

CONSUMPTION PATTERN OF TOBACCO PRODUCTS BY RURAL YOUTH OF VARANASI

Community Medicine

Sachchidanand	3 rd Year Resident , Department of Community Medicine Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005, India
C.P Mishra	Professor, Department of Community Medicine Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005, India
Alok Kumar	Assistant Professor, Department of Community Medicine Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005, India
Pooja Singh	A 50-Gopal Bihar colony Mahmoorganj Varanasi-221005, India
Rajani Vishal	Junior Research Fellow, Department of Community Medicine Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005, India

ABSTRACT

BACKGROUND In present era youth are the most exposed population to initiate tobacco use. Now it is well established that most of the adult users of tobacco start tobacco use in childhood or adolescence. In India currently there has been a rapid increase in use of smokeless tobacco products, which is alarming sign for the health planner.

Objectives: To find out extent and pattern of tobacco consumption in rural youth.

Methods: Community based cross sectional study was done on rural youth from 15-24 years of Varanasi. Consumption of tobacco products by rural youth was elicited by interviewing them using predesigned and pretested proforma.

Results: Trial/ experimentation with Cigarettes / *Bidi*, tobacco products other than Cigarette/ *Bidi* and experimentation of any form of smokeless tobacco products were done by 18.1%, 7.1%, 20.9% respectively. Out of 27 male subjects having trial / experimentation with cigarettes / *Bidi* smoking, 55.6% and 29.6% did so at the age of ≥ 16 years and 14-15, respectively. Out of 6 female subjects 4 (66.7%) and 2 (33.3%) had trial/ experimentation with cigarette / *Bidi* before 16 and ≥ 16 years, respectively. In case of 49.5% subjects of age of trial of cigarette/ *Bidi* smoking was < 16 years.

CONCLUSION: Consumption of tobacco products in either form has been considerable in rural youth and emerges to be potential threat for non communicable diseases.

KEYWORDS:

Betel leaves, Arecanut, Cigarette smoking, Smokeless tobacco products,

INTRODUCTION

Tobacco problem is emerging as one of the most dangerous health hazards in India with consumption of variety of smokeless and smoking forms. India is the second largest consumer of tobacco in the world, second only to China (WHO, 2017). The country has a long history of tobacco use. Tobacco is used in a variety of ways in India; its use has unfortunately been well recognized among the adolescents. According to the most recent Government of India's National Sample Survey data, there are 184 million tobacco consumers in India. About 40% of them use smokeless tobacco, 20% consume cigarettes, and another 40% smoke *beedis*. Smokeless tobacco use includes *pan* (betel leaves) masala and chewing of tobacco in different forms. Tobacco is also smoked using indigenous devices like *hooka*, *chhutta* in different parts of the country. Thus, in contrast to the other parts of the world, tobacco is used in a variety of ways in India, which include smoking and smokeless tobacco use. Tobacco use is a risk factor for six of the eight leading cause of death in the world (WHO, 2008). Every year more than 981100 of it's people are killed by tobacco-caused disease, while more than 2542000 children and more than 12000000 adults continue to use tobacco each day. Adolescents are the most vulnerable population to initiate tobacco use. The World Bank has reported that nearly 82,000-99,000 children and adolescents all over the world begin smoking every day about half of them would continue to smoke to adulthood and half of the adult smokers are expected to die prematurely due to smoking related diseases. If current smoking trends continue, tobacco will kill nearly 250 million of today's children. The tobacco companies are now aggressively targeting their advertising strategies in the developing countries like India. Adolescents often get attracted to tobacco products because of such propaganda. There has been a rapid increase in trade and use of smokeless tobacco products in recent years in the country, which is a matter of serious concern to the health planners. It is important to understand various factors that influence and encourage young teenagers to start smoking or to use other tobacco products. According to National Family Health Survey (NFHS 4) rural men (48.0%) and women (8.1%) are more likely to use any kind of tobacco than are their urban counterparts (38.9% and 4.4%). Additionally, women are more likely to chew tobacco than to

smoke cigarettes or *beedis*. This study is expected to bring out extent and pattern of tobacco consumption in the rural youth of Varanasi.

