

The Prevalence, Pattern, Knowledge, Attitude, and Behavior regarding Tobacco Use among border Students of Public Sector Medical University: A cross-sectional study

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Article Processing

Received: 00/00/2024

Accepted: 00/00/2024

Cite this article: Basit, A. A., Akbar, H., & Lehrasab, S. (2024). The prevalence, pattern, knowledge, attitude, and behavior of smoking of tobacco use among hostelite medical students of Rawalpindi: A cross-sectional study. *SJPMC*, 28(1)

Conflict of Interest: Nil

Funding Source: Nil

Access Online:



Abstract

Introduction: Smoking is one of the most common problems among students globally. It severely impacts smokers' health and leads to addiction. This study investigates the prevalence, attitude, and beliefs about smoking among students living in dormitories at Rawalpindi Medical University.

Materials and Method: A self-administered questionnaire, based on the Global Association of Tobacco Survey covering sections of prevalence, knowledge, attitude, and behavior along with the pattern of tobacco smoking was distributed to 219 students living in hostels of Rawalpindi Medical University.

Results: In general, the predominance of smoking among students living in hostel was 38.1% with more among males at 45.3% as compared to females at 7.7%. Most students have correct knowledge of the smoking hazards, but still, there should be awareness sessions to motivate students to quit this bad habit. A positive attitude toward quitting smoking was observed. 41.3 % of participants also use other drugs besides tobacco. This thing is alarming and appropriate steps should be taken to eradicate this.

Conclusion and recommendations: The percentage of smokers among students living in Dormitories of Rawalpindi Medical University was significantly high. Students know the negative aspects of smoking and they have a positive attitude towards quitting. It may be useful to train students about techniques or methods so that they can combat stresses of various types. Counseling sessions should be arranged for medical students, to reduce smoking practices among students living in dormitories.

Keywords: Tobacco control, Tobacco smoking, Tobacco use cessation, Smokers, Tobacco Smokeless.

Introduction

Globally, smoking is the foremost critical public health issue. Smoking causes more than 5 million deaths per annum, with increasing frequency.¹ According to the statistics of WHO, more than 56 million deaths per annum will occur due to the use of tobacco.² More than 80% of deaths are reported to occur in third-world countries³ due to smoking the chance of developing cancer, lung disease, heart disease, and stroke.³ Smokers also are more prone to suffer from psychological issues, such as anxiety and depression.⁴

The percentage of smokers is higher among college undergraduate students worldwide, including those who study for health-related professional degrees.^{5,6,7,8} A study in Lithuania concluded that 41.1% and 55.7% of local and international male dentistry students were smokers, respectively.⁹ Result of research conducted on finding prevalence of smoking in different regions showed that there is a high percentage of smoking among the students who study in Spain and Turkey as compared to students in The United States and Australia.¹⁰ In France, one in every five students smokes, among males.¹² Smoking prevalence among male medical students is high as compared to female medical students, 3% in the USA and 58% in Japan¹¹.

Medical students play a vital role in the prevention of smoking in the community as they will be physicians in the future. Shockingly, among undergraduate medical students, tobacco use is much higher, as it is translated by now. The presence of smoking among medical students in Nepal has a prevalence of 30.1%.¹³

According to recent estimates, among adults aged 15 and above, 27.0% of males and 5.5% females were recorded as daily tobacco users.^{14,15}

More than half of the smokers (55%) were willing to quit smoking.

The objective of the study is to measure the prevalence of smoking, attitudes, and behaviors towards tobacco use, and patterns of tobacco smoking, among the boarder medical students of Rawalpindi Medical University.

Materials and Methods

A cross-sectional study was conducted, among 220 students living in hostels of Rawalpindi Medical University which included students who were enrolled during 2018-2023. The sample was calculated to be 219 according to the WHO sample size calculator using a 5% margin of error, 95% level of confidence, and estimated prevalence of 70% using reference article⁸. A self-administered questionnaire was developed using the Global Association of Tobacco Surveys.¹⁶ Snowball sampling was done initially to identify smokers. The questionnaire contains questions regarding knowledge, attitude, behavior, and pattern of smoking. The questionnaire was distributed among students after their informed consent. The IRB committee of Rawalpindi Medical University has given ethical approval. All medical students, enrolled in the MBBS program, and living in a hostel were included in the study. Students those don't give consent were excluded from the study. Incomplete data collection forms were also excluded.

For awareness of the harmful effects of smoking, questions regarding knowledge of diseases associated with smoking were asked. To assess the pattern of smoking questions like the number of cigarettes per day, and smoking at home, university, and public places were included.

