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The prevalence of smoking among medical students in Northern Border University of Saudi Arabia

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ABSTRACT

Background: Tobacco is the utmost imperative avoidable reason of mortality globally. Smoking in medical students is a critical issue because they are future healthcare providers and are expected to show a momentous starring role in helping people to quit smoking. *Objectives:* This study was conducted to estimate the pervasiveness of smoking in medicinal scholars of Northern Border University in Arar, Saudi Arabia, to look at smoking patterns and the causes of it, to evaluate the links between smoking and other sociodemographic characteristics as well as the causes of smoking and efforts to quit. *Methods:* The study was cross sectional study. All medical scholars on the period of study were included in the study. Data was collected via personal interview and filling a questionnaire. *Results:* Males constituted 54.2% of the respondents, the prevalence of smoking was 15.8%; 29.2% among males and there was no smokers in females. Year of study of medical student, and positive family history of smoking had a significant effect (P<0.05). 36.8% of the smoker medical students in the study reported smoking 11–20 cigarettes daily, while 23.7% said they smoked between one and ten cigarettes daily. However, 28.9% of smokers in college admitted to using a water pipe (sheesha). In 100% of the smoking medical students, smoking was a personal decision. Intention to kit smoking was reported by 57.8% of them. *Conclusion:* Extraordinary proportions of smoking are found in medical students in Northern Border University, KSA.

Keywords: Smoking, Prevalence, Saudi medical students, Northern Border University.

1. INTRODUCTION

The dangerous results of smoking on healthy life are well-known. Recent studies confirm the quantitative sturdy affiliation amongst smoking and many health hazards in the form of premature death and serious preventable morbidity exist (Jha, 2020). Every diurnal, closely 4800 teenagers smoke their

1st cigarette; of them, almost 2000 will turn out to be steady smokers. Surprisingly, smoking is increasing in most developing countries, including Saudi Arabia, whereas in developed countries there is a steady decline in it. Cigarette production has been increasing worldwide at an average of 2.2% each year, outpacing the population growth rate of 1.7% (Doll et al., 2005).

According to a WHO explosion, tobacco use is predicted to cause 10 million deaths annually by 2030. Since smoking has a serious impact on public health, prevention programs have been given high priority in WHO policies (Perez-Warnisher et al., 2018). Teaching about the effects of the use of tobacco and related diseases is essential for the undergraduate medical students; as they are uniquely placed to lead smoking cessation programs in the community in future (Boopathirajan et al., 2017); for this to achieve health professionals to convince others, they should be nonsmokers. They usually serve as role models for their patients and the public (Bassiony, 2009).

Studies in Saudi Arabia, in government colleges, showed that smoking was highly noticed in male students (Al-Haqwi et al., 2010; Al-Turki, 2006; Jradi & Al-Shehri, 2014; Al-Kaabba et al., 2011; Al-Regaiey et al., 2022). This study outcome would benefit with the development of counteractive dealings to diminish or fighting smoking.

Study objectives

This study was steered to guess the occurrence of smoking in medical scholars of NBU (Northern Border University) in Arar, Saudi Arabia. To investigate the pattern of smoking, their causative factors also in order to show the connotation amid smoking with various socio demographical factors, motives intended for smoking in addition to tries to stop over smoking.

2. METHODOLOGY

This descriptive cross-sectional (prevalence) study was conceded at the NBU Medical College in Arar, Saudi Arabia, between October 1 and December 31, 2021. All first- through fourth-year MBBS medical students who smoked or who did not attend a medical school were included in the study's data collection. Students with COPD, recognized asthma, or any other chronic illness were not allowed toward contribute in the research. Students who used smoking in any other way than by inhaling it, were addicted to any other drug or narcotic, alcohol, or who took sleeping medications were also disqualified from the study. Data was gathered through in-person interviews and the completion of a predesigned questionnaire that was created after studying the literature of previous research and whose questions were all focused on the study's objectives. All of the medical students who were studied, both smokers and non-smokers, provided information on their gender, grade, and family history of smoking.

