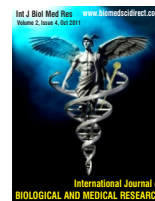


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International Journal of Biological & Medical Research

Journal homepage: www.biomedscidirect.com



Original Article

Cigarette smoking habits among senior secondary school students in lagos, south west Nigeria

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ARTICLE INFO

Keywords:

Cigarette Smoking
Habits
Age Of Onset

ABSTRACT

Background: Cigarette smoking is an important health hazard and a major cause of preventable morbidity and mortality worldwide. Young people particularly in developing countries are taking on this habit despite the hazards. **Material and Method:** The cross-sectional study was conducted in Lagos, South West Nigeria. Students responded to the standard questionnaire recommended for smoking survey habits in young people. The participating students were from six randomly selected senior secondary schools in three local government areas of Lagos. The Local governments were selected by Stratified random sampling. A total of 1,174 questionnaires were analysed. **Result:** There were 140 current smokers giving a smoking prevalence of 12.5% among the students. More males 88 (16.1) smoked compared with females 36 (7.1) There were 54 (4.8) Ex-smokers. The peak age onset of 2.6 years 2.5 years for the males and 11.4 cigarette smoking was 12.8 1.7 years with afor females. The mean age of current smokers was 16.1 mean smoking duration of 3.95 years. The mean quantity of cigarette smoked was 3.7 sticks per day. The reasons given for starting cigarette smoking were peer group influence, curiosity and desire to express maturity. Factors encouraging sustenance of the habit were more frequently a search for pleasure and to reduce stress. Having parents, friends or siblings who are smokers also increase the likelihood of smoking among the students. **Conclusion:** This study showed a rather high prevalence of cigarette smoking among senior secondary school students in Lagos.

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1. Introduction

Cigarette smoking is an important health hazard and a major preventable cause of morbidity and mortality. Despite the fact that the hazards of smoking are well known the number of young people who take up cigarette smoking still seems to be on the increase particularly in developing countries [1,2].

The World Health Organisation (WHO) states that "Much of the disease burden and premature mortality attributable to tobacco

use disproportionately affect the poor". Of the 1.22 billion smokers, 1 billion of them live in developing or transitional economies. Rates of smoking have leveled off or declined in the developed world [3].

Cigarette smoking is the commonest form of tobacco use and in developed countries accounting for at least 80% of overall tobacco consumption [1,2] while several studies in developed countries had shown a decrease in cigarette among the older age groups; it is not the same in the younger populations. In the developing countries the prevalence among the youths seems to be on the increase [2]. In ranking addictive drugs, nicotine was determined to be more addictive than heroine, cocaine, alcohol, caffeine and marijuana [4]. Early onset of smoking leads to more active years of

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smoking with its health hazards. It is therefore important for researchers in the western world as well as developing countries to study cigarette smoking among the youths and the factors that leads to its onset. This is also in agreement with the World Health Organization (WHO) demand for more efforts and cooperation among health advocates and practitioner in reversing the current trend in Tobacco use [5]. To be able to contribute to this global effort, we set out to study the current cigarette smoking habits among students of senior secondary schools in Lagos, south West Nigeria. Although several studies [5-10] had been done among various categories of students in Nigeria, there is need to redefine the present magnitude of cigarette smoking among the young people in Nigeria particularly in an urban, densely populated and cosmopolitan city of Lagos .it is also important to identify those prevailing factors that lead to initiation and continuation of cigarette smoking in this group of people. In addition, it is expected that the findings will provide needed informations that may aid further policy formulations for effective tobacco control in Nigeria.

2. Materials and Methods

The study was carried out in Lagos, the commercial centre of the Federal republic of Nigeria. Lagos state comprises of twenty local government areas (LGA). There were fifteen local government area (LGA) classified as urban while five were classified as rural. Two urban local government areas and one rural local government area were selected by stratified sampling method. A total of six senior secondary schools comprising of four schools in the urban LGA and two from rural LGA were selected for the study. The study was approved by the state ministry of education as well as the ethic committee of the teaching hospital. Informed consent was taken from the students. Self administered questionnaires were distributed to the students in their classrooms. Confidentiality and anonymity were emphasized to the students. The questionnaires were retrieved immediately afterwards for analysis. A pilot study was done previously to assess the validity and the students understanding of the questionnaire. The questionnaire sought information on Demography, smoking habits, parental smoking, circumstances of first cigarette smoking and the reasons for continuing to smoke.

