

Smokeless Tobacco Use and Cessation Attempts during COVID-19 Lockdown: A Qualitative Study

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Abstract

Background: Smokeless tobacco (SLT) use among women is widely prevalent in Manipur state accounting for 45% users as per Global Adult Tobacco Survey (GATS)-2 India. Studies from India and elsewhere indicate changes in the way people used SLT during COVID-19 lockdown. This study explores individual and economic influences on SLT consumption and cessation attempts by tribal women in Manipur during the first COVID-19 lockdown (March-June, 2020) in India. **Methods:** Twenty in-depth interviews, both in-person and telephonically, were conducted among tribal women from Imphal west, Manipur, India, who used any SLT, from April to September 2020. Objective of the study was to understand the use, factors associated with consumption, purchasing behaviors, and cessation attempts of SLT during the lockdown. Thematic content analysis was used to identify core themes and codes. **Results:** Study participants reported of changes in current SLT use during restrictions imposed to contain COVID-19 pandemic in India. Majority reported of reduction or quit attempts in SLT use. Reasons included inaccessibility due to travel restrictions, limited availability and price rise of SLT products, fear of COVID-19, and disposable income for purchase of SLT products. However, a few women reported of increased consumption due to bulk purchasing, or switching to other SLT products as a result of unavailability or price rise of preferred products or to cope up with social isolation caused by the lockdown. **Conclusion:** Study findings on factors influencing quit attempts and strategies used for reducing SLT use by tribal women in Imphal, Manipur provide valuable insights for development of appropriate intervention for prevention of SLT use among women.

Keywords: Tobacco- women- pandemic- quit- SLT

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Introduction

Smokeless tobacco (SLT) use continues to be the predominant form of tobacco use in India which presents a complex and widespread challenge to public health. Every fifth adult in India (21%; 199.4 million), 30% of men and 13% women use SLT either daily or occasionally (GATS-2, 2017). In India, SLT use among women is socio-culturally accepted compared to smoking tobacco (Schensul et al., 2013) with high prevalence reported among women from the north-eastern region (Krishnamoorthy and Ganesh, 2020; Singh and Singh, 2016). Nearly 45% of women in Manipur use SLT, which is almost equivalent to male users (50%) (GATS-2 Manipur, 2017).

In response to the outbreak of SARS-CoV-2, India implemented a nationwide lockdown leading to a complete shutdown of almost all economic activities from March-

June 2020 (Gettleman and Kai, 2020). Production and sale of SLT products were strictly banned in some states and districts to prohibit public use or spitting (Vidyasagaran et al., 2020) leading to lowered accessibility of SLT. Apart from this, there were concerns about SLT being identified as a risk factor in COVID-19 infection (Gaunkar et al., 2020) as using SLT often involved hand-to-mouth contact and the virus could be transmitted when a user spits out saliva produced during the chewing process. Studies from India as well as abroad suggested complex drivers and mechanisms associated with COVID-19 lockdown that impacted SLT consumption (Gupte et al., 2020; Singh et al., 2021; Anderson, 2022). The lockdown more specifically resulted to decreasing use of SLT due to the closure of tobacco sales and/or isolation from social circles (Grover et al., 2020; Arora et al., 2022). Gupte et al, 2020 suggested that the lockdown provided an opportunity for

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reducing or quitting SLT among those currently under treatment for cessation. While the lockdown steered quit attempts, it also led to initiation or increased use to cope with stress or emotions linked to uncertainties or economic struggles caused by the pandemic or disruption of normal routine (Bast et al., 2023; Sujatha et al., 2021; Gupte et al., 2020; Anderson, 2022).

There are few studies that assessed SLT usage and quitting among women during COVID-19 lockdown.. In light of the existing literature, it is important to explore and understand use of SLT among women, the factors that may have contributed to any shifts in SLT usage during the lockdown period, which could potentially help in the expansion of tobacco cessation policies. Hence, the present study explores SLT use and cessation attempts by tribal women in Manipur during the first COVID-19 lockdown (March-June, 2020).

