INTRODUCTION

Smoking remains a priority public health concern. Despite the far-reaching and multi-agency efforts to educate the public about the destructive effects of tobacco, cigarette smoking continues to threaten the wellness and longevity of youth and adults. Tobacco use is a leading preventable risk factor for a very long list of chronic diseases, which are likely to account for the ever mounting share of global disease burden. Most smokers live in developing countries (800 million) and most are male (700 million). However, smoking rates have decreased in developed countries over the last 13 years. In United States, smoking prevalence has been decreasing steadily for decades among the adult population; this trend has also been noted among children and adolescents since the late 1990s. On the contrary, there has been a corresponding 50% increase in smoking rates in developing countries. It is estimated that by 2025, 75% of early deaths in developing countries will be due to smoking-related illnesses. Smoking-related illnesses are the leading preventable causes of death. Failure to overcome the “tobacco epidemic” has many reasons; one of them is the failure of the physicians and the health community to play an effective role in this regard because they are not adequately knowledgeable in tobacco prevention. Besides dealing with smoking-related health problems, they are also expected to represent a role model for the population by adopting a non-smoking lifestyle. Their dedicated opposition to smoking may have a huge effect on society. The time during medical education seems to be the ideal period to establish such a positive influence.

The objective of this study was to assess the frequency of smoking among youth in medical and non-medical colleges in Rawalpindi and to explore the differences in smoking behaviour of the two college students.

METHODOLOGY

This cross-sectional comparative study compares the frequency of smoking and the characteristics and attitudes towards smoking between medical and non-medical college students. Inclusion criteria comprised of students enrolled in college register, students only from Pakistan and volunteers to give the information. Exclusion criteria were foreign national students and any one not volunteering to participate in the study. A self-administered survey questionnaire was distributed to the selected classes with the consent of the teachers. Questionnaires required less than 10 minutes to complete and were returned individually. No incentive was offered for participation in the study and no
individual follow-up was possible. It was also mentioned that this information was required for study purpose only and would be anonymous.

The survey contained questions pertaining to demographic data, reasons for smoking or not smoking etc. Students were asked if they smoke. A yes in reply meant the student was a current smoker. Those who had never smoked a cigarette were defined as non-smokers. All non-smokers were asked to identify from a list of five ‘reasons of not smoking’. All smokers were asked the number of cigarettes they smoked per day. Smokers were also asked to check off a list of five ‘reasons of smoking’. Four items were defined as ‘peer pressure’, ‘fashion and style’, ‘parental smoking’ and ‘media influence’. The fifth option was left open ended as ‘any other’. They were also inquired about attempt at quitting, what motivated them to try to quit and was the attempt successful?

All data was stored and analyzed, using Chi-square statistics on SPSS. Some of the responses were invalid if they included ‘don’t know’, refused to answer or the response was unidentifiable or outside the scope.

RESULTS

The total number of students in the study was 849. Out of them, 444 were from the medical college and 405 from non-medical college. The age of medical students ranged from 19-25 years; mean 22±1.39 years. The age of non-medical college students ranged from 19-24 years; mean 21.145±1.28 years. Male students in the medical college were 70.7% and females were 29.3%. In non-medical college group, 72.1% were males and 27.9% were females. In the medical college, 32.7% students and in the non-medical college 41% of the students were smokers (Table I).

Table II shows that 38.6% of medical college smokers use less than 6-10 cigarettes per day, whereas only 23.5% of non-medical college smokers consumed this amount. Feeling of being addicted to smoking was experienced by 67% and 75.3% of medical and non-medical smokers respectively. Significantly more non-medical students were interested in quitting (31.3% vs. 13%), however, more medical students (9.7%) were successful in quitting as compared to non-medical (6%) students.

The leading reason for smoking was “fashion and style” endorsed by 39.3% and 31.3% and “peer pressure” endorsed by 20.7% and 32.5% of medical college and non-medical college smokers respectively. Additional responses included “parental smoking” endorsed by 17.2% and 19.9% and “media influence” endorsed by 22.8% and 16.3% of medical college and non-medical college smokers respectively (Table II).

Table III shows the reasons for not smoking amongst non-smokers. Among medical students (78.6%) were of opinion that medical education can be helpful in quitting smoking. On the other hand, majority of non-medical students were of the opinion that self-realization (50%) and social anti-smoking campaigns (40%) were helpful in quitting smoking (Table II).

Table III shows the reasons for not smoking amongst non-smokers. Among medical students, (60.9%) and among non-medical students (31%) never smoked because of health concerns. The reason of not smoking...
i.e. parental pressure, peer pressure, and financial constraints were among the minor reasons for not smoking in both the groups.

Table III: Reasons of not smoking among non-smokers.