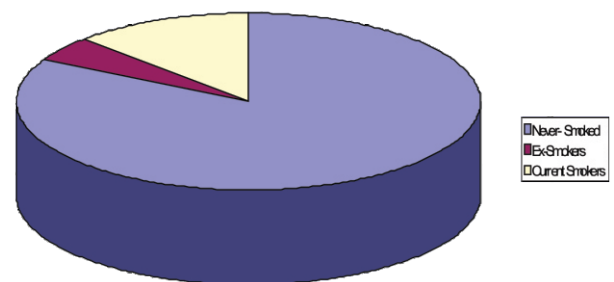
The data was analysed using the Epi INFO (version 6) statistical software. It was also used for data entry and validation. The check programmer EPI Info was used to ensure that only data in specified legal and logical codes were entered. The valid menu was also used to minimize errors in data entry. Measures of central tendency and dispersion were computed for all quantitative variables. Frequency distribution tables were constructed for subgroup of interests. For the comparison of prevalence rates the Chi square was adopted and the student t test was used for comparison of means. Association or difference is said to be statistically significant if P is equal or less than 0.05.

3.Results

1,174 questionnaires were retrieved and found suitable for analysis. 1,132 respondents indicated their smoking status giving a response rate of 96.4%. There were 588 males (51.9%) and 544(48.1%) females. The ages of the respondents ranged from eleven to twenty years with a mean age of 16 ± 1.8 years. 938 students had never smoked cigarette that is 82.8%. 140(12.4%)

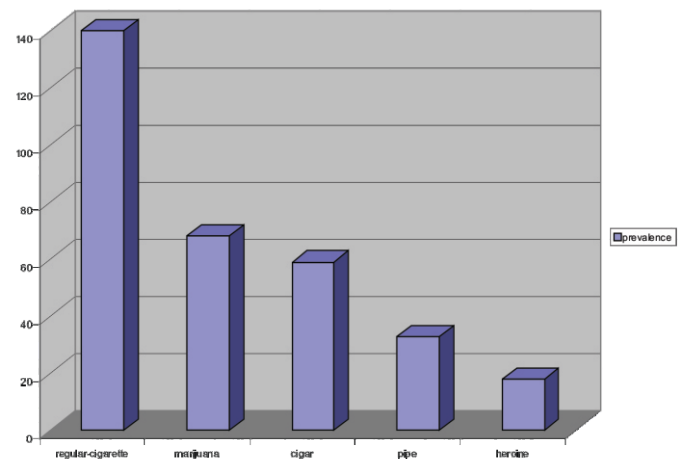
are current smokers while 54 (4.8%) were Ex-smokers. This is illustrated in Figure I. There were 88 male smokers representing a prevalence of 16.1% among the males and 36 female smokers (prevalence of 7.1 among the females.) More males smoke significantly compared with females. ($P < 0.05$)

Figure I: smoking status of senior secondary school students in lagos



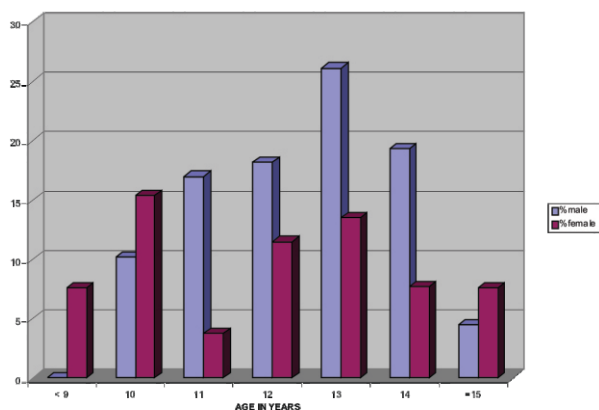
In addition to cigarette smoking, the students abuse Marijuana, use Cigar and Pipe. 68(5.8%) use Marijuana, 59 (5%) use Cigar, 33 (2.8%) and 18 (1.5%) use pipe and cocaine respectively. This is shown in Figure II.

