Quality of care at ART clinic in Shashamanne referral hospital, West Arsi zone, Oromina National Regional State, South Ethiopia

Melese Belayneh [*] [1] *, Mastewal Tamiru* [2]

ABSTRACT

Background

Low income nations like Ethiopia, which are heavily affected by HIV pandemic, health system needs to provide comprehensive services for escalating numbers of HIV positive patients. While demand is increasing, resources are not expanding at desirable rates to meet these demands. This leads to the risk of running poor quality antiretroviral therapy in resource limited health facilities. However, there is paucity of research based evidences on the quality of health services in the country in general, and on anti retroviral therapy in particular.

Objective

To assess quality of care at antiretroviral therapy clinic in Shashamanne Referral Hospital.

Method

A cross-sectional study was conducted in Shashamanne Referral hospital from May 30 to June 30,2017.The study population were selected people living with HIV, antiretroviral therapy clinics and health care workers in antiretroviral therapy clinics during the study period. Stratified sampling method was used to identify study population. Interviewer administered questionnaire was employed among 204 patients to assess their satisfaction. Medical records review check list was used to get vital information from documents of 354 patients. Interview guide was also used to assess providers' view on services. Data were entered by using SPSS version 20 and analyzed using descriptive, bivariate and multivariate techniques. Ethical clearance was obtained from Jimma University College of Public Health and Medical Sciences.

Results

Resources required for implementation of antiretroviral therapy wee available as per recommendation by the national Guideline. However, scarcity of some OIs and ARV drugs and absence of a few laboratory services seen in the hospital. HIV/AIDS care given in line with national guidelines but study revealed that only 42.7% of clients eligible for isoniazid preventive therapy actually taken it. Average mean satisfaction score of patients was 2.51 and significant dissatisfaction seen on waiting time and on knowing what meant results of laboratory tests such as CD4 for their health but overall quality of care at ART clinic rated as good by 49% of patient.

Conclusion and Recommendation

Though services in ART clinic provided in line with the national guideline, majority of clients haven't received INH. The study results revealed strong association between IPT and TB disease on binary logistic regression. Despite 49% clients rated the quality of ART clinic as good, majority of clients were dissatisfied on knowing what meant results of laboratory tests.

INTRODUCTION

HIV/AIDS continues to be a major public health issue which posed a great challenge to our Globe for the past three decades.Still HIV spreading rapidly and affecting all sectors of society. Over 25 million people passed away during this period by HIV/AIDS. There were more than 34 million people living with HIV in the World in 2011.[1]

There is no cure for HIV infection.However; effective treatment with ARV drugs can control the virus so that people with HIV can enjoy healthy and productive life. In 2011 more than 8 million people living with HIV were receiving ART in low and middle income countries. Another 7 million people need to be enrolled in treatment to meet the target of providing ART to 15 million people by 2015[1].

Ethiopia started ART service free of charge in 2005 in a few hospitals.Now the service expanded to health centers with aim of Universal Coverage to ART [9].
In Ethiopia around 1.2 million people live with HIV [2]. In low income nations like Ethiopia, heavily affected by the HIV pandemic health systems need to provide comprehensive care and treatment services for escalating numbers of patients who are HIV positive.While demand is increasing resources are not expanding at desirable rates to meet this demand [8]. HIV/AIDS care and treatment will need to meet service demands primarily through improvements in system efficiency and more effective utilization of existing resources i.e. through provision of quality services.Assessment of existing quality of service in ART clinic will provide health managers and professionals with useful information that could lead to reforms that encourage quality care in the health facilities. AIDS is incurable disease caused by human immune deficiency virus. The main mode of HIV/AIDS transmission is unsafe sexual intercourse and contaminated body fluids. Children acquire infection from their mother. HIV/AIDS attacks all segment of the society- young, adult, male, female, rich and the poor. However, commercial sex workers, handicapped and IDUs are the more vulnerable groups to HIV infection. AIDS is a major public health problem affecting entire population of the globe since the past three decades. Starting from 1980s over 25 million people dead because of AIDS and in 2011 more than 34 million people is living with HIV infection at different corners of the world. Sub-Saharan Africa is the most affected region where nearly 69% of people living with HIV found [1]. In Ethiopia around 1.2 million people live with HIV.Country's epidemic of HIV infection is marked by pockets of high prevalence in urban areas and among women. In 2009 the prevalence of HIV infection was 7.7% in urban areas and 0.9% in rural areas, 2.8% among females as compared to 1.8% among male [1]. Less than one third of Ethiopia's HIV positive patients are currently enrolled in comprehensive care and support services. Despite strong government effort, only 62% of patients who are enrolled to HIV care receiving ART.This is mainly due to human resource shortage, its disproportionate distribution grossly skewed to urban centers together with low retention, moral and job satisfaction causing high turnover among health care workers of all categories. And become the challenges of the ART program. Other most prominent challenges such as inadequate infrastructure, networking, low capacities of service delivery and poor quality of care at all levels remain to be addressed to achieve intended out comes [2, 5]. Low income nations like Ethiopia, which affected heavily by the HIV pandemic health systems need to provide pre antiretroviral care and chronic ART follow up and treatment services for escalating numbers of patients who are HIV positive for the predictable future. While demand is increasing resources are not expanding at desirable rates to meet this demand. The ever increasing demand for ART services runs the risks of poor quality services in public health facility ART clinics that are over burdened and under resourced[8]. Therefore, this study aimed toward improving quality of HIV/AIDS care and treatment services provided at Shashamanne referral hospital.

