

# 'Local government, standardised packaging, and licensing are key': a stakeholder-based qualitative study on strengthening smokeless tobacco regulation in Bangladesh

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## ABSTRACT

**Introduction** Smokeless tobacco (ST) use is widespread and poses a considerable health burden for Bangladesh. However, the tobacco control law enforcement for ST is significantly weaker than for smoking tobacco, leading to a near-total non-compliance of ST products. We explored tobacco control stakeholders' perspectives on high ST non-compliance, in order to improve regulation in Bangladesh.

**Methods** We conducted a qualitative study involving in-depth semistructured interviews (n=20) with five stakeholder groups (policymakers, non-governmental organisations, researchers, international agencies and advocacy networks) between July and September 2024. Participants were asked about their perspectives on regulatory non-compliance of ST, policies and enforcement mechanisms, and supply chain control and international collaboration to address ST non-compliance in Bangladesh. We used the framework approach to analyse the data, which involved iteratively coding, charting and interpreting the interview transcripts.

**Findings** Stakeholders perceived weak monitoring and enforcement of ST, leading to substantial non-compliance of ST regulation in Bangladesh. Factors such as market's informality, cultural embedment and lack of registration and licensing of ST businesses contributed to this. A disjointed regulatory framework and perceived low tax return made ST non-compliance a low priority for regulators. Furthermore, diversity in packaging and targeting of consumers' social and cultural beliefs by the manufacturers made ST compliance more challenging than cigarettes. Widespread tax evasion arises from a flawed self-declarations system and a lack of explicit tax markers due to regulatory weaknesses and manufacturers' influence. Bangladesh's current legal framework fails to address ST product diversity. Participants suggested introducing standardised packaging and licensing with local government involvement to strengthen regulations and address ST non-compliance.

**Conclusion** ST control has long been neglected by policymakers in Bangladesh. Besides government commitment, strengthening regulation to address high ST non-compliance would require implementing evidence-based approaches.

## INTRODUCTION

Bangladesh has 22 million adults (age above 15 years) who use smokeless tobacco (ST), with a prevalence

## WHAT IS ALREADY KNOWN ON THIS TOPIC

- ⇒ Smokeless tobacco (ST) packaging non-compliance in Bangladesh is widespread relative to that in smoking tobacco.
- ⇒ The informal nature and lack of licensing requirements of ST business weakens law enforcement in Bangladesh.

## WHAT THIS STUDY ADDS

- ⇒ Identified the systematic barriers to improve regulation and monitoring for addressing ST non-compliance.
- ⇒ Findings suggested introducing innovative approaches such as engaging local government for registration and implementing standardised packaging (plain packaging with standard size and shape) and market-based monitoring to address ST non-compliance. The supply chain needs to be digitalised, and an app-based monitoring system could be introduced considering widespread use of smartphones.

## HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

- ⇒ The current tobacco control law requires amendments to incorporate ST diversity and implement standardised packaging. It is essential to make registration and licensing for ST businesses mandatory. Local governments can collaborate with central authorities to manage registration and monitoring processes. Additionally, it is crucial to enhance global awareness and international understanding regarding ST non-compliance. Prioritising ST non-compliance in local tobacco control advocacy efforts would require improved policy attention.

of 20.6% compared with 18.0% for smoking.<sup>1</sup> One in five adults uses ST in the country, of which over 90% consume daily. Notably, ST prevalence is higher among women than men across a range of key demographics, for example: 49.9% of women with no formal education (27.1% men), 35.9% in the lowest wealth quintile (24.8% men), 26.8% in rural areas (17.8% men) and 62.1% among those aged above 65 (33.9% men).<sup>1</sup> There is a strong urban-rural disparity, with the vast majority (90%) of the ST users (18 million out of 22 million) living



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in rural areas.<sup>1</sup> ST is also the most common tobacco among Bangladeshi youth, more prevalent among students (4.5%, age 13–15 years) than smoking (2.9%).<sup>2</sup> Cultural acceptance, affordability and availability contribute to the high ST prevalence in Bangladesh.<sup>3,4</sup>

