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**Between 2015 and 2020, smokeless tobacco use among tribal women in India saw a gradual decline. This was primarily influenced by decreasing rural-urban disparities, improving educational and economic status, and targeted public health measures.**

## BACKGROUND

The tobacco epidemic is one of the biggest public health threats the world has ever faced - killing more than 8 million people per year around the world. SLT - such as *pan masala*, *khaini*, *gutkha* etc. is used by all age groups in India. According to Global Adult Tobacco Survey 2016-17 (GATS-2), MOHFW, GoI, 12.8% women in India consume SLT regularly. The objectives of the study were to assess the change from 2015 to 2020 in the use of SLT among tribal women in each state of India; to identify spatially clustered hot spot areas and associated factors with SLT use among tribal women in reproductive age group.

## METHODS

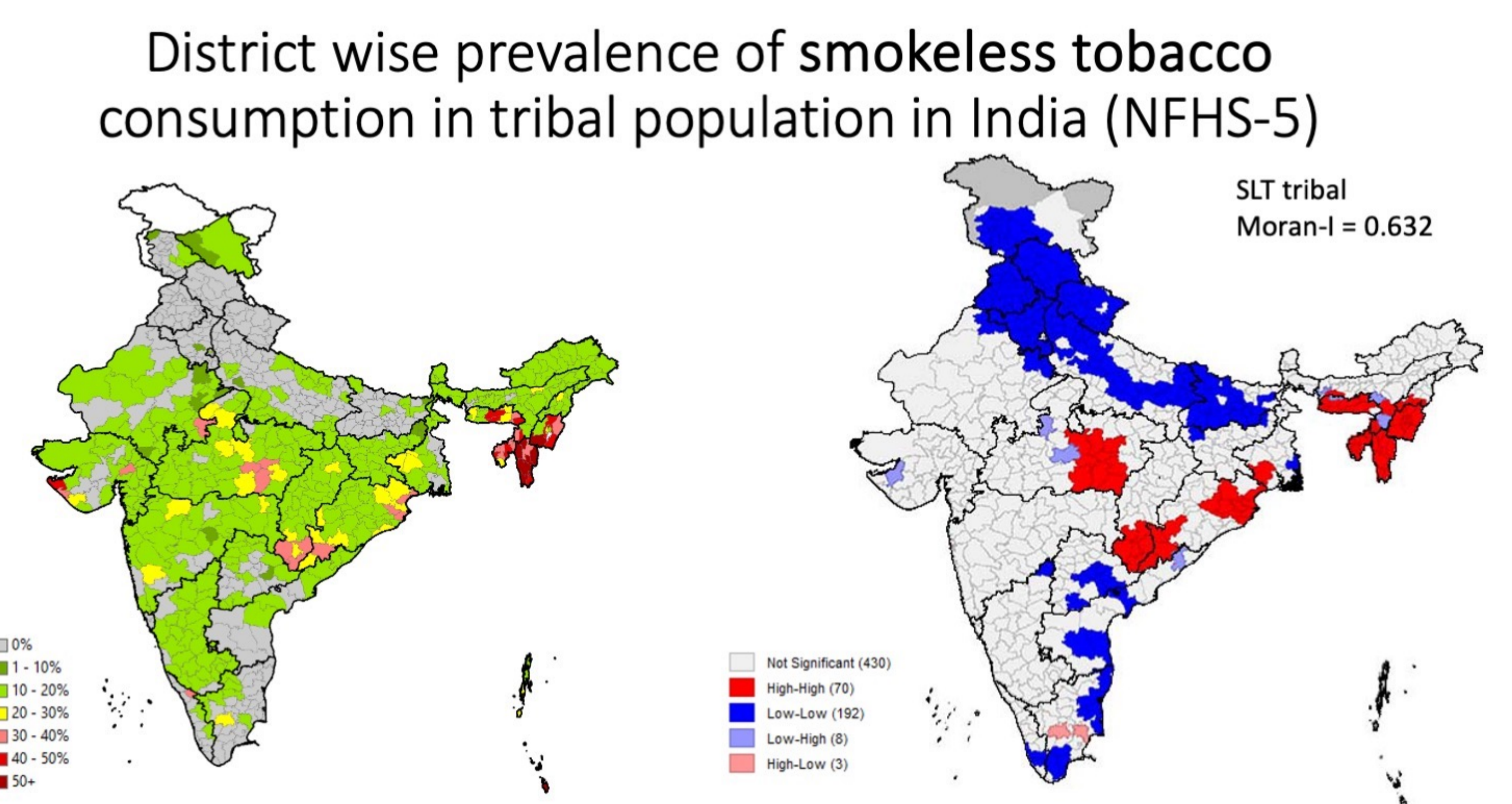
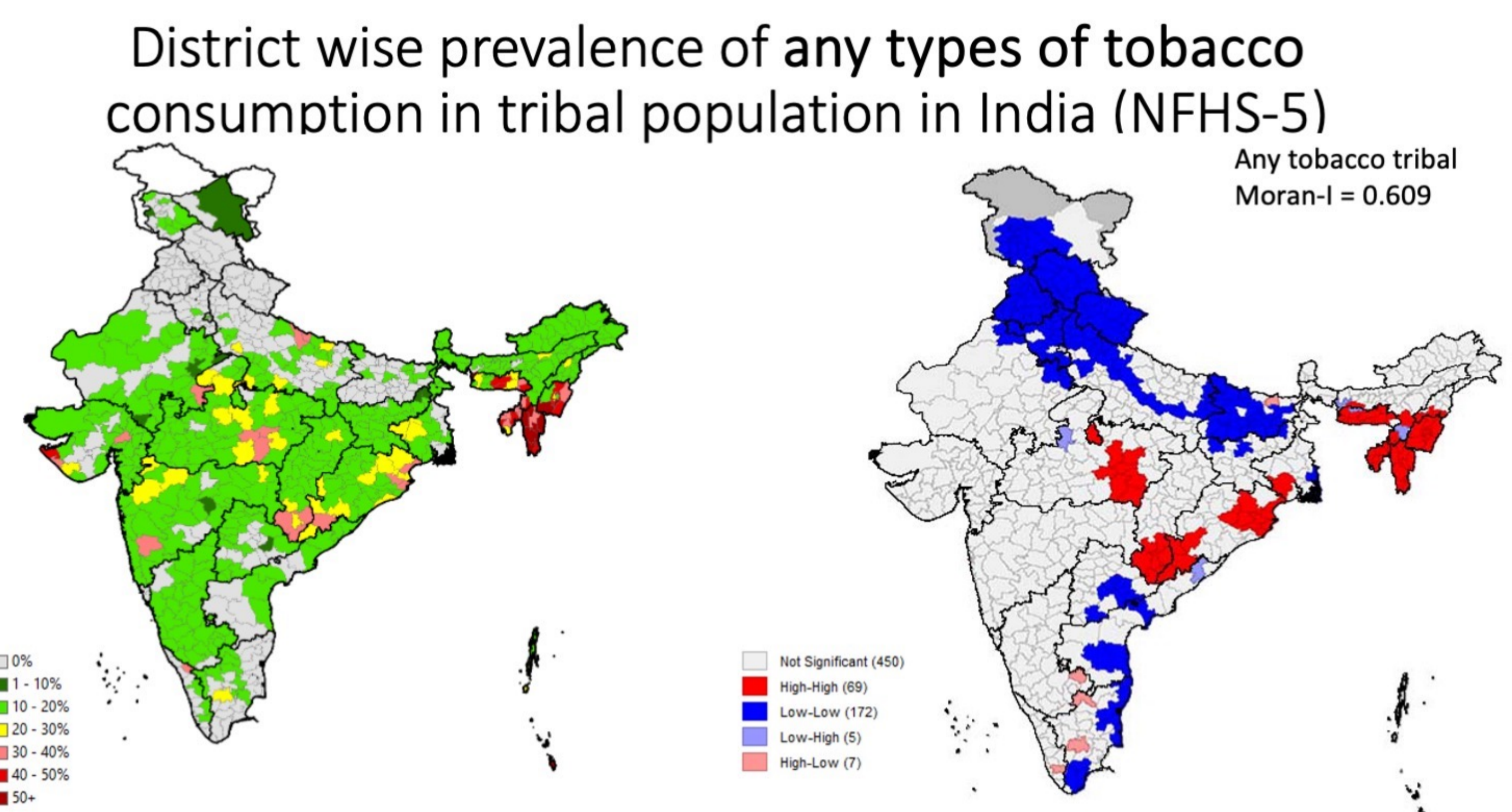
Spatial clustering and spatial modelling techniques (Hotspot analysis, Getis-ord  $G_i^*$ ) were used for analysis of secondary data collected in National Family Health Survey 4 and 5. The data from the National Family Health Surveys (NFHS-4 and NFHS-5) conducted during 2015-16 and 2019-21 was used to compute the prevalence of SLT use and a set of other indicators known in the literature to be associated with SLT use. The study was approved by the institute ethics committee (ICMR NIMS IEC No. 4/2023 dated 17.03.2023).

