SHORT ARTICLE

Prevalence of Cigarette Smoking and its Characteristics among Undergraduate Medical Students at AL-Ghad International College, Abha City, Saudi Arabia

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Citation

Article Cycle

Abstract

Background: Cigarette smoking among medical students is becoming a serious public health problem worldwide. **Objectives**: To determine the daily cigarette smoking prevalence and its characteristics among undergraduate medical students at AL-Ghad International College, Abha city, Saudi Arabia. **Methods and Materials**: A community based cross-sectional study was conducted at AL-Ghad International College, Abha city, Saudi Arabia. A validated self-administered questionnaire was used to collect data from the participants. Descriptive data analysis was performed using Statistical Package for the Social Sciences (SPSS) version 17. Association between different variables was performed using Chi-square and ANOVA tests. A P-value of less than 0.05 was considered statistically significant. **Results:** The prevalence of daily cigarette smoking was 30.25%. Significant associations were found between the cigarette smoking and smokers in the age group of 20-25 years (P-value 0.001) and students of higher level of the study (P-value 0.005). About two-thirds (65.3%) of smokers began cigarette smoking after joining the College and 79.4% smoked 1 to 10 cigarettes per day. The association between number of cigarettes smoked per day and the duration of cigarette smoking in years showed statistically significant result (P. value 0.002). **Conclusion:** The daily cigarette smoking prevalence is still higher among undergraduate medical students. The higher prevalence of cigarette smoking might predict future adverse effects on health. This necessitates introduction of public health preventive and cessation programs which should be implemented by health and education authorities.

Keywords

Cigarette smoking; Medical students; Saudi Arabia

Introduction

Cigarette smoking among undergraduate medical students is becoming a serious public health problem in many countries (1).

Globally, the prevalence of cigarette smoking among medical students ranged from 2 to 58% (2). In Saudi Arabia the prevalence was ranged from 2.4 to 52.3% among general population and 2.4 to 37% among

university students (3). Smoking control efforts are needed to address smoking habit in medical schools worldwide, in order to inhibit smoking among future health professionals (4,5). Education at medical colleges might be the optimal time to introduce smoking cessation strategies (6). No enough data are available about the cigarette smoking prevalence and its characteristics among undergraduate medical students in Saudi Arabia. So, such study is of high importance in order to reduce the increasing prevalence of smoking habit.

Aims & Objectives

To determine the daily cigarette smoking prevalence and its characteristics among undergraduate medical students at AL-Ghad International College, Abha city, Saudi Arabia.

Material & Methods

Study design: A community based cross-sectional study was conducted among undergraduate students of medical colleges at AL-Ghad International College in Abha city, Saudi Arabia.

Study area: Abha is the capital of Asir province in Saudi Arabia; it is situated 2200 meters (7200 feet) above sea level in the fertile mountains of South-Western Saudi Arabia. Abha's mild climate makes it popular tourist destination for Saudis. AL-Ghad International College is a private college in Abha city. The main campus is at Riyadh city, capital of Saudi Arabia.

Study population: This study was conducted among undergraduate students of medical colleges at AL-Ghad International College in Abha city, Saudi Arabia. The inclusion criteria were daily smokers, willing to participate. Those who used other forms of smoking and those who do not smoke on daily basis were excluded.

Study duration: This study was conducted during the period from May to September 2016.

Sample size: Total coverage of daily smokers (121 students).

Strategy for data collection: Data was collected using a validated self-administered questionnaire. The collected data included two parts. The first part included socio-demographic characteristics of the participants, the second one is about smoking characteristics, which included, start of cigarette smoking, number of cigarettes smoked per day and duration of cigarette smoking in years.

Working definition: The definition of smoking adopted in this study and used as inclusion criteria according to the definition of the Centers for Disease Control and Prevention; (CDC) those who were current daily smokers (7). The working definition of the variables are attached in the [Table 3] in annexes.

Ethical consideration: The proposal of this study was approved by Al-Ghad International College ethical committee and all participants verbally consented.

Data analysis: The data was analyzed using Statistical Package for the Social Sciences (SPSS) version 17. The descriptive statistics were tabulated using frequency table. A univariate analysis was done using Chi-square test for categorical variables to study the association between independent and dependent variables. A P-value of less than 0.05 was considered statistically significant

Results

Total number of the participants was 400. The prevalence of cigarette smoking was 30.25% (121).

Most of the study population were distributed between <20 years and 20-25 age groups (42.1 and 45.5% respectively). More than one-third (37.2%) of the smokers belongs to study level 5 and 6. There was a significant association between cigarette smoking and level of the study (P. value 0.005) which reflected by the increase of cigarette smoking in higher level of the study. Also, significant association was found between cigarette smoking and smokers in the age group of 20-25 years (P. value 0.001) [Table 1].

About two-thirds (65.3%) of smokers began cigarette smoking after joining the College and 79.4% smoked 1 to 10 cigarettes per day. The association between number of cigarettes smoked per day and the duration of cigarette smoking in years showed statistically significant result (P. value 0.002) [Table 2].