Materials and Methods

A qualitative inquiry using in-depth interviews (IDIs) was undertaken to understand the factors related to SLT consumption, purchase, and cessation among tribal women SLT users during the lockdown period.

Study setting and participants

This study was conducted in three tribal-dominated villages in Imphal west district, Manipur, viz. Langthabal Chingthak, Tarung and Changangei Kabui khul. Women aged 18-50 years who used SLT daily were purposively selected through Key Informants such as women's group, community leaders, health workers, and tobacco shop owners who provided contacts of women users. Study team visited/contacted these women and invited them to be part of the study. A total of 30 women were approached for the study, out of which 20 provided consent for their participation and once recruited to the study, no one dropped out.

Data collection

Data was collected both telephonically and in-person at the participant's home from April to September 2020. A total of 20 IDIs were conducted by three co-authors, two female and one male (MH, SRS, SA) with M. Phil. in Social Sciences and at-least two years of experience in community-based research in Manipur. These researchers were recruited fulltime for the study and did not stay in the communities from where the data was collected, however, were native to Imphal and well acquainted to the study area. They spoke the local language to communicate with the respondents. All these helped in establishing a good rapport with the participants before conducting the IDIs.. Researchers were trained in qualitative research methods and ethics. This encouraged them to be culturally sensitive and may have minimized biases and assumptions. The IDI that lasted for 40-60 minutes, collected information on socio-demographic characteristics of women and explored SLT use, availability and accessibility of products, purchasing behaviors, change patterns and cessation attempts during the COVID-19 lockdown. In case of four interviews, the interviewers conducted repeated

interviews to collect clarifications on the data collected. Data saturation was not assessed during the process. The domains of enquiry (IDI guide) were developed by the authors based on existing literature and refined further after pilot testing of tool with three tribal women SLT users. These interviews were excluded from analysis.

Ethical Consideration

The study proposal was reviewed and approved by the Ethical Review Committee of Indian Council of Medical Research–National Institute of Medical Statistics (NIMS). Scientific robustness and accountability were audited by the institute's annual Scientific Advisory Committee (SAC). Participant Information Sheet consisting of information pertaining to current study and Informed Consent, translated to the local language (Manipuri), were read out to the participants in-person at the participant's home or over the phone and shared wherever possible through WhatsApp. Consent for conducting and audio-recording the interviews were sought. Only the participants were present during the interviews.

Data analysis

All interviews were recorded (in paper as well as digitally) and later transcribed and translated to English. Data was analyzed using thematic content analysis framework to identify core themes and codes. Three authors including, one (SRS) who conducted the interviews and two others (NTA, SO) (one with Ph.D and another with Master's degree in Social Science) conducted initial line-by-line open coding of the transcripts to develop a provisional coding scheme. Team members then reviewed the initial coding and developed a codebook, which was also reviewed and amended by all team members. Major themes for the codes were then extracted to better conceptualize SLT use and cessation during lockdown. NVivo12, qualitative analysis software was used for coding and analysis (NVIVO, 2022). The authors of the study who were not involved in data analysis were provided with the data and interpretations of the same for validation of results; however, the data was not shared with the study participants.

Interviews of tribal women from three communities provided opportunities for triangulation of information on usage patterns of SLT during COVID-19 lockdown. Authors' understanding of the local setting have resulted in better interpretation of findings. Participants' perspectives have been represented through quotations from the IDIs. Authors have described the study setting, methods used for data collection and analysis for demonstrating the trustworthiness of the findings. The 'Consolidated criteria for reporting qualitative research (COREQ)' was followed.

Results

Profile of participants

The age of participants ranged from 34-50 years. The majority followed Christianity, were from lower socio-economic background, and the maximum education level was high school. Most operated small businesses like weaving, poultry farming, or selling tea and snacks or

groceries or SLT.

