81 cigarette smokers die ten years younger than non-smokers (Ledda *et al.*, 2013). There is  
82 increasing evidence that contact with smokers, particularly family members increases ones  
83 risk of smoking. Moreover, the health impact of smoking will be more among adolescents of  
84 today due to the early initiation of smoking as well as in the case of adolescents who smoke  
85 during adulthood and adolescents who have become habitual smokers due to long term use  
86 and these adolescents are more likely to develop cancer and cardiovascular diseases (Ledda *et*  
87 *al.*, 2013).

88 Efforts to delay or prevent children from starting to smoke are necessary because the earlier a  
89 child starts to smoke the less likely they are to quit the habit as an adult, and the more likely  
90 such a person dies prematurely from smoking related diseases (McGee *et al.*, 2015). Ebirim  
91 *et al.*, (2014) stated that despite the growing problem of global cigarette use, accurate  
92 information on the prevalence as well as the pattern among Nigerian adolescents remains  
93 sparse. Hence, the study seeks to assess the knowledge of medical students towards the health  
94 implications of tobacco smoking and to determine the prevalence and their attitude towards  
95 tobacco smoking. The findings of the study will depict the factors predisposing medical  
96 students towards smoking and also create awareness in promoting attitudinal change towards  
97 tobacco smoking.

#### 98 **Theoretical framework**

99 The Precede-Proceed Model (Green, 1974) was the theoretical framework for the study.  
100 Precede-Proceed model provides a comprehensive structure for assessing health and quality-  
101 of-life. It was proposed in 1974 by Dr. Lawrence W. Green, it is a cost-benefit evaluation

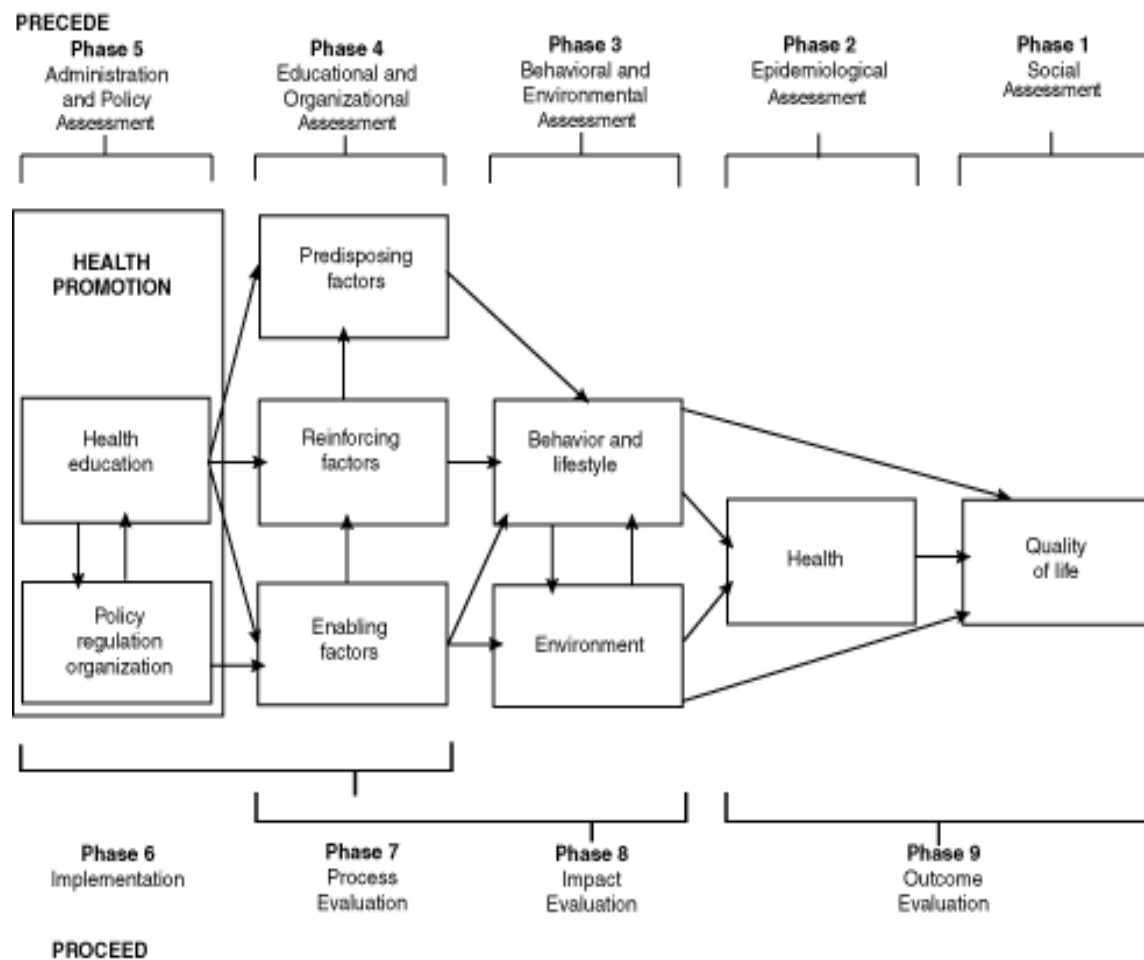
102 framework that that can help health program planners, policy makers, and other evaluators to  
103 analyze situations and design health programs efficiently (Green, 1974). The theory was used  
104 to assess health related behaviours and environments that affect health and quality of life. The  
105 framework has two components. The set of phases consists of series of planned assessments  
106 that generate information that can be used to guide subsequent decision.