ST or unburned tobacco is consumed orally or nasally.<sup>5</sup> ST products and their consumption patterns are diverse across the countries. In Bangladesh, the commonly used ST products are *Zarda* (chewing tobacco combined with lime and spices), *Gul* (powdered tobacco leaves), *Sada Pata* (dried tobacco leaves) and *Khoinee* (sun-dried or fermented tobacco leaves).<sup>6–8</sup> ST products are highly addictive and lead to oral, pharyngeal and oesophageal cancers, and risk of cardiovascular mortality.<sup>9,10</sup> Owing to this high use, in 2017 across Bangladesh, at least 16 947 lives and 403 460 disability-adjusted life years were lost.<sup>11</sup>

In Bangladesh, ST was incorporated within tobacco control policy in 2013, 8 years after the tobacco control law was enacted.<sup>11</sup> Despite being a signatory of the WHO Framework Convention on Tobacco Control, the enforcement of tobacco laws for ST is significantly weaker than for smoking tobacco.<sup>6,12</sup> Consequently, over 90% of ST products in the market are non-compliant (do not adhere to legal packaging and labelling requirements, eg, lacking health warning labels, price and sale statement disclosure, affixing misleading descriptors) and potentially illicit (tax evaded),<sup>6</sup> compared with only 5.6% for cigarettes.<sup>13</sup> Although ST use is widespread and poses a considerable health burden, the policies and their enforcement remain inadequate, with no effective standardised regulations in place.<sup>6</sup> Research on ST in Bangladesh has primarily focused on usage patterns, health impacts, policy gaps and the extent of illicit products and packaging non-compliance.<sup>4,6–8,10–12</sup> However, the underlying reasons for weak regulations, monitoring and poor compliance have not been studied sufficiently. A deeper understanding of these aspects is crucial for formulating effective ST policies and strategies to address poor regulatory compliance in Bangladesh. We aimed to explore tobacco control stakeholders' perspectives on the reasons behind poor compliance with ST regulations in Bangladesh.

## METHODS

The complexity related to ST compliance issues and the need for an in-depth understanding meant that a qualitative approach was the most appropriate.<sup>14</sup> We conducted in-depth interviews with a range of stakeholders, knowledgeable and experienced in the area, exploring their perspectives on non-compliance, regulation and monitoring.

### Settings, participants and recruitment

Previously, we carried out stakeholder mapping for tobacco control in Bangladesh.<sup>15,16</sup> The mapping identified tobacco control organisations in Bangladesh, categorising them into various stakeholder groups while identifying their focal areas and roles in tobacco control (online supplemental table S1, pp 2). Drawing on this stakeholder map, SMA and RH compiled an initial list of interviewees using publicly available information and their familiarity of tobacco control policy environment in Bangladesh, further supplemented by 'snowball' sampling through networks and referrals from other interviewees. We conducted 20 in-depth stakeholder interviews across five groups: policymakers (n=5), non-governmental organisations (NGOs) (n=5), researchers (n=2), international agencies (n=3) and advocacy networks (n=5). Tobacco control in Bangladesh includes policymakers enforcing laws, NGOs raising awareness

and international agencies providing support. Researchers inform policies, while advocacy networks push for stricter regulations, collectively striving to reduce tobacco use. We aimed for balanced representation across groups, ensuring a breadth of experiences while maintaining gender inclusivity in participant selection.

### Process, tools and data collection

Researchers (SMA, RH) familiar with the tobacco control environment in Bangladesh approached potential participants, introducing themselves and their research roles. They explained the research purpose and invited participants via email, providing written information on the scope of interviews. Interested individuals were then contacted to schedule interviews at their convenience, either in person (n=18) or online via Zoom (n=2). RH followed up the email invitations by phone, while SMA conducted all the interviews. Participants were assured of confidentiality and received a second information sheet, with details about the research, the interview process and an explanation of their rights. Interview participation was voluntary. Written consent, including permission to record, was obtained from all participants prior to the commencement of the interviews. Verbal consent was recorded for those who participated online.