Regarding types of SLT use, substantial differences were observed among study participants; these included, *komkwa* (betel leaf with soft areca nut and lime), *kwazarda/zarda* (betel quid with tobacco), *sada* (sweet paan using betel leaf, areca nut, lime and dried coconut), *khaini* (sun-dried/fermented tobacco leaves), and *gutka/talab* (combination of areca nut, slaked lime, paraffin, catechu and tobacco). Majority reported initiation after marriage and duration of use ranged from 2-15 years, and the most common type of SLT used included *komkwa* and *talab* (*gutka*) followed by *kwazarda*. There were few who reported use of two or more products simultaneously, which was commonly paired with *kwazarda/komkwa* and *kwazarda/talab*.

Thematic categories

The main thematic categories that emerged from the data include (a) SLT use during lockdown and reasons associated with use patterns, with sub-themes (1) reduction or cessation, (2) increase or initiation, (3) switching of products, and (4) no change in usage; and (b) cessation attempts, strategies used and barriers in quitting SLT use (Figure 1). Below, we present data on SLT use patterns during lockdown along with the reasons reported by women, followed by cessation and barriers during lockdown, and support these with voices from the participants.

A. SLT use patterns and associated reasons

Majority reported lockdown-associated changes in SLT consumption viz., reductions or temporary cessation, increase or initiation, no change, or switching

of products. Use varied in terms of frequency or quantity and reasons reported were categorized into economic and individual aspects. Economic-related reasons were product accessibility and price, and employment/income loss due to COVID-19, while individual-related reasons were health concerns, financial problems, changes in routine, and purchasing behaviour.

1. Reductions or temporary cessation

Most respondents had reduced the quantity and/or frequency of SLT use during the lockdown. While some stopped consumption on a daily basis, few reported using lesser amounts though they had it every day. One of them stated, “Let’s say; now I am using twenty paans in a day but during lockdown, I ate only around ten a day” (IDI_02_CH; 38, Street Vendor). Reasons identified for reductions or temporary cessation was related to economic or individual aspects.

Economic

(i) Unavailability of SLT products

Majority reported decrease or temporary cessation due to unavailability of products in shops. Regarding this, one of them described: “Since it’s unavailable, I didn’t feel like going here and there just to find a *kwa matap* (one portion of *paan*)” (IDI_06_LC; 49, Poultry Farmer).

Reductions/cessation also resulted from ban on the sale of any form of tobacco products imposed by civil society organizations as a preventive measure against SARS-CoV-2 infection. For instance, a 36-year-old woman who had been using SLT for the

past two years stated, “Yes, it was not sold. Betel leaves were not available and if it was available then areca nut