107

108 Precede is an acronym for predisposing, reinforcing, enabling, constructs in educational  
109 diagnosis and evaluation. It consists of three phases, the first phase, social assessment and  
110 situational analysis which concern quality of life or social problem determination as well as  
111 the needs of a given population. The second phase is epidemiological assessment to identify  
112 health determinants of these problems and it also involves analyzing the behaviour and  
113 environmental factors that link to the health problems. Educational and ecological assessment  
114 is the third phase, it involves the causal factors influencing health behaviours or  
115 environmental factors. These factors are grouped into three: predispose, reinforce, and enable  
116 factors (Green & Kreuter, 2005).

117

118 The second component is referred to as proceed for policy, regulatory, and organizational  
119 constructs in educational and environmental development (phase 4, 5, and 6). These three  
120 phases involve the strategic implementation of multiple actions based on the findings from  
121 assessment in the initial phase. Precede-Proceed model provides a continuous series of phases  
122 in planning, implementation, and evaluation (Green & Kreuter, 2005). Figure 1 illustrates a  
123 diagram explains the Precede-Proceed model;



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127 In application of this theory to this study, this study focuses on smoking among adolescents.

128 In order to understand the influencing factors for smoking among health professional

129 students, it will be important to develop anti-smoking public health programs. This study will

130 only address the third phase of the Precede-Proceed Model. This particular phase assesses the

131 cause of health behaviour (smoking). This phase was used to identify the three important

132 factors that play important roles in changing a person's behaviour as well as the environment.

133 These factors are predisposing factors, enabling factors, and reinforcing factors.

134 The predisposing factors are antecedents to behaviour change that provide the motivation for

135 the behaviour. They include individual or population knowledge, attitudes, belief, and

136 perceptions that facilitate or hinder motivation for change (Green & Kreuter, 1991). Enabling  
137 factors are antecedents to behaviour or environment change that allow a motivational or  
138 environment policy to be realized. It includes accessibility, availability, skills and laws that  
139 can help or hinder the behavioral changes along with the environmental factors (Green &  
140 Kreuter, 2005). This study explores the accessibility to cigarettes and peer smoking as  
141 enabling factors. Reinforcing factors are factors following behaviour that provide the  
142 continuing reward or punishment as a consequence of behaviour. It consists of social support,  
143 peers influence, advice and feedback by health care providers.

144

145 In conclusion, the Precede-Proceed model is a participatory model for creating successful  
146 community health promotion and other public health interventions. It is a multi-assumptions  
147 model for intervention for health behaviour change. It is based on the premise that behaviour  
148 changes are voluntary, and that health programs are more likely to be effective if they are  
149 planned and evaluated. Identification of these factors may be useful to provide interventions  
150 required towards behaviour change as the outcome and to conduct prevention and control  
151 measures of smoking among medical students.