Only smoker medical students were used to gather information on smoking habits, causes of smoking, frequency of burning, day-to-daycignumber, intentions to quit smoking, knowledge of the dangers of smoking, attitudes toward smoking, and the effects of passive smoking. Northern Border University's Research and Ethics Committee in Arar city, Northern KSA (Kingdom of Saudi Arabia), granted permission to carry out the study with decision letter number (14/43/H). The goals and significance of the study were briefly explained to the students by the data collectors. All participants provided their written consent. The questionnaires did not include any names. Sufficient training was provided to data collectors to ensure confidentiality protection, and all questionnaires were kept safe. With the help of the statistical programme for the social sciences, the collected data were coded and examined (SPSS, version 21). A p-value of 0.05 or less was utilized to determine whether differences were significant when using the chi-square test.

3. RESULTS

Table 1 demonstrates the features of the intentional scholars, NBU, Arar, Saudi Arabia. Males constituted 54.2% of the respondents, 30% were in the sixthyear, no one have any chronic disease. Smokers were 38(15.8%); 29.2% among males and 0% among females, and non-smokers were 202(84.2%), no ex. smokers were found among the studied students (Figure 1). Table 2 illustrates the relationship between some student's characteristics and smoking status in the studied medical students. Males comprised (100%) of the respondent medical students who smoke while there was no smoking females. The medical student's year of study and household smoking histories were found to be influencing factors (P 0.05).

Table 1 characteristics of the studied students, NBU, Arar, Saudi Arabia (n=240)

Age group (in years)	Frequency	Percent
18-21	123	51.2
22-24	101	42.1
>24	16	6.7

Gender		
Males	130	54.2
Females	110	45.8
Faculty Grade		
Preparatory Year	44	18.3
Second year	34	14.2
Third year	30	12.5
Fourth year	39	16.3
Fifth year	21	8.8
Sixth year	72	30.0
Chronic diseases		
No	240	100.0
Smoking status		
Smoker	38	15.8
Males (n=130)	38	29.2
Females (n=110)	0	0.0
Non smoker	202	84.2

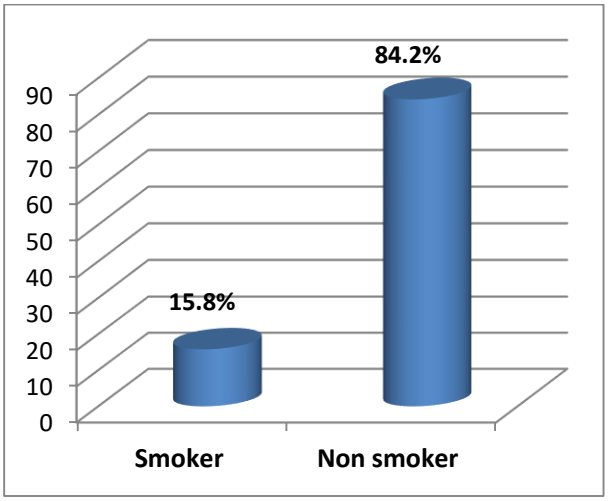

Figure 1 Smoking status among the studied students, NBU, Arar, Saudi Arabia

Table 2 the relationship between some student traits and smoking habits among the med students who were the subjects of the study, Arar, Saudi Arabia

		Smoking status		Total (n=240)	P value
		Yes (n=38)	No (n=202)		
Sex	Males	38	92	130	0.001
		100.0%	45.5%	54.2%	
	Females	0	110	110	
		0.0%	54.5%	45.8%	
Age	>24	4	12	16	0.133
		10.5%	5.9%	6.7%	
	18-21	14	109	123	
		36.8%	54.0%	51.2%	
	22-24	20	81	101	
		52.6%	40.1%	42.1%	
Faculty Grade	Prep. Year	3	41	44	0.028
		7.9%	20.3%	18.3%	

	Third year	5	25	30	
		13.2%	12.4%	12.5%	
	Second year	4	30	34	
		10.5%	14.9%	14.2%	
	Fifth year	8	13	21	
		21.1%	6.4%	8.8%	
	Fourth year	4	35	39	
		10.5%	17.3%	16.3%	
	Sixth year	14	58	72	
		36.8%	28.7%	30.0%	
Family history of smoking	Yes	28	177	205	.007
		73.2%	87.6%	85.2%	
	No	10	25	35	
		26.4%	12.4%	14.8%	

