

Prevalence and factors influencing cigarette smoking among young adults in a tertiary institution in Borno State, Nigeria

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Abstract

Objectives: Tobacco use, a preventable cause of morbidity and mortality, kills over 3.5 million people worldwide each year. Adverse effects of tobacco smoking on general health and longevity are well documented. WHO states that out of the 1.22 billion smokers, 1 billion live in developing and transitional economies. Epidemiological studies among different University students showed marked variation in the prevalence of smoking. The current study was aimed at finding the prevalence of smoking and factors influencing it among young adults in a tertiary institution in Borno State, northeast Nigeria and to find whether there is a change in the trend from previous studies. Factors influencing the onset of smoking habits among adolescents were investigated with peer-group/friends as the single most important contributory factor.

Methods: A descriptive, cross-sectional survey of 400 undergraduate students of the University, carried out over six weeks using a structured, researcher-administered questionnaire.

Result: Forty-eight percent of the respondents fall within the age group of 20-24 years and majority of them (76%) were male. The prevalence of those of them currently smoking was 11.5%. The major reason for initiating the smoking habit amongst the undergraduates was peer group influence observed in over 60% of respondents.

Conclusion: The prevalence of current smokers among university students in Maiduguri is relatively low. Peer influence still plays an integral role in sustaining the habit and it can be targeted to further decrease the trend.

Keywords: Cigarette, smoking, prevalence, tertiary, adults

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Received: November 16, 2018

Accepted: November 26, 2018

Published: December 10, 2018

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<http://dx.doi.org/10.4314/rejhs.v6i4.8>

Prévalence et facteurs influençant la consommation de cigarettes chez les jeunes adultes dans un établissement d'enseignement supérieur de l'État de Borno, au Nigéria

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Resume

Objectifs: Le tabagisme, cause évitable de morbidité et de mortalité, tue chaque année plus de 3,5 millions de personnes dans le monde. Les effets néfastes du tabagisme sur la santé générale et la longévité sont bien documentés. L'OMS affirme que sur les 1,22 milliard de fumeurs, 1 milliard vit dans des économies en développement ou en transition. Des études épidémiologiques menées auprès de différents étudiants universitaires ont montré une nette variation de la prévalence du tabagisme. La présente étude visait à déterminer la prévalence du tabagisme et les facteurs qui l'influencent chez les jeunes adultes dans un établissement tertiaire de l'État de Borno, dans le nord-est du Nigéria, et à déterminer s'il existe un changement de tendance par rapport aux études précédentes. Les facteurs influençant l'apparition d'habitudes tabagiques chez les adolescents ont été étudiés avec le groupe de pairs / amis comme facteur contributif le plus important.

Méthodes: Enquête transversale descriptive réalisée auprès de 400 étudiants de premier cycle de l'Université, menée pendant six semaines à l'aide d'un questionnaire structuré, administré par le chercheur.

Résultats: Quarante-huit pour cent des répondants appartiennent au groupe d'âge des 20 à 24 ans et la majorité d'entre eux (76%) étaient des hommes. La prévalence de ceux qui fument actuellement était de 11,5%. La principale raison d'initiation au tabagisme chez les étudiants de premier cycle était l'influence de groupes de pairs observée chez plus de 60% des répondants.

Conclusion: La prévalence des fumeurs actuels chez les étudiants à Maiduguri est relativement faible. L'influence des pairs joue toujours un rôle essentiel dans le maintien de l'habitude et elle peut être ciblée pour réduire davantage la tendance.

Mots-clés: cigarette, tabagisme, prévalence, tertiaire, adultes

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INTRODUCTION

Tobacco is an agricultural product of the member of the nightshade family. There are more than 70 species of tobacco of which 45 are native to the Americas. It has been widely used for many centuries by the indigenes for medicinal and ceremonial purposes as well as for pleasure (1).

