

ATTITUDES OF MEDICAL STUDENTS TOWARDS SMOKING

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Contribution

All the authors contributed significantly to the research that resulted in the submitted manuscript.

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ABSTRACT

Objective: To assess beliefs and attitudes of medical students towards smoking and to compare difference between smokers and non smokers.

Methodology: This cross-sectional comparative study was conducted from 1st May to 31st October 2011 at FUMC, Rawalpindi. A random sample of 500 male and female students from 1st year to 5th year MBBS were selected by convenient sampling technique. A self administered English language questionnaire was distributed. The data was entered in SPSS version 19.

Results: Out of 500 students, 384 completed questionnaires were received. Of these 42.8 % (n=185) were males. The mean age was 21.46 ± 1.8 . Only 53 (13.8%) were smokers. Out of total males and females 24.24% and 5.02% respectively were smokers. Smoking was found to be statistically significant in males, age group more than 22 yrs and with family history of smoking ($p=0.000$, 0.000 , 0.046 respectively). Stress, boredom/anxiety and experimentation were most common factors leading to smoking. Only 54.9% consider doctors to be role models for the society and 13.3% medical students felt that the legislation is effective. In total 84.1% and 86.7% in smokers group were aware of the hazards of smoking. Only 26.7% of total felt that advice to smokers is effective, but in comparison smokers felt advice matters ($p=0.000$). In terms of increasing price of cigarettes 68.4% felt it will help controlling the smoking menace but smokers had a different view ($p=0.000$).

Conclusion: Smoking behavior and attitudes of future physicians is alarming and addressing this menace needs priority action.

Key Words: Smoking, Medical Students, Attitude

INTRODUCTION

Smoking is a preventable cause of premature morbidity and mortality.¹ Organization (WHO) estimates that globally, smoking attributes approximately 6 million deaths a year which is expected to rise to around 10 million per year by 2030.² Smoking when started during teenage years becomes a lifelong habit. In USA more than 80% of established adult smokers begin smoking before age 18 year.³

In Pakistan about 24 % of college students are reported to be current smokers.⁴ Healthcare professionals play a key role in tobacco use prevention because they are considered as model by patients however studies have shown the prevalence of smoking as high as 44% in Italy in healthcare providers.⁵ Studies specifically done in medical students have shown that the reasons for male smoking as stress relief, image, companionship ,leisurely independence and a show of male power and masculinity while in females the reasons for smoking clustered around concepts of images ,western culture, stress relief and advertising.⁶ More over some studies have shown that students underestimate smoking-related mortality and student's overall knowledge of the effectiveness of smoking cessation methods was inadequate. Only one third of the students felt qualified to counsel patients about tobacco dependence.⁷ While in other parts of the world, In spite of adequate knowledge about hazards of smoking and a satisfactory attitude towards smoking studies continue to show a high prevalence of smoking in medical students.⁸

Information regarding the behavior and attitude of our medical students is of paramount importance to us. They will be the ones who will not only be providing the healthcare to the community but also play a pivotal role in future health programmes and policies of national health services.

Our study is aimed at establishing the magnitude of smoking in medical students and their behavior and attitude towards the menace.

METHODOLOGY

A cross sectional study was conducted at Foundation University Medical College (FUMC) from 1st May 2011 to 31st October 2011. A formal approval from the Ethical board of university was taken and random sample of 500 male and female students from 1st year MBBS to 5th year MBBS were selected by convenient sampling technique. A self administered English language questionnaire was distributed by a group of 4th year medical students headed by a team leader to the selected students in their classes. The questionnaire was collected after 15 minutes by the same team.

