

# Socioeconomic and cultural impact of tobacco in India

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## ABSTRACT

Tobacco consumed either in the form of smoke or smokeless is hazardous to the human body. Death toll due to tobacco globally, has risen to about 6.4 million annually, and is on a constant increase. Since long, tobacco consumption has been attributed to a variety of factors including geographical variation, cultural factors and other associated variables. Earlier tobacco was considered as a taboo, but with advent of 21<sup>st</sup> century and commercialization of tobacco it has been prevalent among males and females. Global adult tobacco survey (GATS) in India 2016-17 revealed that there has been drop of 34.1% tobacco consumers in India, mainly due to the increasing awareness and anti-tobacco campaigns and tobacco hazards warning on the packs. Analysing the changes in trends by healthcare professionals can prove to be a valuable tool in devising strategies to control and limit the morbidity and mortality caused due to tobacco consumption.

**Keywords:** Cultural, hazardous, tobacco

## Introduction

Tobacco consumption is the leading cause of the preventable deaths globally, killing about 6 million people annually around the globe. Global tobacco epidemic kills more people than HIV, tuberculosis, and vector-borne diseases. India has a diverse population with the amalgamation of different cultures, religion, and practices. India's tobacco problem is very complex with majority of people using variety of smoking forms and an array of smokeless tobacco (SLT) products. In country like India, the public spending on health is merely 1.04% of the gross domestic product. Thus, these financial constraints and economic burden to tackle mortality and morbidity related to tobacco can take a major hit on a low middle-income country like India. In 2011, the total economic cost attributable to tobacco consumption from all diseases in India for middle-aged group was about US\$22.4 billion. Direct medical costs of hospital care and treatment of tobacco attributable disease amounted

to US\$3.6 billion and associated indirect morbidity cost to US\$3.1 billion.<sup>[1]</sup>

Males contributed 91% of the entire economic burden and remaining accounted for the females. SLT accounts for 66% of direct medical costs among the females. SLT has grown at an alarming rate in India, about one-fifth of the world's total production and cultivation is done by India.<sup>[1]</sup>

SLT has a cumulative tax about 75% across all India. Excise revenue from tobacco has increased enormously in the past decade. Although the Government of India is trying to increase taxes on SLT, but still the gross revenue has been less than 1% and it is easy and cheap to use it. From 1991 to 2010, the value of SLT exports from India increased times. Over 70% of SLT exports from India go to the Eastern Mediterranean Region, followed by the Western Pacific and American Regions.<sup>[2]</sup>

This monograph intended to raise the profile of the challenge posed by SLT and smoking tobacco, so that tobacco control efforts can effectively respond to this epidemic and

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describe the background, economics, science of tobacco, characteristics, gaps in knowledge, research, policy reforms, and recommendations.

### Hazards of tobacco use

Tobacco is deadly in any form either be smoking or smokeless; scientific evidences have proved that tobacco leads to disease, disability, and death. According to the International Agency for Research on Cancer (IARC) monograph, there is sufficient evidence in humans that tobacco smoking causes cancer of the lung; oral cavity; naso-, oro-, and hypo-pharynx, nasal cavity, and paranasal sinuses; larynx; esophagus; stomach; pancreas; liver; kidney (body and pelvis); ureter; urinary bladder; uterine cervix; and bone marrow (myeloid leukemia). Colorectal cancer is seen to be associated with cigarette smoking, although there is insufficient evidence for it to be causal. Ninety percent of all lung cancer deaths in men and 80% in women are caused by smoking. Research has clearly indicated causal associations between active smoking and adverse reproductive outcomes, chronic obstructive pulmonary disease, and cardiovascular diseases. Studies on bidi smoking, the most common form of tobacco smoking in India, provide evidence toward causality of it as carcinogenic substance.<sup>[3]</sup> Case–control studies demonstrate a strong association of bidi smoking with cancers at various sites, such as oral cavity (including subsites), pharynx, larynx, esophagus, lung, and stomach. The research has indicated the significant trends with the duration and number of bidi smoked with causation of any type of cancer; passive smoking also attributed to diseases related to tobacco consumption.<sup>[3]</sup>

### Prevalence of various smoking tobacco in India

People smoke more tobacco in urban areas as compared with rural mind. With increase in age, smoking prevalence increases, and in India, males smoke more tobacco as compared with females. As compared with the urban area, there is more consumption of bidi and hookah in the rural areas. Daily cigarette smoking is about 6% compared with bidi smoking, which is 10%. In total, 63% of cigarette smokers smoke cigarette every day, whereas 81% of bidi smokers smoke bidi every day. In rural and urban areas, prevalence of daily cigarette smoking is 3% and 5%, respectively, whereas that of daily bidi smoking is 9% and 5%, respectively.<sup>[4]</sup>

