

A Study On Insight Into Cessation Attempts Among Current Smokeless Tobacco Users In An Urban Slum Of Ahmedabad

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DOI Link: 10.56018/bjkines2024066



ABSTRACT

Introduction: According to GATS-2 report, one out of every five persons in Gujarat uses smokeless tobacco (SLT). Tobacco causes addiction & dependence over a period of time. Tobacco cessation is an integral part of the National Tobacco Control Programme. **Objective:** To estimate the proportion of previous quit attempts and its determinants among current SLT users of an urban slum in Ahmedabad. **Methods:** A community-based, cross-sectional study using consecutive sampling was conducted between June 2023 - August 2023 among 250 current SLT users in an urban slum of Ahmedabad (Ward number 15). A pre-tested, semi-structured questionnaire adapted from GATS-2 (Global Adult Tobacco Survey-2) Tobacco Questions for Surveys was administered among the participants for eliciting sociodemographic characteristics, SLT consumption pattern and quitting attempts. **Results:** In this study, 68.8% of the participants had at least one past quit attempt out of which 94.7% tried self-control methods. The most common reason for not being able to quit was perceived as addiction (70.9%). A larger part of SLT users (89%) had noticed warning labels in tobacco packets and 18.3% of them reported that they thought of quitting seeing that warning. Three-fourth of the participants were advised by at least one person to not consume tobacco products & in 60% of the cases, it was the spouse. **Conclusions and recommendations:** The results suggest that there is an obvious lacuna in the community's utilization of services, despite the fact that National Tobacco Control Programme (NTCP) provides nationwide cessation services. This demonstrates the need for extensive community-based tobacco cessation activities.

Keywords: Smokeless tobacco (SLT), Addiction, Quit Attempt, National Tobacco Control Programme (NTCP)

INTRODUCTION

Tobacco use is one of the leading causes of preventable premature deaths and disabilities globally¹. The predominant use of tobacco is by smoke inhalation of cigarettes, pipes, and cigars. Smokeless tobacco (SLT) refers to a variety of tobacco products that are either sniffed, sucked, or chewed. All forms of tobacco use are harmful, and there is no safe level of exposure to tobacco. Globally, smoking cigarettes is the most prevalent way to use tobacco. However, smokeless tobacco is more widely used in India, despite regional variations in its applications². According to GATS – 2 Survey conducted in 2016-17, out of 266.8 million adult tobacco users in India (28.6% of adult population), 199.4 million use SLT (21.4% of population). In Gujarat, every fifth adult uses SLT³.

Tobacco products are habituating and addicting over a period of time. Nicotine in tobacco acts on nicotinic cholinergic receptors, triggering the release of neurotransmitters that produce psychoactive effects that are rewarding. With repeated exposure, tolerance develops to many of the effects of nicotine, thereby reducing its primary reinforcing effects and inducing physical dependence⁴.

Under WHO's [Framework Convention on Tobacco Control \(FCTC\)](#), countries are mandated to treat tobacco use and dependence. Offering help to quit is also one of the five key interventions in the MPOWER package of technical measures and resources which WHO introduced in 2007⁵. In accordance with these recommendations, the National Tobacco Control Programme was introduced in India. Under this programme, Tobacco Cessation Centers (TCCs) that offer medication and

counseling at the district level, a National Tobacco Quitline (Tollfree 1800 11 2356) that offers telephone counseling by licensed counsellors in all languages, and m-cessation services(011 22901701) which offer counselling via mobile SMS are being implemented throughout the country⁶.

Despite its widespread use and negative health effects, there is limited evidence-based literature on quitting SLT compared to cessation of smoking. It has been suggested that the quit attempt rate is a good indicator of population cessation, better than measures such as the utilization rate of cessation aids. At the most basic level, the quit attempt rate is the best indicator of motivation to quit in a given population⁷. The current study was conducted to evaluate various aspects associated with cessation of SLT consumption by estimating the proportion of previous quit attempts and its determinants among current SLT users of an urban slum in Ahmedabad.

