



TOBACCO USAGE AMONGST MEDICAL UNDERGRADUATES OF TEACHING HOSPITAL IN JHARKHAND

Medical Science

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ABSTRACT

Background: Tobacco consumption is the biggest enemy of public health as it is second most common cause of death worldwide. Still people smoke knowing well the consequences. In addition to the high public health costs of treating tobacco-caused diseases, tobacco kills people at the height of their productivity, depriving family of bread winners and nations of healthy workforce. Various reasons cited for tobacco use by adolescents are peer pressure, stress or for fun. Objectives: (1) To assess the magnitude of tobacco use among the male under-graduate medical students. (2) To find out the factors associated with the use of tobacco. (3) To find out the pattern of tobacco abuse semester wise.

Materials and Methods: A cross sectional study was done using a pretested, semi-structured questionnaire on 210 respondents for three months duration (September to November 2016). Data was collected and analyzed using Excel and SPSS software.

Results: it was found that tobacco use was more common among students more than 25 years (63.3%) than those in 20 years or less (19.6%). This association between age and tobacco use was found to be statistically significant (p value < 0.005; $\chi^2 = 14.66$). Present study also shows that students from urban background of residence (51.3%) were more indulged in tobacco use as compared to those belongs to rural background (30.1%). Hostellers were found to be more frequent tobacco users as compared to day-scholars.

Conclusion: Tobacco use is a significant problem among medical students and we need to take steps to stop its use by them so as to prevent them from being exposed to its hazardous effects. This will also make their role in the advocacy of the smoking cessation activities more trustworthy.

KEYWORDS

Medical Student, Smoking, Tobacco

INTRODUCTION

Tobacco is a product prepared from the leaves of tobacco plant by curing them. The plant is categorized within the genus NICOTIANA of the SOLANACEAE family (1). The total global prevalence in smoking is 29% of the 1.3 billion smokers more than 900 million live in developed countries(2). In India the beedis are the most popular smoking form. The other regional forms of the smoking tobacco include chuttas, dhumti, hookahs and chillums (3). In India, it is documented that smokeless tobacco use is found among more than one-third (38.1%) of the men and around one-tenth (9.9%) of women (4). As per WHO estimates approximately 55,000 adolescents start using tobacco every day in India, joining 7.7 million young people under the age of 15 years who already regularly use tobacco(5). Among the ill effect of tobacco use, the proportion of cancer in male and female is 56.4% and 44.9% respectively (6). Youth in general and adolescents in particular fall prey to this deadly habits with severe physical, psychological, and economic implication (7). Among the youth, students are particularly involved due to increase academic pressure and life related stress (8).

As future physician who will witness the continued burden of smoking related disease among their patient medical students represents a primary target for tobacco prevention programmes(9). The prevalence of tobacco smoking has gone up world over, even among Indian medical students. More over medical students who themselves use tobacco are less likely to counsel patients against tobacco use(10).

The WHO Framework Convention on Tobacco Control (WHO FCTC) was adopted by the World Health Assembly in May 2003 and as of April 2014. Has been ratified by 178 countries. Study by Prakash C. Gupta, Cecily S. Ray and Arpita Singh from Healix- Sekhsaria Institute for Public Health (Navi Mumbai, India) for the preparation of this paper. Smoking observed in 36% of venues. The average levels of air particles in milligrams per cubic meter, measured as PM_{2.5}($\mu\text{g}/\text{m}^3$) The meta-analysis found that AMI risk decreased by 17% comparing the AMI incidence before and after the ban went into force the

incidence rate ratio (IRR) being 0.83 (95% CI: 0.75-0.92). The greater protective effect was among younger persons and among non-smokers [11].

Psychosocial factor related to adolescent smoking study by Dr. L L Pederson Department of community health and prevention medicine, more house school of medicine, USA. Study that examination of association of socio-demographic, environmental, behavioral and personal variable with smoking. The prevalence of smoking in general population has been decline by over 15% in the past 15 year. The reduction is seen in adult however not seen in adolescent particularly young female. Based on a median initiation age of 16 and 17 year, the predicted duration of smoking in 16 and 20 years of 50% of male and female respectively. Prevention of the onset of adolescence smoking is thus essential component of effort to reduce the overall the prevalence of smoking and its morbidity and mortality [12].

