ORIGINAL ARTICLE

KNOWLEDGE, ATTITUDE AND PRACTICE OF TOBACCO SMOKING AMONG MEDICAL STUDENTS IN KHYBER PAKHTUNKHWA

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ABSTRACT

Objectives: To find the knowledge, attitude and practices regarding tobacco smoking in medical students of Khyber Pakhtunkhwa (KPK).

Material and Methods: This descriptive study was based on convenient sampling in 5 major medical colleges. The study took place from January 2016 to April 2016. A self-administered questionnaire was used to collect data about knowledge, attitude, and practices regarding smoking and demographic profile.

Results: Out of 1071, 248 (23.1%) had smoked at least once in their life while 176 (16.54%) were current smokers. Out of 248 smokers the major causes for initiating smoking were "on insistence of friends" 92(37.1 %), curiosity 73(29.4%) and stress relief 43(17.3 %). Among current smokers (n=176) the most common reasons for not quitting smoking were addiction (n=71, 40.0%) and stress relief (n=36, 20.7%). One fourty-eight (59.6%) of smokers wanted to quit smoking. Most Students had positive attitudes like giving help to their smoking patients, supporting bans in public places and on advertisements. Majority students had knowledge on famous hazards of tobacco smoking like lung cancer and heart diseases but insufficient knowledge on other hazards.

Conclusion: Smoking in medical students is still a matter of concern. Strict measures should be taken to discourage smoking.

Key Words: Smoking, Medical students, Cigarette, awareness.

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INTRODUCTION

Tobacco smoking carries a high fatality, it is estimated that ultimately half of the smokers die of smoking tobacco. Tobacco kills about six million people every year. Among them there are smokers, ex smokers and more alarmingly non smokers exposed to second-hand smoke. Unless urgent measures are taken against this Pandemic, the annual death toll worldwide could increase to over eight million by 2030[1].

Nearly 80% of over one billion smokers worldwide now live in low- and middle-income countries, where the burden of tobacco-related illness and death is high because of affordability of treatment for illness caused by tobacco smoking.[2] In Pakistan according to World Bank, male smokers in 2009 were about 34.5% of the population up from 30% in 2006. The female smokers were only 6% of population.[3] Data analysed from the only survey available in Pakistan showed the overall prevalence of smoking was more than eight-fold higher among men 28.6%, than among women 3.4% while men aged 40–49 years had the highest prevalence of smoking 40.9% (36.9–44.9).[4] Unfortunately cigarette smoking still remains a problem among medical students, though less than general population it is still more than desirable.[5]

Historically being the centre of tobacco production and tobacco usage in the country[5], it is important to find out the practice and attitudes relating to smoking in health professionals especially medical students the future doctors here as they have a crucial role in stopping this epidemic in future. The purpose of this study is to find the knowledge, attitudes and practises relating to tobacco smoking among medical students of Khyber Pakhtunkhwa.

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MATERIAL AND METHODS

This cross sectional descriptive study was conducted in medical colleges of Khyber Pakhtunkhwa, Pakistan. A total of five medical colleges in the province were selected through simple random selection among the consenting colleges. Those included were Khyber Medical College Peshawar, Khyber Girls Medical College Peshawar, Khyber College of Dentistry, Peshawar, Peshawar Medical College and Ayub Medical College Abbottabad. It was a cross sectional study conducted from January 2016 to April 2016. All available students were approached through convenient sampling. A self-administered questionnaire was used to collect the data. A total of 1071 students aged 17-27 years responded to questionnaire in different classes.

For ethical purposes questionnaires were filled in class rooms after voluntary acceptance to participate in the survey, no names or identifications were noted in order to maintain the anonymity. Students were given choice to answer any or all questions. This questionnaire was designed according to guidelines of World Health Organization (WHO)[6]. According to WHO, a daily smoker is a person, who smokes a cigarette at least once a day. An occasional cigarette smoker is a person, who did smoke but not every day. A never-smoker is a person who has not smoked a cigarette in their lifetime.

The questionnaire contained question on demographics, knowledge, attitude and practice of tobacco smoking. Question on demographics included sex, age, marital status and origin of locality. Income, occupation of main family supporter/earner, academic performance, study year and being a hosteller or non hosteller was also asked.

