



Epidemiological Study of Oral Tobacco use Amongst Urban Slum Inhabitants in Malwani, Mumbai

KEYWORDS

oral tobacco, urban slum, addiction, oral cavity examination.

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ABSTRACT *The tobacco epidemic is one of the biggest public health threats the world has ever faced. This study is a Cross sectional observational study of 2 months on 384 urban slum inhabitants of Ambujwadi area in Malwani, Mumbai about oral tobacco use. Here, prevalence and pattern of oral tobacco use; its socio-demographic factors are studied followed by oral cavity examination. Every participant was personally interviewed and semi structured questionnaire was filled, followed by oral cavity examination. It was found that 58.6% men and 61.9% women used oral tobacco. Maximum subjects used it since 11 to 20 years and were using 6 to 10 units/day. Total 56 subjects had Oral Sub-mucous Fibrosis (OSMF) while 55 had difficulty in chewing. It was concluded that Oral Tobacco use is highly prevalent in urban slums. The use starting in adolescent years for varied reasons resulted in irreversible oral morbidities.*

Introduction:

Tobacco use has assumed the dimension of an epidemic resulting in enormous disability, disease and death. The degree of destruction brought to bear upon the individual and society surpasses the returns generated by tobacco production and consumption in terms of revenue and employment¹.

About 17% of total population in Southeast Asia uses oral tobacco; of which 82% belong to India². There is widespread belief that smokeless tobacco use is less harmful than smoking. Tobacco users who die prematurely deprive their families of income, raise the cost of health care and hinder economic development³. It kills nearly 6 million people a year of whom more than 5 million are from direct tobacco use and more than 600 000 are non-smokers exposed to second-hand smoke³.

Youth are especially vulnerable to initiating smokeless tobacco use. In many cultures, particularly in South East Asia, smokeless tobacco use is more socially acceptable than smoking and it is usually easy to practice without detection⁴.

Health effects of smokeless tobacco use include caries of tooth, receding of gums, high blood pressure, a debilitating condition known as oral sub-mucous fibrosis (OSMF), and cancers of the mouth and food pipe⁵.

In this study prevalence and pattern of oral tobacco use, its socio-demographic factors were studied followed by oral cavity examination.

Materials & Methods:

This is a Cross sectional observational study of 2 months carried on 384 male and female residents of Ambujwadi slum of Malwani. Personal interview method was used to visit the households to reach the sample size. Using formula $n = PQ/L^2$ and precision 10% sample size comes to be around 384 using prevalence 51% as per previous studies⁶. Every participant was personally interviewed and semi structured questionnaire was filled which included enquiries related to tobacco use, socio-demographic aspects and willingness to quit tobacco etc. This was followed by oral cavity examination; inspection of the oral cavity was done using aseptic precautions & wooden spatula was used to retract cheek for better visualisation of oral cavity. Data was entered using Microsoft-Excel 2007 Software. All the responses were tabulated & Data was analysed by using SPSS Software version 20.0.

Results:

Out of 384 residents, 210 were males and 174 were females. It was found that 230 (59.9%) subjects used oral tobacco out of which 123 were males while 107 were females. (**Figure 1**)

Maximum respondents belonged to age group of 31 to 45 years. 109 (47.4%) were educated upto 5th to 9th Std. Most study subjects were occupied in unskilled work [68 (29.6%)] followed by skilled work [58 (25.2%)]. The family income of maximum respondents was between Rs. 3000 to 6000 i.e. 102 (44.4%). (**Table no. 1**)

Table 1: Age distribution, Education, Occupation and Family Income of the study subjects (n = 230)

Age of study subjects	15 to 30 yrs	31 to 45 yrs	46 to 60 yrs	Above 60 yrs	
Number	24 (10.4)	120 (52.2)	57 (24.8)	29 (12.6)	
Education of study subjects	Illiterate	1 st to 4 th Std.	5 th to 9 th Std	SSC	HSC & Above
Number	38 (16.5)	57 (24.8)	109 (47.4)	20 (8.7)	6 (2.6)
Occupation of study subjects	Unskilled	Skilled	Business	Home Maker	Student
Number	68 (29.6)	58 (25.2)	27 (11.7)	71 (30.9)	6 (2.6)
Total Family Income of study subjects	Less than or equal to Rs. 3000	Rs. 3001-6000	Rs. 6001-9000	Above Rs. 9000	
Number	24 (10.4)	71 (30.9)	102 (44.4)	33 (14.3)	

Figs. in brackets indicate Percentage.

Maximum respondents i.e. 18.3% were addicted to Masheri followed by 14.3% respondents being addicted to Tobacco + Ghutka + Mawa. (Table no. 2)

Table 2: Type of oral tobacco consumed by the study subjects (n = 230)

Type of oral tobacco consumed	Frequency		Total percentage
	Males	Females	
Tobacco with Lime	12 (9.75)	08 (7.47)	8.7
Ghutka	18 (14.63)	09 (8.41)	11.7
Mawa	19 (15.44)	03 (2.80)	9.5
Masheri	03 (2.4)	39 (36.44)	18.3
Betel quid tobacco	08 (6.50)	10 (9.34)	7.8
Tobacco + Ghutka	20 (16.2)	09 (8.41)	12.6
Tobacco + Ghutka + Mawa	24 (19.51)	09 (8.41)	14.3
Ghutka + Mawa	16 (13)	10 (9.34)	11.3
Tobacco + Masheri	03 (2.43)	10 (9.34)	5.6
Total	123	107	100

Figs. in brackets indicate Percentage.