Figure II: prevalence of substance abuse by the students



The mean age of initiating cigarette smoking in males is 12.8 ± 2.5 years while that among the females is 11.4 ± 2.6 years. Comparing both males and females p value is 0.04. The females significantly started cigarette smoking earlier than males. Irrespective of gender, majority of the smokers picked the habit between ten and fourteen years. At age ten, 8(15.4%) of the females smoked compared with 9(10.2%) males. 5(7.6%) of the females smoked at ages less than nine compared to none among the males. This is statistically significant ($P < 0.05$). This is shown in Figure III.

Figure III: age at first experience with cigarette smoking in both male and female students



Most of the students were light smokers. 100(84.6%) out of 118 smokers that indicated the quantity smoked, smoked less than five sticks per day. 16 (13.6%) smoked between 5-10 sticks per day. Only 2 (1.6%) of the students smoked more than ten sticks per day. The mean quantity smoked is 3.7 sticks per day with a mean duration of 3.95 years. 106 (75.7%) of the smokers smoked their first cigarette in the company of their friends. 16(11.4%) smoked alone while 11(7.9%) smoked with a smoking relation. Only 3(2.1%) smoked with a smoker parent. 90 (64.3%) of the smokers obtained their first cigarette from friends. 13 (9.3%) got theirs from the shops by themselves. 4(2.9%) obtained from a stub from the smoking parent while 28 (20%) could not remember the source.

76 Students 54.2% smoked for the first time to imitate friends who smoke. 22(15.7%) smoked out of curiosity, 19 (13.6%) smoked as a sign of maturity. This is shown in Figure IV, the reasons for continuing smoking is also indicated in Figure V.

Figure IV: reasons for smoking the first time

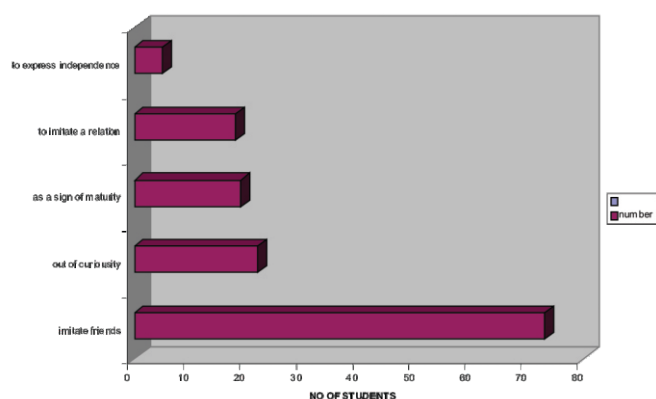
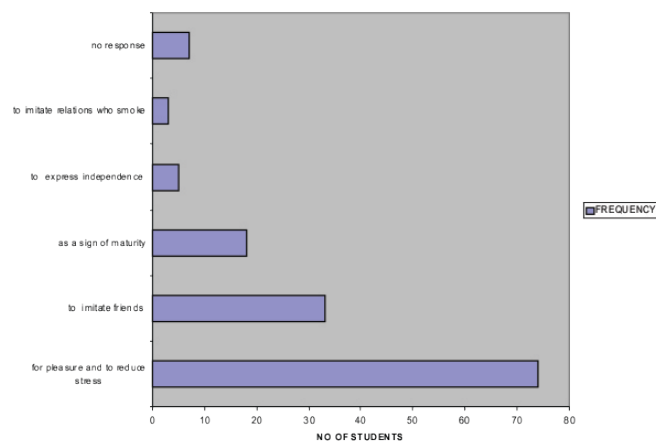


Figure V: reasons for current smoking



13 (9.3%) of the smokers did not indicate whether their friends smoked or not. 14 (10%) did not have any friend who smoke, while 113 (80.7%) of the smokers have friends who currently smoke. Among the non-smoking students 152 (15.3%) had friends who smoke while majority (73.9%) did not have smokers as friends. Having smokers as friends was significantly associated with cigarette smoking ($p < 0.05$). Similarly having siblings, parents and relations who smokes was associated with statistically significant risk of smoking ($p < 0.05$). This is shown in Table 1

Table 1: the significance of friends, siblings, parents and relations smoking.

