

Original article

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INTENTION TO SMOKE TOBACCO PRODUCTS AMONG SENIOR SECONDARY SCHOOL STUDENTS IN UYO LOCAL GOVERNMENT AREA, AKWA IBOM STATE

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INTRODUCTION. Adolescence is a period in which many adolescents start exploring certain risky behaviours like tobacco use. Adolescent tobacco use is a significant global public health challenge. This study was conducted to determine the intention to smoke tobacco products among coeducational senior secondary school students in Uyo LGA, Akwa Ibom State.

MATERIALS AND METHODS. A cross-sectional study was conducted among 200 senior secondary school students aged 10–19 from January 2020 to December 2020. A multi-stage sampling technique was used to select respondents from four senior secondary coeducational schools. Data were collected using a semi-structured interviewer-assisted questionnaire.

RESULTS. Mean age of respondents was 15.3 ± 1.4 years, and 110 (55.0%) of them were males. The prevalence of intention to smoke tobacco products among the respondents was 75 (37.5%). 43 (21.5%) of them reported peer pressure as the reason for their intention to smoke. 190 (95.0%) of them knew that cigarette smoking is harmful to their health. There was a statistically significant association between respondents' sex, ever smoked, currently smoking, age at first experience, last experience, having a sibling that smokes, having friends that smoke, and intention to smoke tobacco products ($p < 0.05$).

CONCLUSION. Adolescents with these risk factors should be prioritized by smoking prevention efforts.

KEYWORDS: Intention to Smoke, Tobacco Products, Senior Secondary School Students, Adolescent Tobacco Use, Public Health, Peer Pressure, Smoking Prevention Efforts, Risk Factors.








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ОТНОШЕНИЕ К ТАБАКОКУРЕНИЮ УЧАЩИХСЯ СТАРШИХ КЛАССОВ СРЕДНЕЙ ШКОЛЫ (УЙО, ШТАТ АКВА-ИБОМ, НИГЕРИЯ)

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ВВЕДЕНИЕ. Подростковый возраст – это период, когда многие подростки начинают пробовать определенные виды рискованного поведения, такие как табакокурение. Подростковое табакокурение – серьезная глобальная проблема общественного здравоохранения. Это исследование было проведено с целью определения намерения курить табачные изделия среди учащихся старших классов средней школы совместного обучения в районе местного самоуправления Уйо, штат Аква-Ибом.

МАТЕРИАЛЫ И МЕТОДЫ. Проведено поперечное исследование с участием 200 учащихся старших классов средней школы в возрасте от 10 до 19 лет с января 2020 года по декабрь 2020 года. Методом многоэтапной выборки были отобраны респонденты из четырех старших классов общеобразовательных школ с совместным обучением. Данные были собраны путем интервьюирования с использованием полуструктурированного опросника.

РЕЗУЛЬТАТЫ. Средний возраст респондентов составил $15,3 \pm 1,4$ лет, среди обследованных было 110 (55,0%) лиц мужского пола. Распространенность намерения курить табачные изделия среди опрошенных составила 75 (37,5%). 43 (21,5%) респондента назвали давление со стороны сверстников причиной своего намерения курить. 190 (95,0%) учащихся знали, что курение сигарет вредит их здоровью. Была выявлена статистически значимая связь между полом респондентов, опытом курения в прошлом, курением на момент исследования, возрастом на момент первого опыта курения, временем с момента последнего курения, наличием курящего брата или сестры, наличием друзей, которые курят, и намерением курить табачные изделия ($p < 0,05$).

ЗАКЛЮЧЕНИЕ. Подростки с вышеуказанными факторами риска должны рассматриваться как приоритетная группа при проведении мероприятий, направленных на профилактику табакокурения.

КЛЮЧЕВЫЕ СЛОВА: намерение курить, табачные изделия, учащиеся старших классов средней школы, употребление табака подростками, общественное здравоохранение, давление сверстников, меры по предотвращению курения, факторы риска.

