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Original Article

Tobacco use amongst the male medical students, Wardha, Central India

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ABSTRACT

The purpose of the present study was to evaluate the use of tobacco in the male medical students and to assess the factors influencing medical students to indulge in tobacco use. A community based cross-sectional study was conducted amongst the male medical students from June 2009 to December 2009. A pre-designed structured questionnaire was used to study various correlates of the tobacco use. Data was collected and analyzed. Out of the 335 participants 50.7% was found to be tobacco users. Among these current users 77.1 % were pure smokers and 10% were uses smokeless tobacco. Most of users started tobacco consumption at the age of 16-20 years. The mean age and Standard Deviation of the study group was 21.34 ± 1.48 years. The residential background, i.e., rural or urban, and religion were not significantly associated with the use of tobacco in the present study. Hostellers were found to be more frequent tobacco users as compared to day-scholars. There was a familial aggregation of the use of tobacco. The factor initiating the use of tobacco was usually peer pressure. Significant tobacco use was found among male medical students and this harmful behaviour reduces health professionals' ability to advise patients effectively. A comprehensive public health initiative is required to reduce prevalence of tobacco use in which efforts should be focused on support for cessation to medical students.

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1. Introduction

The prevention of tobacco use in young Indians appears as the single greatest opportunity for preventing non-communicable disease in the world today as it is home to one sixth of the global population. Tobacco use is one of the major preventable cause of death and disability worldwide. WHO estimates, 4.9 million deaths annually are attributable to tobacco [1]. This figure is expected to rise to 10 million in 2030, with 7 million of these deaths occurring in developing countries, mainly China and India. India is home for one sixth of global population. Currently about one- fifth of all worldwide deaths attributed to tobacco occur in India, more than 8,00,000 people die and 12 million people become ill as a result of

tobacco use each year. In India, the deaths attributable to tobacco, are expected to rise from 1.4% of all deaths in 1990 to 13.3% in 2020 [2]. It is estimated that 5,500 adolescents start using tobacco every day in India, joining the 4 million young people under the age of 15 who already regularly use tobacco. World Health Organization and Centers for Disease Control, USA, developed the Global Youth Tobacco Survey (GYTS) for this purpose [3,4].

Health professionals serve as role models for healthy behaviour to the public. During routine visits, health professionals can counsel patients on dangers of smoking and the importance of quitting; and such counseling is one of the most cost-effective methods of reducing smoking [5]. The medical students who are future Health professionals ignore epidemiological evidence and continue to use a substance that is harmful to health. Thus they send an inconsistent message to patients they counsel to quit tobacco. Also medical students represent a primary target for

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tobacco-prevention programmes; therefore, the purpose of the present study was to evaluate the use of tobacco in the male medical students and to assess the factors influencing medical students to indulge in tobacco use.

2. Materials and Method

A community based cross-sectional study was conducted amongst the under graduate and intern male medical students of Jawaharlal Nehru Medical College, Sawangi, Wardha. Hostel residents as well as Day scholars were included in the study. Out of 351, 335 students were included in the study (37 were interns and remaining 298 were under-graduate students). Study was conducted during the June 2009 to December 2009.

Pre-designed structured questionnaire was used to interview the students. Informed consent was taken from every participant. Anonymity was maintained. Information was asked regarding Place of origin, Religion, Current place of residence. The details of tobacco use like Form of tobacco, Duration of use, Age of Initiation, and amount consumed were asked. "Current use" was defined as having used tobacco at least once in the last 30 days preceding the survey'. "Never use" was defined as having not used tobacco even once in their lifetime. "Ever use" was defined as having used tobacco even once in their lifetime. [6] The information regarding associated factors of tobacco use like family history, influencing factors for tobacco initiation , social circle history, Places of consumption, Parental awareness, Consumption at home town, and Attempts to quit were also elucidated.

2.1. Statistical analysis

Statistical analysis of data was analyzed by using Microsoft Excel and Graph Pad InStat3 statistical software. Data was tabulated using frequency distribution tables. Frequency of demographic characteristics, various tobacco related findings were expressed as proportions (%). Mean and Standard deviation were used for quantitative data. Association between independent factors and dependant factors was determined using Chi-square test. The level of significance was taken at P value <0.05.

Table no. 1 Form, pattern and age of initiation of tobacco use

		Total no. of students	Percentage
Type of tobacco user	Current tobacco user	170	50.7
	Ever user	17	5.1
	Never user	148	44.2
Pattern of tobacco use	Smoker	131	77.1
	Chewer	17	10
	Both	22	12.9
Age of initiation (year)	< 10	7	4.1
	10-15	36	21.2
	15-20	97	57.1
	>20	30	17.6

3.Results

The present study revealed that out of the 335 participants 170 (50.7 %) were found to be tobacco users where as 165 (49.26%) were non users. However amongst these 165 students 17 (10.30%) students accepted to have tried tobacco once in their life time but are not regular users. So these have not been included as regular tobacco users as other 170 students are. Details of the study showed that the pattern of tobacco use is quite distinct with 131(77.1%) being pure smokers consuming tobacco as cigarettes or other forms of smoking ,while the use of smokeless tobacco in the form of gutkha, khaini , kharra(locally available forms of tobacco was found in 17 i.e.10% of the total current tobacco users. A total of 22 (12.9 %) students were found to consuming both form of tobacco. Amongst 170 current tobacco users, most of them (97) started tobacco consumption at the age of 16-20 yrs . (Table no.1) The age group of majority students in the study was 18-23 yrs. The mean age and Standard Deviation of the study group was 21.34 ± 1.48 yrs.