Discussion

This study was conducted to explore the prevalence of daily cigarette smoking and its characteristics among undergraduate medical students at Al-Ghad International College, Abha City, Saudi Arabia. Higher prevalence of daily cigarette smoking was shown in our study which was nearly one-third of the participants (30.25%). This is considerably lower compared to the recently reported prevalence of smoking among medical students in Albaha University Al-Baha, Saudi Arabia (8). This might be,

because we only determined prevalence based on daily smoking, in addition to that, other forms of smoking were excluded. In this study, the cigarette smoking was significantly associated with age group of 20-25 years and higher level of the study (P. value 0.001 and 0.005 respectively). This finding is agreement with recent international studies (8,9). This may be due to increasing number of students taking up smoking comparison to small proportion of students who quit smoking, in addition to academic overload in this period of study. In this study we found, about two-thirds (65.3%) of smokers began cigarette smoking after joining the College, a result agrees with that reported in other study (10) which confirm that many students initiate smoking at university level and this might be due to stress of study in medical colleges and imitation of their colleagues and friends in the college campus. Most of the smokers (79.4%) were light smokers (smoke less than 10 cigarette per day). The Association between number of cigarettes smoked per day and duration of smoking in years showed statistically significant result (p value 0.002). These finding consistent with the previous study conducted among the students of Medicine and Science Colleges in Saudi Arabia (8). This might predict future adverse effects on the health. Several findings in current study can be used as a good source of information to introduce smoking cessation programs among health colleges students and to formulate improved tobacco education in Medical schools because the smoking behavior of medical students does influence the health of their future patients.

Conclusion

The daily cigarette smoking prevalence is still higher among undergraduate medical students. Most smokers started smoking after joining the college which is a reason for concern and the need for the implementation of effective smoking control strategies for the students in universities as well as schools in order to help them to quit smoking successfully.

Recommendation

The higher prevalence of daily cigarette smoking among undergraduate medical students might predict future adverse effects on health. This necessitates introduction of public health preventive and cessation programs which should be implemented by health and education authorities.

Limitation of the study

Our study has certain limitation that should be reported. The survey contains a selection bias because the sample was chosen among private college undergraduate medical students, so the results of the study could be generalized on private college undergraduate medical students, but not on the general medical students.

Relevance of the study

The daily cigarette smoking rate is still higher among medical students in comparison to the prevalence of all forms of smoking.

Authors Contribution

Amar Ibrahim Omer Yahia designed the study, performed the analysis and interpretation of data and wrote the manuscript in final format. Saad Abdullah Saad Alshahrani and Hani Ali Mohammed Asiri contributed toward data acquisition and wrote the draft article.

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Tables

TABLE 1 SOCIO-DEMOGRAPHIC CHARACTERISTICS AMONG UNDERGRADUATE MEDICAL STUDENTS (N= 121)

Variables	Frequency	Percent	P-value
Age group in years			
< 20	51	42.1	
20-25	55	45.5	0.001
> 25	15	12.4	
Total	121	100	
Level of the study			
1-2	18	14.9	
3-4	23	19.0	
5-6	45	37.2	0.005
7-8	35	28.9	
Total	121	100	

TABLE 2 PREVALENCE OF CIGARETTE SMOKING AND ITS CHARACTERISTICS AMONG UNDERGRADUATE MEDICAL STUDENTS (N= 121)

Variables	Frequency	Percent	P-value
Cigarette smoking status			
Smoker	121	30.25	
Non-smoker	279	69.75	
Total	400	100	
Start of cigarette smoking			
At Al-Ghad International College	79	65.3	
At secondary school	37	30.6	
At primary school	05	04.1	
Total	121	100	
Number of cigarettes smoked per day			
1	06	05.0	
2-5	41	33.9	
6-10	49	40.5	
> 10	25	20.6	
Total	121	100	0.002
Duration of cigarette smoking in years			
< 1	36	29.8	
1-5	55	45.4	
> 5	30	24.8	
Total	121	100	

TABLE 3 SHOWED THE OPERATIONAL DEFINITION OF VARIABLES

Variables	Definition	Question/answer	Scale of measurement
Age group	The age group of the students in years	Age group in years: A. < 20 B. 20-25 C. >25	Nominal
Level of the study group	The study level group of the students in semesters	Level of the study group in semesters: A. 1-2 B. 3-4 C. 5-6 D. 7-8	Nominal
First time cigarette smoking	At which period/stage of education, the students start cigarette smoking	At which stage of education, did you start smoking cigarette? A. At Al-Ghad International College B. At secondary school C. At primary School	Nominal
Number of cigarettes smoked	Number of cigarettes smoked per day	Number of cigarettes smoked per day: A. 1 B. 2-5 C. 6-10 D. > 10	Numerical
Duration of cigarette smoking	Duration of cigarette smoking in years	Duration of cigarette smoking in years: A. < 1 B. 1-5 C. > 5	Numerical