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INTRODUCTION

Tobacco use among young ones remains a significant global public health challenge, especially in Low and Middle-Income Countries (LMICs) [1, 2]. The vast majority of smokers begin using tobacco products well before the age of 18 years [2–4]. If current trends continue, a lifetime of tobacco use would result in the deaths of 250 million children and young people alive today, most of them in low-and middle-income countries (LMICs) [5, 6].

In recent years, the tobacco control community has shifted its focus to LMICs, which are becoming a major market for tobacco companies seeking to expand their profits and compensate for dwindling markets in higher-income countries [7]. Many countries in sub-Saharan Africa are in the first stage of the tobacco epidemic [7]. Nigeria, the most populous country in Africa, with an estimated 44% of its population under the age of 18 years, remains an attractive market for the tobacco industry [8]. The 2008 Global Youth Tobacco Survey (GYTS) conducted among children aged 13–15 years in five sites across Nigeria showed rates of smoking experimentation ranging from 4.7% in Ibadan (South Western region) to 16.1% in Kano (Northcentral region), while current smoking rates ranged from 0.3% to 11.4% among girls and boys in Kano state respectively. Furthermore, 2.9% of girls in Ibadan and up to 17.8% of girls in Lagos state who had never smoked cigarettes reported that they were likely to initiate cigarette smoking within the next year [9].

Accessibility of different types of tobacco products to young ones has been identified as an important determinant of tobacco use [10]. Reducing the accessibility of cigarettes to young people can significantly reduce smoking them [10, 11]. Studies in more developed countries showed that youth who perceived cigarettes as relatively easy to get were more likely to become regular smokers compared with those who perceived cigarettes as more difficult to obtain [10, 11]. Another study analyzing adolescents' tobacco access policies, compliance, and enforcement concluded that aggressive and comprehensive approaches to limiting access lead to significant reductions in young people smoking [12]. To reduce or eliminate tobacco use globally, the World Health Or-

ganization facilitated the Framework Convention on Tobacco Control (FCTC), the first public health treaty endorsed by more than 180 countries worldwide and ratified by the Nigerian Government [2, 5, 6]. Article 16 of the WHO FCTC treaty focuses on "Sales to and by children" and states that "parties should adopt and implement effective legislative, executive, administrative or other measures at the appropriate government level to prohibit the sales of tobacco products to persons under the age set by domestic law, national law or eighteen" [2, 13, 14].

MATERIAL AND METHODS

Study area

Uyo is the State capital of Akwa Ibom. It is one of the 31 local government areas that make up Akwa Ibom State. The estimated population according to the 2006 census is 436,873. Uyo people are of the Ibibio ethnic group and speak the Ibibio language. Uyo's local government area has about 32 secondary schools. Secondary schools are more private than public schools.

Study population

The study was conducted among senior secondary school students (SS 1–3) of public and private schools in the Uyo local government area of Akwa Ibom State.

Sampling

A cross-sectional design was used for this study and a multi-stage sampling technique was used to select the study population for this study. The 31 local government areas (LGAs) of Akwa Ibom State were identified and stratified into rural and urban with 29 rural and 6 urban LGAs. Among the 6 urban LGAs, one (Uyo LGA) was randomly selected using a simple random sampling method. All the senior secondary schools were identified and stratified into public and private coeducational schools in the selected urban LGA. The list of these schools was obtained from the Akwa Ibom State Ministry of Education. A simple random sampling method was used to select two schools from each stratum. The total number of students (SS 1–3) in the four selected schools was 200. The number of respondents in each school was determined by proportional allocation. In each selected

school, respondents were selected from SS 1, 2, and 3 using the class register of the different arms (A, B, and C). A simple random sampling method was used to select the first student. Thereafter every 4th student was recruited using systematic sampling.