We (SMA, KS, MK) developed the information sheet, consent form and interview guide (online supplemental appendix, pp 10–18) in English and translated these to Bengali (SMA, SH). The interview guide was informed by the established framework to control illicit tobacco provided by WHO Protocol to Eliminate Illicit Trade in Tobacco Products (ITP).<sup>17</sup> Interviews were semistructured and the guide was organised around three domains: (1) awareness about non-compliance and illicit ST; (2) specific packaging non-compliances related to health warning labels, price and sale statement disclosure, misleading descriptors and visible tax marker, policies and enforcement; and (3) supply chain control and international collaboration to curb non-compliance and illicit ST in Bangladesh. We pretested the interview guide with one tobacco control researcher (representing the research group) and one advocate (representing advocacy networks) to ensure clarity and relevance.

Data were collected from July 2024 until September 2024. Interviews lasted between 26 and 82 min (averaging 51 min). Participants had an average of over 16 years of experience in tobacco control engagement. After conducting the initial five interviews, SMA reviewed the recordings of each subsequent interview, noting discussion topics to identify emerging themes. Interviewing continued until two consecutive recordings revealed no new themes, at which point we determined that data saturation had occurred.<sup>18,19</sup> A demographic table of the participants is provided in online supplemental table S2, pp 4.

### Data analysis

All interviews were conducted in Bengali, anonymised, transcribed (verbatim) by a professional transcription service, and then translated into English. SMA and SH, with tobacco control research experience in Bangladesh, cross-examined the transcripts to enhance rigour and ensure that data retained the local context.

Framework analysis was used to analyse the data as it enabled a structured and systematic approach to analysing a relatively large data set, following the steps described by Gale *et al.*<sup>20</sup> An initial coding framework based on the topic guides and research questions was developed by SMA—this included broad domains and subcategories. Following multiple readings of the transcripts

**Table 1** Domain and themes for data analysis

| Domains                                                      | Themes                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Non-compliance and illicit ST awareness                      | 1. Poor monitoring and weak enforcement caused high ST non-compliance.<br>2. High ST non-compliance is a low policy priority.                                                                                                                                                                                      |
| Specific packaging non-compliances, policies and enforcement | 3. Packaging diversity, regional strategies and implementation gaps lead to non-compliance in ST packaging.<br>4. Tobacco control law did not address ST diversity, causing an enforcement gap.<br>5. Involving local government can enhance monitoring, yet the government's commitment has not been forthcoming. |
| Supply chain control and international collaboration         | 6. Policy amendments mandating standard packaging, licensing and strengthening National Tobacco Control Cell (NTCC) can improve supply chain monitoring.<br>7. There is a need for international collaboration to enhance ST compliance.                                                                           |
| ST, smokeless tobacco.                                       |                                                                                                                                                                                                                                                                                                                    |

and in discussion with SH and later HMJ, the frameworks were refined and organised in Microsoft Excel. Subsequently, SMA 'charted' the data (summaries, extracts and quotes) from each individual interview onto the 'framework' in Microsoft Excel. The Excel sheets were organised according to domains and stakeholder groups. This allowed for comparison across stakeholders. The final stage involved interpreting the data. At this stage, the codes were combined to highlight the 'key findings' (labelled as 'themes') under each broad domain. SMA reviewed the framework and wrote summaries for each theme by scrutinising the charted interview data and considering the perspectives of different stakeholder groups. The summaries included descriptions, backed up by data and quotes. The summaries were reviewed and discussed with HMJ. The write-up of the themes was subsequently refined, combined and shared with the wider team. We followed the COREQ (Consolidated Criteria for Reporting Qualitative Research) for reporting the results of the study.<sup>21</sup>

## RESULTS

The findings are organised into three primary domains, each encompassing several themes that emerged from the interviews (table 1).

### Non-compliance and illicit ST awareness

Theme 1: poor monitoring and weak enforcement caused high ST non-compliance

Research participants from all stakeholder groups exhibited a comprehensive awareness (established through their understanding of the concepts and insightful statements) of non-compliance (products that violate packaging and labelling laws, eg, missing health warnings, price and sale statement disclosures or containing misleading descriptors) and illicit (tax evaded) ST products in Bangladesh. While the information regarding packaging non-compliance and the disparity between smoking and ST was shared, there was consensus that the prevalence of non-compliant ST is considerable and exceeds that of smoking tobacco in the country. Some participants considered the reported rate of over 90% ST non-compliance as alarming and a threat to successful tobacco control (Quote 1, online supplemental table S3, pp 5).