## RESULTS

**Table: Spatio-temporal analysis of the use of smokeless tobacco (SLT) and associated factors among tribal women in India from 2015 to 2020, using NFHS-4 (2015-16) and NFHS-5 (2019-21) data.**

Category	NFHS-4 (2015-16)	NFHS-5 (2019-21)	Observation/Trend
Prevalence of SLT use among Tribal Women	17%	11%	Decrease in SLT usage among tribal women from NFHS-4 to NFHS-5.
Prevalence of SLT use among Women (15-49)	7%	4%	General reduction in tobacco usage among women in the same age group.
Rural vs Urban	Higher SLT use in rural areas	Higher SLT use in rural areas	SLT use remains more prevalent in rural areas, especially among tribal populations.
High SLT Use Regions	Northeastern states (Mizoram, Manipur)	Northeastern states (Mizoram, Manipur)	Tribal-dominated northeastern states report higher SLT usage.
Education	Higher usage among uneducated tribal women	Lower usage among educated women	SLT use decreases with higher educational attainment.
Wealth Quintile	Higher usage in lowest wealth quintile	Lower usage in wealthier quintiles	SLT usage is more prevalent among poorer tribal women.
Health Concerns	Higher incidence of oral health issues, pregnancy complications, infertility	Continued health risks linked to SLT use	SLT use correlates with significant health risks, particularly oral health.
Public Health Interventions	Initial public health campaigns and anti-tobacco awareness efforts	Enhanced focus on tobacco cessation, community interventions	Increased efforts to curb tobacco usage have contributed to the decline in prevalence.

## RESULTS CONTINUED



## CONCLUSIONS

1. A noticeable reduction in tobacco use among tribal women over this period, following the overall trend of declining tobacco usage in India.
2. In both surveys, SLT use was higher in rural areas compared to urban ones, with rural women showing greater prevalence.
3. The geographical distribution of high SLT use was found in northeastern states like Mizoram and Manipur where tribal populations are concentrated.
4. Reduction in SLT use among tribal women is attributed to increased awareness, government interventions, and public health campaigns.

## ADDITIONAL KEY INFORMATION

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Conflicts of Interest: Nil