Data collection

Data were collected using a semi-structured self-administered questionnaire. The questionnaire was adopted from Global Youth Tobacco Survey (GYTS). The questionnaire was in six sections with 28 questions which include socio-demographic characteristics. The questionnaires were completed by the respondents with interviewer assistance in the selected classrooms during the period assigned by the school authority. Ethical approval for this study was obtained from the Akwa Ibom State Ethical Review Committee. Permission to conduct this study was also obtained from the Commissioner for Education, Akwa Ibom State, and this was presented to the Principals of the selected schools to allow the students to participate in the study. All consenting students in each class; SS 1, 2, and 3 of selected senior secondary schools whose names are fully registered in the class register by the start of the academic session and aged 12–19 years of age.

Study variables

The dependent variable was intention to smoke tobacco products, while the independent variables were socio-demographic data and other factors that may be associated with intention to smoke tobacco products such as the age of respondents who had had their first sexual experience, and respondents having a friend that smokes.

Data analysis

Questionnaires were checked for errors and cleaned at the end of each day. Data were entered into the computer and analyzed using SPSS version 20. Errors were checked for and corrected. Relevant frequencies, proportions, percentages, and means of variables were generated. Cross tabulation was done and the Chi-square test was used to test associations between variables at a 5% level of significance and intention to smoke tobacco products.

RESULTS

A total of 200 participants drawn from two public and two private coeducational senior secondary schools in Uyo Local Government Area of Akwa Ibom State were enrolled for this study and the response rate was 100%.

Socio-demographic characteristics of respondents

Table 1 shows the socio-demographic characteristics of respondents. The age of the respondents ranged from 10–19 years with a mean age of 15.3 ± 1.4 years. The majority of the respondents (72.0%) were 14–16 years of age and 110 (55.0%) of them were males. About 70 (35.0%) of the respondents were in SS 3 class and 149 (74.5%) belong to the Ibibio ethnic group.

Table 1
Distribution of sociodemographic characteristics of respondents (N = 200)

Variable	Frequency	Percentage
Age		
10–13	15	7.5
14–16	144	72.0
17–19	41	20.5
Mean (\pm SD)	15.3 (\pm 1.4)	–
Sex		
Male	110	55.0
Female	90	45.0
Class		
SS 1	65	32.5
SS 2	65	32.5
SS 3	70	35.0
Ethnicity		
Ibibio	149	74.5
Anang	21	10.5
Efik	14	7.0
Others	16	8.0

Current tobacco smoking status of respondents

Table 2 shows the current tobacco smoking status of respondents. About 99 (49.5%) of the respondents

have ever smoked or experienced tobacco smoking even one or two puffs and 76 (38.0%) reported ever smoked a cigarette. Less than half of the respondents (25.0%) had their first experience at ages 12–13 years.

Table 2
Respondents' current tobacco smoking status (N = 200)

Variable	Frequency	Percentage
Ever smoked or experimented		
Yes	99	49.5%
No	101	50.5%
Type of tobacco product used		
Cigarette	76	38.0%
Shisha	14	7.0%
Hand-rolled tobacco	9	4.5%
None	101	50.5%
Age of first exposure		
5–7	2	1.0%
8–9	3	1.5%
10–11	16	8.0%
12–13	50	25.0%
14–15	28	14.0%
Never smoked before	101	50.5%
When last smoked		
Today	4	2.0%
Some months ago	9	4.5%
Some years ago	86	43.0%
Never smoked before	101	50.5%
Currently how often do you smoke tobacco		
Daily	3	1.5%
Less than daily	3	6.0%
Not at all	194	97.0%
In the past how often do you smoke tobacco		
Daily	40	20.0%
Less than daily	49	24.5%
Not at all	101	50.5%
I don't know	10	5.0%

Assessment of respondents' awareness of advertisement and promotion of tobacco products

Table 3 shows respondents' awareness of advertisement and promotion of tobacco products. The assessment was done using participants' responses to three questions. Results showed that 64 (32.0%) of the respondents have noticed any advertisement or signs promoting cigarettes in stores where cigarettes are sold in the last 30 days. More than half of the respondents (59.0%) have seen people using tobacco products on TV, in videos, or in movies and just 15 (7.5%) of them would ever use something with a tobacco label used to promote tobacco products. 197 (98.5%) had a good awareness of advertisements and the promotion of tobacco products.