In the present study we found that religion had no association with the use of tobacco. The apparent differences in the percentages of tobacco use in Hindus and Muslims was not statistically significant. The hostellers (53.1%) were found to be using more tobacco as compared to the day –scholars (34.9%) and the difference was found to be statistically significant. The residential background of the students, i.e., rural or urban, was not significantly associated with the tobacco use. The familial aggregation of the tobacco use was also quite evident in the present study, with tobacco use being more common among students belonging to families where tobacco use is prevalent. (Table no.2)

Table no.2 Participants' demographic characteristics and smoking behaviors

Characteristic of the Students (n=335)		Tobacco User (170)	Non-Tobacco user (165)	χ^2 -value, P-Value
Religion	Hindu(262)	138	128	$\chi^2 = 4.51$ P < 0.34
	Muslim(31)	13	18	
	Sikh(24)	9	15	
	Christian(13)	6	7	
	Others(05)	4	1	
Place of Residence	Hosteller(292)	155	137	$\chi^2 = 4.97$ P < 0.02 ^a
	Dayscholar(43)	15	28	
Family Background	Urban(263)	131	132	$\chi^2 = 0.42$ P < 0.51
	Rural(72)	39	33	
Family Hx of Tobacco Use	Yes (86)	49	37	$\chi^2 = 1.79$ P < 0.18
	No (249)	21	128	

a. P < 0.05 statistically significant

Regarding duration of starting of tobacco use, 37.6% students started since 1-3 years i.e. after the admission to medical college. A total of 81 students were smoked less than 10 cigarettes per day. Regarding factors leading to initiation of the use of tobacco, peer pressure was the leading cause (86). The other factors found were personal setback, media and family atmosphere. Although tobacco consumption was seen at a lot many places when the students were interviewed, hostels were found to be the most

common place of tobacco consumption. Though public smoking has been banned, yet smokers revealed that they do smoke in restaurants & some even do it in movie theatres. The present study focused also to know the tendency of future doctors to quit the habit despite knowing the health hazards associated with tobacco consumption. It was found that out of 170 regular users, 81 (47.6%) had tried at least once to quit their habit. Amongst them some had even tried up to 3 – 5 times to quit tobacco use. (Table no.3)

Table no. 3 Associated factors with current tobacco use (n=170)

Variable		Total (%)
Duration of tobacco use	<1 yr	36 (21.17%)
	1-3	64 (37.64%)
	>3 yr	70 (41.2)
No. of cigarettes per day (n=131)	< 10	81(61.8)
	>10	50(38.2)
Factors leading to tobacco use^a	Peer pressure	86(50.6)
	Family atmosphere	21(12.4)
	Personal setback	61(35.8)
	Media	36(21.2)
	Stress	6(3.5)
Places of tobacco use^a	Hostels	140(82.4)
	Restaurant	55(32.4)
	Theaters	33(19.4)
	College Campus	52(30.6)
No. of the students who tried to quit tobacco	Yes	81 (47.6)
	No	89 (52.4)

^a-Multiple responses

4. Discussion

Various studies have been conducted to assess the effect of various factors on the smoking behaviour among the medical students in different parts of the world. In the present study we have tried to find out tobacco use among male medical students.

The proportion of current tobacco users in the present study was found to be 50.7 %, with smokers constituting 39.1%. The overall prevalence of current use of tobacco in the population 13-15 years is 14.0 % in India [7]. While in a national level study conducted by Rani et al, the prevalence of smoking among men in Maharashtra was found to be 13.3% [8]. The percentage of current smoking in the present study was more as compared to the general population and is a matter of serious concern. Similar study conducted in Pakistan in which author found 22% prevalence of smoking among male medical student [9]. A report from nine Asian countries from 15 medical schools revealed that the prevalence of daily smoking in males varied from 4 to 11% from first year to final year; of occasional smoking 18 and 24%, respectively, [10] indicating that the use of tobacco does not respect international boundaries. The figures obtained were a reflection of an average of all the nine countries and are therefore less specific, and hence this was contrast to present study findings. Similar studies conducted in Kerala [11], Orissa [12], West Bengal [13] and Uttar Pradesh [14] in which the figures of tobacco use were found to be 14.1 %, 12.4%, 3.2% and 28.8% respectively. The low rate of tobacco use in these studies may be due to various other unidentified factors.

There was no association found between the residential background and the tobacco use, which focuses the importance of the spread of the epidemic of tobacco use. Similar findings have been found in the study on the male medical students in 1989 [15] which may be an indication that the trend of tobacco use is deep-rooted and not a recent one.

Importance of family supervision on the use of tobacco was quite evident in the present study and another similar studies in Orissa, [12] and in Pakistan [9] with hostellers using more tobacco as compared to day-scholars. It has been observed a significant relationship between the presence of a smoker in the family and picking up the habit in the present as well as other studies, [9,15,16] further focusing familial role model for tobacco use.

Peer pressure was found the important reason for the initiation of tobacco use in the present study. This is serious issue as it is very difficult to prevent the effect of this factor in such age group, which favors living in friend circle. For prevention of tobacco use among this group, this factor requires further research.

From the gathered data most of the students tried to quit the tobacco, but failed to quit. This is due to loss of motivation and no assistance to achieve their goals. These findings suggest that cessation programs are either not available to medical students or, if available, neither sufficient nor effective

5. Conclusion

In conclusion, noteworthy tobacco use was found among male medical students of the present study. This harmful behaviour not only cause personal loss but also reduces health professionals' ability to motivate or counsels the patients effectively. Comprehensive public health initiatives are required to reduce prevalence of tobacco use in which efforts should be focused on support for cessation to health professional.

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