ORIGINAL ARTICLE

# THE TRENDS OF TOBACCO USE AMONG MEDICAL AND NON MEDICAL STUDENTS IN DISTRICT BANNU

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## ABSTRACT

**Background:** Tobacco use is the leading and preventable cause of death in the World. This study was conducted to find out the trends of tobacco use among medical and non-medical students in District Bannu of Khyber Pakhtoonkhwa province.

**Material & Methods:** This cross sectional observational study was conducted in Bannu Medical College and University of Science & Technology Bannu from 16th March 2011 to 15th June 2011. Questionnaires were randomly distributed among the students of medical college and university. These were collected and checked for missing information and wrong entries. No name, address or other identity was mentioned in the proforma.

**Results:** A total of 244 questionnaires were filled. Non responders were excluded and the remaining 227 were included in the study, 120 in medical and 107 in non medical group with females 44 in medical and 39 in non medical. Mean age was 23±4 years. Tobacco users in medical group were 14.5% male and 2.3% female while in non-medical students these were 20.6% male and 2.5% female . The main contributing factor was the bad company and its use was started in the college in 75% of the medical and 53.3% of the non medical group.

**Conclusion:** The prevalence of smoking is higher in the non-medical students than the medical students. The female population is less affected than the male and the etiological factors were mainly stress and bad company.

**KEY WORDS:** Tobacco, College/University Students, Smokers.

## INTRODUCTON

Tobacco use is the most important preventable cause of death in the world.[1] More than 100 million people died in the 20th century due to the consumption of tobacco and tobacco related products. About 70% deaths are occurring in the developing countries and now one billion deaths are estimated in 21st century.[2] According to WHO 47% men and 12% women are smoking globally. Nearly 48% men and 7% women are smokers in the developing countries[3]. This is considered to be the leading cause of death and is also responsible for ischemic heart disease, cerebrovascular accidents, COPD, lung cancer and lower respiratory tract infections.[3]

In National health survey1996, 36% men and 9% women were found to be smokers in Pakistan.[2] In a study conducted in Peshawar university students the prevalence of smoking was 15%.[4] The alarming situation in our country is, that in one study 32% male house officers were found to be smokers in Karachi.[5]

In Pakistan smokeless tobacco is very important which is used in different forms. In a study by Imam SZ and colleagues 21.5% students were using smokeless tobacco and snuff (naswar) was used more frequently followed by paan.[6]

Most of the local studies were conducted in big cities of the country. This study was conducted to know the trends of tobacco use among students of a small city of Bannu.

## MATERIAL AND METHODS

It was a cross sectional observational study conducted in 4th and final year students of Bannu Medical College and master class students of University of Science and Technology Bannu, from 15th march to 16th June 2011. These classes were selected because their ages were comparable. Non willing and junior classes were excluded from the study. Questionnaires were randomly distributed among the students after due permission of local ethical committee. These were collected and checked for missing information and wrong entries. No name, address or other identity was mentioned in the proforma.

Sampling technique was purposive non probability sampling. Using WHO software for sample

size calculation, the needed sample size was 137 for anticipated prevalence of 15%[4] with 6% margin of error and 95% C.I (confidence interval).

The data was analyzed using SPSS version 13. Descriptive analysis was done to calculate means and standard deviations for continuous variables and to run frequencies for nominal and ordinal variables.

## RESULTS

The total number of participants were 244. Among them 128 were medical and 116 non medical students. Eight (6.3%) of the medical students and 9 (7.7%) of the non-medical students were non-responders. Out of 120 (93.7%) of the medical students who were responders, 76 (63.3%) were male and 44 (36.6%) were female. Among the 107 (92.3%) of the non medical students who were responders 68 (63.5%) were male and 39 (36.5%) were female. Mean age of students of both groups was 23±4 years. Eleven (14.5%) of the students who were smokers in the medical group were male and 1 (2.3%) was female and 14(12.6%) in the non medical group who were smoker were male and 1 (2.5%) was female. Sixty-five (85.5%) of the male students in the medical group were non-smokers and similarly 43 (97.7%) female in the same group were non smoker. Forty-five (79.4%) of the male students of the non-medical group were non-smoker and 38 (97.5%) of female students in the same group were non smoker. Among the medical group 3 (25%) started their smoking before