MATERIALS & METHODS

A community-based, cross-sectional study was conducted between June 2023 - August 2023 among current SLT users in an urban slum of Ahmedabad. Sample size of 250 was calculated using Epi Info software version 7, considering the prevalence of SLT use in Gujarat to be 19.2%; absolute precision 5% and confidence limits 95% and 5% non-response rate. The study was conducted in Ranchhodpura, an urban slum (Ward number 15), which is one of the field practice areas of Department of Community Medicine, B.J. Medical College, Ahmedabad. All houses were visited consecutively from the start of the slum area and one available current adult SLT user was interviewed from each household till the required sample size was reached. If no eligible SLT users were available in a household, that household was omitted from the survey. A pre-tested, semi-structured questionnaire adapted from GATS-2 (Global Adult Tobacco Survey-2) Tobacco Questions for Surveys was administered among the participants for eliciting sociodemographic characteristics, SLT consumption pattern and quitting attempts. Informed consent was taken verbally from all participants at the start of the survey. Data was entered and analyzed in Microsoft Excel. Results were reported in simple proportions and appropriate statistical tests were applied to identify any statistically significant associations wherever necessary. p value < 0.05 was considered to be statistically significant. In the present study, the following operational definitions were used:

1. Current smokeless tobacco users / current SLT users – A person who currently uses any smokeless tobacco product, either daily or occasionally³.
2. Previous quit attempts (PQA) – Current SLT user who tried to quit smokeless tobacco at least once in a lifetime.

RESULTS

The mean age of the participants was 40.9 (SD \pm 12.5) years. Out of 250 study participants, 88% were males, 82% were literate and 83.2 % were currently married. Out of 92% who were employed, 54% had an occupation requiring travel (Table No. 1).

Table No.1 Sociodemographic profile of current smokeless tobacco users (N = 250)

Item	Frequency	%
<i>Gender</i>		
Female	29	11.6
Male	221	88.4
<i>Age category</i>		
< 25 years	17	6.8
25-34 years	73	29.2
35-44 years	67	26.8
45-54 years	54	21.6
55-64 years	32	12.8
> 64 years	7	2.8
<i>Educational status</i>		
Illiterate	44	17.6

Primary	39	15.6
Middle	34	13.6
Secondary	88	35.2
Higher secondary	22	8.8
Graduate & above	23	9.2
<i>Marital status</i>		
Currently married	208	83.2
Currently single	42	16.8
<i>Employment status</i>		
Employed	230	92.0
Unemployed	20	8.0
<i>Socioeconomic status (Modified B G Prasad classification)</i>		
I	47	18.8
II	75	30.0
III	51	20.4
IV	55	22.0
V	22	8.8
<i>Type of family</i>		
Nuclear	136	54.4
Joint	74	29.6
Three generations	40	16.0

Of the 250 participants, 68.8% had at least one past quit attempt(PQA) out of which 26.8%(n= 67) attempted quitting in the last year. More male users(73.3%) attempted quitting than female users(34.5%) and this difference was statistically significant(χ^2 value = 18, p value <0.001). Similarly, more literates(71.8%) had previous quit attempts than illiterates(54.5%) which was also statistically significant(χ^2 value = 5, p value <0.025) (Table No.2).Mean age of participants who had PQA was 41.11 (sd \pm 12.96) and mean age of participants who didn't had PQA was 40.42 (sd \pm 11.34). There was no significant difference in their mean age (two -tailed t -test p value = 0.6858. 221 of the participants(88.4%) were aware about the harmful effects of tobacco. There is a statistically significant association between awareness about harmful effects of tobacco and PQA(χ^2 value = 14.56 , p value <0.001).Participants belonging to different SES had similar quit attempt rates(PQA rates among SES class 1 -66.0%, SES class 2-64.5%, SES class 3-72.0%,SES class 4- 70.9%, SES class 5- 77.3%).

Table. No. 2 Determinants of Past Quit Attempts among participants (N = 250).

Variable		Past Quit Attempt (PQA)		χ^2 value	p- value
		Yes (n=172)	No (n=78)		
Age	\leq 45 years	111	57	1.776	0.183
	> 45 years	61	21		
Gender	Male	162	59	17.998	<0.001*
	Female	19	10		
Literacy	Literate	148	58	5.055	0.025*
	Illiterate	24	20		
Current marital status	Married	140	68	1.284	0.257
	Unmarried	32	10		
Employment	Employed	162	68	3.57	0.058
	Unemployed	10	10		

Age of SLT initiation	<18 years	85	43	0.700	0.403
	≥18 years	87	35		
Aware about harmful effects of tobacco	Yes	161	60	14.563	<0.001*
	No	11	18		
Advised by someone not to consume tobacco	Yes	143	46	16.988	<0.001*
	No	29	32		

*- statistically significant results.

