

Smoking in Medical Students of Northern Border University, Kingdom of Saudi Arabia

Nagah Mohamed Abo el-Fetoh¹, Nesreen A. Mohammed², Anfal M. Alanazi³, Habibah T. Alruwaily⁴, Omar TabaanAlenezi⁵, Jawaher Ali Alhowaish⁶

¹Associated Prof. of Public Health and Community Medicine, Faculty of Medicine, Sohag University and Northern border University

E-mail-id: elshmaa3332004@yahoo.com

² Lecturer of Public Health, Faculty of Medicine, Sohag University

E-mail-id: nesreenhammad180@yahoo.com

³Faculty of medicine, Northern border University

E-mail-id: toop-1991@hotmail.Com

⁴Faculty of medicine, Northern border University

E-mail-id: lula3332010@hotmail.Com

⁵Faculty of medicine, Northern border University

E-mail-id: ulv-11@hotmail.Com

⁶Faculty of medicine, northern border university

Email-id: Diamond-135@hotmail.com

Abstract: Tobacco is the most important preventable cause of mortality worldwide. An alarming increase in smoking among young adults since the early 1990s was reported. Studies have shown that initiating smoking early in life is associated with increased risk for serious health outcomes. **Aim Of The Study:** This study was conducted to estimate the prevalence of smoking among medical students of Northern Border University in Arar City, to determine the ecological factors for the problem, and to show the students' knowledge about smoking effects.

Subjects And Methods: The study was cross sectional study. It was conducted in February 2016. All medical students at the time of study (n = 377) were included, with response rate = 80.01%. Data collected via personal interview and filling a questionnaire which was prepared after reviewing literature for similar studies. **Results:** Males comprised (88.2%) of the respondent medical students who smoke with a highly significant difference (P < 0.001) between males and females as regards smoking. Year of study of medical student, educational achievement and family history of smoking had a significant effect (P < 0.05) on medical students smoking. Of the studied smoker medical students 35.6% reported that they smoke both cigarette and water pipe. 66.7% of smoker students reported that they had the intention to stop smoking and 82.4% considered smoking as hazardous. **Conclusion:** Smoking among medical students is considered a problem and efforts are needed to help students to quit smoking and this is considered as a preventive approach to smoking among tomorrow's doctors.

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Keywords: Smoking; medical students; prevalence; consumption pattern; impact of tobacco use.

Introduction:

Tobacco is the most important preventable cause of mortality worldwide. It eventually kills half the people who smoke. It is responsible for death of one in ten adults. Smoking is expected to cause 10 million deaths each year by 2020 if smoking pattern with which the 21st century started continues. ^(1, 2) Simultaneously, an alarming increase in smoking among young adults since the early 1990s was reported. ⁽³⁾

Studies have shown that initiating smoking early in life is associated with increased risk for serious health outcomes as cancer, heart disease, stroke, chronic obstructive lung disease, nicotine addiction and depression. ⁽⁴⁾ Youth smoking is especially

alarming in industrial, low-income, and middle-income countries. ⁽⁵⁾

Therefore, it is critical to prevent youth from initiating smoking via continuous monitoring of risk factors for smoking among them to change the modifiable factors and provide health education and smoking prevention programs. ⁽⁶⁾

Although medical personnel know the serious outcomes of smoking, yet smoking is frequent among medical students and doctors. ⁽⁷⁾ In addition, identifying the prevalence of tobacco use among medical students and its reduction is a necessity to reduce tobacco use among future health personnel, who in turn, can significantly affect tobacco use among patients as well as the general population. ⁽⁸⁾

This study was conducted to estimate the prevalence of smoking among medical students of Northern Border University in Arar City, to determine the ecological factors for the problem, and to show the students' knowledge about the effects of smoking.

Participants and methods:

The study was cross sectional study. It was conducted in February 2016. All medical students at the time of study (n = 377) were included, with 302 students responding (response rate = 80.01%).

Data collected via personal interview and filling a questionnaire which was prepared after reviewing literature for similar studies in which all questions were related to the objectives mentioned above. Data about gender, grade, marital status, residence, educational achievement, economic status and family history of smoking were collected from all studied smoker and non smoker medical students. Data about type of smoking, cause of smoking, heaviness of smoking, no of cigarettes per day, intention to stop smoking, knowing smoking hazards, opinion in smoking, effect of smoking in social life, effect of smoking in personality and sense of smoking addiction were collected from smoker medical students only.

Ethical considerations:

Permission to conduct the study was obtained from the Research and Ethics Committee at the College of Medicine, Northern Border University, Arar, Saudi Arabia. Data collectors gave a brief introduction to the students by explaining the aims and significance of the study. Verbal consent was obtained from all participants. No names were recorded on the questionnaires. Adequate training of data collectors took place to ensure protection of confidentiality, and all questionnaires were kept safe.

