

ORIGINAL ARTICLE

Pervasiveness of Tobacco associated Oral Lesions among Women residing in Urban Slum of Bhopal

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ABSTRACT

Background: The urban-slum population has emerged as a new section which is known to fare very poorly on issues related to oral health. The proportion of the urban-slum population is also increasing at a rapid rate. The deleterious habits are highly prevalent so is the tobacco, in this population. Hence, the study was steered to evaluate the association of tobacco consumption and oral mucosal lesion (OML) in this population.

Aim of the study: To assess the prevalence and patterns of tobacco use and related oral lesions among women residing in urban-slum of Bhopal city (Central India).

Materials and methods: The descriptive cross-sectional questionnaire based study was deliberated by a convenience sample technique. A predesigned structured questionnaire was the tool used for data collection. All the female participants available on the day of survey were included. Entailing in the study was 130 participants residing in various slums of Bhopal city.

Results: Oral health is an important parameter to extent holistic health. The quantum of tobacco is widely prevalent among under-privileged populations. Ramifications are depleted oral health and gross impact on overall health too. Tobacco affects from mild to major lesions in oral cavity. Most devastating is oral cancer directly related to tobacco consumption.

Conclusion: The concludory points derived out of this study are sufficient enough to conclude that women were aware of the trivial general ill effects of tobacco consumption but major harmful effects on oral health is still below the iceberg due to unawareness and low socioeconomic status (SES).

Keywords: Oral lesions, Tobacco, Urban slums, Women.

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INTRODUCTION

Women are vital part of a family as well as society. As we still live in male dominant society role of women is diminished, but today due to effective education women are coming up more impactful. But in under privileged societies like slums women are still not very respectful and most of the important issues are neglected. The health concern either on general or oral is still under darkness of unawareness, gender bias and social and economic recessiveness. Although women constitute nearly one half of the population of the country and therefore, no real development can take place without their involvement and participation.¹ Historically, India tobacco use among women was very common. Post-independence era there was a reverse graph and now in modern era prevalence both in high society and low society is curbed by tobacco whether as a status symbol or calamity due to unawareness. Though rural women do consume tobacco, in various parts of India, generally tobacco use by women is not a socially acceptable norm. Overall, 2.9% of women smoke and 18.4% chew tobacco in India.² The urban-slum population has emerged as a new section which is known to fare very poorly on issues related to oral health.³ The proportion of the urban-slum population is also increasing at a rapid rate. In India, 28% of the total population living in urban areas in 2001, with a future projection of about 38% (535 million) by 2026.⁴ The National sample survey (NSS) 58th round reported that in India, 1 in 7 urban residents is a slum dweller.⁵ In India, because of cultural, ethnic, geographic factors and the popularity of addictive habits, the frequency of oral cancer is also becoming high which constitutes 12% of all cancers in men and 8% of cancers among women.⁶

These urban slum dwelling women were untouched mainly in health related events so this study mainly concerns on the prevalence of oral mucosal lesions (OML) associated due to tobacco consumption among urban slum dwelling women.⁷

According to World Health Organization (WHO) (2009) consumption of tobacco has been growing at the rate of 2 to 5% per annum.⁸ It is estimated that number of deaths due to tobacco will increase from 3 million per year worldwide to 70 million per year by 2025. In India, it is estimated that of the 10 million workers employed

in the tobacco industry, approximately 60% of them are women and 12 to 15% of them are children mainly young girls.⁹ The more recent Indian adult tobacco survey 2010, 18.4% of all female above the age of 15 years used smokeless tobacco.¹⁰

The effects of tobacco use on the oral health also are alarming. Tobacco habits are practiced in various different forms and many of them are specific to certain areas of India. The reasons for the initiation of tobacco use are various, tooth-related complaint (48%), followed by peer-group Influence (38%) unawareness, to curb hunger, to relax after tough physical exertion.¹¹

The concept of women smoking has long been associated with women's suffrage, also a symbol of one's freedom of choice and independence, and has serious repercussions on one's health thus, it is a matter of serious concern which is need to be focused.

MATERIALS AND METHODS

The descriptive cross-sectional questionnaire based study was deliberated by a convenience sample technique. A predesigned structured questionnaire was the tool used for data collection. This research was accomplished over a month from 23rd of March till 20th of April 2014 in the various identified urban-slum areas of Bhopal city. Convenience sampling technique was the key to sampling design in both the steps in selection of slums as well as women slum dwellers. Researchers have been allowed to conduct this study after a prior permission was taken from the respective authorities as members of the wards where study was conducted. Verbal consent was obtained from the participants of the study as most of them failed to even read and write. The study protocol was discussed with institutional research advisory committee and ethical approval was taken from the ethical committee.

