



Smokeless Tobacco (SLT) Use in Delhi after Three Years of Ban on Gutka and One Year on All SLT Products

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ABSTRACT

Introduction: In September 2012, State of Delhi banned Gutka and Pan Masala containing tobacco and/or nicotine. Revised notification in March 2015 banned all smokeless tobacco (SLT) products including twin-pack. This study assesses SLT use among males in urban Delhi after three years of ban on gutka and after one year of revised ban encompassing all SLT products.

Methods: Cross-sectional household survey was conducted during March-December, 2016 in urban Delhi. 1710 Households were selected through three-stage sampling process. One randomly selected adult male in each household was interviewed with standardized questionnaire.

Results: 25.6% adult males in urban Delhi currently use some SLT product. 7.1 % among them also smoke concurrently. Twin-pack, khaini, betel-quid with tobacco and gul are commonly used SLT products with 14.3%, 11.0%, 1.9% and 1.0% prevalence respectively. Two respondents consumed gutka, but procured it from Bihar due to unavailability in Delhi. Users of other SLT products could purchase their product in Delhi.

Conclusion: SLT consumption continues in urban Delhi with twin-pack and khaini being most popular products. Despite revised 2015 notification, enforcement of ban on all SLT products is limited to Gutka. Reasons for selective enforcement must be investigated and addressed for desired success in minimizing SLT consumption.

Keywords: Tobacco control, smokeless tobacco ban, epidemiology of SLT use, smokeless tobacco control policy outcome

INTRODUCTION

Smokeless Tobacco (SLT) classified as group 1 carcinogen (the designation for a known human carcinogen) by the International Agency for Research in Cancer, had 206 million adult users in India in 2010. ^{1,2} High prevalence of SLT use in India made it oral cancer capital of the world. As per estimates by Globocan, in 2011-2012, number of incident cancer cases of 'lip, oral cavity, nasopharynx, other pharynx and larynx' in India was 145,087. This was highest in the world, more than China (81,149) and USA (52,566) taken together, the countries with

second and third highest number of cases. ³ Not only oral and other cancers, SLT use also leads to heart disease and stroke, as well as adverse reproductive outcomes like still-birth, preterm birth and low birth weight. ⁴⁻⁹

Availability of SLT in myriad varieties, easy access, affordability and absence of social stigma made it highly popular in India. Taking cognizance of it as a public health issue of serious concern, Food Safety and Standards Authority of India (FSSAI) notified the Food Safety and Standards Regulation, 2011, with Regulation 2.3.4 mandating prohibition

on use of tobacco and nicotine as ingredients in any food products.¹⁰ Complying with the regulation, most states and union territories in India issued orders prohibiting Gutka and Pan Masala containing tobacco and/or nicotine including Delhi issuing such order on 11 September, 2012.¹¹ Gutka manufacturers resorted to circumventing ban by replacing gutka with twin-pack (pan masala and chewing tobacco sold separately to be mixed by user to create gutka) in the market. To address this issue, the Delhi government issued revised order on 25 March 2015 which explicitly bans all SLT products including the twin-pack.¹²

Ban was imposed with a vision that it will lead to non-availability of gutka and other SLT products thereby stopping their consumption. The objective of this study is to assess smokeless tobacco use among males in urban Delhi after three years of ban on gutka and after one year of explicit ban on all smokeless tobacco products.

METHODS

A cross-sectional household survey was conducted in the urban area of National Capital Territory of Delhi among adult males (age 15 & above) living there as their primary residence prior to the survey date. The institutional populations like those living in students' dormitories, hospitals, hotels, prisons, military barracks, etc. were excluded. The survey conducted during March - December, 2016 collected information on current SLT use by the respondents using a standardized questionnaire. The questionnaire was based on GATS core questionnaire which was designed by Centers for Disease Control and Prevention and World Health Organization for collecting standardized and internationally comparable data.¹³