Tobacco use remains the single largest preventable cause of morbidity and mortality in the United States of America (2). The WHO has estimated that tobacco and its products kill over 3.5 million people worldwide each year, and it is predicted that by the 2020-2030, tobacco will kill 10 million people each year (3). Adverse effects of tobacco smoking on general health are well documented, and on average a cigarette smoker may die 10 years younger than a non-smoker (4,5). It is stated by the WHO that most of the disease burden and premature deaths attributable to tobacco use affect the poor and out of the 1.22 billion smokers, 1 billion live in developing and transitional economies with levels reaching plateau or declining in the developed countries (6).

Epidemiological studies among different university student populations in Arab and Eastern Mediterranean countries showed marked variation in the prevalence of smoking which ranged from 13.0 - 42.5% being highest in Kuwait (7) and Turkey (8).

The smoking prevalence among secondary school students in South-west Nigeria varies between 3.4% and 17.1% (9-11). Factors influencing the onset of smoking habits among adolescents were investigated in Maiduguri, the results of which showed that peer-group pressure is the single most important contributory factor (12). In another study on the effects of health education on cigarette smoking carried out in a tertiary health institution in northern Nigeria it was found that most of the respondents were aware of dangers associated with smoking (13).

The current study was therefore aimed at the prevalence of smoking and factors influencing smoking habits among young adults in a tertiary institution in Borno State and to find whether there is a change in the trend compared to previous studies.

METHODS

Study design

The study was a descriptive, cross-sectional survey with the aim of assessing the prevalence and factors influencing smoking among young adults in a tertiary institution in Maiduguri.

Participants and setting

The study was conducted both within the university campus and the teaching hospital, amongst undergraduate students of a University in Borno State, which is in the northeast sub-region of Nigeria. It was carried out over a period of six weeks. The University enrolls about 25,000 students in its combined programmes, which include a College of Medicine and Faculties of Agriculture, Arts, Dentistry, Education, Engineering, Law, Management science, Pharmacy, Science, Social science and Veterinary medicine. It is a major centre for learning in the north-eastern part of the country. Borno State is bordered by three countries; Cameroun, Chad and Niger with constant trans-border human traffic to Maiduguri for trade, learning and settlement.

A total of 400 participants were enrolled in this study using a simple random sampling method. Data were obtained using a researcher-administered, structured questionnaire which was tested and validated. Responses from the subjects were recorded by ticking the appropriate answers. Information obtained in the questionnaire include sociodemographic characteristics, reasons for smoking, source of cigarette and symptoms associated with smoking. The results obtained were classified, analysed and presented as tables and charts.

Smoking status

A current smoker was one who had smoked at least 100 cigarettes during his/her lifetime and, at the time of interview, reported smoking every day or some days. Ex-smokers were those who reported smoking at least 100 cigarettes during their lifetime but currently did not smoke (13). Non-smokers were those who had never smoked or smoked less than 100 cigarettes in their lifetime (14).

Analysis of Data

Data were presented as frequencies and percentages using tables and pie chart as appropriate.

Ethical clearance

Ethical clearance for the study was obtained from the Ethics and Research Committee, University of Maiduguri Teaching Hospital.

RESULTS

Four hundred undergraduate students were included in the study. Majority of the respondents (76%) were male with females

constituting only 24%. Forty-eight percent fall within the age group of 20-24 years followed by 25.9% in those aged between 25-29 years. Only 8% of the undergraduates were 30 years and above. Higher level of education was attained by 67.3% and by 55.8% of the fathers and the mothers of respondents, respectively while Qur'anic education constitute 12% and 14% of educational level of their fathers and mothers, respectively. Only 5.8% and 8.3% of the parents were not educated at all. The ethnic distribution of the respondents showed that Kanuri made up 20%, Babur/Bura 17%, Hausa 15% and the rest of other ethnic groups 48%. Table 1 shows the sociodemographic characteristics of the respondents.

Figure 1 shows the reasons for initiating smoking habits amongst the undergraduates with over 60% due to peer group influence, 23% due to social acceptance, with 11%, 2% and 1% due to stress, medicinal value and tobacco advertisement, respectively.