<table>
<thead>
<tr>
<th>Reasons for not smoking</th>
<th>Non-smoker among medical college students n=299 Percentage</th>
<th>Non-smokers among non-medical college students n=239 Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health concern</td>
<td>182 60.9%</td>
<td>74 31%</td>
</tr>
<tr>
<td>Peer pressure</td>
<td>23 7.7%</td>
<td>14 5.9%</td>
</tr>
<tr>
<td>Parental pressure</td>
<td>28 9.4%</td>
<td>19 7.9%</td>
</tr>
<tr>
<td>Financial constraints</td>
<td>9 3%</td>
<td>30 12.6%</td>
</tr>
<tr>
<td>Never thought about it</td>
<td>57 19.1%</td>
<td>102 42.7%</td>
</tr>
</tbody>
</table>

**DISCUSSION**

It has been observed that doctors, who smoke tend to be more permissive, are less inclined to advise their patients against tobacco use, and adopt a passive attitude towards smoking. A comprehensive education for doctors on the subject of smoking dependence is imperative, and the best possible time for this training is when they are students. Smoking is not uncommon among medical students and doctors. This study shows that 32.7% of medical students smoke as compared to 41% non-medical students. One of the many reasons why the subject of smoking should be addressed by medical schools is to avail of the opportunity to reach students during their undergraduate years. Various studies show that students start smoking during their undergraduate years as reported in international literature. So this is an ideal time to raise the consciousness of future doctors given that it is easier to influence the attitudes and judgment of people who are in training. In a study on medical students of the Aga Khan Medical College, 95% students were of the opinion that doctors should be a role model in cessation of smoking by not smoking themselves.11

For countries with a high smoking frequency, it may be particularly important for the ‘prospective physicians’ to become the early adopters of the idea of a non-smoking culture so they can help to lead their society in that direction.12,13 Therefore, the smoking behaviour of medical students in such societies is of interest.

In Pakistan, a population-based, cross-sectional survey was carried out by Ahmed and his colleagues where a large number of people i.e. 18,135 individuals were surveyed all over the country. It concluded that one out of every two to three middle-aged men in Pakistan smoke cigarettes. Overall prevalence of smoking was 15.2%, being 28.6% (27.3–29.9%) among men and 3.4% (2.9–3.9%) among women.14 Another survey in Pakistan by Alam reported that 21.6% (36% males and 9% females) of 9441 subjects were smokers. In urban areas, it was 20.7% and in rural 22.0%, males were predominant in both urban and rural areas.2

In this study, predominance of male smoker was observed among both groups i.e. 42% among medical and 52% among non-medical students. Regarding smoking behaviours, there was a significant difference between the two groups of students in number of cigarettes smoked per day. About 38.6% of medical college smokers smoked less than 10 cigarettes per day as compared to non-medical 23.5% students. Few studies have directly compared the smoking behaviour of medical students with that of other college students. Studies have tended to survey medical students alone or have failed to differentiate medical students from other college students. Since the survey methods of published reports vary as well, it is difficult to compare data across the studies.

Majority of medical students (78.6%) were of the opinion that medical education has an important role in quitting smoking, whereas majority of non-medical students (90%) thought that self-realization and social anti-smoking campaigns are more important in quitting smoking. It has been demonstrated that seminars on smoking addiction improve students’ understanding of the problem and, to a lesser degree, also affect their attitude towards smoking.7,14,15

Majority of medical students (60.9%) did not smoke because of health concerns. Medical education seems to have affected the decision of not smoking in medical students. It should be focussed against smoking during seminars, lectures, workshops etc. In a study conducted in the United States, nearly 4 million men from the National Occupational Mortality Surveillance Database were evaluated and it was found that male physicians lived longer than did men of the same age in the general population.16 It was also reported that cigarette smoking declined most rapidly since 1974 among physicians than in other professions. This was achieved effectively through awareness campaigns. It is recommended that because of their important role as example-setters and health educators, persons in these occupations should tend not to smoke.10,17,18 This study also showed a difference between Pakistani medical and non-medical students in smoking frequency and in amount of cigarettes smoked daily. Thus, it seems that medical education or being prospective physicians has some effect on the students’ smoking behaviour and attitude.

**CONCLUSION**

A substantial proportion of medical students in Rawalpindi smoked and that being a medical student had effect on these students decision to smoke. However, they managed only to restrict their cigarette consumption to a lower level. Tobacco education/control programs should be incorporated into school/college curricula to create awareness amongst students at an early age.
Proforma for Data Collection:

1. Code for college:
2. Year of study:
3. Age:
4. Sex:
5. Do you smoke?
   a. Yes   b. No
6. If no for Q. No. 5, then for what reason.
   e. Never thought about it
If yes for Q. No. 5, then please answer the rest of the questions.
7. How many cigarettes do you smoke in a day?
   a. 1-5   b. 6-10   c. 11-15   d. >16
8. Since what age have you been smoking?
   a. < 10 years of age   b. 10-15 years of age
   c. 16-20 years of age   d. > 20 years of age
9. Why did you start smoking?
   a. Peer pressure   b. Health concerns
   c. Fashion and style   d. Parental smoking
   e. Media influence   f. Any other: __________
10. Do you think that you are addicted to cigarette smoking?
    a. Yes   b. No
11. Have you ever tried to quit smoking?
    a. Yes   b. No
12. If yes for Q. No. 11, then were you successful in quitting smoking?
    a. Yes   b. No
13. If no for Q. No. 12, then why were you not successful?
    a. Peer pressure
    b. Overwhelming need for smoke
    c. Work related stress
    d. Domestic problems
    e. Others in the family also smoke
    f. Smoking advertisement
    g. Any other: __________
14. If yes for Q. No. 12, what in your opinion was the most important factor that helped you to quit smoking?
    a. Medical education
    b. Peer pressure
    c. Family values
    d. Social anti-smoking campaigns
    e. Self-realization
    f. Any other reason: __________
15. Do any of your close family members smoke?
    a. Father   b. Mother
    c. Siblings   d. None
16. Do you use any other form of tobacco?
    a. Hukka   b. Bidi
    c. Naswar   d. Gutka

REFERENCES