Table 3 shows the frequency of smoking, daily consumption pattern and intention to stop smoking among studied smoker medical students. It is obvious that,36.8% of the smoker med students participating in the study indicated smoking 11–20 cigarettes daily, while 23.7% said they smoked between one and ten cigarette daily. However, 28.9% reported that they smoke Water pipe (sheesha). Age at beginning of smoking was 15-20 years in 81.6%. Family history of smoking was positive in 73.2% (Figure 2). The causes of smoking were personal choice in 100% of the smoker medical students. Intention to kit smoking was reported by 57.8% of the smoker students. Most (92.1%) of smokers reported that there was no bad effect of passive smoking. Table 4 illustrates the relationship between age at beginning of smoking with kind of burning and household history of smoldering. Here was no substantial association among age at beginning of smoking and type of smoking and household history of smoldering (P>0.05).

Table 3 frequency of smoking, daily consumption pattern and intention to stop smoking among studied smoker medical students, NBU, Arar, Saudi Arabia (N=38)

Parameter	No.	%
Gender		
Males	38	100
Females	0	0.0
Age at beginning of smoking		
<15	2	5.3
15-20	31	81.6
>20	5	13.2
Type of smoking		
Cigarette	27	71.1
Frequency of cigarette smoking daily		
From 1 – 10 cigarettes	9	23.7
11-20 cigarettes per day	14	36.8
More than 20 cigarettes	4	10.5
Water pipe (sheesha)	11	28.9
The rate of sheesha smoking per day		
> 5 times a day	1	2.6
1 – 5 times a day	10	26.3
Family history of smoking		
No	10	26.4
Yes	28	73.2
Causes of smoking		
Personal choice	38	100

Intention to kit smoking		
Yes	22	57.8
No	6	15.8
Undecided	10	26.3
Trying to quit smoking before		
Yes	28	73.7%
No	10	26.3
Quitting smoking if helped suitably		
Yes	26	68.4
No	12	31.6
Why other people smoke?		
For entertainment	33	86.8
For show off	3	7.9
Imitation of others	2	5.3
Feeling uncomfortable inin non-smoking places		
Yes	22	57.9
No	16	42.1
Searched for information about risks of smoking		
No	7	18.4
Yes	31	81.6
Effects of passive smoking		
No bad effect on others	35	92.1
I do not know	3	7.9

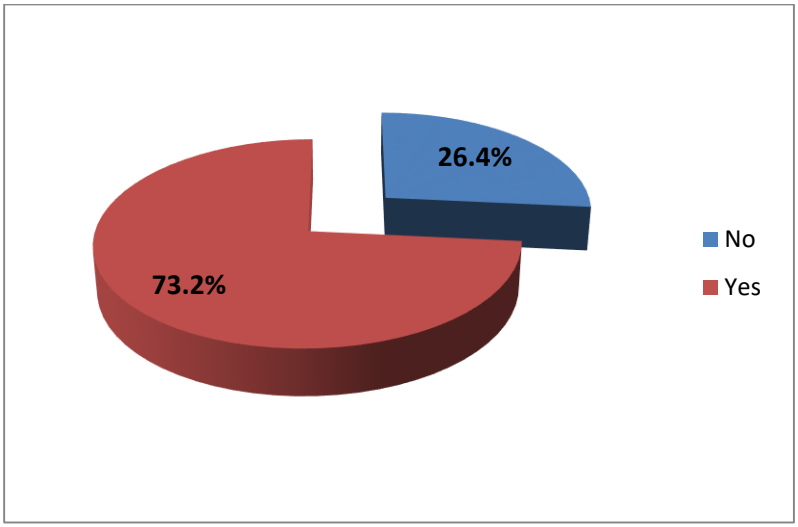

Figure 2 Family history of smoking among studied smoker medical students, NBU, Arar, Saudi Arabia

Table 4 the relationship between age at beginning of smoking withkind of smokingplushousehold history of smoldering

		Age at beginning of smoking			Total (n=38)	P value
		<15 (n=2)	15-20 (n=31)	>20 (n=5)		
Type of smoking	Cigarettes	1	23	3	27	0.654
		50.0%	74.2%	60.0%	71.1%	
	Water pipe (sheesha)	1	8	2	11	
		50.0%	25.8%	40.0%	28.9%	