Statistical Analysis:

Collected data were coded and analyzed using statistical package for the social sciences (SPSS, version 15). The w2-test was used as a test of significance, and differences were considered significant at P value 0.05 or less.

Results:

Table (1) demonstrates the percentage distribution of the studied medical students according to Smoking, Northern Border University, Arar city, KSA. Smokers were 102(33.8%) and non smokers were 200(66.2), no ex. smokers were found among the studied students.

Table (2) illustrates the relationship between some student's characteristics and smoking status in the studied medical students. Males comprised (88.2%) of the respondent medical students who smoke with a highly significant difference ($P < 0.001$) between males and females as regards smoking. Year of study of medical student, educational achievement and family history of smoking had a significant effect ($P < 0.05$) on medical students smoking. On the other hand, no significant difference was found between medical students in different marital status, residence and economic status groups as regards smoking.

Table (3) shows age at beginning, type and causes of smoking among studied smoker medical students, 35.2 % of studied smoker medical students began to smoke when they were <15 years old. Of the studied smoker medical students 35.6% reported that they smoke both cigarette and water pipe and 25.5% reported that peer pressure was their cause to smoke.

Table (4) shows frequency of smoking, daily consumption pattern and sense of smoking addiction among studied smoker medical students. Of the studied smoker medical students 70.6% of smoker students reported that they used to smoke daily and 33.4% reported that they used to smoke 2 packets or more daily. However, 60.8% reported that they had the sense of smoking addiction.

Table (5) shows students opinion on smoking, impact of smoking on social life and on smoker's personality and intention to stop smoking among studied smoker medical students. The majority of smoker students (82.4%) considered smoking as hazardous and 56.9% considered that smoking had a good impact on social life and 64.7% considered that smoking had a good impact on their personality. However, 66.7% only of smoker students reported that they had the intention to stop smoking.

Table (1): Percentage distribution of the studied medical students according to Smoking status, NBU, KSA

Smoking	No.	%
Smokers	102	33.8
Non smokers	200	66.2
Total	302	100.0

Table (2): The relationship between some student's characteristics and smoking status in the studied medical students, NBU, KSA(N = 302)

Parameters	Smokers (N=102)	Non smokers (N=200)	Total (N = 302)	P value
Gender	No.(%)	No.(%)	No.(%)	
Male	90 (88.2)	70 (35.0)	160 (53.0)	0.000
Female	12 (11.8)	130 (65.0)	142 (47.0)	
Year of study of medical student				
2 nd year	18 (17.6)	56 (28.0)	74 (24.5)	0.02
3 rd year	18 (17.6)	4 (2.0)	22 (7.3)	
4 th year	28 (27.5)	74 (37.0)	102(33.8)	
5 th year	22 (21.6)	26 (13.0)	48 (15.9)	
6 th year	16 (15.7)	40 (20.0)	56 (18.5)	
Marital status				
Single	86 (84.3)	190 (95.0)	276 (91.4)	0.22
Married	26 (15.7)	10 (5.0)	36 (8.6)	
Residence				
Urban	96 (94.1)	196 (98.0)	292 (96.7)	0.44
Rural	6 (5.9)	4 (2.0)	10 (3.3)	
Educational achievement				
Excellent	16 (15.7)	80 (40.0)	96 (31.8)	0.01
Very good	36 (35.3)	66 (33.0)	102 (33.8)	
Good	32 (31.4)	50 (25.0)	82 (27.2)	
Accepted& weak	18 (17.7)	4 (2.0)	22 (7.3)	
Economic status				
High	44 (43.1)	92 (46.0)	136 (45.0)	0.53
Middle	52 (51.0)	106 (53.0)	158 (52.3)	
Low	6 (5.9)	2 (1.0)	8 (2.6)	
Family history of smoking				
Yes	88 (86.3)	132 (66.0)	220 (72.8)	0.01
No	14 (13.7)	68 (34.0)	82 (27.2)	

Table (3): Age at beginning, type and causes of smoking among studied smoker medical students, NBU, 2016 (n = 102)

Parameters	No.	%
Age at beginning of smoking		
Less than 15 years	36	35.2
15 -	62	41.3
18 years or more	24	23.5
Type of smoking		
Cigarette	34	33.3
Water pipe (sheesha)	32	31.3
Both cigarette and water pipe	36	35.6
Causes of smoking		
Peer pressure	26	25.5
Father or brother pressure	8	7.8
Trying to calms down	10	9.8
For experience	18	17.6
Sense of boring	4	3.9
Multiple causes	36	35.2

Table (4): Frequency, daily consumption pattern and sense of smoking addiction among studied smoker medical students, NBU, 2016 (n = 102)