Sample

Convenient sampling procedure was employed, four randomly selected slums were emphasized. All adult women residing in the slum were included as the target population. The study was conducted during the day time, so the number of women obtained was less as most were daily wages worker, or associated in construction labor work or the domestic helps. During the study tenure of 15 days 130 women from selected urban slum areas of Bhopal city, Madhya Pradesh were encompassed in the study.

Study Design and Setting

The study was a descriptive cross-sectional questionnaire based study. A structured questionnaire was the tool used for data collection. The questionnaire method

was preferred for data collection as it requires shorter time period, allows female participants to be surveyed at a time and more suitable for recording potentially sensitive or personal information related to their oral hygiene practices and habits along with the demographic information of all the study participants. Questionnaire contained following items:

- Demographic factors including gender, age, education level, occupation, family income and marital status.
- Five close ended questions regarding habits, substance addiction, chewing form, duration, frequency and were asked.
- One open ended question addressed attitudes regarding reasons for starting tobacco.
- Five questions were fabricated to assess the knowledge of participants regarding its harmful effect were asked.

The data was collected in the month of April 2014 in various slums of Bhopal which include: Idgah Hills slum, Gondipura slum, Annanagar slum, E-6 Gautam Nagar slum, and Gareebnagar Chandbadi slum, Chola road Bhopal city. The female participants those were available on the day of survey were included. Subjects who were not willing to participate in the study or having history of any systemic diseases they constituted the exclusion criteria.

Scoring Criteria

A total score was obtained by adding each correct answer. For each correct and incorrect answer scores one and zero were assigned respectively. A higher score indicated a greater level of tobacco dependence respectively.

Clinical Examination

The clinical examination was carried out using the criteria as prescribed by oral health survey—basic methods, World Health Organization (WHO, 1997) modified version. The training and calibration of the investigator was carried out in the Department of Public Health Dentistry, People's Dental Academy, Bhopal. Concordance was 0.87 for the kappa value.

RESULTS

Results of the present research show that, substance addiction like tobacco chewing was most prominent (32.6%) in females of age group of 18 to 30 years. The tobacco practice is widely prevalent in innumerable forms like smoking, chewing tobacco, snuffing, tobacco tooth-paste, pan masala, gutka, supari, etc. From tobacco paste, dry tobacco leaves, smoked form of tobacco and chewing tobacco was also used. Based on (Kuppuswamy

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Table 1: Frequency and distribution of substance addiction of study subjects according to age and socioeconomic status

		Age n(%)				Socioeconomic Status		
		18–30 years (n)	31–45 years	45–65 and Above	Total	Upper lower	Lower	Total
Substance addiction	Chewing tobacco	42 (32.6%)	35 (27.1%)	41 (31.8%)	118 (91.5%)	62 (48.1%)	56 (43.4%)	118 (91.5%)
	Smoking + Chewing	2 (1.6%)	1 (0.8%)	0 (0.0%)	3 (2.3%)	1 (0.8%)	2 (1.6%)	3 (2.3%)
	Using tobacco manjan	3 (2.3%)	5 (3.9%)	0 (0.0%)	8 (6.2%)	7 (5.4%)	1 (0.8%)	8 (6.2%)
Chi-square	$\chi^2 = 7.144$					$\chi^2 = 4.231$		
Degree of freedom	df = 4					df = 2		
p-value		p = 0.128				p = 0.121		

Table 2: Frequency and distribution of oral mucosal condition of study subjects according to age and socioeconomic status

Tobacco use		Age n(%)				Socioeconomic Status		
		18–30 years (n)	31–45 years (n)	45–65 and Above	Total	Upper lower	Lower	Total
OMC	No abnormal condition	46 (35.7%)	25 (9.4%)	25 (9.4%)	96 (74.4%)	56 (43.4%)	40 (31.0%)	96 (74.4%)
	Malignant tumor	0 (0.0%)	0 (0.0%)	1 (0.8%)	1 (0.8%)	0 (0.0%)	1 (0.8%)	1 (0.8%)
	Leukoplakia	0 (0.0%)	3 (2.3%)	4 (3.1%)	7 (5.4%)	3 (2.3%)	4 (3.1%)	7 (5.4%)
	Lichen planus	0 (0.0%)	0 (0.0%)	1 (2.4%)	1 (0.8%)	1 (0.8%)	0 (0.0%)	1 (0.8%)
	Ulceration	1 (0.8%)	6 (4.7%)	6 (4.7%)	13 (10.1%)	8 (6.2%)	5 (3.9%)	13 (10.1%)
	OSMF	0 (0.0%)	7 (5.4%)	4 (3.1%)	11 (8.5%)	2 (1.6%)	9 (7.0%)	11 (8.5%)
Chi-square	$\chi^2 = 26.224$					$\chi^2 = 9.084$		
Degree of freedom	df = 10					df = 5		
p-value		p = 0.003				p = 0.106		