Selection of households was done through three-stage sampling process. City wards were the primary sampling units (PSUs). Census enumeration blocks (CEBs) were the secondary sampling units (SSUs) and households formed the tertiary sampling units (TSUs). At first level, wards (PSUs) were selected using probability proportional to size (PPS) sampling. In every selected ward, one CEB was selected by PPS sampling. At third level, from each CEB, 30 households were selected for survey using "random walk" method. For this, a random direction was chosen from a central location in the CEB by spinning a bottle. The interviewer then selected one household at random in lane in that direction. Subsequent households were selected by going to the house whose front door is closest to that house which was last visited. One eligible person was selected randomly by investigator for interviewing from list of all eligible male

members in selected household. If the selected household was locked or randomly selected eligible participant from that household was not available at the time of first visit, repeat visits were made to the household till success was achieved or the randomly selected eligible participant refused to participate.

The participation in the survey was voluntary and interviews were carried out only after obtained appropriate consent. In case of minor respondents, the interviewer obtained the consent from the parent/guardian as well as the respondent. At any time during the interview, respondent could withdraw from the study and also had the right to refuse to answer any question without providing any reason.

Data collected were entered into an SPSS database for the analysis.

RESULTS

In urban Delhi, 1710 households were selected for the survey. Among them, 1628 households had an eligible participant agreeing to participate. 16 participants dropped out in the middle of interview process. Overall, a response rate of 94.2% was achieved with 1612 respondents completing the interview among visited households.

In this survey, 25.6% adult males in urban Delhi were found to be current users of some form of SLT. 18.5% consumed only SLT product/s while 7.1 % used SLT product/s in conjunction with smoking. Most (95.3%) of the current SLT users are daily users consuming at least one SLT product daily. The population of males aged 15 years and above in urban area of NCT of Delhi in census of 2011 was 63,72,394. Estimated population in 2016, assuming an annual growth rate of 2.09%, was 71,73,786. Based on prevalence of tobacco use found in our survey, in 2016, despite gutka ban for over three years and comprehensive ban on all SLT products for one year, there were 18,33,499 adult male users of SLT in urban Delhi.

Prevalence of SLT use classified by age-group and education of the respondents has been presented in table 1 and 2. Data clearly show that less educated males are much more likely to be SLT users and the trend observed is statistically significant (Chi square = 16.58, df = 3, p<0.01). Only 17.3% respondents consumed SLT among those who completed college as compared to 27.9% among those with less or no education. When viewed in relation of age groups, the prevalence showed variation between 21.2% and 27.6%. The difference was statistically not significant. (Chi square = 5.72, df = 3, p = 0.12)

Table 1: Prevalence of SLT use among males in urban Delhi in different age groups in 2016

Age Group (Years)	Total	SLT users	Prevalence of SLT use (n=1612) (%)
15-24	362	77	21.3
25-44	778	209	26.9
45-64	406	112	27.6
65 & above	66	14	21.2
Total	1612	412	25.6

Table 2: Prevalence of SLT use among males in urban Delhi in 2016 classified by education level (n=1612)

Education Level	Total	SLT users	Prevalence of SLT use
Illiterate or no formal schooling	189	56	29.6
Below primary school	129	37	28.7
Primary up to Senior secondary	940	258	27.4
College & above	352	61	17.3
Refused	2	0	0
Total	1612	412	25.6

While calculating chi square, those who refused (2) were excluded.

Table 3: Pattern of SLT products consumption by adult male population in urban Delhi (n=412)

SLT Product/s consumed	Participants (%)
Twin-pack only	184 (44.7)
Khaini/ tobacco-lime mix only	131 (31.8)
Twin-pack + Khaini	34 (8.3)
Betel quid (BQ) with tobacco only	15 (3.6)
Pan Masala	11 (2.7)
Twin-pack + BQ with Tob	8 (1.9)
Gul only	6 (1.5)
Others*	23 (5.6)