Parameters	No.	%
Frequency of smoking		
Daily	72	70.6
Weekly	12	11.8
Experimental	18	17.6
Daily consumption pattern		
2 packets or more	34	33.4
One packet	42	41.2
Less than one packet	26	25.5
Sense of smoking addiction		
Yes	62	60.8
No	26	25.5
Don't know	14	13.7

Table (5): Students opinion on smoking, impact of smoking on social life and on smoker's personality and intention to stop smoking among studied smoker medical students, NBU, 2016 (n = 102)

Parameters	No.	%
Opinion on smoking		
Hazardous	84	82.4
Has benefits	4	3.9
Has neither benefits nor hazards	2	2.0
Has benefits and hazards	8	7.8
Don't know	4	3.9
Impact of smoking on social life		
Good	58	56.9
Bad	30	29.4
Don't know	14	13.7
Impact of smoking on personality		
Good	66	64.7
Bad	16	15.7
Don't know	20	19.6
Intention to stop smoking		
Yes	68	66.7
No	34	33.4

Discussion

The prevalence of smoking among medical science students in the present study was 33.8% of the responding medical students which is consistent with the finding of Musmar G.⁽⁴⁾ who found that the rate of smoking among university students in Palestine was (34.7%). On the other hand the finding of the current study was higher than the results of studies conducted in other countries as the study conducted by Nazary A. et al.,⁽⁹⁾ to determine the prevalence of smoking among male medical sciences students and reported that the prevalence of smoking was 14.4% and the study conducted in Jordan by Haddad G. Malak Z.⁽¹⁰⁾ where the prevalence was 28.6% among male and female university students and was lower than the

results reported by Chkhaidze I. et al.⁽⁵⁾ where 49.5% of the medical students were smokers.

The current study revealed a highly significant difference ($P < 0.001$) between males and females as regards smoking which is in line with the findings of El-Sharkawy G.⁽²⁾ and Sychareun V et al.⁽¹¹⁾ who reported a highly significant effect of gender on smoking of students.

In addition, the results revealed that year of study of medical students and family history of smoking had a significant effect on smoking of medical students ($P < 0.05$). These findings were not in agreement with the findings of Alzayani S.&Hamadeh R.⁽¹²⁾ who conducted a study in Kingdom of Bahrain and reported that there was no significant effect of year of

study of medical students on smoking ($P > 0.05$). These findings were in line with the results of Nazary A. et al.⁽⁹⁾ and Singh V. et al.⁽¹³⁾ where family history of smoking had a significant effect on medical students smoking.

On the other hand, the effects of marital status, residence and economic status on students smoking were insignificant ($P > 0.05$) and these findings are consistent with the findings of Musmar G.⁽⁴⁾ who reported that marital status and economic status had insignificant effect on students smoking ($P > 0.05$) and the results reported by El-Sharkawy G.⁽²⁾ where marital status and residence had insignificant effect on smoking.

Results revealed that 76.5% of the studied smoker medical students began to smoke when they were younger than 18 years old which is higher than the findings of Khana A.⁽¹⁴⁾ where 54.3% of currently smoking participants tried their first cigarette at 17 years of age or younger.

Of the studied smoker medical students 25.5 % reported that the cause of smoking is peer pressure which is lower than the findings of Stramari L.,⁽¹⁵⁾ who reported that for 42.3% the cause of smoking is peer pressure and Singh V. et al.⁽¹³⁾ where 94.6% of students who smoke reported the presence of peer pressure. In addition, these finding is inconsistent with the finding of Al-Kaabba A.⁽¹⁶⁾ who reported that peer pressure was present only in 9.9% of students who smoke.

As regards heaviness of smoking 70.6% of the studied smoker medical students reported that they smoke daily which is near what is reported by Singh V. et al.⁽¹⁵⁾ where 68.5% of students who smoke reported that they smoke daily.

In the current study, 66.7 of the studied smoker medical students reported that they had the intention to stop smoking which is lower than the findings of Stramari L.⁽¹⁵⁾ where 87.2% of the students who smoke intended to quit smoking.

The current study revealed that all the studied smoker medical students knew smoking hazards which is inconsistent with Fatoohi B. & Gnesta C.⁽¹⁷⁾ where only 40.4% knew that smoking affects health.

Study limitations

The present study has some limitations. First, the response rate is 80.01%. This is considered a problem if those who did not participate in the study were smokers or heavy smokers. Further, as a cross-sectional survey, causality cannot be tested.

Conclusion and recommendations

Smoking among medical students is considered a serious problem as they will become the future health care personnel who are supposed to have an important role in assisting patients to stop smoking. Efforts are

needed to help students to quit smoking and this is considered as a preventive approach to the problem of smoking among tomorrow's doctors. Anti-smoking education should be included in undergraduate curricula, with implementing anti-smoking campaigns.

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Corresponding Author:

Dr. Nagah Mohamed Abo el-Fetoh

E-mail-id: elshmaa3332004@yahoo.com

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