

Prevalence and Pattern of Tobacco Use among Adults in an Urban Community

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Abstract: Tobacco use is a global pandemic and is the leading cause of preventable death. Most of the deaths are occurring in the low and middle income countries.

Objectives: To determine the prevalence and pattern of tobacco use among adults in an urban community.

Materials and methods: A cross sectional study was conducted using face to face interviews on 403 individuals aged 18 years and above residing in an urban community of Imphal West, Manipur. Descriptive statistics and Chi-square test was used for analysis.

Results: The prevalence of ever use of tobacco use was 66.3% and of which 95.5% were current users. Tobacco was used predominantly in smokeless form (zarda pan, khaini, gutkha) by 85% of the users. Smoked tobacco was used only by 15% of the users. The commonest influencing factor for tobacco use was peer pressure.

Conclusion: Prevalence of tobacco use in this community was high. There is a need to develop effective health education and multifactorial tobacco quitting strategies with focus on help and support for those who wish to quit tobacco.

Keywords: Cross sectional study, prevalence, pattern, tobacco use, urban community, Manipur

I. Introduction`

The tobacco epidemic is one of the biggest public health threats the world has ever faced. It kills nearly six million people a year of whom more than 5 million are users and ex-users and more than 600 000 are non-smokers exposed to second-hand smoke. Approximately one person dies every six seconds due to tobacco and this accounts for one in 10 adult deaths. Up to half of current users will eventually die of a tobacco-related disease. Nearly 80% of the more than one billion smokers worldwide live in low- and middle-income countries, where the burden of tobacco-related illness and death is heaviest.¹ In India, tobacco consumption is responsible for half of all the cancers in men and a quarter of all cancers in women,² in addition to being a risk factor for cardiovascular diseases and chronic obstructive pulmonary diseases.^{3,4} India also has one of the highest rates of oral cancer in the world and it has been partly attributed to high prevalence of tobacco chewing.^{5,6} The World Health Organisation predicts that tobacco deaths in India may exceed 1.5 million annually by 2020.⁷ In recent years, the prevalence of smoking has been declining in many developed countries.⁸ But in developing countries there has been a large increase in the number of young adults starting to smoke and in per capita cigarette consumption.⁹ It is high time for the health planners and medical professionals to detect the main force behind which push our generative population in the clutch of this dreaded killer. So far very few reliable and valid studies have been conducted in the whole North-East States of India including Manipur. Hence this study was conducted with the objectives to determine the prevalence and to assess the pattern of tobacco use in an urban population of Imphal, Manipur.

II. Materials and Methods

This was a cross-sectional study conducted in an urban community of Imphal West district of Manipur. Manipur is in the north-eastern part of India. The study population comprised of all adults aged 18 years and above residing in this urban community. Sample size was calculated using the formula $4PQ/L^2$, using a prevalence of 30% from previous study¹⁰, 95% confidence interval and an allowable error of 5%. Assuming a non-response rate of 20%, the final calculated sample size was 403. Sampling was done by simple random sampling method. Sampling frame was prepared from the most recent electoral roll of the state. Data was collected by face to face interview using a pretested structured questionnaire. The questionnaire had questions on socio demographic characteristics, form of tobacco used, frequency, duration of tobacco use and reasons for initiating tobacco use.

Ever user was defined as those who had used any tobacco product in his or her lifetime, even once. Ever users were again classified as current and past user. Current users were those who have used any tobacco product anytime in the last 30 days. Past users were those who had used any tobacco product any time in the past but not within the last 30 days. Never users were those who had never used any form of tobacco.

The various tobacco products mentioned in the study were divided into smoked forms and smokeless forms. Cigarette and bidi are examples of smoked form of tobacco. Smokeless tobacco is tobacco that is not burned. It can be chewed, dipped or applied to teeth and gums. There are many types of smokeless tobacco. They are khaini, zarda pan, pan masala or gutkha to name some. Khaini is a form of chewing tobacco product which is kept in the mouth between the cheeks and gums. It is tobacco mixed with slaked lime and additional flavorings. In Zarda pan the main ingredients of pan are the betel leaf, areca nut, slaked lime and catechu. Sweets and other condiments can also be added. Pan masala or gutkha is a commercial preparation containing the areca nut, slaked lime, catechu, and condiments, with powdered tobacco. Tobacco leaf in dried form is also taken along with betel leaf and quid, with or without lime.

For analysis, descriptive statistics like mean, percentages and proportions were used. Chi-square test was used to see the association between tobacco use and selected variables like age, sex, educational status, occupation etc. p-value of <0.05 was taken as significant. Informed consent was taken from all the respondents and confidentiality was maintained. Approval for the study was granted by Institutional Review Board of Himalayan University, Itanagar, Arunachal Pradesh, India.

III. Results

A total of 403 respondents participated in the study. Of them 60% (n=242) were females. Mean age of the respondents was 34.62(±13.437) years. More than half of the respondents were in the age group of 20-39 years (n=222, 55%). Majority of the respondents were Hindu by religion (89%). Literacy rate was 90.3% with over half (55.1%) having more than ten years of schooling. Unemployed males comprised 3%, housewives comprised 41.2% and manual laborer comprised 10.6% of the total respondents. Majority of the respondents were ever married (n=303, 75.2%).

Two-third of the respondents have ever used tobacco and the prevalence of current user was found to be 95.5% (n=255). Of the ever users, 214(80.1%) were daily users. Past users constituted only 4.5% of the ever users (Table 1).

