

Original Research Article

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A study on prevalence of tobacco consumption in tribal district of Madhya Pradesh

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ABSTRACT

Background: Tobacco use is one of the common risk factors for major non-communicable diseases. It succumbs half of its users to death. Estimates suggest that tobacco will cause about 150 million deaths in the first quarter of the century and 300 million in the second quarter. Prevalence of tobacco use in rural area is higher than urban area. While there is still paucity of data of tobacco consumption among tribal population. The study aims to determine the prevalence of tobacco consumption and its different modes among tribal population.

Methods: A cross-sectional study carried out among 800 study subject 15 years and above of randomly selected villages of Mandla district of M.P., from January 2015 to June 2015 using a pre-designed pre-tested proforma.

Results: Tobacco consumption was prevalent among 43.38% of the study subjects with khaini (68.3%) being the most common form of tobacco consumed followed by betel nut (9.5%). Its consumption was significantly associated with gender, age group, educational status and the marital status of the respondents.

Conclusions: The prevalence of tobacco use is alarmingly high (43.38%). There is a need to strengthen IEC and Behaviour change communication activities focussing on the hazardous effects of tobacco through health education campaigns is needed in tribal areas.

Keywords: Tobacco, Tribal, Madhya Pradesh

INTRODUCTION

Substance use is a serious public health challenge and is one of the biggest curses that modern society has come across.¹ Substance use is defined as, “persistent or sporadic drug use inconsistent with or unrelated to acceptable medical practice”² Of the various substances used, the most widely distributed and commonly used across the world is ‘tobacco’.

Tobacco use is one of the common risk factors for major non-communicable diseases (NCD), i.e. cancer, cardiovascular diseases, and accounts for more than two-third of all new cases of NCD.³ It kills up to half of its users.⁴

Smoking tobacco leads to disease and disability and harms nearly every organ of the body.⁵ Smokeless tobacco contains about 3095 chemicals; among them 28 are cancer causing substances (carcinogens). Smokeless tobacco can lead to nicotine addiction, is associated with diseases of the mouth causes cancer of mouth, oesophagus, and pancreas, may increase the risk for death from heart disease and stroke and can increase risk for early delivery and still birth when used during pregnancy.^{6,7}

The tobacco epidemic is one of the biggest public health threats the world has ever faced, killing around 6 million people year, more than 5 million of those deaths are the result of direct tobacco use while more than 6,00,000 are

the result of non-smokers being exposed to second-hand smoke.⁴

As per report of the tobacco control in India (2004), more than 8-9 lakh people die due to tobacco consumption every year in India, and the proportion of all deaths that can be attributed to tobacco use is expected to rise from 1.4% in 1990 to 13.3% in 2020.⁸ The WHO global report on "Tobacco attributable mortality" 2012 says, 7% of all deaths (for ages 30 and over) in India are attributable to tobacco.⁸

NFHS 3 has reported a relatively higher prevalence of tobacco use in rural than in urban area, while the prevalence of tobacco use in tribal areas is still very high compared to rural and urban counterpart.⁹⁻¹¹

Very few community-based studies have been conducted on the prevalence of tobacco among tribals in India. Such studies will be useful for understanding the problem of tobacco consumption and for taking specific interventional measures at the community level. So, it is the need of hour to conduct a cross sectional study to determine the prevalence of tobacco consumption associated with initiation of these substances, especially among tribal. The present study was carried out with the objectives to estimate the prevalence of tobacco consumption and its different modes among subjects 15 years and above residing in tribal dominated villages of Narayanganj block of Mandla district.

METHODS

This study is a cross sectional study carried out from January 2015 to June 2015 in five villages of Narayanganj block of Mandla district in Madhya Pradesh among 800 subjects belonging to the age group of 15 years and above.

Sample size was calculated using formula where :Sample size (N)= Z^2PQ/I^2 with a prevalence of 39.5% and 95% Confidence Interval, Margin of error of 5% of prevalence, a sample size of 588 was worked out.¹² Adding 20% non-respondents, a minimum sample size of 706 was calculated which was rounded off to 800.

Multistage random sampling was used. In the first stage, one block was randomly selected from Mandla district, which is predominantly a tribal district. From the selected block all the villages were enlisted and 5 villages out of them were selected randomly. The number of subjects to be interviewed from each village was determined on the basis population proportion. Individuals of age 15 years and above were selected randomly and interviewed. The study has been conducted according to World Medical Association Helsinki Declaration. Before starting the study, informed consent was taken from all the individuals aged 18 years and above after explaining the purpose of study, and from parents in case of minors. Respondents denying the consent for the interview and

those terminally ill and were unable to answer the questions were excluded from the study. The data was collected on a predesigned proforma, which includes age, sex, socio-demographic, type of tobacco consumed and age of initiation. It was modified after a pilot study conducted on 50 study subjects. The socioeconomic status of the study subjects was determined as per the modified B. G. Prasad's classification.¹³ The statistical analysis was carried out by using Epi Info™ 7.1.5 and SPSS for windows version 20.0 (trial version).

RESULTS

Table 1 demonstrates that among the participants, median age was 35 years with more than half (58.1%) belonging to the age group 15-49 years. Participation was almost equal from both the genders (female:male=1.1:1). Participants who were scheduled tribe by caste were predominant in the study population. The proportion of married participants (76.3%) was more as compared to the unmarried. Most of the study subjects belonged to class V socio-economic class (88.5%) and more than half of them being illiterates (56.3%).