Table 3
Respondents' awareness of advertisement and promotion of tobacco products (N = 200)

Variable	Frequency	Percentage
Saw tobacco adverts or signs in shops within 30 days		
Yes	64	32.0
No	136	68.0
Saw people using tobacco products on TV, videos, or movies within 30 days		
Yes	118	59.0
No	65	32.5
I have not watched TV, video, or movies in the past 30 days	17	8.5
Would you ever use or wear something that has a tobacco company or tobacco product's name or picture on it		
Yes	15	7.5
No	165	82.5
May be	20	10.0

Assessment of respondents' intention to smoke tobacco products

Table 4 shows respondents' intention to smoke tobacco products. The assessment was done using participants' responses to four questions. Results showed

that 38 (19.0%) of the respondents would most likely smoke if their best friends offer them a cigarette. About 99 (49.5%) of the respondents reported ever thought of smoking, 43 (21.5%) of them reported peer pressure as the reason for the thought of smoking, 26 (13.0%) reported the feeling to be sexually aroused as the reason for thought and 18 (9.0%) of them would most likely smoke cigarette in the next 1 year. 75 (37.5%) have a strong intention to smoke.

Table 4
Respondents' intention to smoke (N = 200)

Variable	Frequency	Percentage
Would smoke if offered cigarette		
Definitely	18	9.0
Most likely	38	19.0
Less likely	36	18.0
No	101	50.5
I don't know	7	3.5
Ever thought of smoking		
Yes	99	49.5
No	101	50.5
If yes, the reason		
Peer pressure	43	21.5
Love the smell of cigarette	1	0.5
To be aroused sexually	26	13.0
Anger	23	11.5
Just feel like to taste	4	2.0
Parents influence	2	1.0
Never smoked before	101	50.5
Would you smoke a cigarette in the next one year		
Definitely	1	0.5
Most likely	18	9.0
Less likely	3	1.5
No	173	86.5
I don't know	5	2.5

Bivariate analysis

Association between socio-demographic characteristics and intention to smoke tobacco products

Table 5 shows the association between intention to smoke tobacco products and the socio-demographic characteristics of respondents. Among those who had ever smoked; the males (26.4%) compared to the females (12.2%) had had the intention to smoke tobacco products. This was statistically significant ($p < 0.05$).

Association between selected factors and intention to smoke tobacco products

Table 6 shows the association between selected factors and intention to smoke tobacco. Among those that had ever smoked; those that had ever smoked even one or two puffs (40.4%) compared to those that had never smoked (0.0%) had had the intention to smoke tobacco products ($p < 0.05$) and adolescents that still smoke (100.0%) compared to those that do not still smoke (19.2%) had had the intention to smoke tobacco products ($p < 0.05$), these were significantly associated with intention to smoke tobacco products. There was a statistically significant association between the age of respondents at first experience, date of respondents' last experience, those that have a sibling that smokes, respondents that have friends that smoke, and intention to smoke tobacco products ($p < 0.05$).

DISCUSSION

This study determined the intention to smoke tobacco products among public and private coeducational senior secondary schools and associated factors in the Uyo Local Government Area of Akwa Ibom State. The respondents' ages range from 10 to 19 years. The mean age of the respondents was 15.3 years. Majority of the respondents are Ibibios by ethnicity. This is expected because the study was carried out in Uyo which is relatively dominated by Ibibios in Akwa Ibom State.

Intention to smoke tobacco products among adolescents is a concern in Nigeria. The result from this study shows that of those that had ever smoked, 49.5% have had the intention to smoke tobacco products before. This is slightly higher than that from a previous study that reported the proportion of ever had an intention to smoke tobacco products as 42.9%

Table 5

Association between sociodemographic characteristics and intention to smoke tobacco products (N = 200)