Participants commonly attributed high ST non-compliance to insufficient monitoring and enforcement compared with smoking tobacco, which stemmed from informality of the ST

market, lack of registration and general cultural acceptance of ST in Bangladesh (Quote 2, online supplemental table S3, pp 5).

Alongside these conventional reasons, policymakers contended that there was an inadequate integration of ST in the tobacco control law, a low entry barrier for ST manufacturing and high costs of enforcing compliance which impeded regulatory agencies from stronger enforcement (Quote 3, online supplemental table S3, pp 6).

Participants from advocacy networks highlighted western influences on Bangladesh's tobacco control advocacy and movement, which primarily focused on smoking tobacco, sometimes at the expense of ST (Quote 4, online supplemental table S3, pp 6).

### Theme 2: high ST non-compliance is a low policy priority

It was acknowledged that addressing non-compliance and illicit ST requires specialised knowledge to make informed decisions. However, participants reported that tobacco control activists and researchers show little interest and limited knowledge about ST non-compliance (Quote 5, online supplemental table S3, pp 6).

It was believed that policymakers and researchers often prioritise cigarettes over ST due to global campaigns focused on smoking, necessitating ongoing sensitisation of policymakers who do not effectively address ST non-compliance and taxation issues. This was reported to concern three perspectives: public health (the public health perspective of tobacco control in Bangladesh—safeguarding people from secondhand smoking), revenue (limited strength of National Board of Revenue (NBR) challenges regulating uncountable informal ST manufacturers and being a low relative return in terms of revenue) and attitude (cultural acceptance of ST and mainly consumed by rural poor women whose health issues are often neglected) (Quotes 6 and 7, online supplemental table S3, pp 6).

According to participants, ignoring ST non-compliance hinders Bangladesh's tobacco control success. However, a disjointed regulatory framework, limited jurisdiction, fragmented responsibilities and low perceived tax return resulted in ST being a low policy priority. It was highlighted that the disproportionately high ST prevalence among women and in rural areas poses a significant health concern, making the control of non-compliance and illicit ST a priority. It was reported that ensuring compliance and addressing illicit ST must become a policy focus (Quote 8, online supplemental table S3, pp 6).

### Specific non-compliances, policies and enforcement

Theme 3: packaging diversity, regional strategies and implementation gaps caused non-compliance in ST packaging

Participants identified significant challenges in compliance with health warning labels, price and sale statement disclosures, misleading descriptors and visible tax markers. They unanimously agreed that packaging and labelling non-compliance in ST products is widespread and notably higher than that in smoking tobacco. This disparity was attributed to regulatory differences with ST products—as it was often considered a small and cottage industry, thereby evading strict oversight. Additionally, participants emphasised that manufacturers intentionally remain non-compliant with health warning labels to avoid deterring sales (Quote 9, online supplemental table S3, pp 6).

Referring to low accountability of manufacturers due to no monitoring authority, most participants agreed that ST non-compliance related to price and sale statement disclosure was mainly due to weak policy implementation. Manufacturers avoid



mentioning prices on ST packs to exploit market conditions and evade taxes (Quote 10, online supplemental table S3, pp 6).

All participants shared similar perceptions about using misleading descriptors on ST packaging. In Bangladesh, ST products are specifically designed and marketed for distinct regions, with packaging reflecting local sociocultural contexts. Most stakeholders agreed that this region-specific strategy, coupled with the use of misleading descriptors, allows ST manufacturers to effectively target specific customer bases through their cultural, religious and social beliefs. Additionally, employing familiar and culturally resonant brand names makes these products seem more approachable and connects them to family and cultural traditions (Quote 11, online supplemental table S3, pp 7).

Participants noted that most ST manufacturers in Bangladesh evade taxes, with few registered brands disclosing production volumes through the self-declaration system (Quote 12, online supplemental table S3, pp 7).