Table 3: Frequency and distribution of oral mucosal lesion of study subjects according to age and socioeconomic status

Tobacco use		Age n(%)				Socioeconomic Status		
		18–30 years (n)	31–45 years (n)	45–65 and Above	Total	Upper Lower	Lower	Total
OML	Buccal mucosa	1 (0.8%)	14 (10.79%)	14 (10.79%)	29 (22.5%)	13 (10.1%)	16 (12.4%)	29 (22.5%)
	Floor of mouth	0 (0.0%)	2 (1.6%)	2 (1.6%)	4 (3.1%)	1 (0.8%)	3 (2.3%)	4 (3.1%)
	Healthy	46 (35.7%)	25 (19.4%)	25 (19.4%)	96 (74.4%)	56 (43.4%)	40 (31.0%)	96 (74.4%)
Chi-square	$\chi^2 = 21.383$					$\chi^2 = 3.061$		
Degree of freedom	df = 4					df = 2		
p-value		p = 0.000				p = 0.0216		

scale) among different socioeconomic status total of (45.75%) of study subjects were affected in slum dwelling underprivileged low socioeconomic population. Pervasiveness of mucosal lesion was exceptionally high for women residing in slum (21.58%). There was no statistically significant difference in the age distribution of the study population in different socioeconomic status (SES) categories ($p = 0.121$) (Table 1).

It indicate frequency distribution of oral mucosal condition (OMC) of study subjects according to age and SES. In the age group of 18 to 30 years no abnormal condition were observed (35.7%). Ulceration was observed in (4.7%) of individual in age range 31 to 45 years and 45 to 65 years. Oral submucous fibrosis (OSMF) and leukoplakia was observed in (5.4%) and (3.1%) in the age group of 31 to 45 years respectively. Exposure of OSMF was higher (8.6%) in different SES as compared

to leukoplakia (5.4%). There is a significant association between age and OML among the study subjects ($p = 0.003$) (Table 2).

It expresses the frequency distribution of OML of study subjects according to age and SES. In (35.7%) of study participants of age range of 18 to 30 years, no abnormal condition was recorded. Buccal mucosa was affected in (10.79%) of individuals in age range 31 to 45 years and 45 to 65 years respectively. When SES was considered buccal mucosa was affected more (22.5%) than floor of mouth (3.1%). There was highly statistically significant difference was observed in relation to age ($p = 0.000$) (Table 3).

DISCUSSION

Tobacco is the leading cause of mortality globally and in India. The foremost way in which tobacco is used

throughout the world is either smoking in cigarettes or chewing tobacco. Currently, tobacco use is estimated to account for 3 million deaths per year, about half a million of which are among women, reflecting their previous patterns of tobacco consumption.¹² Current study was conducted among the women residing in urban slums of Bhopal city to estimate the prevalence of tobacco chewing and its effect on oral health. The reason for preferring slum women was that instead of being most integral part of family and society, they are still disadvantaged concerning oral and general health. Most of them are illiterate, unaware about the facts and are usually the victims of torments in the society ruled by poverty. Most of them have abusive and addicted spouses, causing them to live under stress of domestic violence. Often the children are left to the mercy of these helpless women, who then have to find some means to look after their children. This in turn results in having lost all hopes of a better, secured comfortable life and leads to unhealthy practices like smoking and tobacco chewing, etc.

In this survey conducted in Bhopal city in Central India, we observed that the overall prevalence of tobacco use in any form was 21%, with a significantly higher prevalence in semi-urban areas as compared to urban, similar to what has been observed in earlier studies in India. According to Gupta et al, tobacco use in urban slums is 11.9% which is much lesser as compared to our study. Because of higher stress level and urbanization people in urban slums are more exposed to such deleterious habit as observed in our study.⁷

CONCLUSION

The results of this study are sufficient enough to conclude that women were aware of the general ill effects of smoking but fail to identify smoking to be associated with female maladies. This may be because the tobacco educational campaigns have mainly focused on risks for men and specific adverse effects on women's health have not been highlighted. Therefore, women do not associate

themselves with these health problems and considers them a men's health issue. To better educate the women of health effects of tobacco, anti-tobacco educational strategies and interventions need to be devised.⁶

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