152

### 153 **MATERIAL AND METHODS**

154 This research is a descriptive study aimed at finding out the knowledge of medical students  
155 about the health effects of smoking in the university. The study was conducted in Afe  
156 Babalola University, Ado-ekiti, Ekiti State Nigeria. The total number of students in the  
157 College of Medicine and Health Sciences of Afe Babalola University was about 1,600, since  
158 the target population of this research was limited to students in the department of Medicine,  
159 Nursing Science and Medical Laboratory Science, the population was reduced to 506. The  
160 sample size was determined using the rule of thumb, therefore, 24% of the target population,

161 which is 120 students was selected for the study. The simple random sampling technique was  
162 used in choosing the participants. The sampling techniques was purposive and convenience.  
163 Self-developed questionnaire was the instrument used for data gathering. The questionnaire  
164 has two sections. Section A investigates the demographic characteristics of the participants.  
165 Section B was on questions that sought to assess the knowledge of medical students towards  
166 the health implications of tobacco smoking and to determine the prevalence and their attitude  
167 towards tobacco smoking. The reliability of the questionnaire was done using the test-retest  
168 method.

169

170 The research proposal was approved by the Department of Nursing Science, Afe Babalola  
171 University, Ado-Ekiti. Before the commencement of the study, approvals were obtained from  
172 The Research Ethics Committee of Afe Babalola University. Written and verbal informed  
173 consent was sought and obtained from participants before administration of the questionnaire.  
174 Participation was made voluntary without coercion, manipulation or undue inducement. The  
175 participants were told that they could freely withdraw at any point during the study process.  
176 The researcher administered the questionnaire to the participants. The questionnaires were  
177 retrieved from the participants immediately after completion. There were 120 students  
178 recruited for the study out of which 111 responded adequately to the questionnaire. Data  
179 gathering was from August to September 2015. Data from the study was analyzed using both  
180 descriptive and inferential statistics.

## 181 **RESULTS**

182 The analysis of the socio-demographic status of the participants (Table 1), the majority  
183 (90.0%) of the participants were female while 18.9% were males. Table 1 established that the  
184 majority 78.4% of the participants were 18-21 years of age while only 1.8% was age 22-25  
185 years old. With regards to participant's religion, 87.3% were Christians while 12.7% were



186 Muslims. Almost all (99.1%) the participants were single and the majority (57.7%) were in  
 187 their 4<sup>th</sup> year. Participants were asked about their monthly allowance and more than half  
 188 (55.8%) of the participants received between N10, 000 to N30, 000 while only 5.8% received  
 189 above N100, 000.

190

191

**Table 1: Demographic profile of participants (N=111)**

<b>Socio demographic characteristics</b>	<b>Number</b>	<b>%</b>
<b>Gender</b>		
Male	21	18.9
Female	<b>90</b>	<b>81.1</b>
<b>Age</b>		
14 – 17	2	1.8
18 – 21	87	78.4
22 – 25	20	18.0
26 – 30	2	1.8
<b>Marital status</b>		
Single	110	99.1
Married	1	.9
<b>Religion</b>		
Christianity	96	87.3
Islam	14	12.7
<b>Level of degree</b>		
200	2	1.8
300	11	9.9
400	64	57.7
500	34	30.6
<b>Monthly income</b>		
N10000 – N30000	58	55.8
N40000 – N60000	33	31.7
N70000 - N100000	7	6.7
Above N100000	6	5.8

192

193 As shown in Table 2, 73.9% of the participants have never smoked a cigarette before, while  
 194 26.1% of the participants responded positively. With regards to participants frequent of  
 195 smoking, the majority (77.3%) smoked daily while only 3.4% indicated that they smoked  
 196 every week. When the participants were also asked to indicate the number of cigarette that

197 they smoke daily, the majority (89.7%) of the participants indicated that they smoke less than  
 198 10 cigarettes stick a day while 6.9% smoked more than 30 sticks a day.