Participants reported that in Bangladesh, an explicit tax marker for ST is absent due to regulatory weaknesses, implementation challenges and the manufacturers' influence on policymakers through local leaders. There is a lack of clear legal provisions for tax markers on ST products. Additionally, the informal nature of the ST market complicates the identification and regulation of manufacturers. Furthermore, legal loopholes in various frameworks, including environmental and labour laws, further benefit ST products. For instance, weak labour laws and limited chemical use regulations allow informal ST manufacturers to exploit underage labour and use hazardous ingredients while manufacturing, respectively. While the regulation of ST involves multiple agencies, there is no clear ownership or accountability and there was reported a significant knowledge gap within regulatory agencies about the dynamics of the ST market (Quote 13, online supplemental table S3, pp 7).

Participants proposed a multifaceted approach to enhancing ST packaging compliance. Essential proposed steps included: identifying non-compliant manufacturers, implementing market-based monitoring, implementing an obligatory registration and licensing system integrated with local governments and enforcing ST wholesale markets (instead of only retail) (Quote 14, online supplemental table S3, pp 7).

It was highlighted that a unified effort across ministries, civil society and activists is required and an effective collaboration among the task force committees for tobacco control is needed (Quote 15, online supplemental table S3, pp 7). Considering standard packaging a fundamental step, participants emphasised the creation of a new 'schedule' (approved list) of various ST and a specialised tax policy to implement tax marker on ST packs. There is also a need for stronger advocacy to showcase ST's tax potential (Quote 16, online supplemental table S3, pp 7).

#### Theme 4: tobacco control law ignored ST diversity, causing enforcement gap

While participants from international agencies deemed the legal tobacco control framework adequate, those from policymakers, NGOs, researchers and advocacy networks agreed that the current law inadequately addresses ST diversity in Bangladesh. To enhance regulation, it was felt that it should provide clear guidelines on ST packaging, including specifications for type, material and design (Quote 17, online supplemental table S3, pp 7).

Regardless of their professional group, nearly all participants indicated a substantial enforcement gap for ST. They argued for stronger regulatory measures, enhanced monitoring and more

effective enforcement strategies (Quote 18, online supplemental table S3, pp 7).

Concerning ST regulation, the current 'mobile court' (mobile judicial unit led by executive magistrates that visit locations to deliver prompt justice for minor offences) is limited in both scope and impact as it primarily enforces section 5 (tobacco advertisement) of the tobacco control law. Participants indicated that section 10 (addressing ST packaging compliance) is seldom enforced. Furthermore, the personal motivations of local administrative officials, due to the sensitisation of tobacco control advocates, often influence the frequency and effectiveness of mobile courts, leading to inconsistencies in enforcement (Quote 19, online supplemental table S3, pp 7).

#### Theme 5: involving local government can enhance monitoring, yet the government's commitment remains a hurdle

Participants from various stakeholder groups identified several obstacles to enhancing the monitoring of ST non-compliance. Due to the local administration's low prioritisation of tobacco control, the task force committees for surveillance were unable to achieve their intended objective of ensuring compliance with tobacco control laws (Quote 20, online supplemental table S3, pp 8).

Insufficient government commitment, in addition to ST's informality, lack of registration and licensing, and regulatory agencies' resource limitations, was a major barrier to ST regulation enforcement (Quote 21, online supplemental table S3, pp 8). Furthermore, the National Tobacco Control Cell (NTCC), which is pivotal in regulatory efforts, faces significant challenges, such as insufficient dedicated staff and a reliance on project-based personnel (Quote 22, online supplemental table S3, pp 8).

Participants considered the unused government network at the local level as an important facilitator for enhanced monitoring of ST. Furthermore, they emphasised that with the widespread use of smartphones, authorities could leverage digital tools to capture and report non-compliant ST products, thereby enhancing surveillance capabilities (Quotes 23 and 24, online supplemental table S3, pp 8).