Tobacco use among adults 15 years and older in sub-saharan Africa (SSA) Study by Townsend L, Fisher AT, Gilreath T, and King G, Department of Psychiatry and Mental Health and Adolescent Research institute, university of Cap Town. They are study that developing countries are at increasing risk for tobacco use and monitor tobacco use in developing countries is needed. They are conducted 14 of the 48 SSA countries. The male age between 30 and 49 year used tobacco at higher rate the those younger or older. Among female prevalence rate of smoking tobacco are increased steadily with age. While in many SSA countries the prevalence of tobacco are use among adult in relatively low compared to developed and other developing countries [13].

Material and Methods:

A cross sectional study was conducted in Rajendra Institute of Medical Sciences (RIMS), Ranchi, Jharkhand from September 2016 to November 2016. Male Medical undergraduate students from 2012 batch to 2016 batch were study population for this study. 50 male students from each batch were chosen randomly as study subjects by lottery method. Total 250 students then contacted to participate in

study. Out of those 250 students, 40 didn't participated in study as only willing subjects were included in study. Our final sample came out to be 210 male medical undergraduate students. Pre-tested, structured, self-administered questionnaire was used for data collection. Confidentiality about data was explained to subjects and informed consent was taken from the study participants before administering questionnaire to them. Data was entered in MS excel spreadsheet and analysed in SPSS software.

RESULTS

Majority (132, 62.8%) of the participating students were in the age group of 21 – 25 years. 142 (67.6%) students were non tribal and others were from tribal ethnicity. Out of 210 students, 118 (56.2%) belongs to Hindu religion and 22 (10.5%) were from Muslim religion. 70 (33.3%) students were from other religion like Sarna, Christian and Sikh. Among the all participating students 136 (64.7%) were from rural background whereas 74 (35.2%) were from urban background. Nearly 90% (188) students were currently residing in RIMS hostel. Least number of participants were from 2016 year of admission batch (35, 16.6%). (Table 1) Out of 210 undergraduate male medical students, 131(62.38%) of students were not using tobacco and 79(37.63%) students were using tobacco. (Table 2)

In the present study, it was found that tobacco use was more common among students more than 25 years (63.3%) than those in 20 years or less (19.6%). This association between age and tobacco use was found to be statistically significant (p value < 0.005; $\chi^2 = 14.66$). Findings of present study also shows that students from urban background of residence (51.3%) were more indulged in tobacco use as compared to those belongs to rural background (30.1%). Present study also revealed that tobacco consumption was more among students from senior batches as compared to junior batches. Association of tobacco consumption with place of residence (p value < 0.005; $\chi^2 = 9.18$) and year of admission (p value < 0.005; $\chi^2 = 16.67$) was also found to be statistically significant in this study. Tobacco use was also more among non tribal students as well among day scholars. However these differences were not found to be statistically significant. (Table 3)

Table 1: Baseline characteristics of male undergraduate students (n = 210)

Variable	Frequency	Percentage	
Age	< 20	56	26.6
	21 – 25	132	62.8
	>25	22	10.5
Ethnicity	Tribal	68	32.4
	Non tribal	142	67.6
Religion	Hindu	118	56.2
	Muslim	22	10.5
	Others *	70	33.3
Place of residence	Rural	136	64.7
	Urban	74	35.2
Place of current residence	RIMS Hostel	188	89.5
	Day Scholar	22	10.5
Year of admission	2012	42	20.0
	2013	46	21.9
	2014	43	20.5
	2015	44	20.9
	2016	35	16.6

*Sarna, Sikh etc.