CHARACTERISTICS	NON-SMOKER (N=992)	SMOKER (N=140)	X ²	P VALUE
Friends Smoke	152 (15.3%)	113 (80.7%)	292.7	<0.05
Friends do not smoke	725 (73.1%)	14 (10%)		
No response	116 (11.6%)	13 (9.3%)		
Sibling Smoking	96 (9.7%)	60 (42.9%)	94.3	<0.05
Relation Smoking	152 (15.3%)	74 (52.9%)	100.93	<0.05
Parental Smoking	27 (2.72%)	66 (47.1%)	15.94	<0.05

4. Discussion

This study showed the pattern of cigarette smoking habits among students of senior secondary schools in Lagos. The smoking prevalence of 12.4% in this study is similar to the finding of the social survey division of the United Kingdom where 12% of children in Scotland and Britain smoked [11]. This is however lower than 25.7% found among students of secondary schools in Beijing China [12] and the 33.9% found in a similar study done in the North Eastern part of the country among adolescents however that study was done in 171 subjects compared with our study. It was also done largely in a rural population unlike our study that involved both urban and rural area of Lagos.¹³

An earlier study in Nigeria in 1976 [6] found that 17.5% of boys and 2.7% of girls in secondary schools smoked regularly. However, in this present study, more females smoked compared with the earlier study. This may be related to higher number of females in schools now, and consequent increased exposure to events outside the homes, or it may most likely be to the aggressive advertising used by tobacco companies specifically targeting young females.

This study also showed that students in secondary schools in Lagos in addition to smoking cigarette abuse other substances. According to the Centre for Disease Control tobacco, marijuana and alcohol use are gateway drugs and when younger children use them they are often more likely to abuse cocaine, heroine and other hallucinogens [3]. This is enough evidence to step up efforts to prevent childhood use of cigarette, alcohol and cannabis.

Majority of the smokers picked up the habit between ten and fourteen years. This is similar to other studies done in Nigeria and elsewhere [6-9,12,13]. This emphasizes that cigarette smoking habits occur very early in childhood and therefore efforts should be directed at preventing its onset. It is also worthy of note that females smoked their first cigarette at a much younger age compared to their males counterpart. This may be related to greater influence of peer pressure on females. This is similar to the finding of Bawazeer et al in Yemen [11].

In this study, family and peer smoking behaviour was found to be influential in tobacco use among young people. This is consistent with the social learning theory. Cigarette smoking among parents, siblings and peer pressure influence cigarette smoking. Since children view their parents as role models it will not be surprising when children of smokers start smoking. It is also important to note that when parents or older siblings smoke cigarette stubs are readily available for early experimentation.

The most frequent reason for smoking the very first time was to imitate their smoker friends, out of curiosity and need to imitate a smoking relation. This may reflect the inquisitive nature of adolescents which makes them vulnerable to peer group influence, while continuous smoking resulted from search for pleasure and reducing stress. This is similar to the finding of Shu Qi among the Chinese students [13,14].

Most of the students were light smokers. The small number of cigarettes smoked may be related to their socio-economic status, with small amount of money being available to secondary school students. However the quantity smoked may increase over time, as they grow older and with independent sources of income to fund their habit.

Most young smokers smoke their first cigarette away from home and did so in company of their friends. This is important as most young smokers do so secretly without the knowledge of their parents or family member thus making quitting difficult, as most of the smokers may be unwilling to come forward and be assisted with quitting. More smokers helped their parents to buy cigarette compared with non smokers in this study. Thus, children were exposed to sale of cigarette from retail outlet early in life without any control measures. This may result in indiscriminate buying at will by the children and early experimentation with smoking.

The level of education of the parents also affected the prevalence of smoking among the students. There was a higher smoking rate among those students with well educated fathers compared to those whose fathers had little or no education. This is also true for the mothers. High socio-economic class as reflected by parental occupation was significantly associated with cigarette smoking among the students. This can be result of greater availability of fund to such students to pursue their habit. Admittedly the figures obtained for tobacco use is 12.4%, this may not be alarmingly high but one would however caution that the figure obtained may be as a result of the fact that most students tend to hide to smoke in Nigeria. Secondly, this figure is high for a developing nation already burdened with the problem of Human immunodeficiency virus (HIV) infection; malaria as well as tuberculosis, the additive effect of tobacco related disease is definitely not welcome.

5. Conclusion

In conclusion, the prevalence of cigarette smoking among senior secondary school student in Lagos is on the increase and it is very important that aggressive antismoking campaigns backed by effective legislation be put in place to reduce this trend.

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