Table 1: Socio-demography of the study population.

Characteristics	No.	%
Gender		
Males	385	48.1
Females	415	51.9
Age group (years)		
15 to 19	133	16.6
20 to 49	465	58.1
50 to 60	111	13.9
60 and above	91	11.4
Category		
General	21	2.6
OBC	125	15.6
SC	106	13.3
ST	548	68.5
Education status (completed)		
Illiterate	450	56.3
Primary	108	13.5
Middle	131	16.4
Secondary	100	12.5
High secondary	6	0.8
College and above	5	0.6
Marital status		
Married	610	76.3
Unmarried	190	23.7
Socio-economic status		
Class I	0	0
Class II	0	0
Class III	8	1
Class IV	84	10.5
Class V	708	88.5

Table 2: Distribution of tobacco consumption among the study subjects.

Type of tobacco	No. (N=347)	%
Betel nut	33	9.5
Tobacco (khaini)	237	68.3
Gudaku/nasmanjan	10	2.9
Bidi	12	3.5
Cigarette	5	1.4
Chillum	3	0.9
Both smokeless and smoked form	47	13.5

The prevalence of tobacco consumption among the study subjects was found to be 43.38%. The tobacco in the form of khaini (68.3%) was the most prevalent form of

tobacco consumed by the study participants followed by betel nut (9.5%). While smoked tobacco was mostly consumed in the form of bidi (3.5%) and cigarette (1.4%) (Table 2). The average age for initiation of tobacco consumption was 22.82 (± 10.40) years. It was observed that the minimum age of initiation of the tobacco consumption was 7 years.

Table 3 depicts that 47.5% of the males and 39.5% of the females consumed tobacco in any form. Most of the tobacco consumers were in the age group 20 to 49 years and were mostly illiterates belonging to class V socio-economic class according to modified BG Prasad Scale.¹³ Gender, age group, educational status and the marital status of the respondents were significantly associated with tobacco consumption in any form.

Table 3: Association of tobacco with the various socio-demographic correlates of the study population.

	Ever user (%)	Never user (%)	P value *
Gender			
Males	183 (47.5)	202 (52.5)	
Females	164 (39.5)	251 (60.5)	0.027
Age group (years)			
15 to 19	27 (20.3)	106 (79.7)	
20 to 49	211 (45.4)	254 (54.6)	<0.001
50 to 60	63 (56.8)	48 (43.2)	
60 and above	46 (50.5)	45 (49.5)	
Category			
General	12 (57.1)	9 (42.9)	
OBC	50 (40)	75 (60)	
SC	47 (44.3)	59 (55.7)	0.45
ST	250 (45.6)	298 (54.4)	
Education status (completed)			
Illiterate	235 (52.2)	215 (47.8)	
Primary	72 (66.7)	36 (33.3)	
Middle	46 (35.1)	85 (64.9)	
Secondary	28 (28)	72 (72)	<0.001
High secondary	3 (50)	3 (50)	
College and above	2 (40)	3 (60)	
Socio-economic status			
Class III	2 (25)	6 (75)	
Class IV	37 (44)	47 (56)	0.57
Class V	308 (43.5)	400 (56.5)	
Marital status			
Married	301 (48.9)	309 (51.1)	
Unmarried	46 (24.2)	144 (75.8)	<0.001

*Chi Square p value.

DISCUSSION

This study shows high prevalence of tobacco use among the study population of Narayanganj block of Mandla districts. The prevalence of any form of tobacco consumption was 43.38%. Global Adult Tobacco Survey in India, 2009-10 reported relatively lower prevalence of

34.6% for any form of tobacco use among 15 years and older as compared to our study.¹⁴ NFHS-4 reports the prevalence of any forms of tobacco use as 59.5% in men and 10.4% in women in the age group of 13 to 49 years in Madhya Pradesh while in our study area it was found to be 47.5% among male and 39.5% among females.¹⁵ This clearly shows that the proportion of females consuming

tobacco is very higher than the females of Madhya Pradesh which could be attributed to the prevailing social and cultural differences among the tribals as compared to the other communities. Surendra et al in their study among tribals of kundam block of Jabalpur found that 58% of the interviewed persons reported to have used tobacco in one form or the other.¹⁶

Study revealed that the consumption of smokeless tobacco was more predominant than the smoked form with khaini being the most commonly consumed. Similar results were found by Surendra et al from Kundam block of Jabalpur.¹⁶ However, Khan et al from Gajipur, Bangladesh found results contrary to our findings that smoking was more prevalent than smokeless tobacco consumption.¹⁷ The difference might be due to different geographical location and socio-demographic characters of the study population.

Gender, age group, educational status and the marital status of the respondents were significantly associated with tobacco consumption in any form according to the present study. As the educational status of the subjects improved, the use of tobacco was found to be reduced depicting the importance of education against tobacco consumption.

Prevalence of tobacco consumption was high in both the genders in the study population that can be attributed to the social and traditional conditions prevailing in the tribal population. Lack of awareness, low educational status and unemployment also play an important role in tobacco consumption in these tribal areas.

Social environment, involvement of family members and easy availability of tobacco products may be the contributing factors.

Recommendations

Strengthening of IEC and behaviour change communication activities focussing on the hazardous effects of tobacco through health education campaigns is needed in tribal areas.

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