**Table 1: Comparison of different variables between medical and non-medical students.**

| Variables | Medical | Percentage | Non-medical | Percentage |
|---|---|---|---|---|
| **Total** | 128 | | 116 | |
| **Non-responders** | 8 | 6.3% | 9 | 7.7% |
| **Responders** | 120 | 93.7% | 107 | 92.3% |
| Male | 76 | 63.3% | 68 | 63.5% |
| Female | 44 | 36.6% | 39 | 36.5% |
| **Age** | 23+4 years | | 23+4 years | |
| **Smokers** | | | | |
| Male | 11 | 14.5% | 14 | 20.6% |
| Female | 1 | 2.3% | 1 | 2.5% |
| **Non smokers** | | | | |
| Male | 65 | 85.5% | 54 | 79.4% |
| Female | 43 | 97.7% | 38 | 97.5% |
| **Smoking before college admission** | 3 | 25% | 7 | 46.7% |
| **Smoking after college admission** | 9 | 75% | 8 | 53.3% |
| **Type of tobacco** | | | | |
| Cigarette | 7 | 58.4% | 6 | 40% |
| Naswar (snuff) | 4 | 33.4% | 6 | 40% |
| **Hashish** | 1 | 8.2% | 3 | 20% |
| **Provocating factor** | | | | |
| **Company** | 8 | 66.7% | 10 | 66.7% |
| **Stress** | 4 | 33.3% | 5 | 33.3% |
| **Age at which smoking started** | | | | |
| **Before 20** | 4 | 33.3% | 7 | 46% |
| **After 20** | 8 | 66.7% | 8 | 53.3% |

their college admission and 9(75%) started smoking after the college admission. Similarly in the non-medical group 7 (46.7%) started smoking before the college admission and 8 (53.3%) of the students started smoking after the college admission. The most frequent tobacco used was cigarette 7 (58.4%), followed by naswar (chewing snuff) 4(33.4%) and then hashish 1(8.2%) in the medical group. In the non medical group 6(40%) used cigarette, 6(40%) naswar and 3(20%) used charas. The provocating factor for smoking was company in 8 (66.7%) and stress in 4 (33.3%) in the medical group but in the non-medical group 10 (66.7%) started tobacco use due to company and 5 (33.3%) was because of stress. Four (33.3%) students in the medical group started smoking before the age of 20 years while 8 (66.7%) started smoking after the age of 20 years. In the non-medical group 7 (46%) started smoking before the age of 20 years and 8 (53.3%) started after the age of 20 years. The minimum age of starting smoking was 11 years in non medical group. Results are given in Table 1.

## DISCUSSION

The students being aware of the hazards of tobacco use, still smoke, is alarming for the future especially in developing countries like Pakistan. This has led to the increase in preventable causes of death in the developed countries like United States.[7]

In our study the prevalence was lower as compared to the other local studies in both medical and non-medical students.[4,7] According to WHO 47% men and 12% women are smoking globally. Nearly 48% men and 7% women are smokers in the developing countries.[3] Comparing our results with the above WHO report we are still on the safer side.

A study conducted in Karachi had 32% prevalance in medical students[8]. Keeping in view the above three studies, one in Karachi and two in Peshawar, it is clear that conditions in Bannu city are totally different from these big cities. The lower prevalence in our study may be due to the very religious society and elders restrictions on their youngsters.

As a whole tobacco users were more in non medical group because they may not be aware of the bad effects of tobacco products, like medical students. Like other researchers where they have found high prevalence of smokeless tobacco, we also have higher number of its users in both groups, more of snuff users in non-medical group.[6] Snuff and hashish (charas) are usually not considered hazardous, which is wrong, because tobacco is lethal in any form.[9]

Non-medical group had an earlier starting age as compared to medical students, In both groups the main provocating factor was the friends or class mates, which was also shown earlier by Zaman et al.[4]

Most of the students started tobacco in the college and university. This needs health educational programs at the school and college level. Other forms of tobacco like bidi and shisha found in other Pakistani studies was not present in our study.[10]

## CONCLUSION

The prevalence of smoking is higher in the non medical students than the medical students. The female population is less affected than the male and the etiological factors were mainly stress and bad company.

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