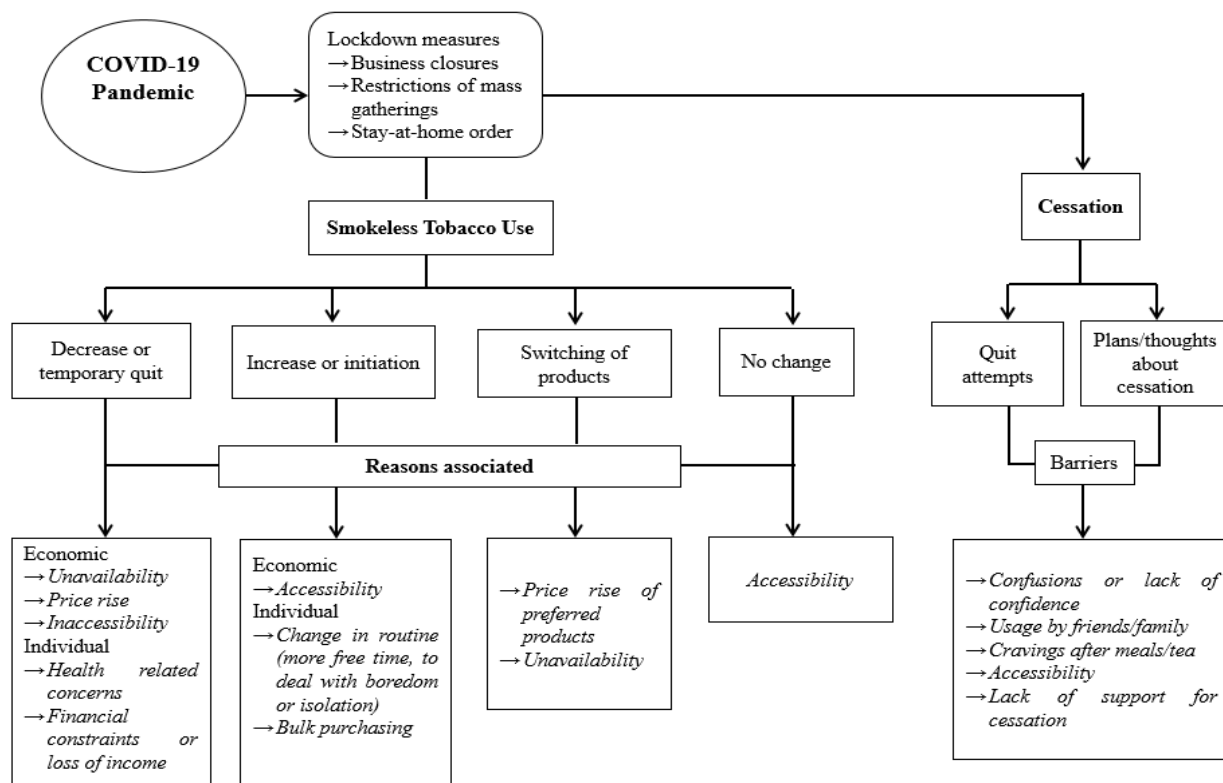


Figure 1. SLT Use, associated Factors, and Cessation during COVID-19 Lockdown

was not available. Zarda (tobacco) was not available. That time zarda and all were burned down, right?" (IDI_09_LC; 36, Food Vendor)

(ii) Price rise

Increase of SLT prices led to reduction/quit for a few respondents. They mentioned that though SLT products were available during the lockdown, rates of the products were very high, and thus they were either unable or unwilling to pay and consume. Price of products reportedly increased four to six times the usual rate during lockdown. However, there were a few who reported purchasing and using in smaller amounts, though costly.

"If the price of kwa is 30-40 rupees, then I didn't eat it. I used to say, 'leave it I will not eat that expensive kwa. Those who are addicted let them buy and eat'" (IDI_04_CH; 40, Poultry Farmer)

(iii) Inaccessibility

Respondents reported restrictions in movement from their homes to buy SLT due to the stay-at-home orders, social distancing, and business closures, thus resulting to reductions or halt in consumption. One participant expressed, "Lockdown was very strict...that time I didn't use much as we were not allowed to go out..... shops were also not open." (IDI_03_LC; 34, Grocer)

Individual

(i) Health-related concerns

Reductions were linked to health concerns related to COVID-19 as well as other personal health issues. Few respondents reported quitting due to fear of contracting COVID-19 as they believed SLT use was associated with the infection and that they should not risk their health further. Participants felt that the intensity of the pandemic/lockdown had induced a sense of considering/valuing their health, which had motivated them to decrease consumption. One of them expressed, "Earlier I used to consume 5-6 paan but during the pandemic/lockdown I used only 3-4. There were days when I didn't feel like using at all. It's not like I am totally addicted to it. I didn't consider it a priority. When I am sick I don't feel like using it and I can stay without eating even for 4-5 days. I didn't get the desire to eat at all during that time." (IDI_05_CH; 43, Food Vendor)