The prevalence of smoking practice among hostelite students was determined both based on gender and year of study. The pattern, knowledge attitude, and behavior of smoking were determined among the identified smokers. Data collection was done by distributing questionnaires among medical students living in hostels. Incomplete responses were discarded.

Data was entered in MS Excel, coded, and analyzed using Statistical Package for Social Sciences (SPSS), version 29. The information was summarized by calculating the number and percentages for categorical variables. For continuous variables, the mean and standard deviation was calculated.

Results

In this research, 82.2% of males and 17.8% of females were included as shown in Table-1.

The prevalence of smoking increases as the year of study increases. The prevalence of smoking in the final year was 66.6% followed by the 4th year (51%), 3rd year (35.0%), 2nd year (28.07%), and 1st year (13.3).

Most participants correctly identified the health hazards of smoking. Heart Attack (4.2%), Stroke (79.6%), Lung cancer (95.3%), Diabetes (39.4), Emphysema (88.2), and Sexual Dysfunction (57.1%) Knowledge of health-related issues of tobacco smoking are shown in table-IV.

55.5% of participants were willing to quit smoking and 10.2% were passive smokers. 60.0% of participants thought that cigarettes are easily available when you are far from home.

96% of participants started smoking just out of curiosity and then it became their habit. 22.6% of participants started smoking to control weight and 76.3% of smokers were part of the circle of smokers as mentioned in table V.

The pattern of smoking among the participants was noted and presented in table-VI. 49.3% of participants smoked 1-5 cigarettes per day, 22.4% of participants smoked 5-10 smoke per day, 23.5% of participants smoked >10 cigarettes per day 7.2% of participants smoked indeed at home, 7.9% at public places, 14.7% of participants smoked a cigarette in university premises. 68.2% of participants smoked due to peer influence. 82.4% of members smoked because of stress 79.4% as it was smoked when they were with their friends, 41.3% of members used other drugs too in their lives at least once.

Table-I Shows the prevalence of smoking based on gender

Gender	Total	Frequency	Percentage
Male	181	82	45.1
Female	39	3	7.96

Table-II Prevalence of smoking based on year of study

Year of Study	Total	Frequency	Percentage
First year MBBS	15	2	13.3
Second year MBBS	57	16	28.1
Third year MBBS	77	27	35.0
Fourth year MBBS	47	24	51.0
Final year MBBS	24	16	66.6
Total	220	85	38.6

Table-III Prevalence of history

Question	Agree	Disagree
Any of your family member's smoke:	54.6	34.1
You started smoking in medical college:	79.4	20.6
Did you start smoking during your 9th to 12th grade?	20.6	79.5

Table-IV Knowledge of students regarding health issues of tobacco smoking.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Standard Deviation
Heart Attack	25.9	47.1	22.4	2.4	2.4	3.9176	0.8892
Stroke	3.5	67.1	17.6	9.4	2.4	3.6	0.8047
Lung Cancer	49.4	45.9	2.4	2.4	1.3	4.4235	0.6615
Diabetes	5.6	22.4	35.3	41.2	1.2	2.7882	0.8032
Emphysema	31.8	52.9	7.1	8.2	2.5	2.0824	0.8481
Sexual Dysfunction	7.1	16.5	67.1	8.2	1.2	3.2	0.7368

Table-V Attitudes and behavior of smoking towards cigarette smoking

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Standard Deviation
Have you ever tried to quit smoking?	12.9	34.1	16.5	32.9	3.5	3.2	1.14
Are you a passive smoker?	3.5	3.5	12.9	58.8	24.7	1.95	0.72
Are cigarettes easily available in the hostel?	3.5	36.5	40.0	20.0	2.5	3.23	0.81
Did you start smoking just out of curiosity?	22.4	58.8	15.3	3.5	2.9	4	0.72
Did you start smoking for the desire to control weight?	2.3	14.1	16.5	62.4	7.1	2.37	0.81
Are you a part of a circle of smokers?	16.5	48.2	10.6	22.4	2.4	3.54	1.08