### Prevalence of SLT In India

About 26% of all adults in India use SLT by chewing, applying it to the teeth and gums, or by sniffing. Consumption of SLT (26%) is more prevalent than various smoking tobacco. Of the 26% of all adults who use SLT, 21% use SLT every day and the other 5% use it occasionally. A little more than 2% of the adults who were SLT users in the past, either daily or occasionally, have since stopped such use completely. Use of SLT among males (33%) is higher than females (18%); in contrast, smoking has a sharp difference between the two genders. In rural areas, 29% of adults use SLT, whereas the figure is 18% in urban areas.<sup>[4]</sup>

### Social inequalities and socioeconomic status effect on tobacco consumption in India

In India, tobacco consumption is more prevalent among the disadvantaged group and they face higher exposure of tobacco harms. Hiscock reported in a review that population with lower socioeconomic status had a more inclination toward tobacco consumption and quit attempts are less likely to be successful in these individuals mainly due to reduced community support for quitting, less motivation to quit, very strong addiction, more likelihood not to complete pharmaceutical and behavioral intervention for tobacco quitting, psychological problems such as lack of self-efficacy, and tobacco industry marketing.<sup>[1]</sup> Reid elaborated in his survey that socioeconomic disparities exist at multiple stages in the path to smoking cessation. Potential effects on socioeconomic disparities should be considered when implementing cessation interventions.<sup>[5]</sup> Survey conducted by Thakur *et al.* in 2013 highlighted variations to geographical regions in the association between socioeconomic attributes with tobacco consumption and further revealed consistent inverse gradients for both smoking and SLT use in India.<sup>[6]</sup>

Indicators of socioeconomic position vary across studies; often education, occupation, and income level are used interchangeably to measure socioeconomic position. It is essential to examine multiple indicators of socioeconomic position simultaneously and one should be able to understand combined impact and thereby provide more detailed information of social inequalities in tobacco use. Glorian *et al.* in 2004 concluded that for researchers to gain a more complete understanding of socioeconomic indicators related to tobacco usage, others have noted the importance of considering multiple indicators of socioeconomic position in understanding patterns of tobacco use. Education and occupation are likely to operate through differing pathways. Education is one of the most widely used indicators of socioeconomic position, given that it is easy to measure, applicable to individuals both inside and outside the labor force, and stable across the life course. It has consistently been shown to be a strong correlation of tobacco use, both in India and elsewhere.<sup>[7]</sup>

Survey by Corsi and Subramanian in 2014 assessed socioeconomic inequalities in smoking behavior among males in India and reported that people who were wealthier, more educated, and having a decent job were more prone to cigarette smoking, and on the other side, people who are less educated with poor socioeconomic status had a habit of bidi smoking. This unusual variation in socioeconomic gradients in consumption of two smoking habits reported among the males raises serious concern and curiosity to tackle this problem. Also, a greater concern that is ignored in many studies is growing prevalence of dual tobacco consumption among the population and forming a tobacco quit strategy.<sup>[8]</sup>

Several studies have shown inverse gradients in tobacco use in India (with the exception of cigarette use) with generally greater use among poor, less educated, and disadvantaged caste and tribe groups. The patterns of tobacco consumption can be attributed

to differences in the penetration of tobacco control policies and variations in health awareness and consequences of tobacco use. Tobacco use disparities have also been linked to differentials in uptake among adolescents, type and quality of products used and patterns in the cessation of use, with education, social norms, and cultural practices being important drivers.

In India, where multiple forms of tobacco exist, social patterning of tobacco will be an important driver of inequalities in morbidity and mortality from noncommunicable diseases (NCDs) moving ahead. Monitoring changes in the socioeconomic inequalities in tobacco use may help in understanding the directions of this change, thereby identifying knowledge/research gaps in existing interventions in order to avert future disease burdens.

### Sociocultural factors influencing tobacco consumption in India

Prevalence studies of tobacco use in India have shown wide variations between urban and rural areas, regions, age, gender, education, and other sociodemographic variables across the country.

There has also been a complex interplay of sociocultural factors that not only influenced the acceptance or rejection of tobacco by sections of society but also determined the patterns of use. In ancient India, smoking tobacco in the joint family was considered as a taboo and was mostly consumed by the dominant male members of the family. The younger members of the family avoid consumption of tobacco products in presence of elder family members. The practice of members of different generations smoking together, in a home setting, is rare even today though modernity has led to some relaxation of these rules.