Concerns regarding spitting out tobacco extract were also observed among few respondents, which helped them avoid using SLT in certain circumstances during the lockdown/pandemic. One of them said, "I have heard that spitting tobacco in public places raises risk of COVID-19. I didn't eat in public places and at home when I ate and spit, I covered it by sand or any other thing." (IDI_04_TR; 45, Unemployed)

(ii) Financial constraints

Respondents stated that loss/lack of income of self or family due to the pandemic affected their purchasing ability and price rise led to reduce consumption as they prioritised buying essentials over SLT. For instance, one woman quoted, "Since it was lockdown, there was no way of earning money. That's why my husband and I decided

to stop buying and eating tobacco as we are not addicted like others." (IDI_07_LC; 38, Teacher)

2. Increase or initiation

Increase in usage or initiation was seen as a way to cope with loneliness and to get by boredom or pass time during the lockdown. Panic purchasing of SLT also led to increase in consumption. A few of them reported that they bought SLT in bulk, when available, so as to ensure regular availability of their preferred products with them. For instance, one woman quoted, "During lockdown I had lots.....There must have been days when I use to have around 5-6 times during the lockdown" (IDI_02_TK; 42, Unemployed). The reasons associated with increase in consumption or initiations are elucidated below:

Economic

Accessibility

Respondents reported that SLT seemed to be easily available and always stored well in shops that remained open even during lockdown. Instances were reported wherein few respondents consistently sought and purchased preferred SLT product(s) from other localities if it was not available in their area or immediate surroundings despite of price rise. One of them noted, "Even if it was expensive, we bought. For example, some elders of our village use paan, so, they told the shopkeepers in our area to sell even if expensive. And, when shopkeepers brought it, we used to buy for 100 or 50 rupees and eat. Also, even though shops were closed during lockdown, shopkeepers used to sell in their houses. They used to say-'it is expensive, we will not sell it.' But, we requested them-'even if it is expensive, you have to sell...we will buy it though expensive.'" (IDI_02_CH; 38, Food Vendor)

Individual

(i) Purchasing behaviour

Purchasing in bulk reportedly led to an increase in consumption. Respondents expressed that the lockdown alarmed them about the chances of unavailability of SLT products and therefore they purchased their preferred product(s) in large quantities and stored them in advance to avoid potential difficulties of being without SLT or going out repeatedly to purchase or waiting for products to be available in shops.

"During lockdown I had lots. There was no instance when it was not available to eat. Since we bought many packets at a time, most of the time I had. All tobacco products were available. Ahh! The owners of the shop... they only called us and gave. They used to say, 'come, it is there, come'... like this they called." (IDI_02_TK; 42, Unemployed)

(ii) Change in routine-oriented behaviour

Lockdown-induced increase or initiation of use was also attributed to lack of social activity or unemployment. Few respondents expressed that they started or were inclined to consume more during the lockdown, as compared to usual days, as they had more free time to spend at home and had to cope with boredom or loneliness.

One of them stated, "I started having during lockdown. My sister-in-law used to come to my place during that time and she always brought SLT whenever she came. That was the time when I longed so much for people to be around. I used to wish if someone would come and talk with me." (IDI_03_TK; 37, Unemployed)

3. Switching of products

Switching to other SLT form(s) during lockdown was another shift observed among respondents. Unavailability or increase in rates of preferred products during lockdown was reasons for switching. Regarding unavailability, one of them quoted, "...when I didn't get to have kwa, I kept supari in my mouth....only the supari pieces." (IDI_06_LC; 49, Poultry Farmer) Financial difficulties caused by the lockdown were also reported by few for switching to a cheaper product as they would be able to consume the same amount of SLT like before, and also would help them in saving some money for managing their daily necessities. For instance, one of them stated:

"I started using talab that time (during lockdown) because khaini price reached upto 100 rupees per packet. I used khaini only when talab was unavailable." (IDI_08_CH; 49, Unemployed)