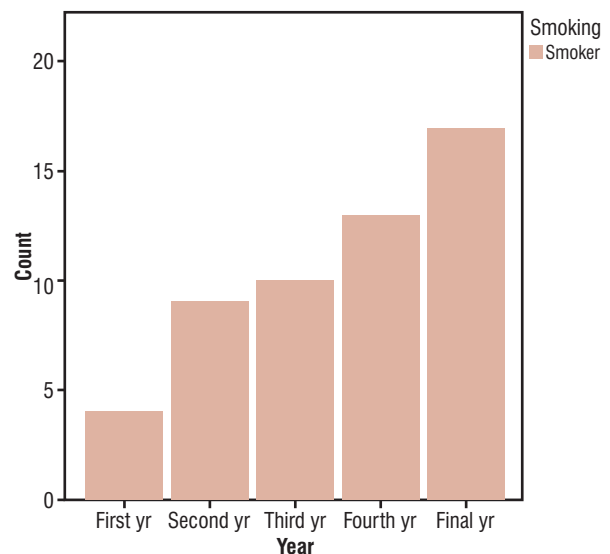
The data was entered in SPSS version 19. Descriptive

statistics were used to describe the data i.e, mean and standard deviation (SD) for quantitative variables(age and number of cigarettes smoked per day) while frequency along with percentages for qualitative variables(gender, smoking status, family history of smoking, factors leading to smoking, awareness about hazards, legislation in country and view about doctors as role model. Chi-square test was used to analyze the effect of gender, age, family history of smoking on tobacco smoking as well as to compare the attitudes/beliefs as effectiveness of legislation, awareness about smoking hazard, advice by parents and teachers and doctors as role models in smokers and non smoker medical students groups. P-value <0.05 was considered as significant.

RESULTS

Complete questionnaires were received from 384 students out of 500. Out of 384, 42.8%(n=185) were males where as 51.2%(n=199) were females. The age of students ranged from 18yrs to 25yrs with mean of 21.46 ± 1.8 . In total 53 (13.8%) were smokers, while rest 331(86.2%) were non smokers. Out of total males 43(24.24 %) where as 10(5.02%) out of total 199 females were smokers. The prevalence of smoking was found to be statistically significant in males with $p=0.000$. Smoking was found to be statistically significant($p=0.000$) in age group more than 22 yrs with 39 out of total 53 smokers above age of 22yrs. Similarly smoking trend lowest in first year and increased steadily in subsequent classes as can b seen in Figure 1.

Figure 1: Smoking Trends in Medical Students



Most of the students smoked less than 10 cigarettes per day with only 37.2%(n=16) male smokers and 30%(n=3) female smokers smoking more than 10 cigarettes in a day In total of 384 medical students 23.7%(n=91) where as in

smokers 66.03% (n=35) had a history of smoking in family (p=0.046).

In factors leading to smoking in males stress, boredom/anxiety and experimentation were found significantly more as compared to females (Table 1).

Table 1: Factors Promoting Tobacco Use in Medical Students

Factors	Male	Female
	Frequency (%)	Frequency (%)
Stress	26(60.4%)	1(10%)
Boredom/Anxiety	25(58.1%)	0(0%)
Experimentation	24(55.8%)	1(10%)
To look Cool	14(32.5%)	3(30%)
Failure in Life	10(23.25%)	5(50%)
Peer Pressure	8(18.6%)	1(10%)
Ideal personality	6(13.9%)	0(0%)

When asked for doctors as role models only 54.9 % (n=221) consider themselves as role models, and in comparison between smokers 67.9% (n=36) and non smokers 52.8% (n=175) the difference was insignificant with (p=0.053). Most of all medical students 84.1% (n=323) were well aware of the hazards of smoking. Even in smokers group 86.7% (n=46) but were still smoking. Over all 26.7% (n=106) of total felt that advice to smokers by teachers, parents or even colleagues is effective. In terms of comparison between smokers and non smoker medical students 60.3% (n=32) of smokers said the advice matters compared to just 23.3% (n=74) with p=0.000. Mostly all medical students (13.3%, n=51) felt that the legislation is not effective in controlling smoking. In comparison, smokers and non smokers medical students 79.2% (n=42) and 87.9% (n=291) respectively with insignificant p-value felt legislation ineffective. In terms of increasing price and taxes on cigarettes 268 students (68.4%) felt it will help controlling the smoking menace. But when compared between smokers and non smokers a clear difference was seen with 39.6% (n=21) compared to 73.1% (n=242) respectively feeling pricing and taxes will decrease trend (p=0.000) (Table 2).