Variable	Intention to smoke tobacco products		X ²	P-value
	Willing to smoke N (%)	Not willing to smoke N (%)		
Age (years)				
10–13	1 (6.7)	14 (93.3)	3.256	0.196^
14–16	28 (19.4)	116 (80.6)		
17–19	11 (26.8)	30 (73.2)		
Sex				
Male	29 (26.4)	81 (73.6)	6.187	0.013*
Female	11 (12.2)	79 (87.8)		
Class				
SS 1	9 (13.8)	56 (86.2)	2.280	0.302
SS 2	15 (23.1)	50 (76.9)		
SS 3	16 (22.9)	54 (77.1)		
Ethnicity				
Ibibio	33 (22.1)	116 (77.9)	4.179	0.243^
Anang	2 (9.5)	19 (90.5)		
Efik	1 (7.1)	13 (92.9)		
Others	4 (25.0)	12 (75.0)		

*Significant variable at 5% level of significance

^Likelihood Ratio

-Fisher's Exact Test

[15–23] which reported that 45% of adolescents have ever had the intention to smoke tobacco products. This shows that there is an increasing prevalence of intention to smoke tobacco products among adolescents.

The factors that were found to be significantly associated with the intention to smoke tobacco products were socio-demographic characteristics and ever-smoked. This study found a significant association between respondents who currently still smoke, age at first experience, and intention to smoke tobacco products. A significant association was found between respondents' siblings, friends smoking, and intention to smoke tobacco products, this is in agreement with a previous study that peer behaviour whether good or bad will be learned and followed, through modeling or

imitation of friends' behaviour, or selective reinforcement by peers [24–26]. Thus current smokers with peer smoking behaviour will act in accordance with their peers' behaviour as smoking has become a peer socialization normative standard [24–28].

CONCLUSION

This study has shown that intention to smoke tobacco products is still prevalent among adolescents, which is still a public health problem. Assessing intention to smoke tobacco products among the adolescents that have ever smoked, 50 (25.0%) of them had their first experience at ages 12–13 years and 38 (19.0%) are most likely to smoke cigarettes in the future if offered by their friends. The proportion of those that had the intention to smoke tobacco prod-

Table 6

**Association between selected factors
and intention to smoke tobacco products (N = 200)**

Variable	Intention to smoke tobacco products		X ²	P-value
	Willing to smoke N (%)	Not willing to smoke N (%)		
Ever smoked even one or two puffs				
Yes	40 (40.4)	59 (59.6)	–	<0.001*
No	0 (0.0)	101 (100.0)		
If yes, do you still smoke				
Yes	2 (100.0)	0 (0.0)	0.039*	
No	38 (19.2)	160 (80.8)		
Age when first tried to smoke				
5–7	2 (100.0)	0 (0.0)	78.849	<0.001*^
8–9	0 (0.0)	3 (100.0)		
10–11	7 (43.8)	9 (56.3)		
12–13	22 (44.0)	28 (56.0)		
14–15	9 (39.1)	14 (60.9)		
16	0 (0.0)	5 (100.0)		
When last smoked				
Today	2 (100.0)	0 (0.0)	72.370	<0.001*^
Some months ago	4 (44.4)	5 (55.6)		
Some years ago	34 (39.5)	52 (60.5)		
Never smoked before	0 (0.0)	103 (100.0)		
Does either of your parents smoke				
Yes	2 (28.6)	5 (71.4)	0.605	0.739^
No	36 (20.1)	143 (79.9)		
I don't know	2 (14.3)	12 (85.7)		
Does any of your siblings smoke				
Yes	20 (71.4)	8 (28.6)	44.347	<0.001*^
No	19 (12.6)	132 (87.4)		
I don't know	1 (4.8)	20 (95.2)		
Do you have a friend that smokes				
Yes	40 (44.4)	50 (55.6)	76.508	<0.001*^
No	0 (0.0)	94 (100.0)		
I don't know	0 (0.0)	16 (100.0)		

*Significant variable at 5% level of significance

^Likelihood Ratio

-Fisher's Exact Test

ucts was low. Most adolescents still have very poor knowledge about the dangers of smoking. Intention to smoke tobacco products was associated with socio-demographic characteristics, ever smoked, and smoking status of respondents' friends and siblings.

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