Smoking history in family was asked. Practice of smoking, frequency of smoking, age when tobacco smoking was first done, reason for starting smoking and reasons for smoking now were also asked. Type of tobacco smoking i.e. cigarette, Sheesha (water pipe), Cigar etc were asked. Their favourite or most common form of tobacco smoking was also asked. Reason for starting smoking and smoking now was inquired. Current smokers were defined as those who had smoked at least once in past 30 days. The amount of smoking done daily, weekly or monthly was asked; in case of cigarette smoking, the average amount of cigarette smoked was asked.

Attitudes regarding smoking were inquired; the intention of quitting smoking and whether any attempt for quitting smoking was done was asked. Students' opinions were taken on smoking and its association with stress. Their opinion on smoking advertisements, the depiction of smoking in movies, smoking in public areas and role of teachers in smoking prevention was also asked. Medical students were inquired that whether they would advise their patients to stop smoking and offer them help. They were asked whether in their opinion smoking had any beneficial effect.

Students were asked about their knowledge on side effects of smoking and its association with different medical conditions. Data input and analyses were done using SPSS 16.0. Answers left Unanswered were considered missing data and removed from final analysis. Univariate and bivariate analysis was done. Frequencies and cross tabulation were calculated to find the association among different variables. Pearson's chi Square was used to calculate the P value. A Value of less than 0.05 was considered statistically significant. Odds ratios were calculated with confidence interval of 95%.

RESULTS

A total of 1071 students aged 17-27 (mean age 20.83 years) participated in this study. Out of which male students were 599 (55.9%) and 472 (44.1%) were females. 833 (77.7%) were unmarried and 238 (22.3%) were married. 716 (66.9%) had an Urban background while 355 (33.1%) had a rural background. Out of 1071 students, 248 (23.1%) students had smoked at least once in their life while 179 (16.4%) were current smokers. Figure 1 shows the frequency of smoking in different medical colleges, the reasons of smoking is shown in Figure 2.

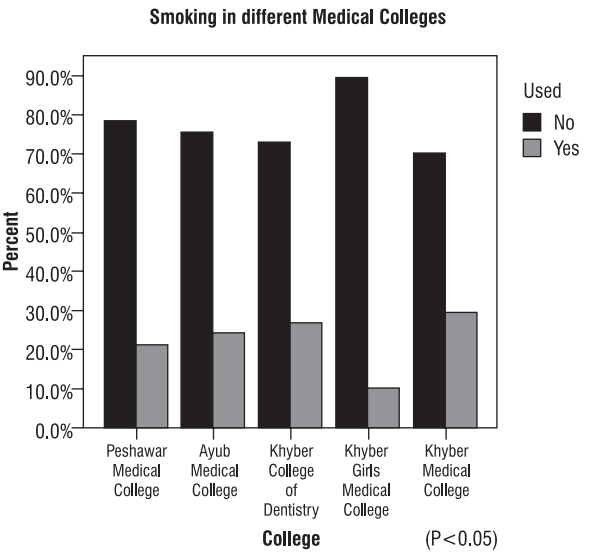

Figure 1:

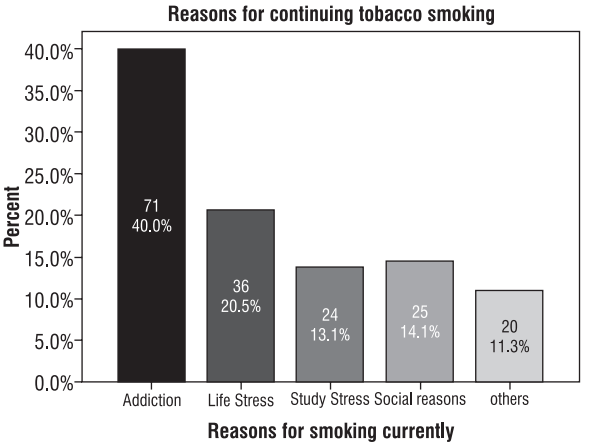

Figure 2:

Table 1: Demographic features

a. favourite form of tobacco smoking (n=248)	
1.Cigarette	72.6% (180)
2. sheesha (water pipe smoking)	25.4%(63)
3. other forms	2.0%(5)
b. Frequency of smoking (n=248)	
1. daily smokers	35.8%(n=89)
2. weekly	16.5% (n=41)
3. monthly	12.9% (n=32)
4. occasionally	5.6% (n=14)
5. ex-smokers	29.03% (n=72)
c. Amount of cigarette smoking among daily and weekly cigarette smokers (n=130)	
1. Less than 5	49.3% (n=64)
2. 5-10	34.6%(n=45)
3. 10-20	14.6%(n=19)
4. Greater than 1 pack	1.5%(n=2)

Table 2. Reasons for starting smoking (n=248)

1.	on insistence of friends	37.1% (92)
2.	Curiosity	29.4% (73)
3.	Stress relieving	17.3% (43)
4.	Improve performance in exams	5.6% (14)
5.	Social reasons or fashion	6.5% (16)
6.	Family members influence	1.6% (4)
7.	Lack of knowledge that it was harmful	1.3% (3)
8.	Others/didnot answer	1.3% (3)

Students were asked whether any medical measures exist besides psychological support for quitting smoking, 764 (71.3%) of students said, Yes

Table 3. Attitudes regarding smoking

	Yes	No
1. Should Cigarette advertisements be banned? (n=1071)	86.5%, (n=926)	13.5% (n=145)
2. Should Public smoking should be banned? (n=1071)	(91.8%, n= 983)	8.2% (n=88)
3. Does smoking help in relieving stress? (n=1071)	18.7% (n=200)	81.3% (n=871)
4. Do teachers play a role in smoking prevention? (n=1071)	27.3% (n=292)	72.7% (n=779)
5. Will you strongly advise your patients to stop smoking? (n=1071)	93.5% (n=1001)	7.5% (n=70)
6. Students wanted to quit smoking?(n=248)	59.6% (148)	40.4% (n=100)
7. Had attempted to quit smoking?	148 (59.5%)	40.5% (n=100)
8. Do you think smoking has any social/medical advantages? (n=1071)	14.1% (n=151)	83.9% (n=920)

but significant number said, No 206 (19.2%), 9.5% did not know.

Five hundred & seventy-five (53.7%) students had a family history (parents or siblings) of smoking while 46.3% had no such history. 184 (30.7%) of male students had at least smoked once while 472 (13.6%) females had at least tried some sort of smoking. (Odds ratio 3.195, 95% CI: 2.3-4.3). Different demographic features are shown in Table 1.

There was a relationship noted between academic performance and cigarette smoking. Those who had poor academic performance were more likely to be smokers/ex smokers. 50% of those who had fair academic performance(50% or less marks) were smokers, while smoking percentage remained similar for other students (average achievers 24.9%, good achievers 22.6%, excellent achievers 24.2% academic groups; P=0.002). Reasons for starting smoking is shown in Table 2.

Smoking was more common in 2nd and 3rd year. Smoking in 1st year was 19.3%, 31.8% in 2nd year, 30.1% in 3rd year, 18.7% in 4th year and 25.2% in final year. (P<0.001) Smoking was more common in students having a positive family history (206 out of 369)(35.8%) as compared to those who had no close family history 11.7%, (58 out of 438) (odds ratio 4.216,

Table 4: Students knowledge about side effects of smoking(n=1071)

No.	Side effect	Response		
		Yes	No	Don't know
1.	Chronic obstructive pulmonary disease	969(90.5%)	30(2.8%)	72(6.7%)
2.	Birth defects	801 (74.8%)	64(6.0%)	206(19.2%)
3.	Coronary vascular diseases	946(88.3%)	28(2.6%)	97(9.1%)
4.	Stroke	799 (74.6%)	59 (5.5%)	213 (19.9%)
5.	Lung cancers	998(93.2%)	23(2.1%)	50(4.7%)
6.	Oral cancers	927 (86.6%)	37 (3.5%)	107(10.0%)
7.	Cervical cancers	434(40.5%)	167(15.6%)	470(43.9%)
8.	Bladder cancers	383 (35.8%)	179(16.7%)	509 (47.5%)
9.	Cataract	318 (29.7%)	218 (20.4%)	535(50.0%)
10.	Sexual dysfunctions	443 (41.4%)	152(14.2%)	476(44.4%)

95% CI: 3.1-5.8). Attitudes regarding smoking is shown in Table 3. The knowledge of side effects of smoking among medical students are shown in Table 4.