Smokeless form of tobacco was most commonly used by 85% of the users. Most common form of smokeless tobacco used was zarda pan (52.6%) followed by khaini (15.7%), gutkha (13.6%) and tobacco leaf with pan (3.1%). Cigarette and bidi was smoked by 11.9% and 3.1% of the respondents respectively. Mean age of first use was found to be 24.72(±9.718) years. Minimum and maximum age of first use was found to be 8 years and 61 years respectively. Most of the respondents (44.6%) started using tobacco in the age group of 20-29 years and 28.8% started using within 10-19 years of age.

Table 2 summarizes the prevalence of ever use of tobacco by socio-demographic characteristics. The prevalence of tobacco use was 77.6% among men and 58.7% among women (p=0.000). The prevalence of tobacco use was highest among the age group of 40-49 years as compared to other age groups (p=0.000). Tobacco use was more prevalent among those who were educated below class ten (76.15%, p=0.004). Among all the occupations, manual labourers had the highest prevalence of tobacco use (88.4%) followed by those who were government employed (84.6%). Students had the lowest prevalence of 30.9% (p=0.000). Ever married respondents had a higher prevalence (73.5%) as compared to unmarried respondents (45%) and this was statistically significant (p=0.000). Religion and family income were not statistically associated with tobacco use.

Peer pressure was named as the most common influencing factor for tobacco use by 45.8% (n=141) respondents. Other reasons reported were experimentation, imitation of others, for medicinal purpose to relieve nausea, pain and stress.

Of the total respondents, 315(78.4%) have knowledge of harmful effects of tobacco and majority of them knew that it causes cancer. Ever users had more knowledge compared to non-users but it was not statistically significant (p=0.557). Television and radio were the most common source of information about the harmful effects of tobacco followed by warning on tobacco product packets. Of the current users 84.3% were willing to quit tobacco.

IV. Discussion

The prevalence of ever use of tobacco in our study was found to be 66.3% and that of current user was 95.5% which is higher than that reported from other parts of the country^{10-13,15,16} and elsewhere.^{6,17,18} The proportion of past users in our study was 4.5% which is consistent with other studies.^{12,18} The rate of tobacco was significantly higher among males as compared to females and this was comparable to other studies.^{15,18} However this finding was not consistent with another study which claimed that females were more likely to smoke than males.¹⁹

Educational status was significantly associated with tobacco use. This is consistent with observations that those with lower level of education are more likely to use tobacco.^{10,12,18,20} In this study, the age wise prevalence of tobacco use was higher as the age advanced and the highest rate was found in the age group of 40-

49 years and then declined gradually as age advances. Similar finding was also reported by other workers^{10,11,12,18}

Manual labourers showed a higher rate of tobacco use and this was consistent with other studies.^{10,18} Those who were ever married had a higher rate of tobacco use as compared to the unmarried respondents. This may be due to influences of the spouses consuming tobacco. Peer pressure was named as the most common reason for initiation of tobacco use and similar findings were also reported in other studies.^{11,21} Smokeless tobacco was more commonly used as compared to smoked form. Zarda pan and khaini were the most commonly used form of tobacco in this study and similar findings were also reported.¹¹

The mean age of first use was 24 years which was comparable with other studies.^{12,18} The higher age of initiation of tobacco use gives a wider scope for effective health education. Such an approach will be feasible in the study area as this one is a highly literate community. Of the current users 84.3% were willing to quit tobacco use which is much higher than reported in other studies.¹² Knowledge of harmful effects of tobacco in the study population was found to be comparable with a study in India¹² but this level was lower than that reported in a study elsewhere.

V. Conclusion

The high prevalence rate of use both among men and women points towards the fact that mere knowledge about the health hazards is not sufficient to make them stop using tobacco. So there is a need to develop effective health education and multifactorial tobacco quitting strategies with focus on help and support for those who wish to quit tobacco.

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Table 1. Prevalence of tobacco use (n=403)

Tobacco use	Number	Prevalence(%)
Never user	136	33.7
Ever user	267	66.3
Current user	255	95.5
Past user	12	4.5

Table 2. Prevalence and characteristics of the respondents (n=403)

Characteristics	Number	No. of ever users	Prevalence (%)	p-value	
Gender:	Male	161	125	77.6	0.000
	Female	242	142	58.7	
Age group(yrs):	≤19	49	18	36.7	0.000
	20-29	115	72	62.6	
	30-39	107	80	74.8	
	40-49	70	53	75.7	
	50-59	35	26	74.3	
	≥60	27	18	66.7	
Education:	Illiterate	39	29	74.4	0.004
	<ClassX	142	108	76.1	
	ClassX-XII	146	83	56.8	
	≥Graduate	76	47	61.8	
Occupation:	Unemployed/Housewife	178	117	65.7	0.000
	Manual laborer	43	38	88.4	
	Govt. employed	26	22	84.6	
	Private sector employed	19	12	63.2	
	Self employed	69	57	82.6	
	Student	68	21	30.9	
Marital status:	Ever married	303	222	73.5	0.000
	Unmarried	100	45	45	
Religion:	Hindu	326	221	67.8	0.17
	Non- Hindu	77	46	59.7	
Monthly Family income (in Rs):	<5000	72	48	66.7	0.596
	5000-9999	155	100	64.5	
	10000-14999	64	47	73.4	
	≥15000	112	72	64.3	