Table-VI Pattern of smoking among the participants

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Standard Deviation
Do you smoke (1- 5) cigarettes daily?	14.1	45.9	15.3	24.7		3.4941	1.0194
Do you smoke (5-10) cigarettes daily?	17.6	22.4	25.9	29.4	4.7	3.1882	1.1801
Do you smoke (more than 10) cigarettes daily?	18.8	23.5	18.8	28.2	10.6	3.1176	1.3039
Do you smoke at home?	1.2	3.5	5.9	56.5	32.9	1.8706	0.7526
Do you smoke in public places?	2.3	5.9	4.7	60.0	29.4	1.8353	0.7845
Do you smoke in university?	4.7	5.9	8.2	55.3	25.9	2.0824	1.0025
Do you feel lethargic when you don't smoke?	7.1	58.8	24.7	9.4	2.5	3.6353	0.7535
Do you smoke after meals?	1.2	56.5	29.4	9.4	3.5	3.4235	0.8220
Do you smoke after waking up?	2.4	38.8	14.1	40.0	4.7	2.9765	1.0233
Do you smoke due to peer pressure?	8.2	60.0	12.9	18.8	2.8	3.5765	0.8915
Do you smoke because of stress?	12.9	63.5	14.1	9.4	3.5	3.8	0.7837
Do you use a lighter for lighting cigarettes every time?	12.9	49.4	17.6	16.5	3.5	3.5176	1.0306
Do you smoke with friends only?	15.3	58.8	10.6	15.3	2.6	3.7412	0.9018
Do you use any other drugs as well?	4.7	20.0	30.6	43.5	1.2	2.8353	0.9238

Discussion

In this study, it has been observed that tobacco consumption among boarders is quite high. The prevalence of smoking among students was 38.6% which is significantly higher as compared to Saudi Arabian Medical School (14.3%)¹⁶, Yemen (27.0%) Jordan (26.3%), and Syria (15.8%)

Bahrain (27.5%).¹⁷

According to recent estimates, among adults aged 15 years and above, 27.0% of males and 5.5% females were recorded as daily tobacco users.¹⁸ Since physicians are role models for their patients their attitude and behavior regarding tobacco smoking greatly affect their patients.¹⁹

The prevalence of smoking is more in 4th year (51%) and final year students (66%) as compared to the 1st year (13.3%) 2nd year (28.07%) and 3rd year students (35%). A study in Lahore also shows this trend.²⁰

This study shows that if a family member of a student smokes, the student is more likely to smoke too. This is similar to the results in Pune²¹ and Derbyshire²³. Most of the students start smoking when they go to Dormitories. There are a lot of reasons for this which include peer influence, study stress, and bad company²³.

Around 49.3% of smokers smoke 1-5 cigarettes per day, 22% smoke 5-10 cigarettes, and 23% smoke more than 10 cigarettes. An interesting finding is observed that almost 50% of participants who were smokers who smoked more than 10 cigarettes per day also smoked at home, in public places, and at university.²⁴

49% Participants who smoke more than 10 cigarettes per day feel lethargic when they don't smoke. These participants also smoke after meals and after waking up in the morning.

This also points towards high-level nicotine dependence⁴⁴. 79.4% of participants smoke only with friends. This is similar to the results of a study in India and Malaysia.^{17, 18, 19}, 41.3% of participants also use other drugs besides tobacco. Furthermore, people who smoke are 7 to 16 times more likely to abuse other drugs besides tobacco such as marijuana and heroin.²¹ The reasons for smoking in this study were for the most part peer impact, and relief of stress, studies in India, Malaysia, and other communities showed that teenagers begin smoking to upgrade their social status, to relieve depression for stimulation out of curiosity, company of smokers, or as a result of the impact of advertisement.^{22, 23, 24}

Medical students were aware of diseases related to smoking. Most of the participants know the fact that smoking is associated with lung cancer, emphysema, stroke, and heart diseases but less awareness about sexual dysfunction.²⁵

In this study, the participants had a positive attitude to quit smoking. This attitude shows that the medical students are aware of the health hazards of smoking, this result was similar to a study conducted in Turkey which shows that among smokers 92.6% considered smoking as harmful to health, but 12.3% didn't worry about it.²

This research dealt with a sensitive issue. Despite the fact the questionnaire was anonymous, we can't rule out the possibility of underreporting of tobacco use. Another limitation of this study is that as it is conducted in Dormitories of Rawalpindi Medical University it can't be generalized to the whole university and other universities too.

Conclusion

The prevalence of tobacco and other drug misuse was relatively high among students living in dormitories of Rawalpindi Medical University although they have quite a satisfactory level of awareness regarding its disadvantages. Most of them started smoking due to stress and peer influence. Many of them were motivated to quit smoking, medical students should be taught how to handle stress of various types and how to manage these types of circumstances without using tobacco or other drugs. In this regard, stress-coping strategy sessions should be arranged for students. It may be suitable to consider the introduction of counseling programs to help students, particularly medical students and future physicians who play a driving part in tackling smoking and substance abuse in their communities. Further studies will be conducted to determine the best way to implement curriculum changes for early smoking prevention and initiate smoking cessation programs for undergraduate medical students.

Recommendation

University Administration should arrange awareness seminars and impose restrictions in dormitories so that the prevalence of smoking in Dormitories can be reduced.

Conflict of Interest

No conflict of interest.

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