#### Supply chain control and international collaboration

##### Theme 6: policy amendments mandating standard packaging, licensing and strengthening National Tobacco Control Cell can improve supply chain monitoring

There was a broad consensus across participant stakeholder groups that Bangladesh's tobacco control law, particularly regarding ST, requires significant revisions. They stressed the need for a tobacco tax policy and a specific section for ST within tobacco control law. Participants called for standardised packaging (plain packaging with standard size and shape) for ST products and measures to curb loose sales. They noted that recommendations for law amendments often come from international donors and consultants who might ignore the unique local context. Participants recommended prioritising ST in the government's operational framework and establishing an autonomous organogram for NTCC for empowerment (Quotes 25 and 26, online supplemental table S3, pp 8).

Participants suggested that effective collaboration between the NTCC, the NBR and local government would enhance ST regulation and ensure a sustainable model for monitoring non-compliance. The majority of participants advocated for a multisectoral approach, recognising that tobacco control is not the responsibility of a single ministry (Quote 27, online supplemental table S3, pp 8).

**Theme 7: there is a need for international collaboration to enhance ST compliance**

Participants suggested that lessons from neighbouring countries can be invaluable. They highlighted that collaboration to share successful strategies could bolster efforts against ST non-compliance. In addition to sharing lessons, participants agreed that the signing and ratification of the ITP would be essential for enhancing supply chain control and addressing ST non-compliance in Bangladesh (Quotes 28 and 29, online supplemental table S3, pp 8). Besides international collaboration, participants from NGOs and advocacy networks highlighted that donors funding tobacco control research should prioritise ST in Bangladesh. They stressed enhancing the awareness of the global community and international understanding regarding ST non-compliance (Quote 30, online supplemental table S3, pp 9).

## DISCUSSION

This study is the first, to our knowledge, to explore stakeholders' perceptions of the widespread non-compliance and illicit ST in Bangladesh with an aim to improve regulation and monitoring. ST is interwoven in Bangladesh's culture and social practices. It is particularly common among women, who may refrain from smoking due to social stigma. Despite the high prevalence of ST use and widespread stakeholder awareness of ST non-compliance, we found that regulation and law enforcement remain a low priority. Our findings indicate that this may be largely due to policymakers and enforcement agencies' primary focus on smoking tobacco, neglecting ST. This was reported to be largely due to the tobacco control advocacy movement driven by funds from a more 'Western-centric' perspective emphasising smoking tobacco, through initiatives excluding ST such as 'smoke-free laws' and 'cigarette taxation'. While such efforts are no doubt important, they are often non-inclusive, neglecting ST regulation in the local tobacco control efforts. Another issue highlighted by participants in the research was that ST products and packages are diverse, creating difficulty in implementing packaging rules and the existing fiscal instruments. The informal nature of the ST market itself makes ST regulation and enforcement difficult. Several recommendations were made by the research participants, with the engagement of local government for licensing and monitoring regarded as efficient and sustainable for addressing ST non-compliance.

Our findings indicate that the regularity disparity between smoking and ST aligns with a broader narrative, with similar disparities reported in Southeast Asia and Africa.<sup>22–24</sup> This misalignment is attributed to cultural and social factors, policymakers being lenient to ST regulation and global influence on tobacco control policy priorities. The smoking-focused Western tobacco control movement is considered an impediment to advancing tobacco control policies for ST in Southeast Asia.<sup>25</sup> ST's deep-rooted cultural acceptance, especially among rural poor women, appears to perpetuate its low policy priority in Bangladesh.<sup>8,26</sup> Public health issues of rural poor women receive less policy attention due to their weak political representation. Existing research shows an under-representation of women's health concerns in tobacco control discourse in other countries leading to ST's policy neglect, which also appears to be the case in Bangladesh.<sup>27</sup> The broader association of tobacco use with poverty may also help to understand ST's low priority in the context of Bangladesh—particularly given its association with rural areas.<sup>27</sup>

