

**TOBACCO USE AWARENESS AND PERCEPTION AMONG MEDICAL STUDENTS IN  
THE NIGER DELTA UNIVERSITY, BAYELSA STATE, NIGERIA****\*Eniojukan Joshua F. and Owonaro Peter A**

Public Health Pharmacy Unit, Department of Clinical Pharmacy and Pharmacy Practice Faculty of Pharmacy, Niger Delta University, Wilberforce Island, Bayelsa State, Nigeria.

**\*Correspondence for Author: Eniojukan Joshua F.**

Public Health Pharmacy Unit, Department of Clinical Pharmacy and Pharmacy Practice Faculty of Pharmacy, Niger Delta University, Wilberforce Island, Bayelsa State, Nigeria.,

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**ABSTRACT**

Tobacco is a chemical substance, which when consumed in excessive amount has the ability to alter the physical, psychological and behavioral characteristics of the individual. This was a descriptive cross-sectional study evaluating the prevalence, pattern and perception of tobacco use among medical students of the Niger Delta University, Bayelsa State, Nigeria. Questionnaires were administered randomly to 140 consenting medical students, after carefully explaining the objectives of the study. Data was analyzed with SPSS Version 20. Majority (72.8%) of the respondents were aged 16 – 25 years, predominantly male (53.6%) and Christian (97.1%) by religion. The smoking prevalence was 32.3%; there were more male (27.7%) than female (4.6%) smokers; 68% was initiated at age 10 – 19 years; about half the ever smoked had quit smoking at study time. Most quitters did so after realizing the deleterious effects of smoking on health; some did so following counseling. Majority (44%) smoked 1-5 sticks per day; the awareness level of World No Tobacco Day and Nigeria Tobacco Control Decree were 17.3% and 3.6% respectively. The general level of perception towards tobacco use and practice was 83% high; 42% were of the opinion that the label “smokers are liable to die young” has not served as deterrent to smokers; 95.7% opined that it is part of their duty as future health care providers to be involved in smoking cessation program of helping smokers to quit Enforcement of anti-smoking campaigns among the students and the addition of it to their curriculum is urgently needed.

**KEYWORDS:** Smoking, Undergraduates, Prevalence, Adolescents, Bayelsa, Nigeria.**INTRODUCTION**

The use of tobacco originated from the beginning of human race as roots, leaves, plant, herbs and others to keep his body in good Health. Tobacco is a chemical substance that can change the physical, psychological and behavioral characteristics of the consumer. The users are faced with several health hazards such as cancer, respiratory diseases and cardiovascular diseases. Addiction is common among youths resulting to difficulty in quitting smoking.<sup>[1]</sup> Tobacco smoking is recorded as a leading cause of preventable deaths in the United State of America. Lung cancer, ischemic heart disease and respiratory tract disorders are diseases resulting from smoking cigarette. Despite the health challenges tobacco smokers are faced with economic burden.<sup>[2]</sup> In 2000–2004, about 443,000 premature deaths were recorded due to cigarette smoking or secondhand smoke exposure. Whereas, in 2007 42.3 million were reported as current smokers with significance among gender, race, income, ethnicity, age and level of education in the United State.<sup>[2]</sup> The prevalence of smoking is still on the rise in developing countries despite the awareness of smoking effects. The increase in smoking is linked to the level of advertisement in media and the youths are the major target.<sup>[3]</sup> About one third of

the world populations that are 15 and above are smokers.<sup>[1]</sup> Therefore, the use of tobacco among students is on the increase and there is urgent need to curtail this negative trend. Hence, there is urgent need to establish policies to forestall smoking and setting up of antismoking campaign centers to reduce prevalence of smoking and rehabilitation centers to avert addiction by smoke.<sup>[4]</sup> In this study we will be evaluating the prevalence, pattern, perception of tobacco use among the medical students of the Niger Delta University of Bayelsa State, Nigeria.

**METHOD**

**Study population:** This survey was done in the Niger Delta University, Wilberforce island Bayelsa State South –South of Nigeria. The University Community is made up of about 10,000 students and the medical students were about 420.

**Study Design and Sample:** This was a descriptive cross-sectional study. Questionnaires were administered randomly to 140 consenting medical students, after carefully explaining the objectives of the study. The questionnaires were designed to retrieve demographic information, epidemiology of smoking and other

contextual correlates. The sample size was calculated using the formula for determining sample size for population studies.<sup>[5]</sup>

**Data Analysis:** Data were coded and fed into SPSS version 20 spread sheet for descriptive and inferential (students't-test and one-way ANOVA) statistics.