Maximum i.e. 87 (37.8%) respondents started oral tobacco use due to peer pressure. (Figure 2)

Majority of respondents i.e. 119 (51.7%) started use of oral tobacco at the tender age of 16 to 20 years and 114 (49.6%) respondents used 6 to 10 units/day. 107 (46.5%) were using oral tobacco since 11 to 20 years while 113 (49.2%) respondents spend around Rs. 11 to 20 per day on oral tobacco. (Table no. 3)

Table 3: Age of starting oral tobacco use, Frequency, Duration and Amount spent per day on oral tobacco by the study subjects (n = 230)

Age of starting tobacco use in study subjects	Below 10 yrs	11-15 yrs	16-20 yrs	Above 20 yrs
Number	10 (4.3)	85 (37)	119 (51.7)	16 (7)
Frequency of use in study subjects	1 to 5 units/day	6 to 10 units/day	11 to 15 units/day	
Number	101 (43.9)	114 (49.6)	15 (6.5)	
Duration of use in study subjects	Less than 1 yr	1 to 10 yrs	11 to 20 yrs	More than 20 yrs
Number	12 (5.2)	60 (26.1)	107 (46.5)	51 (22.2)
Amount spent per day by study subjects	Less than 10 Rs/day	11 to 20 Rs/day	21 to 30 Rs/day	More than 30 Rs/day
Number	98 (42.6)	113 (49.2)	15 (6.5)	4 (1.7)

Figs. in brackets indicate Percentage.

118 (51.3%) respondents tried to quit oral tobacco use while 220 (95.7%) respondents had family history of oral tobacco use. (Table no. 4)

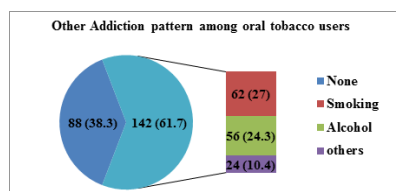
Table 4: History of trying to quit oral tobacco use and Family History of oral tobacco use amongst the study subjects (n = 230)

History of trying to quit oral tobacco use	Number	Family History of oral tobacco use amongst the study subjects	Number
Yes	118 (51.3)	Yes	220 (95.7)
No	112 (48.7)	No	10 (4.3)

Figs. in brackets indicate Percentage.

It was seen that 62 (27%) respondents had other addictions in the form of smoking and 56 (24.3%) respondents were addicted to alcohol in addition to oral tobacco. (Figure 3)

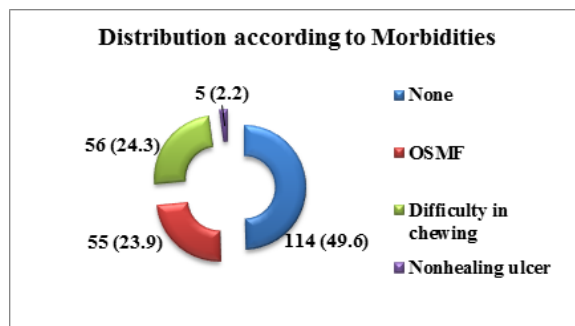
Fig 3: Other addictions in oral tobacco users (n = 230)



Figs. in brackets indicate Percentage.

On oral examination it was revealed that 56 (24.3%) respondents had difficulty in chewing and 55 (23.9%) respondents were having Oral Sub-mucous Fibrosis. (Figure 4)

Fig 4: Distribution of oral tobacco users according to morbidities on oral examination (n = 230)



Figs. in brackets indicate Percentage.

Discussion:

Gupta PC et al⁶ in a study conducted in 2003 concluded that smokeless tobacco use is more common than smoking. In urban areas of Mumbai they found that out of 69% of males who used tobacco in either form around 46% used tobacco in oral or smokeless form while in females 57.5% used tobacco in smokeless form and none of them smoked tobacco. Comparable results were found in our study.

Gupta PC and Ray CS⁶ in a survey conducted in 1996 in Bombay among 99598 individuals concluded the prevalence of smokeless tobacco use was 57.1% among women and 45.7% among men.

Comparable Findings are found in our study.

According to Global adult Tobacco Survey India (GATS-India)-2009-2010⁷; 23.6 and 17.3 % men and women use smokeless tobacco in India. While in Maharashtra it was 30 and 18.8% among men and women.

Conclusion:

It is concluded from the study that Oral Tobacco use is highly prevalent in urban slums. Family history of oral tobacco use and peer pressure had huge impact on starting oral tobacco use. Many subjects belonged to lower socio-economic class and still spent lots of money for their addiction. The use starting in adolescent years was found to result in irreversible oral morbidities as per the oral examination.

Recommendations:

1. Peers need to be trained as counselors for tobacco consumption.
2. Mobilizing community support is of utmost importance.
3. Referral for de-addiction services in willing people.
5. No spitting campaign should be conducted in the community.
6. Long term Behavioural change strategy for families is necessary. Eg. Masheri.
7. Mass effective awareness campaigns and regular screening checkups are needed.

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