Smokeless tobacco (ST) refers to indigenous smokeless tobacco products mostly consumed in South Asia, including but not limited to betel quid with tobacco, tobacco-lime mixture, gutkha, oral tobacco, zarda, and paan masala.[1,2] Scientific evidence corroborates that use of ST products is associated with oral cancer,[3,4] nicotine addiction,[5] oral

pain,[6] cardiovascular diseases,[7] hypertension,[8] diabetes,[9] loss in bone density,[10] and problems during pregnancy and following childbirth.[11] WHO South-East Asia region is home to 90% of global ST users with over 250 million of such users living in the region. Myriad forms of ST products are used in different parts of the region. Based on the available literature, prevalence of ST use in the region varies from 1.1% in Thailand to 51.4% in Myanmar among men, while it ranges from 1.9% in Timor-Leste to 27.9% in Bangladesh among women.[12] Global Adult Tobacco Survey (GATS) India revealed that more than one-third (35%) of adults in India use tobacco in one form or the other. Among them, 21 percent adults use only ST, 9 percent only smoke, and 5 percent smoke as well as use ST. The extent of use of ST products among Indian men is 33% and among Indian women is 18%. Among both sexes, the prevalence of ST use in the country is higher than the prevalence of smoking-prevalence of smoking among Indian men is 24% and among Indian women is 3%.[13] Notably, this difference is more pronounced for women than for men. Despite these undesirable trends, ST use among Indians remains an understudied public health problem. In particular, limited research is available on the use of these products among Indian women.

The prevalence of smoking among Indian women is low in most states on account of social unacceptability. However, in contrast, use of ST among women is socially acceptable in Indian context; in fact, the use of these products is deeply embedded in the socio-cultural milieu of the populations in several states. The ST epidemic in India is notable for the variety of products that are consumed across the states. Moreover, simultaneous use of multiple forms of ST-poly ST use-is common among Indian women in certain states.[14] Besides, there is huge variation in the prevalence of ST use among women across different states in India, ranging from 0.2% in Punjab to 49.1% in Mizoram.[13] Given the socioeconomic and cultural diversity of the country, the underlying determinants of ST use among women are expected to vary across different states in India. Therefore, the current gap in the understanding of the dynamics of ST consumption among Indian women needs to be addressed by

ascertaining the epidemiological determinants of ST use in this group with a special focus on high-prevalence states. Such analyses would be critical for designing targeted and scalable tobacco control interventions aimed at achieving overall reduction in ST use among women at the population level in these high priority states. In this background, this study examines predictors of current ST use among Indian women aged 15 years and above in selected high-prevalence states using data from GATS-India 2010.

MATERIAL AND METHODS
GATS is a nationally representative household survey that uses a standardized questionnaire, sample design, and procedures for data collection and management. The survey provides cross-sectional estimates for the country as a whole as well as by state, residence (rural/urban), and gender with respect to adults aged 15 years and above.[13] Primary data of GATS-India 2010 was used in this study, particularly the responses to relevant questions from the survey questionnaire concerning use of various ST products and related parameters. To start with, percentage of current female ST users aged 15 years and above according to states was calculated to identify the states with high prevalence of ST use among women. For this study, high-prevalence states were defined as those states in which more than one-third of the female population aged 15 years and above currently consumes ST. Thereafter, in these identified states, percentage of ST use among women according to type of ST product was studied. Besides, few selected parameters, including those related to tobacco cessation, of current adult female ST users in these high-prevalence states were compared with those of current adult female ST users in the remaining states in India.