## RESULT

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

Variable	Frequency	Percent (%)
Age		
16 – 20	37	26.4
21 – 25	65	46.4
26 – 30	29	20.7
> 30	9	6.4
Gender		
Male	75	53.6
Female	65	46.4
Level		
200	30	21.4
300	31	22.1
400	35	25.0
500	23	16.4
600	21	15.0
Religion		
Christianity	136	97.1
Islam	3	2.1
Eckankar	1	0.7

### Prevalence and Patterns of Smoking

The prevalence of smoking was 32.3%; there were more male (27.7%) than female (4.6%) smokers. Majority (36%) was initiated into smoking at age 15 – 19 years; 32% at age 10-14 years and 12% at age 20-24 years.

64% of the respondents were initiated into smoking at primary and secondary school stages; 16% at 100 level. Majority (44%) smoked 1-5 sticks per day; 40.9% and

66.7% respectively of male and female smokers had quitted smoking at the time of the study; 45.4% had quitted smoking at 200 level in the University. Major reasons for quitting were knowledge of hazard effects of smoking (54.5%), to set good examples (36.4%), and after counseling (27.3%). 70% of the respondents reported that they had not been educated on smoking cessation. However, 76.4% of respondents were willing to help smokers to quit smoking. See table 2.

**Table 2 Prevalence and Patterns of Smoking**

Variable	Frequency	Percent (%)
Ever smoked cigarette	Yes (%)	No (%)
Male	22 (27.7)	52 (70.3)
Female	3 (4.6)	62 (95.4)
Age of initiation		
10-14	8	32.0
15-19	9	36.0
20-24	3	12.0
No response	5	20.0
Stage of initiation		
Primary	8	32.0
Secondary	8	32.0
100 level	4	16.0
200 level	1	4.0
300 level	2	8.0
400 level	2	8.0
Number of sticks smoked per day		

1-5	11	44.0
6-10	2	8.0
No response	12	48.0
Quitted smoking?	Yes (%)	No (%)
Male	9 (40.9)	13 (59.1)
Female	2 (66.7)	1 (33.3)
Stage of quitting smoking		
Primary	2	18.2
Secondary	1	9.1
100 level	1	9.1
200 level	5	45.4
400 level	2	18.2
Reasons for quitting smoking		
Knowledge of health hazards	6	54.5
Relations and friends	2	18.2
Bad breath	2	18.2
To set good examples	4	36.4
After counseling	3	27.3
Others	2	18.2
Have you been taught about smoking cessation in your medical programme?		
Yes	24	17.1
No	116	82.9
Are you willing to help smokers quit smoking?		
Yes	107	76.4
No	33	23.6

**Level of Awareness of World No Tobacco Day (WNTD) and Nigeria Tobacco Control Decree (NTCD):** The awareness level of WNTD among NDU medical students was 17.3%. This was not significantly different by sex ( $X^2 = 0.303$ ;  $p = 0.656$ ) and level of students ( $X^2 = 5.802$ ;  $p = 0.214$ ). 28.5%, 21.7% and 14.3% were

reported as the level of awareness of WNTD for 400, 500 and 600 levels respectively. The awareness of NTCD was found to be 3.6%; this was not significantly different by sex ( $X^2 = 1.492$ ;  $p = 0.226$ ) and level of students ( $X^2 = 8.295$ ;  $p = 0.081$ ). 13% of 500 level had awareness of NTCD. See table 3.

**Table.3: Level of Awareness of WNTD AND NTCD**

Awareness status		Awareness of WNTD by Sex							
		Sex							
		Male (%)		Female (%)		Total	X <sup>2</sup>	Sig.	
Aware		14 (18.9)		10 (15.4)		24 (17.3)	0.303	0.656	
Not aware		60 (81.9)		55 (84.6)		115 (82.7)			
Total		74 (100.0)		65 (100.0)		139 (100.0)			
Awareness of WNTD by Level									
		Level							
		200	300	400	500	600	Total	X <sup>2</sup>	Sig.
Aware		3 (10.0)	3 (10.0)	10 (28.5)	5 (21.7)	3 (14.3)	24 (17.3)	5.802	0.214
Not aware		27 (90.0)	27 (90.0)	25 (71.4)	18 (78.3)	18 (85.7)	115 (82.7)		
Total		30 (100)	30 (100)	35 (100)	23 (100)	137(100)	139 (100)		
Awareness status		Awareness of NTCD by Sex							
		Sex							
		Male (%)		Female (%)		Total	X <sup>2</sup>	Sig.	
Aware		4 (5.4)		1 (1.5)		5 (3.6)	1.492	0.226	
Not aware		70 (94.6)		64 (98.5)		134 (96.4)			
Total		74 (100.0)		65 (100.0)		139 (100.0)			
Awareness of NTCD by Level									
		Level							
		200	300	400	500	600	Total	X <sup>2</sup>	Sig.
Aware		0 (0.0)	0 (0.0)	1 (2.9)	3 (13.0)	1 (4.8)	5 (3.6)	8.295	0.081
Not aware		30 (100)	30 (100)	34 (97.1)	20 (87.0)	20 (95.2)	134 (96.4)		
Total		30 (100)	30 (100)	35 (100.0)	23 (100)	21 (100.0)	139 (100)		

