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Prevalence of Tobacco Consumption among Urban Tribals of Mandla District (M.P)

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Abstract

Introduction: *Tobacco is one of the most common abuse substances all over the world. Tobacco leads to disease and disability and harms nearly every organ of the body. According to the World Health Organization (WHO), nearly 6 million deaths occur every year due to tobacco use. The majority of smoking related deaths in India occur in the prime working age group of 15–59 years. This study was aimed to find out the prevalence and pattern of tobacco use among urban tribal adult.*

Methodology: *A cross sectional study conducted among the randomly selected 561 tribal adults age 20yrs and above in 5 urban ward of mandla city from February 2015 to April 2016 by using a pre-designed pre-tested proforma.*

Results: *Out of total, 41.5% subjects consume tobacco in any form while prevalence of smoking and tobacco chewing was 4.8% and 37.2% respectively. Mean age of starting of tobacco chewing and smoking was 21.7 yrs and 23.9 yrs respectively. Consumption significantly associated with gender, age, education, occupation, type of family and occupation status.*

Conclusion: *Prevalence of tobacco consumption high in urban tribal population. Required population based approach to control and reduce tobacco consumption in the country. Tobacco control programme needs to be intensively implemented in urban area also.*

Keyword: *Tobacco, urban, tribal.*

Introduction

Tobacco is one of the most common abuse substances all over the world. Tobacco is consumed in different forms like smoking, tobacco chewing, sniffing etc. Tobacco contains a very powerful addictive chemical called nicotine which makes it very hard for tobacco users to stop using it.[1] In present day Substance abuse is a serious public health problem and is one of the biggest curses that modern society has come across.[2] Smoking tobacco leads to disease and disability and harms nearly every organ of the

body.[3] Smokeless tobacco contains nearly 3000 chemicals; out of them 28 are carcinogenic. Smokeless tobacco in any form (gutkha, kheni, gudaku) can lead to nicotine addiction, heart disease, stroke, low birth weight in pregnancy and associated with cancer of mouth, oesophagus, and pancreas. [4,5]

In India, tobacco consumption is responsible for half of all the cancers in men and a quarter of all cancers in women. [6] Tobacco consumption is one of the important risk factors for non-communicable diseases (NCD), accounts for more than two-third of all new cases of NCD.[7] According to the World Health Organization (WHO), nearly 6 million deaths occur every year due to tobacco use, which may escalate to 8 million deaths a year by 2030.[8]

India has highest number of tobacco user in the world and among fewer countries in the world where prevalence of smoking and smokeless tobacco use are high, and within noticeable proportion. According to National Family Health Survey second round (NFHS II, 1998–99), prevalence of tobacco use in India was estimated to be 37 percent among the population of 15 years and above.[9] Smoking is responsible for a large number of premature deaths in India. The majority of smoking related deaths in India occur in the prime working age group of 15–59 years. [10] 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. [11-13] As per report of Tobacco Control in India (2004), more than 8-9 lakh death are directly or indirectly linked to tobacco consumption every year in India. 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, which will result in form of enormous economic, emotional and societal costs for nearly a billion of people.[14]

Very few community-based studies have been conducted on the prevalence of tobacco among tribals in India. Most of the studies are conducted in rural population. This study was aimed to find out the prevalence and pattern of tobacco use among urban tribal adult. Studies will be useful for understanding the problem of tobacco consumption and for taking specific interventional measures at the community level.

Methodology

This study is a cross sectional study carried out from February 2015 to April 2016 in randomly selected 5 ward out of 24 ward of Mandla city of Madhya Pradesh among 561 subjects belonging to the age group of 20 yrs and above. Sample size was calculated using formula where : Sample size (N)=Z^2 PQ/L^2 with a prevalence of 43.3% [15] and 95% Confidence Interval, Margin of error of 10% of prevalence, a sample size of 501 was worked out. Adding 12% non-respondents, a minimum sample size of 561 was calculated.

