PREVALENCE AND PATTERN OF TOBACCO USE IN RURAL COMMUNITY OF JAIPUR, RAJASTHAN (INDIA): A CROSS SECTIONAL STUDY

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ABSTRACT

Introduction: Tobacco use is one of the important preventable causes of death and a leading public health problem all over the world. Tobacco users who die prematurely deprive their families' from income, education and health care. Now it is appropriate the policies should be focused to address any gaps and emerging challenges. Our study is focused to find out these challenges and gaps.

Methods: It was community based cross sectional, study. Study area was villages that were covered under the rural health training center area of NIMS Medical College Jaipur. Study subject were adults age more than 18 years.

Result: Overall prevalence of tobacco consumers in rural area was 37.8%. It was quite higher among males (48.8%) in comparison to females (14.6%). In smokeless tobacco users Gutkha/pan masala was most popular chewable form of tobacco in young generation. Among the subjects 36 % were willing to quit tobacco at some point. A fewer portion of subject (33.2%) knew that smoking can cause cancer, and only 24.8% and 7.5 % knew of effects on respiratory system and cardiovascular system.

Conclusion: Prevalence is quite higher. Awareness regarding ill effect on health is poor. False perception of well-being among users is higher. Those who want to quit tobacco are not able to get proper assistance. Poor and illiterate individuals living in rural area are at the maximum risk of using tobacco.

Keywords: Tobacco, Knowledge, health, Education, cessation.

INTRODUCTION

Tobacco products are made entirely or partly of leaf tobacco as raw material, which are intended to be smoked, sucked, chewed or snuffed. All contain the highly addictive psychoactive ingredient; nicotine. It is claiming the lives of nearly 5.4 million people a year worldwide.[1] Burden in South East Asia region is one of the highest among WHO regions.[2] Estimated number of to-bacco users in India is 274.9 million with a lot of regional variation[2]. One fifth of all worldwide deaths attributed to tobacco occurs in India, more than 8 lakh people die and 12 million people fall ill due to tobacco each year[3].

Among other diseases, tobacco use increases risk for cardiovascular disease, lung and oral cavity cancers[4]. Tobacco use accounts for one in six deaths due to non communicable diseases

(NCDs)[5]. In India tobacco consumption pushes approximately 150 million people in poverty.[4] Tobacco users who die prematurely deprive their families' income, education and health care pushing them further in to cycle of poverty.

In India prevalence of smoking and tobacco chewing shows marked geographical difference at the level of villages, districts and states even after controlling for the individual and household demographic markers[6]. Country is now passing through a crucial phase in tobacco control activities and hence it is appropriate the policies should be focused to address any gaps and emerging challenges. Our study is focused to find out these challenges and gaps. The objective of the present study is access magnitude, socioeconomic, demographic correlates of tobacco consumption, knowledge toward ill effect of tobacco on health and attitude towards cessation.

METHODS

The present community based cross sectional study was under taken in rural area of Jaipur. Study period was Jan 2013 to July 2013. Study population consists of adult population RHTC area of a medical college. Door to door household survey conducted and 1410 available men & women (836 men & 395 women) of age more than 18 years were interviewed on pretested and semi structured schedule. The questionnaire had two parts, first part consisted of questions regarding socio demographic characteristic of participants like age, sex, religion, education status and socio economic status. Second part includes the question regarding use of tobacco, knowledge about ill effect on health and attitude towards cessation. Before enrolling the individuals in to the study informed verbal consent was obtained. Ethical clearance from Institute Ethical Committee was taken prior to start of study. During the study survey those who were found to have symptoms related to tobacco use were referred to institute OPD.

Following criteria has been used for standard definition of tobacco user - means Use of smoke/smokeless tobacco product at least ones every day or nearly every day over a period of one month or more.[2] Rare instances or experimental tobacco use by the subject will not be counted in tobacco user category. For socio economic classification base value of B G Prasad Classification upgraded by using, All India Consumer Price Index (AICPI) for 2013.[7] Chi square

(x^2), t test and ANOVA used for analysis of data using SPSS 16.

RESULT

Overall prevalence of tobacco consumers in rural area was 37.8%. It was quite higher among males (48.8%) in comparison to females (14.6%). Among males smoking of tobacco (31.13%) was more prevalent in comparison tobacco chewing (17.71%). In females prevalence of tobacco chewers (9.21%) was more in comparison smokers (5.48%).