A non-random sub sample consisting of women in these high-prevalence states was used for univariate and multivariate analyses. The study population was split into two groups-those currently using ST daily or occasionally and those currently not using it at all. A binary logistic regression model with presence or absence of current ST use as the dependent variable was used to identify univariate predictors of current ST use among women. Significant univariate predictors were used to build a multivariate logistic

regression model using SPSS 23.0 software for complex samples.

The variables related to social determinants used in these analyses included age, place of residence (urban/rural), education (highest level completed), and occupation. For these analyses, educational level was divided into four mutually exclusive categories: no formal schooling, less than primary, primary completed or less than secondary, and secondary school or above. Occupational categories were based on a question that asked about the primary work status of the respondent in the past 12 months. In this study, the responses to this question were recorded in five mutually exclusive categories: employed, self-employed, homemaker, student, and unemployed/retired.

The GATS data used in these analyses consisted of 35529 completed interviews of adult women. Continuous data are presented as mean ± standard deviation (SD); ratios/prevalence are presented as percent. Between-group continuous variables were compared by t-test; categorical variables were compared by chi-square test. P value of <0.05 was considered statistically significant. The 95% confidence intervals (CI) are given, wherever appropriate.

RESULTS
Nine states-Mizoram, Tripura, Chhattisgarh, Manipur, Nagaland, Meghalaya, Odisha, Jharkhand, and Bihar-have more than 33.3% prevalence of current ST use among adult women aged 15 years and above [Table 1]. Different forms of ST products are consumed by women in these nine high-prevalence states, including betel quid with tobacco, khaini or tobacco-lime mixture, gutkha or tobacco-lime and areca nut mixture, oral tobacco (snuff, mishri, gul, and gudakhu), and other ST products (pan masala, betel quid without tobacco, and nasal use of snuff).

Table 1 Current Users of ST Products among Women According to States

State	ST (-) Women	ST (+) Women	Total Women	% ST (+) Women	% ST (+) Women (weighted)
Mizoram	376	416	792	52.5	49.1
Tripura	396	357	753	47.4	43.5
Chhattisgarh	603	464	1067	43.5	41.6
Manipur	432	307	739	41.5	37
Nagaland	443	275	718	38.3	36.6
Meghalaya	494	267	761	35.1	35.9
Odisha	688	368	1056	34.8	35.5
Jharkhand	706	376	1082	34.8	35.4
Bihar	810	441	1251	35.3	34.6
Arunachal Pradesh	497	189	686	27.6	27.7
Assam	1962	651	2613	24.9	25.3
Sikkim	586	181	767	23.6	23.3
Maharashtra	1878	461	2339	19.7	18.9
Madhya Pradesh	793	191	984	19.4	18.4
West Bengal	1358	261	1619	16.1	17.8
Karnataka	824	159	983	16.2	16
Andhra Pradesh	1214	174	1388	12.5	14.5
Uttar Pradesh	1764	335	2099	16.0	13.7
Gujarat	1180	152	1332	11.4	11
Kerala	919	86	1005	8.6	8.5
Rajasthan	942	95	1037	9.2	8.5
Tamil Nadu	1193	118	1311	9.0	8.4

Puducherry	974	71	1045	6.8	6.3
Jammu & Kashmir	861	41	902	4.5	4.1
Goa	862	30	892	3.4	3.2
Delhi	927	29	956	3.0	2.8
Uttarakhand	1004	25	1029	2.4	2.1
Haryana	1042	15	1057	1.4	1.3
Chandigarh	987	14	1001	1.4	1.1
Himachal Pradesh	1072	8	1080	0.7	0.6
Punjab	1182	3	1185	0.3	0.2
India	28969	6560	35529	18.5	18.4

ST: Smokeless Tobacco

Table 2 shows extent of current ST use among women in these states according to type of ST product. Maximum consumption of betel quid with tobacco among adult Indian women is in Tripura (38.9%), where as 34.3% of adult women in Mizoram consume khaini. Consumption of oral tobacco is extremely high in Chhattisgarh where 33.6% adult women consume these products. The consumption of gutkha among the female population is maximum in Nagaland (7.4%) followed by Chhattisgarh (6.7%) and Mizoram (6.2%).