With advent of 20<sup>th</sup> century, many joint families segregated to nuclear families raised the consumption of tobacco prevalence among the population. Ironically, smoking was considered as a taboo and chewing tobacco was not, and practiced by many individuals. Inclusion of tobacco as one of the key ingredients of paan highlights the importance of this product and wide social acceptability of tobacco chewing in ancient India. The social acceptance and consumption of paan increased further during the Mughal era and paan chewing became a widely prevalent form of SLT use in India. Women consumed paan for cosmetic reasons as chewing it produced a bright red juice that colored their mouth and lips.

Smoking by women in India is still socially unacceptable, but SLT use is common and on a rise. Currently, 70 millions of women >15 years of age consume SLT. The key indicator for SLT usage among females is to-do difficult and laborious tasks with ease.

Using SLT during pregnancy results in the following:  
70% higher risk of anemia in pregnant women  
two to three times higher rate of low birthweight  
two to three times higher rate of stillbirth

The relative risk of oral cancer among women who consume tobacco is eight times higher than that for men, and the relative risk of cardiovascular disease is two to four times higher than in men. Relative risk of all-cause mortality due to SLT use is highest among women.<sup>[9,10]</sup>

### Determinants of tobacco use in India

Determinants of SLT use are gender, wealth index, and belonging to a scheduled tribe. Peer pressure, exposure, advertisements, parental use, lack of awareness, and potential health risks conferred higher risk of tobacco consumption. Consumption of tobacco is higher in the North India and lowest in the West India. Misconception with SLT and smoking tobacco is that it is considered good for dental health, helps in weight reduction, suppress hunger, and can be used as analgesia for dental pain.

### Global adult tobacco Survey—2010 V/S 2016-2017 (India)

Global Adult Tobacco Survey (GATS) 2016–2017, India, has witnessed an overall decline in the number of tobacco users in past 7 years, especially among the age group of 15–24 years.<sup>[11,12]</sup>

According to the survey details, 61.9% adults thought of quitting cigarettes, 53.8% thought of quitting bidi, and 46.2% adults thought of quitting SLT mainly due to the warning signs on the tobacco packs.

GATS 2016–2017 was conducted by the Union health ministry with technical assistance from the World Health Organization (WHO) and Centers for Disease Control and Prevention, United States. It was conducted in 30 states of India, encompassing a total of 74,037 individuals were interviewed over the period of 6 months from August 2016 to February 2017.

According to the survey, there has been a decline among the tobacco users from about 34.6% in GATS-I in 2009–2010 to 28.6% in GATS-II in 2016–2017, and interestingly, the tobacco consumption among the 15–24 years of the population has decreased by 18% from GATS-I to GATS-II.

### Average expenditure on tobacco

The average expenditure incurred by an urban respondent in buying cigarettes and SLT products is higher than their rural counterparts, whereas it is almost same in the case of bidis.<sup>[11,12]</sup> The educational level of the respondents reveals that across all levels of education categories, the highest amount of money is spent in buying cigarettes followed by SLT and bidis. Those who have secondary and above education incur more expenditure in buying cigarettes than those from other levels of education categories. Students spend the highest amount of money (Rs12.60) in buying cigarettes in the last purchase than all other occupational categories, whereas homemakers incur the highest expenditure (Rs8.50) in the last purchase of SLT.

## Conclusion

India is a large country with each state having its own set of regional and cultural variations. Determinants of tobacco consumption have been studied in detail and socioeconomic criterion had been identified as a major indicator for the same.

Risk of smoking tobacco in the poorest quintile was more than the richest quintile across all states and UTs except Bihar, Nagaland, and Tripura. Most of the states in Indian reported fall in smoking and SLT consumption with rising wealth quintile barring a few exceptions. Most of the North-Eastern states reported high consumption of SLT and increase in consumption with rising wealth quintile.<sup>[13]</sup> Primarily, economic determinants act as predictors of tobacco consumption. Social inequalities are both a cause and derivative of long-term tobacco consumption as it often replaces essential expenditures of family and the resulting morbidity and mortality widen the gap further.

### Future recommendations

Tobacco prevention and control policies in India have largely focused on awareness and behavior change campaigns, with much weaker implementation of more effective population level interventions, such as taxation increases and the banning of smoking in public places. Recent taxation on cigarettes and bidis was 38% and 9%, respectively, whereas according to WHO, it should be around 70%. Although the new government in India has increased tobacco prices, there is still a substantial difference between the pricing of premium and local cigarette, which is encouraging product substitution, and bidis continue to be subjected to very low taxation.