4. No change in usage

Few reported that the lockdown did not cause any change to their SLT consumption as they expressed no difficulties in accessing their preferred products or spending more money than usual in buying the same. Some of them reported that even when their desired product was unavailable at nearby shops or in the village during lockdown, they got it from other areas. Regarding this one participant expressed, "It was available everywhere. At that time, it was 200-300 rupees per packet. I didn't reduce consuming thinking it's expensive. My husband bought as usual....zarda, areca nut and all for me to eat." (IDI_03_CH; 39, Unemployed)

B. Cessation attempts, strategies used and barriers in quitting SLT use during lockdown

Few respondents had thoughts about quitting or attempted quitting during the lockdown. However, lack of confidence to attempt quitting or fear of tackling the desire to use SLT were cited as reasons for not attempting quit or having cessation plans. Regarding this, one woman quoted, "...I could stop using that time but surely I would start using again when I see someone using...I didn't want this to happen." (IDI_01_TK; 43, Grocer)

Majority of those who attempted or planned to quit during lockdown reported that they were unsuccessful in doing so due to an inability to overcome cravings and lack of formal cessation support. For instance, one woman said that she was able to access her preferred products easily that made it challenging for her to attempt quit. Another contemplated quitting and perceived it as an individual action that is solely based on the users' willpower. She quoted, "Quitting was not very successful. I couldn't! I am still thinking of giving it a try (chuckles) since my age is also advancing, right?... there's no particular help as such when it comes to nisha (addiction). Quitting should

naturally come from one's thoughts... it is to do with oneself only. That time only it will work." (IDI_04_LC; 47, Business)

Respondents who attempted quitting reported experiencing withdrawal symptoms. Cravings especially after meals or tea, use by peers/family, irritation or restlessness, and seeing SLT packets were reported most commonly. For instance, "I thought I would never use it but when I met my friends (users), I got the urge to use it because of the SLT fragrance, which was quite tempting." (IDI_03_LC; 34, Poultry Farmer). Another stated, "...after meals I used to have strong craving of eating a small piece of kwa" (IDI_04_CH; 40, Business).

Substitutions like chewing gums, eating fruits or toffees or drinking juice after meals/tea were reported as few ways to manage cravings. Regarding this one respondent stated, "When I felt the urge to chew I ate a mango. Whenever I wanted to eat paan I ate fruits if there were fruits. We use paan because we make it a habit." (IDI_03_LC; 34, Poultry Farmer)

Respondents who made quit attempts expressed that there was some kind of support from spouse/family for quitting; however, it was not persistent enough for them to give up usage completely. Regarding this, one said, "My husband keeps advising me every day to stop using. Sometimes I felt that I should stop but when he doesn't caution me regularly I lose motivation to try quitting." (IDI_05_CH; 43, Food vendor)

Discussion

The present study gives insights into the SLT use among tribal women from Manipur during the first COVID-19 lockdown and strategies women adopted to reduce SLT use. Study participants accounted for increased use or initiation, decrease or cessation, switching of products or no change in usage during the lockdown.

Cessation or reductions were linked mostly to issues with supply of SLT products due to lockdown such as unavailability and increased price of products. While unavailability and over pricing of SLT products motivated some to attempt quit or reduce use, financial crisis due to unemployment, caused by the pandemic, forced some to quit. Similarly, price rise and lesser availability of SLT products during lockdown period were observed to be important factors in quitting among SLT users enrolled in a cessation trial in India (Singh et al., 2021) as well as in other studies on tobacco use (Giovenco et al., 2021; Gupte et al., 2020). These findings suggest the need for banning and increasing rates or taxes of tobacco products which could perhaps help in the control of SLT use.