**Level of perception of Tobacco use and practice**

The general level of positive perception towards tobacco use and practice was found to be 83%. Majority (42%) either strongly disagreed or disagreed that the label “smokers are liable to die young” has served as deterrent to smokers; majority (66.4%) were in support of no sale of tobacco products in pharmacies; 87.8% fully

supported no smoking in hospitals; 89.8% opined that doctors should not smoke. 84.1% agreed that smoking cessation should be included in their undergraduate curriculum; nearly all (95.7%) opined that it is part of their duty as future health care providers to be involved in smoking cessation program of helping smokers to quit. See table 4 for details.

**Table 4: Level of Perception of NDU Pharmacy Students towards Tobacco use and Practice**

Item	N	SD (%)	D (%)	NS (%)	A (%)	SA (%)	Mean±sd
Do you agree that the statement “ <i>smokers are liable to die young</i> ” has served as deterrent to smokers?	126	26 (20.6)	27 (21.4)	35 (27.8)	25 (19.8)	13 (10.0)	2.78±1.27
Do you agree that tobacco products should not be sold in Pharmacies?	134	6 (4.5)	21 (15.7)	18 (13.4)	35 (26.1)	54 (40.3)	3.82±1.24
Do you agree that smoking should not be permitted in Hospitals?	139	6 (4.3)	3 (2.2)	8 (5.8)	21 (15.1)	101 (72.7)	4.50±1.01
Do you agree that as health care providers, Doctors should not smoke?	137	4 (2.9)	2 (1.5)	8 (5.8)	33 (24.1)	90 (65.7)	4.48±0.9
Do you agree that counseling about smoking cessation should be included in medical curriculum?	139	4 (2.9)	5 (3.6)	13 (9.4)	53 (38.1)	64 (46.0)	4.21±0.96
Do you agree that tobacco use or smoking should be prohibited at medical student’s events?	138	3 (2.2)	7 (5.1)	11 (8.0)	30 (21.7)	87 (63.0)	4.38±0.98
Do you agree that it is part of your duty as future health care provider to be involved in smoking cessation program of helping smokers to quit?	82	2 (1.4)	2 (1.4)	2 (1.4)	52 (37.1)	82 (58.6)	4.50±0.74
Do you agree that Doctors and medical students should be involved in quit smoking program?	139	3 (2.2)	4 (2.9)	3 (2.2)	54 (38.8)	75 (54.0)	4.40±0.85
Mean perception of medical students towards tobacco use and practice = 4.13±0.99, equal to 83% (High)							

Cronbach’s alpha = 0.746

**Cross-tabulations of respondents’ perception and demography:** There was statistically significant difference observed between males and females in relation to their perception towards tobacco use and practices ( $t = -2.766$ ,  $df = 138$ ,  $p = 0.006$ ).

A one-way ANOVA revealed no statistically significant difference among the levels ( $F = 0.897$ ) and different age groups ( $F = 0.785$ ,  $p = 0.504$ ) in relation to perception of tobacco use and practices. See table 5.

**Table 5: Cross-tabulations of respondents’ perception and demography**

Independent samples t-test for gender							
Variable	N	Mean±sd	Df	T	p-value	CI (95%)	
						Lower limit	Upper limit
Male	75	3.91±0.74	138	-2.766	0.006	-0.522	-0.087
Female	65	4.21±0.53					
One-way ANOVA for level							
Variable	N	Mean±sd	Df	F	p-value	CI (95%)	
						Lower limit	Upper limit
200 level	30	4.00±0.56	4,135	0.897	0.467	3.80	4.21
300 level	31	3.88±1.00				3.51	4.24
400 level	35	4.11±0.53				3.93	4.29
500 level	23	4.18±0.47				3.85	4.37
600 level	21	4.11±0.57				3.85	4.37
One-way ANOVA for age group							
16-20	37	4.18±0.57	3, 136	0.785	0.504	3.99	4.37
21-25	65	3.97±0.73				3.79	4.15
26-30	29	4.03±0.71				3.76	4.30
>30	9	4.07±0.3				3.84	4.3