This research concurs with our earlier research which found the informal nature of the ST market, further complicating

the enforcement of any regulation and overall accountability.<sup>6</sup> Informality and a lack of licensing make regulation of ST difficult and a low priority in countries such as Bangladesh.<sup>4 10 11 28</sup> ST is decentralised, small-scale and often mobile; the lack of mandatory licensing for ST businesses means they are often unlicensed, making regulation and enforcement of ST difficult. Similar difficulties are observed in neighbouring countries, India and Pakistan.<sup>12 29 30</sup> Tracking and tracing manufacturers and their products is challenging under such structures—and regulatory agencies such as the NBR and NTCC lack the technical knowledge, tools and workforce to monitor and regulate the ST market effectively.<sup>31</sup> Hence, mapping of ST manufacturers and developing a surveillance system for effective regulation is recommended in other studies.<sup>4</sup> However, fragmented responsibilities and lack of coordination among regulatory bodies are also emphasised in other research,<sup>31</sup> hence hindering comprehensive regulation and complicating enforcement. This is similar to other contexts, for example, in Kenya and Indonesia, it was reported that unclear roles and responsibilities of regulatory agencies were considered as an impediment for successful implementation of tobacco control policy.<sup>32 33</sup>

With the current system, the regulation of non-compliance and illicit ST in Bangladesh faces unique challenges due to its cultural acceptance, market informality and limited policy attention. Addressing these challenges would require a centralised and multifaceted approach. Raising ST focus advocacy, strengthening supply chain monitoring regulatory frameworks and improving compliance mechanisms through systematic monitoring and surveillance is essential. Policy amendments are needed to address ST heterogeneity in product and packaging. Additionally, a tobacco tax policy should be in place. Standardised packaging with a digital tracking system should be introduced to ensure supply chain compliance and improve surveillance. The importance of such policy step for high ST burden countries is reported in other studies.<sup>30 34</sup> Licensing and tobacco retailing assist in enhancing compliance with tobacco control laws.<sup>35–38</sup> Accordingly, the licensing and registration for ST manufacturing and business should be obligatory with a central database, a policy recommendation also endorsed by other research.<sup>11</sup>

Engaging local government in licensing and monitoring was suggested by stakeholders in the research as an efficient and sustainable way to address ST non-compliance. NGOs involved in tobacco control advocacy can voluntarily support local government in improving monitoring and surveillance. Instead of sole reliance on the 'mobile court' system, expanding enforcement authority to local governments and introducing stricter penalties for non-compliance, targeting both manufacturers and wholesalers is recommended. By leveraging lessons from smoking tobacco control and international best practices, Bangladesh can build a more robust and equitable system to regulate ST. Participation in the ITP is imperative and would strengthen efforts in this regard. Existing research in Bangladesh also emphasises the importance of collaboration with neighbouring countries to address non-compliant and illicit ST.<sup>39</sup> Furthermore, research and advocacy must occur to ensure equitable focus on ST issues within the international tobacco control movement. Policy design based on assumptions for tobacco control in high-income countries might not be true for low- and middle-income countries (LMICs).<sup>25</sup> Thus, tobacco control funders should consider the local contexts when establishing tobacco control research and advocacy priorities in ST-burdened LMICs.

We acknowledge some weaknesses in this research. A potential limitation is the unequal gender balance of participants interviewed, with only 2 of the 20 participants being women. This

reflects the gender disparity in the tobacco control movement in Bangladesh. However, the vast experience of the participants and the rich information substantiates this limitation. Application of collaborative coding and use of verbatim quotes with persistent observation made the findings credible for the country and context. However, they might not be fully transferable to other LMICs. The strength of the research is that through such in-depth qualitative research, a deep understanding of issues related to ST regulation and enforcement in Bangladesh from a diverse range of perspectives was enabled.

## CONCLUSION

Although Bangladesh is overburdened with ST, unlike the policy and advocacy attention for smoking, ST control receives little priority from researchers and policymakers. The findings from this research contribute to the understanding of systematic barriers to control of ST non-compliance in Bangladesh. By identifying the interplay between policy gaps, enforcement challenges and distinct market dynamics, this study can enrich frameworks on regulatory compliance for ST. Standardised packaging, registration and licensing, and engagement of local government for monitoring and surveillance would be the key to addressing Bangladesh's high ST non-compliance. An innovative and evidence-based approach needs to be implemented. While the generalisability of the findings is limited, other LMICs, especially from Southeast Asia facing poor ST compliance can learn from the findings.

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