Reductions/quit were also due to inaccessibility to products as a result of stay-at-home policies to curb the pandemic. Strict COVID-19 preventive measures undertaken by (community) authorities led to reduced opportunities for purchasing SLT and consumption in particular situations like using along with friends or by the paan shops, which was seen as a common trend among users in Manipur (Laishram et al., 2021). With stay-at-home orders intended to minimize socialization outside of one's residence, it is plausible that there was

limited-accessibility to places where SLT products were sold or chances for usage (Denlinger-Apte et al., 2022).

Fear of COVID-19 infection and concerns about the need to protect their health prompted women to reduce SLT usage. Our findings are comparable with studies on tobacco use during lockdown (Giovenco et al., 2021; Duong et al., 2021) that found quitting linked with increased health concerns/illness caused by COVID-19. Appropriate communication and sensitization about risks of disease(s) and comorbidities among tobacco users could be used as an intervention opportunity to control tobacco use and reduce tobacco-related diseases.

Increased usage during lockdown was related to uninterrupted supply and buying products in greater quantities and stocking up at home to ensure sufficient stock of preferred products. A study in the United States (Soule et al., 2020) reported increase of tobacco use during the lockdown because of bulk purchasing attributed to stay-at-home orders, or attempts to minimize trips to stores or uncertainty in availability of products. In accordance with findings from similar studies, increased use acted as a time-filler and a means of coping with boredom and loneliness caused by the lockdown (Sun et al., 2022; Grogan et al., 2022). This highlights the serious issue of psychosocial/behavioural contributors to nicotine dependence and the availability of tobacco products despite of complete ban during the pandemic as a preventive measure (ICMR 2020). Imposing strict regulations and routine inspection mechanisms on the sale of SLT products could be beneficial in decreasing purchase, consumption and overall disease burden.

A critical influence of spouse/family on use was noted widely across our interviews irrespective of usage patterns during lockdown. While motivation and determination to quit by users in the same household were useful in increasing personal intention to quit by few women, purchasing, sharing, or using SLT among spouses or other family members were described as potential triggers that acted as an impediment to cessation by some. Our findings corroborates with the study conducted among Indian women aged 18-40 years that found women whose husbands were poly SLT users were three times more likely to be poly SLT users than women whose husbands were non-users (Nair et al., 2015). Similarly, other studies indicate the influence of family tobacco use on initiation or relapse of other members in the household (Roberts et al., 2016; Homish and Leonard, 2005). This emphasizes the need to contemplate SLT cessation not only at an individual but also at the household level. Application of family-based interventions in cessation efforts would aid in reductions/cessation among family users and has the potential to diminish the use in subsequent generations.

Findings must be considered in light of few limitations including social desirability in response and limited generalisability due to purposive sample of respondents from three tribal villages in Imphal, Manipur. Nonetheless, it provides critical information for prevention and cessation of tobacco among women.

In conclusion, this study reports changes in patterns of SLT use and quit attempts made by tribal women due to COVID-19 lockdown. These findings underscore the

need for holistic community-based interventions that focus on potential factors that increase motivation to quit, relapse risk or triggers, and support cessation efforts of women SLT users.

Author Contribution Statement

The following authors contributed towards ‘Conceptualization, Analysis & Writing’: SO, SN, NTA, SRS, ELDC, SS; the following authors collected data: MH, SRS, SA; and the following authors contributed by conducting ‘Critical Review and Editing’: MVVR, NH, KJS, LS, SS, HK..

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If it was approved by any scientific body

The study was approved by the ICMR- National Institute of Medical Statistics (NIMS) Scientific Advisory Committee.

How the ethical issue was handled (name the ethical committee that approved the research)

The ICMR-National Institute of Medical Statistics Ethics Committee approved the study protocol, procedures, tools, Participant Information Sheet and consent forms.

Availability of data (if apply to your research)

The data cannot be shared in public domain as it is qualitative information and even the identified data may reveal detailed information on individual participants that can be identifiable (eg. locations and narratives of experiences). However, requests for data can be made by emailing to the corresponding author.

Conflict of interest

No conflict of interest is reported by the study team.

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