MATERIAL & METHODS

The study was conducted in *Kashi Vidyapeeth* Community Development (CD) Block of Varanasi district.

Study design: Community based cross sectional study.

Study subjects: Rural youth from 15-24 years were considered as study subjects.

Sampling Methodology:

Following steps were involved in the selection of study subjects. One Community Development Block (Kashi Viddhyeeth block) was selected from 8 Community Developments Blocks of Varanasi District by simple random sampling. In the selected Community Developments Block 4 villages (Bacchaw, Hariharpur, Badagaon Pratham, Tikari) were selected by stratified random sampling; stratification was done on the basis of distance from the block head quarters. Proportionate numbers of study subjects were selected by simple random sampling methods from the universe of youths aged 15-24 years.

Inclusion Criteria: Only permanent residents consenting for the study were included in the study.

Exclusion Criteria: Subjects with obvious mental retardation and lack of understanding were excluded from the study.

Tools and technique: Family level information was obtained by interviewing study subjects/ head of the family or any other responsible family member and the findings were recorded on the predesigned and pretested proforma. Information regarding different facets of tobacco consumption was obtained by interviewing them with the help of interview schedule.

Analysis of data: Data thus generated were analyzed by using

Statistical Packages for Social Sciences (SPSS) version 20. Appropriate tables were generated and 2 test, was applied for statistical association and inference.

RESULTS

Distribution of study subjects according trial / experimentation with tobacco products is given in table1. Out of 98 male subjects, 27 (27.6%) underwent trial / experimentation with cigarettes / Bidi smoking. Majority (92.9%) female subjects were without trial / experimental with Cigarettes and Bidi smoking. In all 18.1% subjects had trial / experimentation with Cigarettes and Bidi smoking. There existed significant (p<0.05) difference in the sex wise trial/ experimentation status of Cigarette / Bidi smoking. Trial / experimentation with any form of smoked tobacco products other than Cigarette/ Bidi were done by 12.3% male and 1.2% female subjects, respectively; overall this value was 7.1%. There existed significant (p<0.01) difference in the trial / experimentation with any form of smoked tobacco products other than Cigarette/ Bidi. Trial / experimentation of any form of smokeless tobacco products ever was done by 28.6% male and 11.9% female subjects, respectively; overall this value was 20.9%. There existed significant (p<0.01) difference in male and female subjects in terms of their trial and experimentation status of any form of smokeless tobacco products ever.

Table 1: Distribution of subjects according to trial/ experimentation with tobacco products

Particulars	Male		Female		Total		Test of significance		
	No.	%	No.	%	No.	%	χ^2	df	P
Cigarette/ Bidi									
Yes	27	27.6	6	7.1	33	18.1	12.69	1	<0.05
No	71	72.4	78	92.9	149	81.9			
Tobacco products other than cigarette/ Bidi									
Yes	12	12.2	1	1.2	13	7.1	8.33	1	<0.05
No	86	87.8	83	98.8	169	92.9			
Experimentation of any form of smokeless tobacco products									
Yes	28	28.6	10	11.9	38	20.9	7.60	1	<0.05
No	70	71.4	74	88.1	144	79.1			

Out of 27 male subjects having trial / experimentation with Cigarettes / Bidi smoking, 55.6% and 29.6% did so at the age of ≥ 16 years and 14-15 years, respectively. Out of 6 female subjects 4 (66.7%) and 2 (33.3%) had trial / experimentation with Cigarette / Bidi before 16 and ≥ 16 years, respectively. In case of 49.5% subjects of age of trial of Cigarette/ Bidi smoking was < 16 years. Out of 27 male subjects smoking in past 30 days 16 (59.3%) did so for 1-9 days; corresponding value with duration of smoking 10-19 days and 20-30 days were 7.4% and 33.31% , respectively. In case of 2 and 1 female subjects duration of smoking was in the range of 1-9 and 10-19 days, respectively. There existed no significant (p>0.05) difference in male and female subjects in terms of duration of smoking. In case of 60.0% subject's number of days of smoking in the past 30 days was 1 to 9 days. Out of 27 male subjects smoking Cigarette / Bidi, 7 (25.9%), 4 (14.8%) and 2 (7.8%) smoked, 1, 2-5 and 6-10 Cigarette / Bidi per day, respectively, in the past 30 days. In case of all the 3 female subjects number of Cigarette/ Bidi smoked per day was <1 in the past 30 days. There existed no significant (p>0.05) difference in male and female subjects in terms of number of Cigarette/ Bidi smoked by them per day in the past 30 days. In case of 56.7% subjects, number of Cigarette / Bidi smoked per day was <1. Out of 14 male subjects with strong desire to smoke again, in case of 12 (85.8%) time gap after smoking and strong desire to smoke again that was to ignore was ≤ 4 hours, whereas one female stated time gap after smoking and strong desire to smoke again to be 1-2 hours. There existed significant (P<0.05) difference between time gap after smoking and strong desire by male and female subjects to smoke again that was to ignore. Out of 15 (8.2%) subjects with strong desire to