Table 2 shows the prevalence of cigarette smoking among the undergraduates, it shows that majority of the respondents (78.5%) were non-smokers with 11.5% current smokers and 10% ex-smokers.

Symptoms acknowledged by respondents to be associated with cigarette smoking included chest pain as indicated by 41.9% as the most common symptom followed by cough (26.7%). Table 3 shows the distribution of the respondents' knowledge of the common symptoms associated with cigarette smoking.

Table 4 shows that 92.5% of the respondents agree that passive smoking is equally harmful to health, 82% did not agree that smoking has more benefits than harm, 42% did not agree that increase in the price of cigarette will reduce the smoking habit while over 50% of them agree that quitting smoking is easier said than done.

DISCUSSION

In this study, we looked at the prevalence of smoking among undergraduate students of a University in Borno State, what drives this habit and then assessed the knowledge and attitude of the students towards cigarette smoking. The prevalence of current smokers was 11.5%. This is similar to the prevalence of 12.8% found among medical out-patients in Maiduguri by Salawu *et al* (15). It is, however, lower than the 22% prevalence among University students in South West, Nigeria (16) and 26% in Pakistan (17). The percentage of those who have smoked cigarette

before (current and ex-smokers) was 21.5% and this is like the 22% found among university students in southwest Nigeria (24). The social unacceptability of cigarette smoking in the environment may account for the low figure among our sample of undergraduate students. The gender difference in the proportion of respondents may be due to cultural influence where more males attain higher education.

Only 8% of the respondents were 30 years or older. This may be because the subjects are in their earlier years of study and therefore more willing to participate or a trend showing younger age demographics in the University. Babatunde *et al* (16) in their study found from two Universities in South West, Nigeria, 96.3% of respondents who smoked to be younger than 26 years. The majority of participants in a health education intervention on cigarette smoking from two Colleges of Education in Northern, Nigeria were in the 19 – 26 years age group (18). Similarly, 74% of our respondents are in the 20 - 26 years age group.

The high number of parents with tertiary level of education in this group is consistent with other studies (19). Highly educated individuals are more likely to be in the upper or middle class, be economically better off and to encourage their wards to do same (25). This may also be responsible for the low prevalence of current smokers in the group as highly educated parents may have more disciplined children, especially in this regard.

Peer pressure was cited by over 60% of respondents as the influence for commencing the habit of smoking. An earlier study by Yahya *et al* (12) in the same environment reported same as the prevailing. Ojo *et al* (19) found peers to have significantly influenced moderate and heavy smokers among University undergraduate students. Many other studies both within (16) and outside (20-22) Nigeria have shown a similar trend. It may then become important to incorporate into school curricula, at the senior secondary school for instance, measures aimed at discouraging the youth from smoking and make concerted efforts to reduce peer influence through peer education training. Media adverts, both print and electronic, have also been known to reinforce significant peer pressure (21) and should be controlled. Unlike the findings of some studies, coping with stress or relaxation (18, 23, 26) were not important reasons for smoking.

Majority of the respondents (92.5%) agreed that passive smoking is harmful to health. In a recent study, Kaleta *et al* (27) found 69.3% of

adolescents to be aware of the deleterious health effects of passive smoking. The high awareness in this population can be tapped and used in improving tobacco control measures among students. Over forty percent of the respondents do not see price increase as a deterrent to tobacco smoking. Studies have on the contrary shown the effectiveness of punitive cigarette pricing in reducing smoking habit among adults (26).

In conclusion, the prevalence of current smokers among these students in this University in Borno State is relatively low; peer influence still plays an integral role in sustaining the habit and the same can be utilized to further lower the prevalence of the habit.

Acknowledgement: We wish to thank all the students who participated in this study

Conflicts of interest: The authors declare no conflicts of interest.

