Determinants of Smoking Habit among Medical Students

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Abstract

A cross sectional study of smoking habits among medical students was carried out to find out the prevalence of smoking and its association with certain factors such as parental smoking, peer pressure, use of alcohol and other drugs. Prevalence of smoking was 46%. There was significant association of smoking with parental smoking habit, peer pressure, use of alcohol and other drugs. Strategies to counter these social determinants have been discussed.

Key Words : Determinants; Medical students; Smoking

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Introduction

Cigarette smoking, a major risk behaviour adversely affecting public health, has reached epidemic proportions. Having crossed its peak in developed countries, the tobacco menace is showing an upward trend in developing countries. Smoking and health are intimately related and thus, smoking among future health care personnel such as medical students is an important issue. Years of research in developed countries has identified certain factors that commonly play a role in initiation of tobacco use. These include exposure to tobacco marketing efforts, role modelling by parents/other adults, peer pressure, collateral addiction to other drugs, inadequate knowledge about injurious effects of tobacco use, etc. Medical students are generally in the age group 17-25 years. This is the time when lifestyle patterns, both healthy and unhealthy, are formed. Moreover, as future doctors, they are the role models for the laity in regard to smoking habits. WHO has included prevalence of tobacco use among subgroups such as physicians, nurses, other health workers, etc among the indicators which should be monitored by each country [1]. Against this background, the present study was carried out, to find out the prevalence and determinants of smoking habit among medical students.

Material and Methods

A cross sectional survey among 200 randomly selected medical students (including 28 girl students), was carried out in a medical college during July-August 2001. The participants were administered a self administered structured questionnaire recommended by WHO [1], (suitably adapted after pre-testing), on smoking habits. Anonymity and confidentiality were assured. The following criteria were used to further classify the intensity of smoking [2] :

Non smoker - one who has never smoked

Occasional smoker - one who smokes less than once a week, on special occasions or has only puffed a few times

Regular smoker - one who smokes daily

Parental tobacco use was defined as habit of smoking tobacco by either or both parents. Peer pressure was decided by response to questions such as, a) whether the respondent faced persuasion of close friends to smoke, (b) as an imitation of the habit of close friends, or (c) to impress close friends. Affirmative answer to any of these was taken as peer pressure.

Results

Prevalence of smoking : (Table 1). Out of the 200 students, 108 (54%) were non-smokers. The remaining 92 (46%) were smokers, out of which 63 (31.5%) were regular smokers, and 29 (14.5%) were occasional smokers. All 28 female students were non-smokers.

Duration of smoking : (Table 2). Out of the 92 smokers, 35 (38.1%) were smoking for 1-4 years, 29 (31.5%) for past 6 months to 1 year, 20 (21.7%) for a period of less than 6 months, 7 (7.6%) for 5-10 years and only 1 (1.1%) for more

Table 1

Prevalence of smoking among medical students

Smoking habit	Number	Percentage
Smoking daily	63	31.5
Occasional smoker	29	14.5
Non-smoker	108	54
Total	200	100

Table 2

Duration of smoking among the smokers

Duration	Number	Percentage
< 6 months	20	21.7
6 months - 1 year	29	31.5
1-4 years	35	38.1
5-10 years	7	7.6
> 10 years	1	1.1
Total	92	100

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than 10 years.

Number of cigarettes smoked per day : (Table 3). Of the 92 smokers, 31 (33.7%) smoked less than 5 cigarettes, 26 (28.3%), smoked 5-9 cigarettes, 22 (23.9%), smoked 10-20 and 13 (14.1%) smoked more than 20 cigarettes a day.

Table 3

Number of cigarettes smoked daily by the smokers

Number of cigarettes	Number	Percentage
< 5	31	33.7
5-9	26	28.3
10-20	22	23.9
> 20	13	14.1
Total	92	100

Prevalence of parental smoking : (Table 4) : Out of the 200 respondents, 70 (35%) reported history of parental smoking, out of which 27.5% were regular smokers and 7.5% of parents were occasional smokers.

Table 4

Prevalence of parental smoking

Parental smoking habit	Number	Percentage
Smokes daily	55	27.5
Occasional smoker	15	7.5
Non-smoker	130	65
Total	200	100

Influence of parental smoking on smoking behaviour of medical student : (Table 5). There was a significant association between the smoking habits of parents and that of their wards. Out of the smokers, 52% reported smoking in their parents, while out of the non-smokers only 20% reported parental smoking. (Chi sq = 22.09, df=1, p<0.0001, OR=4.26, Cornfield 95% CL 2.19<OR<8.35).