DISCUSSION

Smoking is a key behavior that determines the future health consequences of a society. While the high income countries have shown a declining trend of smoking the trend is still alarming in under developed countries. Our interest of choosing the medical students as a focus of study for looking into their behavior, attitudes and factors leading to

smoking revolved around the notion that health professionals are expected to influence the population.^{5,9} The society expect them to be role models.

The prevalence of 13.8% smokers in medical student population in our study is similar to a study conducted in Karachi which found the prevalence of 11.2% smokers.⁸ Whereas, in India, Saudi Arabia, Ethiopia, United Kingdom and United states of America the prevalence was found to be 14.5%, 19%, 9%, 8% and 10% respectively.¹⁰⁻¹³ The finding of more Male students smoking is similar to as found all over world.^{10,11,14}

Our study found that more smokers were above the age of 22 yrs and it was noted that higher class more is the smoking trend. This finding is similar to which was found in medical students in London where 69.7% smokers were found in final year as compared to 42.5% in second year with a p value of 0.01.¹⁵ Our study population showed more than 30% males as well as female smokers smoking more than 10 cigarettes per day how ever in UK a study showed 80% smoking less than 10 cigarettes per day.¹⁶

Among the factors identified which usually lead to smoking tobacco, family history is most important one. If there is family history of any kind of tobacco use than students are more likely to take up that habit.^{4,17,18} Many studies have shown that experimentation or use of tobacco just for fun with friends leads to a permanent habit and addiction for a lifetime. Other factors leading to tobacco smoking include relieving stress as frequent smokers report smoking was relaxing (62.5% vs. 26.2%, p=0.002) and energizing (48.5% vs. 11.4%, p=0.001).¹⁹

With 86.7% of smokers in our study having the knowledge of over whelming evidence of health consequences of smoking

Table 2: Belief and Attitudes Between Smoker and Nonsmoker Medical Students

Beliefs/Attitudes	Smokers (n=53)	Non Smokers (n=331)	P- value Chi-Square Test
	Frequency (%)	Frequency (%)	
Doctors as role models	36(67.9%)	175(52.8%)	0.053
Awareness about hazards	46(86.7%)	277(83.6%)	0.068
Advice by teachers and parents	32(60.3%)	74(23.3%)	0.000
Effectiveness of Legislation	42(79.2%)	291(89.7%)	0.71
Increasing Prices/Taxes on cigarettes	21(39.6%)	242(73.1%)	0.000

and even with a fact that 67.9% smokers themselves consider as a role model for the society but still continued to smoke; the trend to smoke still is very disturbing

There is difference in attitudes regarding legislation, developing countries and under developed countries. In developing countries most students showed positive attitudes towards tobacco control irrespective of their own smoking status, for example most students agreed to ban on tobacco sales to adolescents and that banning of smoking in public places. One of the strategies to reduce smoking-related morbidity and mortality is to encourage the involvement of health professionals as role models in tobacco-use prevention and cessation counseling where as in developing countries students had wrong beliefs on smoking ($p < 0.05$), and negative attitude toward tobacco control policies compared to nonsmokers.^{7,20,21}

Studies have shown that higher cigarette prices will reduce smoking prevalence rates of overall youth population and other youth sub-populations. Moreover, that smoke-free air laws will reduce smoking prevalence for the overall youth population with the largest reductions in high SES and male subpopulations.²⁰ But in our study only 39.6% smokers agreed that increasing prices will have an effect on overall smoking trend.

To counter the worrisome trend tobacco use in students WHO and the U.S. Centre for Disease Control and Prevention and Global Health Professions Student Survey (GHPSS) recommends the introduction of a separate tobacco module in medical schools so to increase awareness in youth.²¹ In Italy, one study projects that with a comprehensive approach, the smoking prevalence can be decreased by as much as 12% soon after the policies are in place, increasing to a 30% reduction in the next twenty years and a 34% reduction by 30 years in 2040.²²

LIMITATIONS

A large scale study with proper controls and smoker medical students is required to produce more reliable results.

CONCLUSION

In our study the fact that medical students knew of hazards and legislations and continued to use tobacco is similar to studies which have shown that despite knowledge of so called no-smoking policy for years, its perceived enforcement is variable. Special education programs should be included in medical curriculum to motivate the future physicians about their responsibility as the role model in a society.

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