The number of subjects to be interviewed from each ward was determined on the basis population proportion. Individuals of age 20 years and above were selected randomly and interviewed. Individuals who have not given consent for the interview or severely ill were excluded from the study. The data was collected on a predesigned proforma, which includes age, sex, socio-demographic, type of tobacco consumed, frequency per day, amount and age of initiation. It was modified after a pilot study conducted on 30 study subjects. The socioeconomic status of the study subjects was determined as per the modified B. G. Prasad‘s classification may 2014. The statistical analysis was carried out by using Epi Info™ 7.1.5 and SPSS for windows version 20.

Result

Out of total study subject 52.5% were male. Mean age was 38.6 of male and 38.2 yrs of female, maximum study subjects belong to age group 20-29 (31.6%) followed by 30-39yrs (27.9%). Mean age of men and women were 38.6yrs and 38.2yrs respectively. Nearly 80% were married followed by 13.7% unmarried. 20.5% study subjects were illiterate, and among educated maximum had

studied up to intermediate level. Out of total study subjects 47.2% unemployed and about 60% lived in joint family. Maximum subjects belong to lower middle (28.2%) class followed by upper class (20.3%).

Out of total, 41.5% subjects consume tobacco in any form while prevalence of smoking and tobacco chewing was 4.8% and 37.2% respectively. Only 0.5% individuals consume both form of tobacco. Mean age of starting of tobacco chewing and smoking was 21.7 yrs and 23.9 yrs respectively. Distribution of smoking and tobacco chewing is given in table 1 and 2.

Prevalence of tobacco chewing, among male and female was 57.5% and 24% respectively. Among different age groups maximum prevalence was found in above 60-65 yrs of age (70.9%), followed by 40-49 yrs (47.5%). Marital relationships also influence the consumption of tobacco, it was maximum (61.8%) among widow and minimum (28.6%) among unmarried. Education also influences tobacco consumption, maximum subject who consume tobacco were educated less than or up to high school. Occupation significantly associated with tobacco consumption, highest prevalence in skilled and semiskilled person while minimum among professionals. Joint families (54.1%) were significantly associated with tobacco consumption. Tobacco consumption was common in low income group as found in this study.

Table-1 Distribution of subjects according to habit of smoking and living status

Parameters		No.
History of smoking of tobacco	Yes	27(4.8%)
	No	534(95.2%)
Mean age of initiation (year)		23.9
Mean duration of addiction (year)		31.6
Frequency		N=27
Type of smoking	Bidi	18(66.7%)
	Cigarette	9(33.3%)
	Others	0(0.0%)
Units consumed per day		N=27
>15/day		2(7.4%)
5-15/day		6(22.2%)
<5 day		19(70.4%)

Table-2 Distribution of subjects according to habit of smokeless tobacco and living status

Parameters		
Smokeless tobacco	Yes	209(37.2%)
	No	352(62.8%)
Mean age of initiation(year)		21.7
Mean duration of addiction (year)		18.4
Frequency		N=209
Type of tobacco chewing	Kheni	41.2%
	Gutkha	34.7%
	Both	24.1%
Frequency per day		N=209
>15/day		4(1.9%)
5-15/day		62(29.7%)
<5/day		143(68.4%)
Amount per day		N=209
<10gm		186(89.0%)
≥10gm		23(11.0%)