In males (35.4%) and females (9.35%) smoking was highest in 46-60 year of age group. It was lowest in 18-30 year age group, 23.97% & 2.04% for males and females respectively. Significant association was observed in age groups and smoking among males. Chewing of tobacco was higher in younger age group 18-30 yr in both males (23.46%) and females (12.24%). Compared to Hindus, Muslim was fewer smokers but more likely to chewing, although no significant difference observed in both males and females in both religious groups. Illiterates men were more likely to smoker (37.59%) and chew tobacco (28.56%) as compared to those who were completed schooling for more than 12 year. Significant association was observed in male tobacco users and education. None of the female was smoker those who completed 6 yrs schooling. In female chewing of tobacco was minimum (4.44%) among those who completed more than 12 year of schooling. Unlike males no significant association was find out between tobacco using habit and educational status in females. On socio economic basis smoking was maximum among poorest men (39.33%) and significant association was found in smoking and socioeconomic group. In female smoking was significantly higher in SE class V. Chewing of tobacco in females was highest in Socio Economic class II (13.75) closely followed by Class III (12.5%). No significant difference observed in most of the female tobacco consumers of different demographic and socioeconomic groups.

Table 1: Prevalence of tobacco consumption habit

Sex	Tobacco users (%)	Smoker (%)	Chewers (%)
Male(954)	466 (48.8)	297 (31.13)	169 (17.71)
Female(456)	67 (14.6)	25 (5.48)	42 (9.21)
Total(1410)	533 (37.8)	322 (22.8)	211 (15)

Table-2: Socio Economic correlation of tobacco consumption habit among Male

Variable	Tobacco Smoker (n=297)	X², Degrees of Freedom	P value	Tobacco chewer (n=169)	X², Degrees of Freedom	P value
Age (yrs)						
18-30(196)	47 (23.97)	8.03, Df-3	0.04	46 (23.46)	1.709, Df-3	0.634
31-45(359)	118 (32.87)			62 (17.27)		
46-60(274)	97 (35.40)			43 (15.69)		
>60(125)	35 (28)			18 (14.4)		
Religion						
Hindu(807))	256 (31.72)	0.456, Df-1	0.499	139 (17.22)	.865, Df-1	0.352
Muslim(147)	41 (27.89)			30 (20.40)		
Educational Status (year of schooling)						
No schooling (274)	103 (37.59)	29.2, Df-3	0.000	78 (28.46)	35.4, Df-3	0.000
1-5 yr (278)	93 (33.45)			48 (17.27)		
6 to 12(237)	78 (32.91)			26 (10.97)		
More than12 yr (165)	23 (13.93)			17 (10.30)		
Socioeconomic status*						
I (73)	16 (21.91)	21.74, Df-4	0.000	18 (24.65)	8.32, Df-4	0.08
II (107)	19 (17.75)			21 (19.62)		
III(273)	77 (28.20)			46 (14.55)		
IV (290)	102 (35.17)			39 (13.44)		
V(211)	83 (39.33)			45 (21.32)		

(*SES- Class- Rs 5156 & above, Class II- Rs 2578-5155, Class III- 1547-2577, Class IV- 773-1546, Class V- <Rs 773)

Table 3: Socio Economic correlation of tobacco consumption habit among female

Variable	Tobacco Smoker (n=25)	X², Df	P value	Tobacco Chewer (n=42)	X², Df	P value
Age (yrs)						
18-30(98)	2 (2.04)	6.41, Df-3	0.09	12 (12.24)	1.76, Df-3	0.62
31-45(156)	5 (3.20)			14 (8.97)		
46-60(139)	13 (9.35)			13 (9.35)		
>60(63)	5 (7.93)			3) (4.76		
Religion						
Hindu(385)	21 (5.45)	.05, Df-1	0.82	31 (7.79)	3.12, Df-1	0.07
Muslim(71)	4 (5.63)			11 (16.9)		
Educational Status (Year of schooling)						
No schooling(176)	19 (10.79)	3.59, Df-1	0.06	14 (7.95)	2.31, Df-3	0.51
1-5 yr (127)	6 (4.72)			12 (9.44)		
6 to 12 yr(108)	0 (0)			14 (12.96)		
>12yr(45)	0 (0)			2 (4.44)		
Economic status*						
I(31)	0 (0)	8.56, Df-3	0.03	2 (6.45)	3.43, Df-4	0.48
II(51)	1 (1.96)			7 (13.72)		
III(136)	4 (2.94)			17 (12.5)		
IV(129)	7 (5.42)			9 (6.97)		
V(109)	13 (11.92)			7 (6.42)		