Table 2: Proportion of male medical students consuming tobacco (n=210)

Tobacco Use	Frequency	Percentage
Yes	79	37.62%
No	131	62.38%

Table 3: Association of tobacco use among male medical undergraduates with baseline characteristics

Characteristics	Tobacco use		Chi square test	
	Yes	No		
Age	< 20 (n = 56)	11 (19.6%)	45 (80.3%)	p value < 0.005 $\chi^2 = 14.66$
	21 – 25 (n = 132)	54 (40.9%)	78 (59%)	

	>25 (n = 22)	14 (63.3%)	08 (36.3%)	
Ethnicity	Tribal (n = 68)	22 (32.3%)	46 (67.9%)	p value > 0.05 $\chi^2 = 1.18$
	Non tribal (n = 142)	57 (40.1%)	85 (59.9%)	
Religion	Hindu (n = 118)	46 (38.9%)	72 (61.1%)	p value > 0.05 $\chi^2 = 1.34$
	Muslim (n = 22)	10 (45.4%)	12 (54.6%)	
	Others * (n = 70)	23 (32.8%)	47 (67.1%)	
Place of residence	Rural (n = 136)	41 (30.1%)	95 (69.9%)	p value < 0.005 $\chi^2 = 9.18$
	Urban (n = 74)	38 (51.3%)	36 (48.7%)	
Place of current residence	RIMS Hostel (n = 188)	67 (35.6%)	121 (64.3%)	p value > 0.05 $\chi^2 = 3.00$
	Day Scholar (n = 22)	12 (54.6%)	10 (45.4%)	
Year of admission	2012 (n = 42)	20 (47.6%)	22 (52.3%)	p value < 0.005 $\chi^2 = 16.67$
	2013 (n = 46)	26 (56.5%)	20 (43.5%)	
	2014 (n = 43)	13 (30.2%)	30 (69.8%)	
	2015 (n = 44)	14 (31.8%)	30 (68.1%)	
	2016 (n = 35)	06 (17.1%)	29 (82.9%)	

*Sarna, Sikh etc.

DISCUSSION

The study was conducted among 210 undergraduate medical students of RIMS Ranchi, out of which 79(37.62%) were found to use tobacco and majority were non-user i.e 131(62.38%) which is higher than that reported by Gavarsana et al where it is 22% and 28.8% by Ranjeeta et al. Finding of this study is dissimilar to study done in Pakistan which revealed 22% of prevalence of smoking among male medical students while here it is approximately 98%.

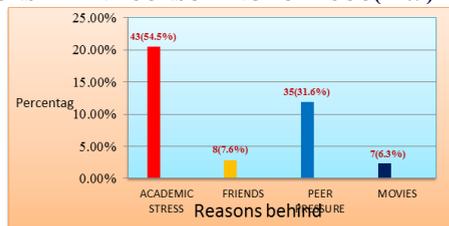
Study by Ranjeeta et al showed that 34.4% students were above 20 years of age and in present study 46 (58.2%) students were 20 to 21 years group. Family history of tobacco use found to be in 46.7% of medical students in Ranjeeta et study and here it is 9.1% only.

In the present study there is increasing trend of tobacco use from first year(22.8%) to 2nd year(27.8%) and then trend goes on decreasing as we move above. Similar study by T. Chatterjee et al prevalence of smoking went on increasing from first year to third year of study (p=0.0164). Chatterjee et al showed main reason for tobacco use was peer pressure (49.5%) and in the present study it is academic pressure (54.5%) and peer pressure (31.6%).

CONCLUSIONS

Out of 210 undergraduate medical students, 131 (62.38%) of students were non-consumer of tobacco and 79 (37.63%) students were consuming tobacco. Most (62.8%) of the students were belonging to 21-25 year age groups, followed by students less than 20 years (26.6%) then of more than 25 years age group (10.5%). Majority (63.3%) of the UG students who consume tobacco belonged to class 3 followed by class 2(21.8%) and class 4(16.4%). More than two third (80.95%) UG students who consume tobacco had no family history of tobacco consumption and approximately 19% were having family history of tobacco consumption. Majority (54.5%) of UG students who consume tobacco told that academic pressure were main reason consuming tobacco which was followed by peer pressure(31.6%) and some told friends (7.6%) and movies (6.3).

REASONS BEHIND CONSUMING TOBACCO (n=79)



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