Table 2 Current ST use among Women in the Nine High Prevalence States According to the Type of ST

State	Betel Quid with Tobacco	Khaini or Tobacco-lime Mixture	Gutkha or Tobacco-lime and Areca Nut Mixture	Oral Tobacco (snuff, mishri, gul, and gudakhu)	Other ST (pan masala, betel quid without tobacco, and nasal use of snuff)	Overall Use (any ST)
Mizoram	11.7*	34.3*	6.2*	5.6*	18.1*	49.1
Tripura	38.9*	2.4	1.8	0.4	1.7	43.5
Chhattisgarh	5.7*	15.9*	6.7*	33.6*	5.4	41.6
Manipur	23.8*	10*	3.2*	0.3	10.5*	37
Nagaland	22.6*	17.4*	7.4*	0.5	15.3*	36.6
Meghalaya	23.4*	4.2	1.4	2.6	8*	35.9
Odisha	12.9*	9.6*	1.1	12.6*	13.2*	35.5
Jharkhand	0.8	13.6*	0.4	9.2*	16.2*	35.4
Bihar	2	2.9	0.6	5.5	29.8*	34.6
India	4.9	4.7	2.9	6.3	5.4	18.4

* Usage greater than the country average
ST: Smokeless Tobacco

Some important parameters-mean age at initiation of daily use of ST, knowledge about harmful health effects of ST consumption, and parameters related to tobacco cessation-differed significantly between the current female ST users in the nine high-prevalence states and those in the remaining states [Table 3]. Interestingly, the proportion of current female ST users wanting to quit ST use was significantly higher in these nine states than in the remaining states (39.8% versus 34.0%; P < 0.001); still, significantly less proportion of these users in the nine states actually made quit attempt(s) in the last 12 months prior to GATS compared to those in the remaining states (22.2% versus 28.9%; P < 0.005).

Table 3 Comparing Selected Parameters of Current Female ST Users Aged 15 Years and Above in the Nine High Prevalence States with Those of Current Female ST Users in the Remaining States

Parameter	Female ST Users in Nine High-prevalence States (n=3271)	Female ST Users in Remaining States (n=3289)	P-value
Average prevalence of ST consumption among women	39.80%	12.00%	< 0.001
Mean age (in years)	n=3271; 38.4 +/- 14.2	n=3289; 43.6 +/- 15.4	< 0.005
Mean age at initiation of daily use of ST (in years)*	n=2230; 21.2 +/- 11.6	n=2175; 24.2 +/- 12.6	< 0.001
Believes that using ST causes serious illness	n=3266; 2814 (86.1%)	n=3279; 2637 (80.4%)	< 0.001
Interested in quitting ST	n=3271; 1302 (39.8%)	n=3289; 1118 (34.0%)	< 0.001
Made quit attempt(s) in last twelve months†	n=3248; 722 (22.2%)	n=3260; 941 (28.9%)	< 0.005
Advised to quit ST by HCP in last twelve months†	n=1244; 287 (23.1%)	n=1682; 570 (33.9%)	< 0.001
Used counseling, including at a cessation clinic, to try and stop using ST†	n=722; 35 (4.8%)	n=941; 144 (15.3%)	< 0.001

Including all current female ST users aged 15 years and above
† Excluding former users of ST who have abstained for less than 12 months
ST: Smokeless Tobacco; HCP: Healthcare Providers

The current use of ST among women in the nine high-prevalence states by age was higher among older adults (45.9% and 44.9% in the age groups 45–64 years and ≥65 years, respectively); the age gradient was significant (P < 0.001). The proportion of women currently consuming ST was higher in the rural areas than in the urban areas (41.6% versus 34.9%; P < 0.001). Among women in these nine states, only 27.0% of those at the highest educational level currently used ST as compared to 46.0% of those with no formal education; the education gradient being significant (P < 0.001). By occupation, prevalence of ST use among women was highest among the self-employed (50.6%) and employed (45.6%) categories. Notably, prevalence of current ST use was also high among female homemakers (38.5%) [Table 4].