CI: confidence interval, F is significant at  $p < 0.05$

## DISCUSSION

**Demography:** Majority of the respondents belonged to the adolescent age group (15 – 25 years) predominantly male and Christian by religion. This University is situated in the south-south zone of Nigeria which is dominated by Christians.<sup>[6]</sup>

**Smoking Prevalence and Patterns:** The smoking prevalence in this population was high at 32.3%; this is in contrast with other studies that have reported much lower prevalence rates among adolescents.<sup>[7-11]</sup>

There were more male (27.7%) than female (4.6%) smokers, similar to other studies.<sup>[8,12,13]</sup>

Males are usually more outgoing whilst females would rather guide against being tagged wayward.<sup>[14]</sup>

Majority (68%) was initiated into smoking at age 10 – 19 years. Over 60% were initiated at primary or secondary school levels. These results are similar to other studies.<sup>[8,11,13,15]</sup>

A closer watch is required for this cohort of smokers and a more aggressive cessation programme should be mounted for them arising from the observation that the younger the age at debuting, the greater the risk of serious health problems.<sup>[16]</sup>

In developed countries like the United kingdom and United State the initiation of smoking is even lower in age.<sup>[17]</sup> This may be connected to the degree of youth freedom and the moral and religious value attached to smoking. About half the ever smoked had quit smoking at study time, similar to other studies.<sup>[13]</sup> Most of quitters did so after realizing the deleterious effects of smoking on health; some did so following counseling. Thus, proper and aggressive educational interventions would lead to more smoking quitters in this population. This is more pertinent as 70% of respondents had never been taught smoking cessation. The knowledge of health Problems is associated with reasons for not smoking.<sup>[9]</sup>

**Number of Sticks smoked per day:** Majority (44%) smoked 1-5 sticks per day. Studies conducted in Nigeria have associated current smoking with five sticks or more a day<sup>[7, 18]</sup> and classified the average Nigerian smokers as light smokers.<sup>[19, 20]</sup> It is, however, of no effect whether light or heavy smoker; they all carry same risks.

**Awareness Level of WNTD:** The awareness level of WNTD among NDU medical students was very low at 17.3%; even lower is the awareness level of NTCD at 3.6%. A similar report was recorded in a study among pharmacy students in the same University.<sup>[10]</sup> Hence there is need to create more awareness in the University community. Recent study revealed a very low awareness level of the law banning smoking in public places in Osun State, Nigeria.<sup>[21]</sup> The study revealed that students were ready to be part of smoking cessation programmes

only lacked the requisite knowledge. It was gratifying to note that the students were generally very willing to help in smoking cessation programme.

**Perception of tobacco use and Practice:** The general level of perception by NDU medical students towards tobacco use and practice was found to be very high. This means that there is a high level of perception of the effects of tobacco use and practice among the medical students in Niger Delta University.

However, majority (42%) were of the opinion that the label “*smokers are liable to die young*” has not served as deterrent to smokers, similar to other studies.<sup>[10]</sup>

Majority (66.4%) were in support of banning the sale of tobacco products in pharmacies; 87.8% fully supported banning smoking in hospitals; 89.8% opined that doctors should not smoke; 84.1% agreed that smoking cessation should be included in their undergraduate curriculum and nearly all (95.7%) opined that it is part of their duty as future health care providers to be involved in smoking cessation program of helping smokers to quit.

However, more training should still be included in their curriculum to enable them participate in anti-smoking programmes.<sup>[22]</sup> A statistical significance was reported among male and female on their perception towards tobacco use. However, there was no statistically significant difference among the levels of medical students and age. This is similar to other studies among pharmacy students.<sup>[10]</sup>

## CONCLUSION

Majority of respondents were adolescents aged 16 -25 years, predominantly Christian (97.1%) by religion. Smoking prevalence was high among medical students in NDU with more male smokers; about half of ever smoked were current smokers; debuting age was low with majority between 10 – 19 years. Quitters did so sequel to realizing the adverse effects of smoking on health. There was a very low level of awareness of WNTD and NTCD. There was a very high level of positive perception about tobacco use and practice which was gender but not age or level sensitive.

There is need to increase awareness and knowledge of this population on tobacco effects and cessation programmes. The undergraduate medical curriculum should inculcate these into the students. The need to set up antismoking campaign centres and rehabilitation centres cannot be over emphasized.

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