smoke again, in case of 13.3%, 6.7% and 80.0% time gap after smoking and strong desire to smoke again that was to ignore was 1-2, > 2-4 and > 4 hours, respectively.

Distribution of study subjects according to type of consumption of smokeless tobacco products is given in table 2. As much as 71.4% and 88.1% female subjects did not consume any smokeless tobacco products. Gutkha, Khaini alone and in combination were consumed by 22.4%. 1.0%, 5.1% male subjects, respectively. Gutakha and Khaini were consumed by 11.9% female subjects. There existed significant (p<0.05) difference in the consumption of smokeless tobacco products by male and female subjects.

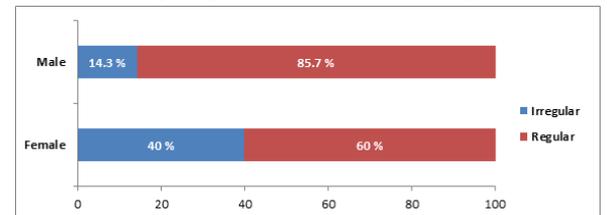
Table 2: Distribution of subjects according to trial/ experimentation with tobacco products

Consumption of smokeless tobacco products	Male		Female		Total	
	No.	%	No.	%	No.	%
None	70	71.4	74	88.1	144	79.1
Gutkha	22	22.4	0	0.0	22	12.1
Khaini/ Surti	1	1.0	0	0.0	1	0.6
Others (combinations)	5	5.1	10	11.9	15	8.2
Total	98	100.0	84	100.0	182	100.0

$\chi^2 = 23.84$; df= 3; p<0.05

Out of 38 subjects consuming smokeless tobacco products, 30 (78.9%) were consuming regularly. Regular consumption of smokeless tobacco products was done by 85.7% male and 60% female subjects. Consumption pattern of smokeless tobacco products was similar (p>0.05) in male and female subjects.

Figure: Consumption pattern of smokeless tobacco products



Thirty seven (20.3%) subjects used smokeless tobacco products during the past 30 days, corresponding value for male and female subjects was 27.6% and 11.9%, respectively. There existed significant (2= 6.83; df= 1; p<0.01) difference in the use of any form of smokeless tobacco products by male and female subjects during the past 30 days. In case of 3.6%, 3.6%, 35.7% and 57.1% male subjects age of first trial of smokeless tobacco products was 10 or 11, 12 or 13, 14 or 15, ≥ 16 years, respectively. Out of 10 female subjects, 20.0%, 30.0% and 50% first tried smokeless tobacco products at the age of 12 or 13, 14 or 15 and ≥ 16 years, respectively. There existed no significant (p>0.05) difference in the age at first trial of smokeless products by male and female subjects

Out of 23 male subjects who ate pan 86.9% and 13.0% cases did so with Kaththa and slaked lime, respectively (table3). Out of 10 female subjects, 70% and 30% consumed Pan with Kaththa and slaked lime, respectively. In case 47.8% male and 50% female subjects, pattern of consumption of Pan was regular; overall this value was 48.5% pan was consumed by 18.1%

Table 3: Consumption pattern of pan by study subjects

Particulars	Male (n=23)		Female (n=10)		Total (n=33)	
	No.	%	No.	%	No.	%
With catechu (Kaththa)	20	86.9	7	70.0	27	81.8
With slaked lime	3	13.0	3	30.0	6	18.2
Regular consumption	11	47.8	5	50.0	16	48.5
Irregular consumption	12	52.2	5	50.0	17	51.5

Pan was consumed by 23 (23.55%) male and 10 (11.9%) female subjects.