199

200 With respect to participants age at smoking initiation, about one-third (34.4%) of the  
 201 participants commenced smoking between aged 18 to 21 years, 27.6% between age 16 to 17  
 202 years and 31.1 started smoking above the age of 21 years. When asked about the person that  
 203 introduced them to smoking, almost half (45.2%) of the participants indicated peer group,  
 204 16.1% and 9.7% indicated boyfriend and girlfriend respectively while 25.8% said it was their  
 205 personal choice. With regards to question on what predisposes the participants to smoking,  
 206 the majority (77.4%) of them stated that they started smoking because of fun, 12.9% was due  
 207 to peer pressure, while 6.5% indicated stress as what predisposed them to smoking.

208 **Table 2: Predisposing factors to smoking as indicated by the participants**

Options	Number	%
<b>Have you ever smoked?</b>		
Yes	29	26.1
No	82	73.9
Total	111	100
<b>How often do you smoke?</b>		
Daily	23	77.3
Weekly	6	22.7
Total	29	100
<b>Number of cigarette smoked daily</b>		
Less than 10	26	89.7
11 – 20	1	3.4
Above 20	2	6.9
Total	29	100
<b>Age at smoking initiation</b>		
12 – 15 years	2	6.9
16 – 17	8	27.6
18 – 21	10	34.4
Above 21 years	9	31.1
Total	29	100
<b>Who introduce you to smoking?</b>		
Peer group	14	45.2
Boyfriend	5	16.1
Girlfriend	3	9.7
Relations	1	3.2

Personal choice	8	25.8
Total	29	100
<b>What led you to smoking?</b>		
Stress	2	6.5
Peer pressure	4	12.9
Fun	24	77.4
Other reasons	1	3.2
Total	29	100

209

210 On the participants' attitudes towards smoking, as revealed Table 3, when the participants  
 211 were asked if they will smoke a cigarette offered by their best friend, the majority (63.6%) of  
 212 them indicated definitely not, 12.1% answered probably not and 15.9% indicated probably  
 213 yes while 8.4% answered definitely yes. With regards to participants probability of smoking  
 214 in the next 12 months, more than half (65.1%) of the participants indicated definitely not,  
 215 13.8% probably not, 11.9% probably yes and 9.2% indicated definitely yes.

216

217

**Table 3: Attitudes towards smoking**

Options	Number	%
<b>Will you smoke a cigarette offer by your friend?</b>		
Definitely not	68	63.6
Probably not	13	12.1
Probably yes	17	15.9
Definitely yes	9	8.4
Total	107	100
<b>Probability of smoking in the next 12 months</b>		
Definitely not	71	65.1
Probably not	15	13.8
Probably yes	13	11.9
Definitely yes	10	9.2
Total	109	100

218

219 As revealed in Table 4, participants were asked if they have ever tried to stop smoking in the  
 220 past year and more than half (52.2%) highlighted yes while the remaining 47.8% indicated  
 221 no. When the participants were asked how they usually obtain their cigarette, the majority

222 (55.0%) of the participants get their cigarette supply from friends while 35.0% indicated that  
 223 they normally buy from the shops.

224

225 **Table 4: Participants' quitting attempts and access to smoking**

Options	Number	%
<b>Quitting attempts</b>		
Yes	12	52.2
No	11	47.8
Total	23	100
<b>Access to cigarette</b>		
From the shop	7	35.0
From friends	11	55.0
Others	2	10.0
Total	20	100

226

227 As shown in Table 5, participants were asked if they are aware that smoking is dangerous to  
 228 their health and almost all (99.1%) of the participants indicated yes with exception of only  
 229 one (0.9%) participants who indicated no. In addition, when the participants were asked if  
 230 they are aware of the health risks that are associated with cigarette smoking, almost all  
 231 (99.1%) of the participants indicated yes with exception of only one (0.9%) participants who  
 232 indicated no. On the participants' knowledge on the health impacts of smoking, the majority  
 233 (81.8%) of them indicated lung cancer while the remaining 18.2% highlighted cancer of the  
 234 bladder.

235

236 When the participants were asked if they know the benefit of smoking cessation and The  
 237 majority (65.4%) of the participants indicated yes while the remaining 34.6% indicated no.