Out of 117 participants who had at-least one PQA, 94.7% tried self- control methods while 3% underwent de-addiction services or were assisted by a doctor. Reasons for not able to quit was perceived as addiction (71%), SLT helps in relieving stress (13%), didn't feel it necessary to quit (12%) and peer pressure (4%). The participants reported headache(36.8%) and anxiety(32.8%) as the most common withdrawal symptoms, while 20.8% reported no symptoms at all when trying to quit.

89% of SLT users had noticed warning labels in tobacco packets & it made 18.3% of them thought of quitting. 3/4th of the participants was advised by at least one person to not consume tobacco products & in 60% of the cases, it was the spouse. A doctor or a health care provider had advised 30% of the participants to quit tobacco. There is a statistically significant association between someone advising not to consume tobacco and having past quit attempts (χ^2 value = 16.98, p-value < 0.001). In our study, one eight (12.8%) of the participants used additional forms of tobacco such as bidi, cigarette, or both.

DISCUSSION

This study offers a thorough picture of current smokeless tobacco users' attempts to quit as well as the factors that influence those attempts. In our study, 26.8% of current SLT users attempted quitting in the last year which is slightly lower than the national data where 33.2% tried to quit³. A similar study conducted in Bhavnagar in 2019 reported that almost half of the tobacco chewers had made at least one attempt to quit SLT use⁸, whereas in our study 69% tried to quit at least once in lifetime. This increase in attempted quitting can be attributed to the better awareness among SLT users about the harmful effects of tobacco, as reported in our study (88.4%) as well as in GATS-2 survey (95.6%). PQA was more among literates in our study which is similar to the study done by Bidyut K Sarkar *et al* who reported that the probability of making a quit attempt was higher among tobacco users who were more educated upto secondary level with adjusted OR-1.61 (CI 1.1-2.33)⁹.

It is to be noted that great majority of the study participants with at least one PQA attempted self-control techniques. Identical results have been obtained in a 3 year follow up study done by Veeraiah S *et al* in Tamil Nadu among tobacco users where they reported participants are reluctant to receive professional help and prefer to 'quit' by themselves¹⁰. It is reported that only about 3% to 5% of unassisted quit attempts are successful¹¹. As per GATS-2 report, as many as 74.9 percent of the SLT users made the quit attempt on their own³. Behavioral interventions have been proven to be an efficacious and feasible modality for smokeless tobacco cessation in all settings (low and high resource). Regular telephone support/quit lines are also proved beneficial. Among pharmacological modalities, nicotine lozenges and varenicline proved efficacious in SLT cessation¹². It is encouraging that the vast majority of participants correctly identify addiction as the reason of their inability to quit. NTCP provides free de-addiction services to the public. Despite this, many people decide to quit on their own. It needs to be investigated why those who attempt to quit SLT do not use these services. There are numerous possibilities, including the public's lack of awareness about these services.

The quit attempt rates are comparable among the various socioeconomic class. It can be seen as a direct benefit from the mandatory display of anti-tobacco health spots or messages in the mass media including films and television programme.

According to GATS - 2, 74.1% of Gujarati users of SLT saw health warnings, and 42.2% of them thought about quitting the product³. In our study, however, 89% of SLT users stated that they had seen the warning labels on tobacco packets; however, only 18.3% of them said they had thought about giving up, which may be explained by the state's behavioral diversity. Our research revealed

that the spouse served as the main source of advice for quitting smoking, which presents a chance to include the spouse in the deaddiction services of the national tobacco control programme.

CONCLUSION & RECOMMENDATIONS

The study shows that addiction is the primary reason for not being able to quit using tobacco products, even though they were aware of its negative effects. The results suggest that there is an obvious lacuna in the community's utilization of services, despite the fact that NTCP provides nationwide cessation services. This demonstrates the need for extensive community-based tobacco cessation activities. We recommend community based interventional studies to develop a better model of tobacco cessation so as to strengthen the National Tobacco Control Programme.

Limitations: This study had a cross-sectional design and respondent reporting format. So, selection bias and information bias are a possibility.

Conflict of Interest: None

Funding: None

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