Table 4 Comparison of Baseline Characteristics of Current Female ST Users (n=3271) and Current non-users (n=4949) aged 15 Years and Above in the Nine High Prevalence States

Parameter	ST Users	ST Non-users	P-value	Sample Size
Mean age (in years)	38.4 +/- 14.1	34.6 +/- 14.9	< 0.001	8219
Age (in years)			< 0.001	
15–24	n=457; 24.1%	n=1441; 75.9%		1898
25–44	n=1831; 43.9%	n=2339; 56.1%		4170
45–64	n=759; 45.9%	n=893; 54.1%		1652
65+	n=224; 44.9%	n=275; 55.1%		499
Residence			< 0.001	
Rural	n=2498; 41.6%	n=3508; 58.4%		6006
Urban	n=773; 34.9%	n=1440; 65.1%		2213
Occupation			< 0.001	
Government or NG employee	n=576; 45.6%	n=686; 54.4%		1262
Self-employed	n=746; 50.6%	n=727; 49.4%		1473

Homemaker	n=1682; 38.5%	n=2688; 61.5%	4370
Student	n=113; 16.9%	n=557; 83.1%	670
Unemployed or Retired	n=137; 34.6%	n=259; 65.4%	396
Education		< 0.001	
No formal education	n=1525; 46.0%	n=1793; 54.0%	3318
Less than primary	n=471; 43.4%	n=613; 56.6%	1084
Primary or less than secondary	n=863; 37.4%	n=1442; 62.6%	2305
Secondary or above	n=399; 27.0%	n=1078; 73%	1477

ST: Smokeless Tobacco; NG: Non Government

Table 5 tabulates the results of the multivariate logistic regression analysis predicting the socioeconomic and demographic correlates of current ST use among adult women in the nine high-prevalence states. The strong correlates of current ST use among women in these states are older age [odds Ratios (ORs) range from 1.98 in 25–44 years age group to 2.08 in ≥ 65 years age group], low education (ORs range from 1.48 in primary or less than secondary to 1.71 in no formal education), rural residence (OR 1.15), and certain occupational categories (ORs of 2.25, 1.84, and 1.45 for self-employed, employed, and homemakers, respectively).

Table 5 Predictors of Current ST Use Among Women Aged 15 Years and Above in the Nine High Prevalence States Using Multivariate Logistic Regression Analysis

Parameter	OR	95% CI	P-value
Place of Residence			< 0.05
Rural	1.15	(1.0, 1.3)	< 0.05
Urban (RC)	1.00		
Age (in years)			< 0.001
65+	2.08	(1.6, 2.6)	< 0.001
45–64	2.00	(1.7, 2.4)	< 0.001
25–44	1.98	(1.7, 2.3)	< 0.001
15–24 (RC)	1.00		
Education			< 0.001
No formal education	1.71	(1.5, 2.0)	< 0.001
Less than primary	1.63	(1.4, 1.9)	< 0.001
Primary or less than secondary	1.48	(1.3, 1.7)	< 0.001
Secondary or above (RC)	1.00		
Occupation			< 0.001
Self-employed	2.25	(1.7, 2.9)	< 0.001
Employed (Government/NG)	1.84	(1.4, 2.4)	< 0.001
Homemaker	1.45	(1.1, 1.8)	< 0.005
Unemployed or Retired	1.11	(0.8, 1.5)	> 0.05; NS
Student (RC)	1.00		

ST: Smokeless Tobacco; NG: Non-Government; RC: Reference Category; OR: Odds Ratio; CI: Confidence Interval; NS: Non-Significant

DISCUSSION

The prevalence of ST use among adult women varies significantly across states in India. This study based on GATS 2010 data shows that nine states in India- Mizoram, Tripura, Chhattisgarh, Manipur, Nagaland, Meghalaya, Odisha, Jharkhand, and Bihar-have more than 33.3% prevalence of current ST use among adult women aged 15 years and above, where as some other states such as Jammu & Kashmir, Goa, Delhi, Uttarakhand, Haryana, Chandigarh, Himachal Pradesh, and Punjab have less than 5.0% prevalence of current ST use among women. These findings are

consistent with the results of a similar study based on National Family Health Survey (NFHS) 2005–06 data which reported marked variation in chewing tobacco consumption among women across different states in India with distinctly higher prevalence in the northeastern states of India.[15] Another study reported distinctly high prevalence of ST use in central and eastern India, and in the northeastern states.[16] Notably, eight out of the nine high-prevalence states identified in this study are located in eastern/northeastern India. Future research should delve into the reasons for these pronounced inter-state differentials as these can provide useful insights to policy makers with regard to the likely effects of different public health policies on ST use among women in different states.