238 Almost all (93.6%) of the participants indicated the absence of a tobacco treatment centre in  
 239 their institution.

240

241

242

**Table 5: Participants’ knowledge of the danger of smoking**

<b>Options</b>	<b>Number</b>	<b>%</b>
<b>Do you know that smoking is dangerous to your health?</b>		
Yes	110	99.1
No	1	0.9
Total	111	100
<b>Awareness of the health risks associated with smoking</b>		
Yes	110	99.1
No	1	0.9
Total	111	100
<b>Benefit of smoking cessation</b>		
Yes	68	65.4
No	36	34.6
Total	104	100
<b>Tobacco treatment center</b>		
Yes	7	6.4
No	102	93.6
Total	109	100

243

244 Table 6 shows that 40.2% of the participants strongly agree that smokers are more popular  
 245 while 22.3% strongly disagree. Also, 35.7% of the participants strongly agree that smoking  
 246 helps people forget their worries and 26.8% disagree. 27.7% of the participants strongly agree  
 247 that non-smokers dislike being around people who smoke while 17.9% strongly disagree.  
 248 Almost half (44.6%) of the participants strongly disagrees that smokers find it hard to get  
 249 dates while 13.4% strongly agree. More than half (53.6%) of the participants strongly  
 250 disagree that smoking is something you need to try before deciding to do it or not, 17.9%  
 251 agree, 17.9% strongly agree, while 8.9% disagree. Almost half (44.6%) of the participants  
 252 strongly disagree that there is no harm in having a cigarette while 13.4% agree. Almost half  
 253 (44.6%) of the participants strongly disagree that smoking helps people to relax, 26.8%  
 254 disagrees, and 8.9% strongly agree. About one third (34.8%) of the participants disagrees  
 255 that smoking makes people look sexy while 27.7% strongly disagree. The majority (53.6%)  
 256 of the participants strongly disagree that smoking is enjoyable while 37.5% disagree. More  
 257 than half (55%) of the participants strongly agree that smokers are often stressed while 31.3%

258 agree. And lastly, the majority (62.5%) of the participants strongly agree that non-smokers  
 259 should be proud to be smoke free, 11.6% agree, 15.1% strongly disagree, while only 10.7%  
 260 disagree. A total of 71.4% of the participants indicated that they will prefer a smoke-free  
 261 institution.

262 **Table 6: Participants’ attitude towards smoking**

S/N	ITEMS	SA	%	Agree	%	SD	%	Disagree	%
1	Smokers are more popular.	45	40.2	15	13.4	25	22.3	25	22.3
2	Smoking helps people forget their worries.	40	35.7	15	13.4	25	22.3	30	26.8
3	Non-smokers dislike being around people who smoke.	31	27.7	29	25.9	20	17.9	30	26.8
4	Smokers find it hard to get dates.	15	13.4	25	22.3	50	44.6	20	17.9
5	Smoking is something you need to try before deciding to do it or not.	20	17.9	20	17.9	60	53.6	10	8.9
6	There is no harm in having a cigarette.	25	22.3	15	13.4	50	44.6	20	17.9
7	Smoking helps people relax.	10	8.9	20	17.9	50	44.6	30	26.8
8	Smoking makes people look sexy.	10	8.9	30	26.8	31	27.7	39	26.6
9	Smoking is enjoyable.	5	4.5	5	4.5	60	53.6	42	37.5
10	Smokers are often stressed.	55	49.1	35	31.3	10	8.9	12	10.7
11	Non-smokers should be proud to be smoke free.	70	62.5	13	11.6	17	15.1	12	10.7

263 SA and SD represent ‘strongly agree’ and ‘strongly disagree’, respectively. Participants  
 264 were asked to tick which of the option was applicable to them

265 **DISCUSSION**

266 In this study, about one-third (34.4%) of the participants commenced smoking between the  
 267 age of 18 to 21 years and 27.6% of the participants were between age 16 to 17 years.  
 268 According to Ebirim et al. (2014), the prevalence of ever smoked adolescents was 15.3% and  
 269 11.2% for current smokers according to a study conducted using adolescents in Owerri  
 270 South-Eastern Nigeria. Similarly in this study, 26.1% of the participants do smoke  
 271 cigarettes and the majority (77.3%) smoked daily. Likewise 89.7% of the participants smoke  
 272 less than 10 cigarettes stick a day while 6.9% smoked more than 30 sticks daily.