* Others include silver coated elaichi with tobacco (5), BQ with Tobacco + Khaini (5), Khaini + Gul (5), Twin-pack + Gul (4), Gutka only (2), Twin-pack + Khaini + 'BQ with Tobacco' (1), Khaini + Gul + 'BQ with Tobacco' (1)

Gutka was consumed by only 2 respondents (0.1%) and procured by users from state of Bihar where they claimed that it was available in some locations. All (100%) current SLT users responded that gutka was not available in Delhi. None (0.0%) among the users of any SLT products expressed any difficulty in availability and purchase of their respective products including the substitute 'twin-pack'. Most (97.6%) SLT users in our survey were aware of ban imposed on gutka in Delhi in 2012. But, none (0.0%) was aware of revised and comprehensive 2015' ban on all SLT products. Twin-pack, khaini, betel quid with tobacco and gul are the main SLT products being consumed by 14.3%, 11.0%, 1.9% and 1.0% males respectively in urban Delhi (table 3).

DISCUSSION

This study has detected large gap in the enforcement of an otherwise strong and comprehensive ban policy encompassing all SLT products. The ban notification issued in 2012 had weakness of imposing ban only on gutka and pan masala containing tobacco and/or nicotine as ingredients. The tobacco industry apt at exploiting any loopholes in laws and policies to their advantage came up with the idea of selling pan-masala without tobacco and chewing tobacco separately to circumvent the definition of banned products. Many journal and newspaper articles highlighted this substitution of gutka by twin-pack.¹⁴⁻¹⁸ This study not only reaffirms this fact, but also that, though revised 2015 ban notification in Delhi resolved the weakness of 2012 notification, enforcement of additions in the revision is minimal on the ground and twin-pack is being sold and consumed freely in urban Delhi. Not only twin-pack, but khaini, betel quid with tobacco, gul and other non-gutka SLT products are also getting sold and consumed freely in urban Delhi. Second round of GATS-India conducted during 2016-2017 has also found continued consumption of SLT in Delhi.¹⁹

Twin-pack found in our survey in 2016 as the most popular SLT product among adult males in urban Delhi continues the trend of substituted product gutka being most popular SLT product in Delhi in GATS-India survey in 2010.¹ This hints towards success of gutka manufacturers in replacing gutka by twin-pack in the market and in the usage pattern among consumers. Urgent action by concerned authorities to address this is needed.

Strong enforcement of ban on gutka shows that the system is capable of effective implementation of ban on any tobacco product. However, due to reasons beyond the scope of our research, only one product, i.e. gutka, has been banned in practice.

To be effective, the comprehensive SLT ban policy of the Government of Delhi should have been coupled with mechanisms and resources to ensure its implementation in practice. Responsibilities must be set with appropriate government departments and officials to ensure the enforcement with regular and periodic review of implementation status.

Epidemiology of SLT use in the aftermath of SLT ban notifications across India will vary in different states. Preference of tobacco products consumed varies across different states and geographical regions in India.²⁰ Also, level of law enforcement varies among states.²¹ Data collected in our survey and their analyses are representative of males over the age of fourteen years residing in urban area of Delhi. So, as a limitation, our sample is not nationally representative. Another limitation is that our

sample has no representation of females.

CONCLUSION

After over three years of imposing gutka-ban and even after a year of comprehensive ban, smokeless tobacco consumption continues among adult males in urban Delhi with twin-pack and khaini being most commonly consumed SLT products. The implementation of exhaustive and unambiguous ban on all SLT products, as per 2015 notification by the Government of Delhi, is limited to only Gutka in practice. All other SLT products are freely available and consumed including the twin-pack introduced in the market as gutka-substitute to circumvent the 2012 gutka-ban. Reasons for selective enforcement need to be investigated and addressed to ensure the enforcement of the comprehensive SLT ban in letter and spirit and achieve the intended impact on smokeless tobacco consumption. Also, mechanisms need to be put in place to monitor the extent of implementation of SLT ban policy on the ground. Partial ban or partial implementation of ban will fail to make any significant impact on SLT consumption.

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