Many different forms of ST products are consumed by adult women in the nine high-prevalence states. Betel quid with tobacco is consumed mainly in Tripura, Manipur, Meghalaya, and Nagaland, while khaini or tobacco-lime mixture is consumed chiefly in Mizoram, Nagaland, Chhattisgarh, and Jharkhand. Gutkha or tobacco-lime and areca nut mixture is consumed mostly in Nagaland, Chhattisgarh, and Mizoram. Oral tobacco is popular in Chhattisgarh, Odisha, and Jharkhand. Regarding other ST products such as pan masala, betel quid without tobacco, and nasal use of snuff, prevalence is more in Bihar, Mizoram, Jharkhand, and Nagaland. Notably, there appears to be no distinct pattern in the variation in the types of ST products consumed among women across different states. In fact, literature shows that the predominant type of ST product consumed in any region depends on prevailing local beliefs and other socio-cultural determinants in that region.[12,15,17] In this light, it is of paramount importance that tobacco control measures and interventions, including tobacco cessation initiatives and awareness campaigns, in these high-prevalence states are customized according to the state-specific factors determining the type of ST use among women.

To the best of our knowledge, this is the first study in Indian context to compare selected outcomes of interest between current female ST users in the high-prevalence states and those in the remaining states, with special reference to tobacco cessation.

Interestingly, our study shows that the proportion of current female ST users believing that ST use causes serious illness and thus wanting to quit ST use was significantly higher in the nine high-prevalence states than in the remaining states. Still, significantly lesser proportion of female ST users in these nine states made quit attempt(s) in last 12 months; used counseling, including at a cessation clinic, to try and stop using ST; and were advised to quit ST by healthcare provider in last 12 months compared to those in the remaining states. Thus, our findings demonstrate an urgent requirement of closing the existing need-to-demand gap in the nine high-prevalence states in respect of providing adequate tobacco cessation facilities targeted at female ST users.

Our results indicate that, in the nine high-prevalence states, the use of ST in women is more common among those aged 25 years and above, those living in rural areas, less-educated, self-employed, government or non-government employees, and homemakers. The age and education gradients, and the rural preponderance observed in our study are consistent with the results of several previous studies conducted not only in India[14,15,16,18] but also in other countries of the South-East Asia region.[12,17,19,20] More significantly, it is important to note that unlike the country trend,[13] the prevalence of ST use among women in these nine states was highest among self-employed, government or non-government employees, and homemakers. The comparatively higher prevalence of ST use among homemakers corroborate that ST use among women is socially acceptable and well-embedded within the socio-cultural milieu of these states.

India is the second largest consumer and third largest producer of tobacco globally.[21] Tobacco use is a major public health challenge in India with more than 275 million adults consuming different tobacco products. Besides enacting comprehensive tobacco control legislation (COTPA, 2003), India was among the first few countries to ratify the WHO Framework Convention on Tobacco Control (WHO FCTC) in 2004. The National Tobacco Control Programme (NTCP) was piloted during the 11th Five Year Plan[22] and is being scaled-up during the 12th Five Year Plan. In the

context of ST, few individual states in India invoked the food safety laws in 2011 to ban gutkha and pan masala containing tobacco.[23] Since then, 34 states and union territories across the country have banned these products. However, despite such stringent initiatives, existing ST control policies in India seem inadequate as well as poorly implemented.[24]

To conclude, limited progress has been made by India so far to address the emerging public health threats posed by ST. On account of large scale use of ST products among adult Indian women, tobacco control policies and interventions that especially focus on female ST use need to be prioritized and effectively implemented. Such an approach would largely be in line with the spirit of the decision FCTC/COP7(12) adopted at the recently concluded seventh session of the Conference of the Parties to the WHO Framework Convention on Tobacco Control (COP7).[25] As the underlying determinants of ST use among women vary across different states and in order to ensure optimal and efficient use of available resources, the states with extremely high prevalence of ST use among women ought to be focused while developing and implementing policies and programmes to tackle this menace. The time may not be more opportune to develop targeted, scalable, and practicable public health interventions to reduce overall ST use among women at the population level in the nine high-prevalence states in India with special focus on the disadvantaged and vulnerable populations identified in this study.

DISCLAIMER
The opinions or views expressed in this article are solely those of the authors and do not express the views or opinions of the organization to which the authors are affiliated.

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