273 Several smoking surveys have revealed a decline in current cigarette smoking among adults  
274 far more prominent among boys than girls. After an initial rise among teenage boys, a decline  
275 in cigarette smoking has occurred. This has not been the case with teenage girls, who show a  
276 continuous increase in proportional smoking (Batulu et al, 2011). Both males and females  
277 Nigerians are initiating smoking at earlier ages, among adolescents, male consumption of  
278 cigarettes per day has plateaued during the past 5 years, but some increases are noted for  
279 females. A study showed that students between aged 16 years and above have 2.4 times  
280 higher risk of smoking, compared to aged 13 years (Rahman et al., 2011). Another study  
281 revealed that the students commenced smoking between 15 to 22 years, more than two thirds  
282 (71%) of smokers were in the age group less than 18 years (Tarafdar et al., 2010).

283

284 Krosnick and Judd (2011) stated that a common term in life-span developmental psychology  
285 of young adults is a decrease in parental influence on the child and an increase in peer  
286 influence. Peer smoking is an important factor that can influence smoking in young adults. A  
287 study by Krosnick and Judd (2011), found that peer smoking correlates with adolescent  
288 cigarette smoking and usually accounts for more of the variance in adolescent smoking than  
289 any other variable. This is consistent with the study as 45.2% of the participants agreed that  
290 peer pressure is a factor that influences them to smoking also 16.1% and 9.7% specified  
291 boyfriend and girlfriend respectively while only 25.8% said it was their personal choice.  
292 Merdad et al (2010), also documented that both parental and peer smoking factors were  
293 important predictors of smoking. In this study, the majority (63.6%) of the participants will  
294 smoke a cigarette offered by their best friend and 65.1% will probability smoke within the  
295 next 12 months.

296 Cigarette accessibility is the gateway for all risk factors that contribute to smoking in  
297 adolescents; the higher perceived accessibility increases the risk of smoking among

298 adolescents. The study by Gilpin et al. (2010) indicated that adolescents who perceived at  
299 baseline that cigarettes were easy to get were more likely to smoke. High prevalence of  
300 smoking among students may be relate to their accessibility to cigarettes, easy accessibility of  
301 cigarettes and tobacco products and lack of legislation prohibiting sale of tobacco to minors  
302 also increase the possibility of students to smoke (Rahman et al., 2011). In a study by Martini  
303 and Sulistyowati (2005), on factors relating to cigarette smoking behaviour in Adison port,  
304 Saraburin Province in Indonesia, it was reported that the convenience for buying cigarette and  
305 getting cigarette from others were associated with smoking behaviour. Overall, accessibility  
306 to cigarettes is a very important factor related to smoking among college students, they are  
307 more likely to smoke with their friends. This is in consistence with this study as the majority  
308 (55.0%) of the participants gets their cigarette supply from friends while 35.0% indicated that  
309 they normally buy from the shops.

310 From the study it shows that majority of the participants have high knowledge that about the  
311 health effects of tobacco smoking Almost all (99.1%) of the participants are aware that  
312 smoking is dangerous to their health and also aware of the health risks that are associated  
313 with cigarette smoking and 81.8% indicated lung cancer while the remaining 18.2%  
314 highlighted cancer of the bladder. Also majority of them knew that lung cancer is associated  
315 with cigarette smoking, furthermore, majority of them agreed that cigarette smoking is  
316 implicated in heart disease. This showed that the adolescents were conversant with these  
317 health problems that result from smoking cigarettes (Ebirim et al, 2014). Majority of the  
318 students had good knowledge of the various health problems associated with cigarette  
319 smoking. This is probably due to the fact that many of them have been educated in school  
320 about these harmful effects. There are other health effects of smoking among adolescents,  
321 these include coughing, respiratory infections, increase heart rate, high blood pressure,  
322 increase stomach acid, decrease blood and oxygen supply and low appetite. There are also



323 cosmetic effects and premature ageing of skin, yellow-grey complexion, stains fingers and  
324 nails (Schane et al., 2010). Smoking may lead to coughs and worsen respiratory diseases  
325 among young people. Adolescent smokers experience shortness of breath at higher rates  
326 compared to non-smoking adolescents and produce phlegm more often than those who do not  
327 smoke (Appau, 2011).