Family history of smoking	No	0	10	3	13	0.277
		0.0%	32.3%	60.0%	34.2%	
	Yes	2	21	2	25	
		100.0%	67.7%	40.0%	65.8%	

4. DISCUSSION

The smoking rate between all of med students in the current study was 15.8% amongst overall number of the investigated students (29.2% in males and 0% in females). Saudi female scholars had aoccurrenceratio of 5% (95% CI: 3-7%), equated to 26% (95% CI: 24-29%) for Saudi male students. Alotaibi et al., (2019) meta-analysis revealed that the mutual guess timate of smoking dues amongst university students in the Saudi Arabia remained 17% (95% CI: 11-23%). On the other hand the finding of the current study was higher than the results of Aboel Fetoh et al., (2016) who reported the rate of smoking counted in medicinal students of NBU33.8% (56.2% in males and 8.4% in females). Our results also was higher than the results of studies conducted in other countries as the study conducted by Musmar, (2012) who found that the rate of smoking counted in medical and non-medical students in Palestine was (34.7%) and Nazary et al., (2010) toward conclude the pervasiveness of smoking midstmen medical sciences students and conveyed that the frequency of smoking remained 14.4% and the study conducted in Jordan by Haddad & Malak, (2002) where the prevalence was 28.6% among male and female university students.

Our result was lower than the results reported by Chkhaidze et al., (2013) where 49.5% of the medicinal scholars stayed cig smoker. 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 Aboel-Fetoh et al., (2016), Telayneh et al., (2021) and Chinwong et al., (2018) 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 household history of smoldering had a significant effect on smoking of medical students ($P < 0.05$). These findings were in agreement with the findings of Aboel-Fetoh et al., (2016), results of Nazary et al., (2010) and Brown et al., (2018) where family history of smoking had a significant effect on medical students smoking. But these findings were not consistent with Alzayani et al., (2015) who conducted a study in Kingdom of Bahrain and reported that here stood no substantial consequence of year of study of medical students on smoking ($P >0.05$).

Results of the current study revealed that 81.6% of the med students who were smokes who were evaluated did so between the ages of 15-20, which is agreed with the findings of Aboel-Fetoh et al., (2016) where 64.8% of the smoker students began smoldering by the oldness of 15-20 years, Khana et al., (2012) where 54.3% of currently smoking participants tried their first cigarette at 17 years of age or younger. In the existing study, wholly (100%) of the smoker students reported that the cause of smoking is personal choice. These finding is consistent with the finding of Al-Kaabba et al., (2011) who reported that peer pressure was present only in 9.9% of students who smoke. On the other hand, these finding is inconsistent with the finding of Aboel-Fetoh et al., (2016) where Subjective norm was cited as the reason for smoke by 25.5% of the med students who participated in the study. Stramari et al., (2009) discovered that peer pressure was the reason for smoking for 42.3% of smokers and Singh et al., (2003) where 94.6% of students who smoke reported the presence of peer pressure.

In our study, intention to kit smoking was reported by 57.8% of the smoker students. Also, in Aboel-Fetoh et al., (2016), 66.7% of the studied smoker medical students reported that they had the intention to stop smoking. This figure is lower than the findings of Stramari et al., (2009) where 87.2% of the scholars who smolder intended to quit smoking.

5. CONCLUSION AND RECOMMENDATIONS

High rates of smoking are seen among medical students in Northern Border University, Saudi Arabia, which is a critical issue because they will work as future healthcare providers and are expected to play a significant part in helping people quit. Helping students stop smoking is necessary, and this is seen as a proactive measure against the issue of smoking among the future medical professionals. Undergraduate curricula should incorporate anti-smoking education and anti-smoking campaign implementation.

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Author Contributions

We certify, as authors, that we have participated sufficiently in the intellectual content, conception and design of this work or the analysis and interpretation of the data (when applicable), as well as the writing of the manuscript, to take public responsibility for it and have agreed to have our name listed as a contributor. All persons who have made substantial contributions to the work reported in the manuscript.

Ethical approval

The study was approved from the research ethics committee of Northern Border University, Arar, Saudi Arabia, with decision letter number (14/43/H).

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Conflicts of interest

The authors declare that there are no conflicts of interests.

Data and materials availability

All data associated with this study are present in the paper.

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