Simulation of tobacco interventions has shown that 1 million myocardial infarctions and 0.6 million stroke deaths in India could be averted over the next decade, if taxation on cigarettes was increased by 300%.<sup>[14]</sup>

Public policy and health promotion interventions (a part of the sociopolitical context) need to have an inequality perspective to have desired impact and accordingly modify tobacco control policies. Uniform population-based approach of health education had worsened social inequalities as major benefits are harnessed by upper economic classes. Tobacco control measures that differentially target the poor include banning of advertisements, raising tobacco prices, work place interventions, free supply of cessation aids, and telephone help lines. Taxation has been reported as the most effective policy measure to curb smoking epidemic in poor. A 10% increase in bidi prices cut down bidi consumption by 9.2%.

All in all, addressing the inequalities in tobacco consumption did not necessitate introducing new set of interventions for tobacco control, but modifying the existing ones. To reduce the mortality and morbidity related to tobacco, there should be suitable policy reformation with interventions like inclusion of

large public health programs in relation with NCD program to solve this problem holistically.

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### Conflicts of interest

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## References

1. WHO. Press release on tobacco 2014. Available from: [www.searo.who.int/mediacentre/features/2014/taxing-tobacco-to-protect-the-health-poor/en/](http://www.searo.who.int/mediacentre/features/2014/taxing-tobacco-to-protect-the-health-poor/en/). [Last accessed on 2017 Oct 28].
2. Smokeless Tobacco & public health in India. Available from: [https://mafiadoc.com/smokeless-tobacco-and-public-health-in-india-report-\\_599ae6a71723dd09401acdee.html](https://mafiadoc.com/smokeless-tobacco-and-public-health-in-india-report-_599ae6a71723dd09401acdee.html). [Last accessed on 2017 Oct 28].
3. Mishra GA., Pimple SA, Shastri SS. An overview of the tobacco problem in India. *Indian J Med Paediatr Oncol* 2012;33:139-45.
4. WHO. Tobacco Free Initiative. Global Adult Tobacco Survey (GATS) India report 2009-2010. Geneva, Switzerland: World Health Organization; 2011.
5. Hiscock R, Bauld L, Amos A, Fidler JA, Munafò M. Socioeconomic status and smoking: A review. *Ann NY Acad Sci* 2012;1248:107-23.
6. Thakur JS, Prinja S, Bhatnagar N, Rana SK, Sinha DN, Singh PK. Widespread inequalities in smoking & smokeless tobacco consumption across wealth quintiles in States of India: Need for targeted interventions. *Indian J Med Res* 2015;141:789-98.
7. Sorensen G, Gupta PC, Pednekar MS. Social disparities in tobacco use in Mumbai, India: The roles of occupation, education, and gender. *Am J Public Health* 2005;95:1003-8.
8. Corsi DJ, Subramanian SV. Divergent socio-economic gradients in smoking by type of tobacco use in India [Short communication]. *Int J Tuberc Lung Dis*. 2014;18:122-4.
9. Tobacco and women's health. Available from <https://women.smokefree.gov/11-harmful-effects-of-smoking-on-women's-health.aspx>. [Last accessed on 2017 Oct 28].
10. Reichert VC, Seltzer V, Efferen LS, Kohn N. Women and tobacco dependence. *Obstet Gynecol Clin North Am* 2009;36:877-90.
11. GATS-II India (2017). Available from [http://www.searo.who.int/india/mediacentre/events/2017/gats2\\_india.pdf?ua=1](http://www.searo.who.int/india/mediacentre/events/2017/gats2_india.pdf?ua=1). [Last accessed on 2017 Oct 28].
12. Agrawal S, Karan A, Selvaraj S, Bhan N, Subramanian SV, Millett C. Socio-economic patterning of tobacco use in Indian states. *Int J Tuberc Lung Dis*. 2013;17:1110-7.
13. Sreeramareddy CT, Pradhan PM, Mir IA, Sin S. Smoking and smokeless tobacco use in nine South and Southeast Asian countries: Prevalence estimates and social determinants from demographic and health surveys. *Popul Health Metr* 2014;12:22.
14. Asaria P, Chisholm D, Mathers C, Ezzati M, Beaglehole R. Chronic disease prevention: Health effects and financial costs of strategies to reduce salt intake and control tobacco use. *Lancet* 2007;370:2044-53.