328

329 The majority (65.4%) of the participants in this study know the benefit of smoking cessation.  
330 According to Fuller 2010, there were some gender differences in knowledge and attitudes,  
331 with boys more likely to agree with the positive statements about smoking; that smoking  
332 helps people relax if they are stressed, that smoking is not dangerous if you do not smoke a  
333 lot and that smoking helps people cope with life. In the study, 8.9% of the participants  
334 strongly agreed that smoking helps in relaxation. According to Fuller (2010), there were also  
335 differences by age, with younger participants more likely to think that smoking is not  
336 dangerous if you do not smoke a lot while older participants were more likely to agree with  
337 the statements that smoking helps people to relax, that smokers stay slimmer than non-  
338 smokers, that smoking gives people confidence and that smoking helps people cope. This  
339 may be a result of increasing personal experience with smoking and smokers were found to  
340 agree more with positive statements and less with negative statements than non-smokers  
341 (Fuller, 2010). Parrott, (2011) carried out a research on the topic that most smokers have  
342 stressful feeling more than non- smokers, and adolescent smokers believe that increasing  
343 levels of stress as they develop regular patterns of smoking. That means smoking can be  
344 caused as a result of stress that occurs in an individual. According to WHO (2010), it can also  
345 result to social effects due to peer pressure and as a result it could lead to financial burdens  
346 for them and their families.

347

348 **CONCLUSION**

349 Smoking is one of most important health problems in the world. Smoking overuse results in  
350 serious consequences for the community health and the society as a whole. The major  
351 impacts on health are physically, psychologically, socially and economically due to smoking  
352 (WHO 2010). There is an increasing prevalence of cigarette smoking among adolescents. The  
353 result of the study revealed that some of the students have attempted to stop smoking but a  
354 tobacco treatment centre was not available within the institution, this should be addressed  
355 because it could assist in the reduction of smoking prevalence among adolescents and young  
356 adults. There is no safe level of exposure to second-hand tobacco smoke because it causes  
357 more than 600,000 deaths yearly. Every person should be able to breath tobacco smoke-free  
358 air. Smoke-free laws protect the health of non-smokers, do not harm business and it  
359 encourages smokers to quit. Over 1.3 billion people or 18.0% of the world's population are  
360 protected by comprehensive national smoke free laws.

361

362 **RECOMMENDATIONS FOR NURSING PRACTICE AND LIMITATION**

363 **From the findings of this study, it is recommended that a** comprehensive individual and  
364 group education should be done in the clinics and during school health visits, to increase  
365 adolescents' knowledge regarding the health effect of cigarette smoking. Also, emphasis  
366 should be placed on the consequences of smoking in the presence of children during adult  
367 health education.

368 In addition, nurses should create more awareness on cigarette smoking and this can be  
369 disseminated properly through seminars, conferences and workshops. They should also  
370 promote tobacco control activities like smoking cessation strategies, smoking cessation  
371 therapies and smoking prevention programs to students.

372

373 Besides, the government should provide facilities like a tobacco treatment centre in the  
374 communities and schools to aid in treatment of addictions and other illnesses. The  
375 government should also provide advocates to create health volunteers in the community by  
376 training them on how to motivate smokers to quit smoking, how to promote healthy lifestyles,  
377 and how to maintain smoke-free lifestyles.

378

379 It is also important for the government to have measures in protecting non-smokers from  
380 environmental tobacco smoke while training should be provided to all health-care providers  
381 at primary care, community and national level to enable them to effectively deliver smoking  
382 cessation interventions and treatment.

383

384 The limitation for the study is the purposive and convenient sample of health professional  
385 students in Afe Babalola University, Ado-Ekiti. Hence the results are not generalizable to a  
386 larger context.

387

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