Table 5

Influence of parental smoking on the smoking habit of the ward

	Ward smoker	Ward non-smoker	Total
Parent smoker	48 (52%)	22 (20%)	70 (35%)
Parent non-smoker	44 (48%)	86 (80%)	130 (65%)
Total	92 (100%)	108 (100%)	200 (100%)

Chi sq = 22.09, df = 1, p < 0.001, OR = 4.26, Cornfield 95% CL 2.19<OR<8.35

Influence of peer pressure on smoking behaviour : (Table 6). Similarly there was a significant association between peer pressure and smoking behaviour. 95% of the smokers stated peer pressure to smoke compared to only 4.6% of non-smokers. (Chi square =158.17, df=1, p<0.0001).

Association between alcohol and smoking : (Table 7). There was a highly significant correlation between alcohol and smoking behaviour. 88% of the smokers also took alcohol, compared to only 30% of the non-smokers. (Chi square = 66.62, df = 1, p<0.0001).

Association between other drugs and smoking : (Table

Table 6

Influence of peer pressure on smoking habit

	Student smoker	Student non-smoker	Total
Peer pressure present	87 (94.6%)	5 (4.6%)	92 (46%)
Peer pressure absent	5 (5.4%)	103 (95.4%)	108 (54%)
Total	92 (100%)	108 (100%)	200 (100%)

Chi sq = 158.17, df=1, p < 0.0001

Table 7

Association of alcohol with smoking

	Smoker	Non-smoker	Total
Takes alcohol	81 (88%)	32 (30%)	113 (57%)
Does not take alcohol	11 (12%)	76 (70%)	87 (43%)
Total	92 (100%)	108 (100%)	200 (100%)

Chi sq = 66.62, df = 1, p < 0.0001, OR = 17.49, Cornfield 95% CL 7.8<OR<40.09

8). Similarly smoking was significantly associated with use of other addictive drugs. 27% of the smokers gave history of having tried other addictive drugs compared to only 3.7% of the non-smokers (Chi square = 20.22, df=1, p<0.0001).

Table 8

Association of smoking with intake of other drugs

	Smoker	Non smoker	Total
History of other drugs	25 (27%)	4 (3.7%)	29 (14.5%)
No history of drugs	67 (73%)	104 (96.3%)	171 (85.5%)
Total	92 (100%)	108 (100%)	200 (100%)

Chi sq = 20.22, df = 1, p < 0.0001

Discussion

WHO estimates that there are about 100 million smokers in the world representing about one third of the global population aged 15 years and over [3]. The vast majority of the smokers are in developing countries. Globally it is estimated by WHO that, 47% of men and 12% of the women smoke. Adequate national data on tobacco use prevalence are not currently available. However, WHO estimates that in India, 65% of all men use some form of tobacco (about 35% smoking, 22% smokeless tobacco, 8% both) [3].

The prevalence of smoking at 46% in the present study is more or less similar to a recent study carried out on military recruits among whom the prevalence of smoking was found to be 43% [2]. However, no generalization of the study findings is recommended, this being a highly selective group. What is a matter of concern is that medical students are well aware of the health hazards of smoking - in this group what further method can be used to bring about behaviour change? As a corollary, does health education on the ill effects of smoking per se influence behaviour change in lay populations,

particularly the young.

Mere awareness of the hazards of smoking is overwhelmed by other social factors such as parental smoking, peer pressure, and use of other drugs. In the present study, these were significant determinants of smoking behaviour. Similar trends have been reported earlier in literature [2,4-6].

Because of these important social factors, the traditional 'Preventive Model' of health education, whereby the individual is persuaded to take responsible decisions, i.e. to adopt behaviours (based on correct knowledge) which will prevent disease, does not appear to work satisfactorily among the youth. The 'Preventive Model' of health education has been subjected to criticism [7]. This criticism considers the individual focus of the preventive approach to health education as ineffective because it ignores the socio-political roots of ill-health.

Smoking behaviours and their determinants in young people have been the subject of considerable scrutiny and a variety of methodological approaches have been adopted in smoking prevention education. Of particular interest in the developed countries, has been the use of methods which address the social influences on smoking. Evans [8] identified peers, parents, and the media as major sources of pressure and in response attempted to familiarize young people with these pressures and with ways of dealing with them. McAlister and others [9,10] developed these ideas further and added the use of peer leaders as educators, activities to increase social commitment not to smoke, and the role-playing of situations that needed resistance to social pressure. A number of studies in the West have reported significant results using these approaches [11,12].

The present study findings also emphasize that similar methods of focusing on social determinants of smoking are urgently required in our country to successfully bring down the prevalence of smoking among young people. The study has brought out that there is high prevalence of smoking among medical students who ought to be aware of the hazards of smoking - in spite of this knowledge - they have been pushed into the habit of

smoking by parental smoking behaviour, peer pressure and lure of other drugs. Measures such as advocacy and societal norms, addressing these factors rather than isolated health education on the ill effects of smoking, will check the rising trend of young smokers in developing countries.

(Note : It would be relevant to point out that the principal investigator of this study being himself a medical student, is a good example of using "peers" to address the issue of smoking among young medicos)

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