(*SES- Class- Rs 5156 & above, Class II- Rs 2578-5155, Class III- 1547-2577, Class IV- 773-1546, Class V- <Rs 773)

The tobacco product which was most frequently used was bidi both in men and women followed by hooka. In smokeless tobacco users Gutkha/pan masala was most popular however Khani was popular among elderly population. Men who were bidi smoker, 15 bidi per day were an average. Among gutkha chewers 8-10 pouhces per day was average which cost almost 12-14 Rsper day. Among smokers 67.4 % subject do not know about the act of prohibition of smoking in public places. 29.3% does not understand what is printed or pictured on pouch of bidi/cigarette or tobacco. About 12 % subject visited to health facility/ Doctor in last one month for different health problems, but few them advised(3%) for the quitting the tobacco habit by health personnel.

Table 4- Attitude towards cessation of tobacco use and health impact:*

Question/finding	Answer
Willing to quit tobacco use at one point of time	36% say yes
Attempted to quit tobacco use one or more time	24% say yes
Want to quit tobacco reason- financial burden	32%
Want to quit tobacco reason – ill impact on health	22%
Need assistance for quitting tobacco	30% say yes
Ever thought about the harm of tobacco	42% say No
Understand about pictorial warning	29.3% say No
Knew that tobacco may cause cancer	33.2%
Knew that tobacco may affect respiratory system	24.8%
Knew that tobacco may affect cardiovascular system	7.5%

*Multiple responses

DISCUSSION

Prevalence of tobacco users in this study was 37.8%, finding of this study is consistence with Global adult tobacco survey (GATs) India where they reported current tobacco use in any form 34.6%, 47.9% male and 20.3% female. Jagdish Kaur et al[8], Vivekgupta et[9] find out the similar prevalence. Almost same finding were reported in NFHS-3, except in case men, where we find out lower prevalence of chewing of tobacco. The difference may due to age limit and regional variation. Finding of study also supported by Rani, Bonu and Jha at el[6] who coated that prevalence of smoking and chewing of tobacco among men were 37.8% & 19% respectively in Rajasthan. Similar finding were matched in case of females, where they reported prevalence smoking 4.1% and chewing of tobacco 3.8%. Gupta et al[10] and Venkat Narayan et el[11] found higher prevalence of smoking in men however smoking among females were similar to our study. Garg G and Bansal R et al[12] reported prevalence of tobacco use among men was 52.4% which support our finding (48.8%).

In our study we find out highest prevalence of smoking were in men of age group 46-60 year. Vivek Gupta at el[9] and Rani et el[6] also reported the highest prevalence of smoking in this age group. We observed increasing trend of prevalence of tobacco smoking with age. Rani et el also reported very less prevalence of smoking in female of age group 15-24 and 25-39 yr age as 2.8 and 0.6 % which is almost similar to our findings.[6] Smoking was the highest in least educated and poorest subjects in both groups; however the habit of chewing tobacco was almost equally distributed in female of different education and economic group. It is likely that poor and less educated people are less aware of health hazards of tobacco consumption; more likely to find themselves in condition predisposing to them to initiation of smoking and chewing of tobacco , and more likely to have higher degree of fatalism or higher overall risk taking behaviour.[12] The socio economic differentials in tobacco consumption from this study also compare well with the findings from previous studies in India.[11] [14]Gutkha or pan masala was the most popular form of chewable tobacco among young male and female, this trend show the gutka/pan masala is now socially acceptable way of tobacco consumption. One fourth of tobacco users tried to quit their habit of tobacco consumption but they not succeed. The major cause for restarting was urgency for tobacco followed by social pressure by the peers.

However, the majority of users also believed that they are in good health and did not perceive their habit of tobacco to be harming them. About 42% of subject reported that they never thought about the harm. This attitude regarding health is also supported by Geneviece et al[15] as he finds out 51% smokers in his study never thought about health impact.

CONCLUSION

Prevalence of Tobacco habit is quite high. Awareness regarding impact on health is very poor. About one third tobacco consumers as said that they need help in quitting tobacco. There is urgent need to address their problem. Health centre/personnel may be good assistance point for those who want to quit tobacco habit. They may also act as source of information. Due to poor quality of pictorial warning on pouches and packets, people sometimes fail to correlate tobacco with morbidities caused by it and they remain less impressed by these statutory/pictorial health warnings. Poor and illiterate individuals living in rural area are at the maximum risk of using tobacco. Identifying the gap in implemen-

tation of policies is critical for success of the program. More rigorous studies over time are needed to evaluate patterns of tobacco use and impact of government policies.

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