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Table 1 – Sociodemographic characteristics of University of Maiduguri undergraduates

Characteristics	Frequency	Percentage (%)
Age group (years)		
< 15	2	0.5
15 – 19	73	18.9
20 – 24	192	48.1
25 – 29	103	25.9
> 30	30	7.7
Gender		
Male	303	75.8
Female	97	24.2
Ethnicity		
Kanuri	80	20.0
Bura	69	17.3
Hausa	61	15.3
Other tribes	190	47.5
Father's educational level		
Qur'anic	48	12.0
Primary	23	5.8
Secondary	37	9.3
Tertiary	269	67.3
None	23	5.8
Mother's educational level		
Qur'anic	59	14.8
Primary	22	5.5
Secondary	63	15.8
Tertiary	223	55.8
None	33	8.3
Total	400	100

Table 2 – Prevalence of cigarette smoking among the study population

Smoking habit	Frequency	Percentage %
Current smoker	46	11.5
Ex-smoker	40	10.0
Non-smoker	314	78.5
Total	400	100

Table 3 – Knowledge of common symptoms associated with smoking among the study population

Symptoms	Frequency	Percentage %
Chest pain	36	41.9
Cough	23	26.7
Difficulty in breathing	11	12.8
Headache	4	4.7
Others	12	14.0
Total	86	100

Table 4 – Beliefs and attitudes of the undergraduate students regarding cigarette smoking

Beliefs and attitudes	Frequency	Percentage %
Cigarette smoking could be harmful to people close by who inhale the smoke		
Agree	370	92.5
Indifferent	16	4.0
Disagree	14	3.5
Smoking has more benefits than harm		
Agree	34	8.5
Indifferent	39	9.8
Disagree	327	81.8
If the price of cigarette is high, people will reduce smoking		
Agree	130	32.5
Indifferent	100	25.0
Disagree	170	42.5
Quitting smoking is easier said than done	214	53.6
Agree	82	20.3
Indifferent	104	26.1
Disagree		
Smoking does not have any harmful effect to health	52	13.0
Agree	22	5.5
Indifferent	326	81.5
Disagree		
Total	400	100

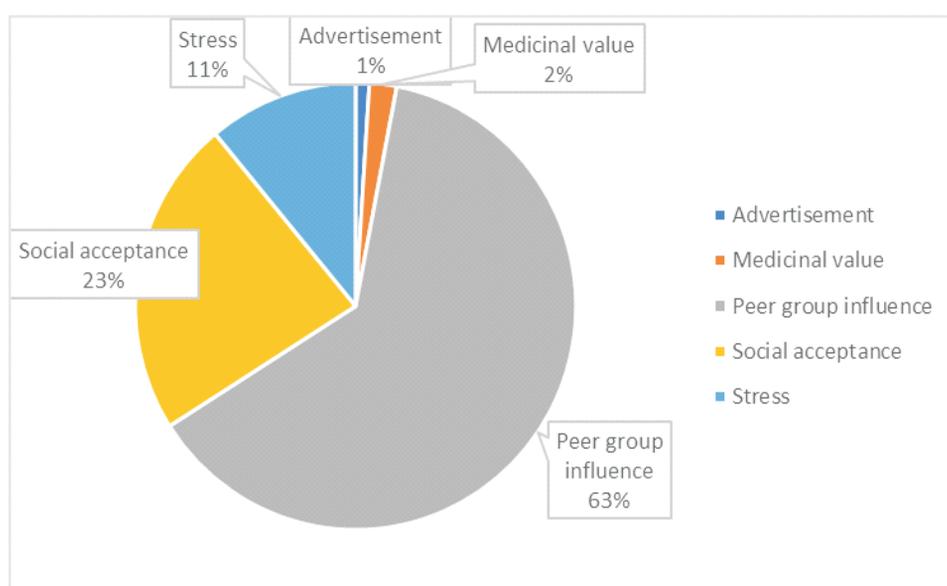


Figure 1 Reasons for initiation of smoking among undergraduate students