Out of 18 male subjects consuming bitternut, 14 (77.8%) did so regularly. One out of 4 female subjects, 1 (25.0%) did show regularly. There existed no significant ($p>0.05$) difference in the consumption of betalnurt. Of 22 (12.1%) consumers of betalnurt, this was regular in 68.2% cases.

DISCUSSION

In order to assess the tobacco consumption pattern in the rural youth this study was conducted in one of the Community Development Block of Varanasi District. A total of 182 subjects constituted the material of study. Tobacco is an agro-based item produced and consumed both in the unmanufactured and manufactured form (viz cigarettes, cigars, *bidis*, *snuff*, *gutkha* etc.) in India. Crushed and dried tobacco is wrapped in tendu leaves and rolled into *bidi*. These are smaller in size than the regular company made cigarettes. One out of seven subjects had trial experimentation of cigarette (Table-1) and half of them did so before 16 years of age and there has been exposure to tobacco smoke on considerable number of days but of low intensity. Most tobacco users start using tobacco before the age of 18 years, while some start as young as 10 years (Reddy, 2005). Even a study conducted on health professional's majority of the ever consumers and current consumers initiated the habit when they were between 16 to 20 years of age. Trial and experimentation with any form of smoked tobacco products other than cigarette and *bidi* has been performed by one out of 14 subjects. Trial/ experimentation with smoked tobacco products has been considerably more in males than females (Table-1). Out of 15 subjects with strong desire to smoke again that was to ignore, majority were male and 8 out of 10 cases time gap has been 4 hours. Experimentation with smokeless tobacco product prevailed him 2 out of 20 subjects, being considerably higher in male than female subjects. *Gutkha* consumption in 1 out of 5 subjects (Table-2) has a potential treat. Consumption of smokeless tobacco products in nearly 8 out of 10 subjects on regular basis needs serious attention. In the reference period of 30 days use of any form of smokeless tobacco products has been considerably higher in male than female subjects. In 9 out of 20 subjects age of trial of first smokeless tobacco products has been in the early phase of life (viz 10 to 14 years). In comparison to the present observation lower tobacco consumption prevailed in children belonging to 10 to 15 years of Chhattisgarh (Tiwari et al., 2014), college students of Gujarat aged 18-25 years where in 9.7% males and 4.3% females reported cigarette use (Thakor, 2012). A study conducted in West Bengal also reported low intake of tobacco in either form (Mukherjee, 2012). Global youth tobacco survey also reported lower figure of cigarette smoking and consumption other tobacco products. Low tobacco consumption has been reported among 13-14 years school children of Bangalore city (Singh et al., 2015) and study conducted in Noida on students of class VII to XII age 11 to 19 years studying in different private and government schools (Narain et al., 2009). The findings of study conducted on college students of University of Delhi has reported that nearly 1 out of 4 males, 1 out 25 females were tobacco users and out and 6 out of 10 users did so at the age of 16 to 20 yrs. Consumption of pan is a regular tradition of this region of the country. Nearly 1 out of 4 male and 1 out of 10 female subjects of the present study has been consuming pan and this was regular in nature in half of the subjects (Table-3). Although in initial stages it is tobaccoless but later on tobacco becomes one of the ingredients of pan and this may be cause of concern as far as tobacco related cancer is concerned. Nearly 1 out of 8 subjects also consumed betalnurt. Consumption of betalnurt has been less in comparison to the figure (1 out 4) reported by Tiwari et al., (2014). Although several advantages of betalnurt are reported in literature, its regular consumption by two third of cases for a prolonged period may lead to oral cancer.

CONCLUSION

Consumption of tobacco products in either form has been considerable in rural youth and emerges to be potential threat for non communicable diseases.

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