A strong relationship was not found with respect to residence in hostels. 26.6% hostel students had smoked at least once as compared to 20.2% Day scholar (Odd ratio 1.448, 95% CI: 1.1-1.9). Similarly, 31.0% of students belonging to rural areas smoked in contrast to 21.5% in students belonging to urban areas.(Odds ratio 1.63, 95% CI: 1.2-2.1)

DISCUSSION

Health professionals, especially medical students play a pivotal role against smoking. Even though smoking among medical professionals is less than the general population,[7] yet, the prevalence of smoking among medical students is still alarmingly high. The prevalence was found to be 23.1%, which was only slightly higher than studies conducted elsewhere in Pakistan[8], however, the prevalence of smoking in females was surprisingly much higher at 13.6%, a finding different from other studies in Pakistan.[8,9] Though data is very limited, a study conducted in 2002 on smoking in general students in Peshawar showed somewhat similar high female smoking trend.[10] Studies conducted in more conservative societies like in Saudi Arabia and aboard show similarly significant smoking prevalence indicating that smoking among medical students is a global phenomena.[11,12,13]

Among the smokers majority were daily smokers at 35.8%, however, there were significant number of ex smokers (29.03%). The numbers of people quitting smoking was therefore much better than studies conducted previously in other regions of Pakistan, however, this could also simply show that more people experiment with smoking in Khyber-Pakhtunkhwa.[8,9,14]

Smoking was not common in females. It was more common in public sector medical colleges when compared to private sector Medical College as shown in Figure 1. Cigarette smoking was by far the most common method of tobacco abuse followed by water pipe smoking (Shisha).[14]

The amount of cigarette smoking among current smokers varied, however, majority smoked less than 5 cigarettes and very small percentage smoked more than 1 pack per day. This was pretty much lower than compared to general population in Pakistan, in which among smokers a huge number smokes more than 1 pack per day. Similarly, the numbers of daily smokers were also much lower than general population.[15] Most common reasons for initiating smoking were friends, curiosity and stress. Studies in Pakistan and aboard showed similar findings.[4,11]

The reasons for current smoking identified by smokers were addiction and stress relief. Findings were similar to other studies; however, leading cause was identified as addiction, which was not seen in some other similar studies.[12]

Most of the students had tried to quit and wanted to do so which was an encouraging sign. This finding was different from similar studies in Pakistan,[13,16] however, studies elsewhere in the world showed similar results.[17,18] This is crucial, as non-smoker doctors are much more likely to help their patient in quitting smoking.[19] Majority of students had positive attitudes towards

smoking and were willing to help their patients in quitting smoking (93.5%, Table 3). Most of studies worldwide show similar findings.[21,22]

Majority of students had good knowledge about famous hazards regarding smoking; however, a significant number of students still lacked detail knowledge on smoking. This problem is not restricted to our country but is found in other countries too. Therefore, more focus should be there on educating students regarding smoking harmful effects. The most common hazard known to student was lung cancer followed by heart diseases. This was not a surprising finding as it is hugely advertised.[8,14,22]

Cigarette smoking was much more common in people with positive family history. This shows that family, though may not be the cause quoted by smokers but it has influence on smoking habits. This finding is documented by some other studies.[23,24]

Similarly, smoking was also seen to be much more common in poor performers in academics. There could be a variety of reasons for this, for example more awareness on side effects, better friends or less stress induced smoking.[25,26]

CONCLUSION

Cigarette smoking is still a big menace among medical students. Main reasons for continuing smoking was addiction and for stress relief. Though a huge majority of students showed better attitudes towards cigarette smoking prevention, Students still lack enough knowledge on smoking hazards.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

Naeem M:	Literature research and wrote introduction section of the article
Khan S:	Involved in writing the discussions of the article and literature research
Abbas SH:	Designed the questionnaire and was involved in writing the results
Khan A:	Collected the data and also designed the study
Khan MZUI:	Wrote the abstract and was also involved in literature review

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.