Table-3 Relation of different variable with tobacco consumption

Factor	Variable	Yes	No	Total	Chi test
Gender	Male	169 57.5%	125 42.5%	294 100.0%	χ^2=64.7, df-1 p<.000
	Female	64 24.0%	203 76.0%	267 100.0%	
Age	20-29	62 35.0%	115 65.0%	177 100.0%	χ^2=26.69, df-4 p<.000
	30-39	59 38.8%	93 61.2%	152 100.0%	
	40-49	47 47.5%	52 52.5%	99 100.0%	
	50-59	26 33.3%	52 66.7%	78 100.0%	
	60-65	39 70.9%	16 29.1%	55 100.0%	
Marital status	Married	189 42.2%	259 57.8%	448 100.0%	χ^2=11.19, df-3 p-.011 Fischer exact test
	Unmarried	22 28.6%	55 71.4%	77 100.0%	
	Divorce	1 50.0%	1 50.0%	2 100.0%	
	Widow	21 61.8%	13 38.2%	34 100.0%	
Education status	Professional Degree	1 20.0%	4 80.0%	5 100.0%	
	Post Graduate And Above	8 36.4%	14 63.6%	22 100.0%	
	Graduate	24 30.8%	54 69.2%	78 100.0%	
	Inter Mediate Or Post High School Diploma	35 30.4%	80 69.6%	115 100.0%	
	High School Certificate	29 49.2%	30 50.8%	59 100.0%	χ^2=19.19, df-8 p-.014 Fischer exact test
	Middle School	47 52.8%	42 47.2%	89 100.0%	
	Primary School	21 48.8%	22 51.2%	43 100.0%	
	Literate	14 40.0%	21 60.0%	35 100.0%	
	Illiterate	54 47.0%	61 53.0%	115 100.0%	
Occupation Type of family	Professional	5 25.0%	15 75.0%	20 100.0%	
	semi-professional	17 50.0%	17 50.0%	34 100.0%	
	Clerks	21 61.8%	13 38.2%	34 100.0%	
	Shopkeeper	12 60.0%	8 40.0%	20 100.0%	
	Farmer	17 50.0%	17 50.0%	34 100.0%	χ^2=68.7, df-8 p=.000
	Skilled	30 71.4%	12 28.6%	42 100.0%	
	semi skilled	21 61.8%	13 38.2%	34 100.0%	
	Unskilled	43 55.1%	35 44.9%	78 100.0%	
	Unemployed	67 25.3%	198 74.7%	265 100.0%	
Type of family	Joint	60 54.1%	51 45.9%	111 100.0%	
	Nuclear	116 35.2%	214 64.8%	330 100.0%	χ^2 =14.460, df-2 p=.001
	Three generation	57 47.5%	63 52.5%	120 100.0%	
Socioeconomic status (prashad category)	1 upper class	34 29.8%	80 70.2%	114 100.0%	
	2 upper middle class	48 52.2%	44 47.8%	92 100.0%	
	3 middle class	25 29.1%	61 70.9%	86 100.0%	χ^2 =21.626, df-4 p<0.00
	4 lower middle class	68 43.0%	90 57.0%	158 100.0%	
	5 lower class	58 52.3%	53 47.7%	111 100.0%	

Discussion

Prevalence of any type of tobacco consumption is 41.5% in urban tribal population in study area. Prevalence is slightly less as compared to study done by Verma P et al[15] (43.28%) in rural area of similar district in age group 15 year age and above. Prevalence found in this study is also less as compared to current tobacco user 55.8% in National Household Survey of Drug and Alcohol Abuse in India.[16] Global Adult Tobacco Survey (2009-10) report found 34.6% prevalence of any form of tobacco use among 15 years and older which was less as compared to our study.[17]

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 57.5% among male and 24.0% among females. Prevalence is more as compared to NFHS-3 survey which reported 16.6% among women and 41.2% among men aged 15-54 years in Mumbai, India.[18] But result of this study is slightly higher as compared to prevalence found in GATS India survey, which was 48% in men and 20% in women among individuals aged 15 years or older[19]

Prevalence of tobacco consumption increase with age and association is significant with different age groups, this result was similar to study done by Verma P et al [15] and A. Singh etal [20].Tobacco consumption is significantly associated with relationship status of subjects, more among widow and divorcee, this result was different from Verma P et al study [15] where it was more common in married individuals. Education status was significantly associated with consumption habit, similar result found in study done by Verma et al and also in study done by Garg A. et al [21] among a resettle colony in Delhi for smoking. Tobacco consumption is significantly associated with occupation, it was highest among skilled person and lowest among professionals, results are similar to study done by Garg A. et al [21] they also found high smoking prevalence among skilled person. Socioeconomic status significantly associated with consumption in this study, consumption is more among low income groups similar to a study done by A. Singh et al [20] and Garg A. et al. [21]

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