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# Standard smokeless tobacco packaging: potential impact on perceived attractiveness, warning label visibility and harm perceptions among adults in Bangladesh

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## ABSTRACT

**Background** In Bangladesh, smokeless tobacco (SLT) is available in a variety of pack shapes and sizes. Lack of standard packaging could limit compliance with pictorial health warning label (HWL) requirements. We explored Bangladeshi SLT users' and non-users' perceptions of a proposed standard pack shape for *gul* (tobacco powder) and *zordha* (chewing tobacco), including the role that HWL placement plays on harm perceptions.

**Methods** We conducted 28 focus groups across three regions of Bangladesh: Dhaka, Sylhet and Khulna. Groups were stratified equally by urban/rural residence, gender and SLT use. Trained facilitators used a standardised guide to discuss perceived attractiveness, noticeability of HWLs and perceived harm of current versus standard packs.

**Results** Most groups found bright colours, 'brand owner' portrait imagery, and strong, sturdy pack material of current packs attractive. Many of the same features increased perceived attractiveness of the standard packs. Pictorial HWLs on the standard packs appeared larger and increased the visibility and noticeability of HWLs compared with current packs. Lack of HWLs or limited visibility of HWL due to discolouration contributed to lower levels of perceived harm of the current packs. In contrast, HWL prominence and placement on both sides of the standard pack increased perceived harm of standard packs.

**Conclusion** The findings suggest a standard shape and size for SLT sold in Bangladesh, coupled with proper implementation of HWLs per the law, could improve HWL noticeability and increase harm perceptions. Additional plain packaging policies that also standardise pack colour may be required to reduce attractive colours and branding.

## INTRODUCTION

Smokeless tobacco (SLT) is used by approximately 300 million people worldwide.<sup>1</sup> These products contain toxins and carcinogens associated with oral cancers, heart disease, stroke and reproductive health complications.<sup>1-3</sup> Although SLT is used in over 120 countries, the highest burden of SLT-caused disease is concentrated in India, Pakistan and Bangladesh.<sup>3</sup>

In Bangladesh, SLT use is a socially acceptable behaviour for both women and men.<sup>4,5</sup> Approximately one in five adults (20.6%) currently used SLT in 2017.<sup>6</sup> The most common forms of SLT in

## WHAT IS ALREADY KNOWN ON THIS TOPIC

- ⇒ In Bangladesh, 21% of adults currently used smokeless tobacco (SLT) in 2017; use is highest among women (representing 62% of current users), among less socioeconomically advantaged populations and among people living in rural areas.
- ⇒ There are wide variability in the types of SLT products available in South Asia and in the shape and size of their packaging, leading to poor compliance with health warning label (HWL) requirements (eg, warnings too small, not placed where they are supposed to be).
- ⇒ While it is known that tobacco packaging affects consumer perceptions of product attractiveness and perceived harm, there is little evidence about the influence of standard SLT packaging on product attractiveness and harm perceptions, particularly in a country where SLT use is high and compliance with HWL requirements is low.

## WHAT THIS STUDY ADDS

- ⇒ This study found that HWLs were more visible and noticeable on standard packs compared with current packs on the market; further, all groups reported greater harm perceptions for standard packs with compliant HWLs.

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

- ⇒ Presence of bright colours, 'owner' portrait imagery, and strong, sturdy pack material were found to be attractive irrespective of whether the pack shape and size were standard; this suggests the importance of plain packaging in addition to standard packaging.

Bangladesh are *zordha* (chewing tobacco mixed with spices that is chewed with betel leaf) and *gul* (tobacco powder flavoured with spices that is rubbed directly on the gums and teeth).<sup>7,8</sup> Almost two-thirds (62.0%) of current SLT users are women,<sup>6</sup> and the rates of use are higher among less socioeconomically advantaged populations and among people living in rural areas.<sup>6,8,9</sup> Most current SLT users initiate use before the age of 24 and nearly all initiate use before 35 years.<sup>10</sup>



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Several factors may contribute to the initiation and progression of sustained use of SLT products in Bangladesh, including the wide availability of low-cost SLT products.<sup>11 12</sup> Additionally, knowledge about SLT-related health harms is limited,<sup>9 13</sup> and some current SLT users, particularly women, believe that SLT can be used to treat medical ailments (eg, stomachache, toothache).<sup>14 15</sup> Studies also suggest that believing one's usual SLT product is less harmful than other SLT products is a common reason for continued SLT use among adolescents and adults.<sup>14</sup>

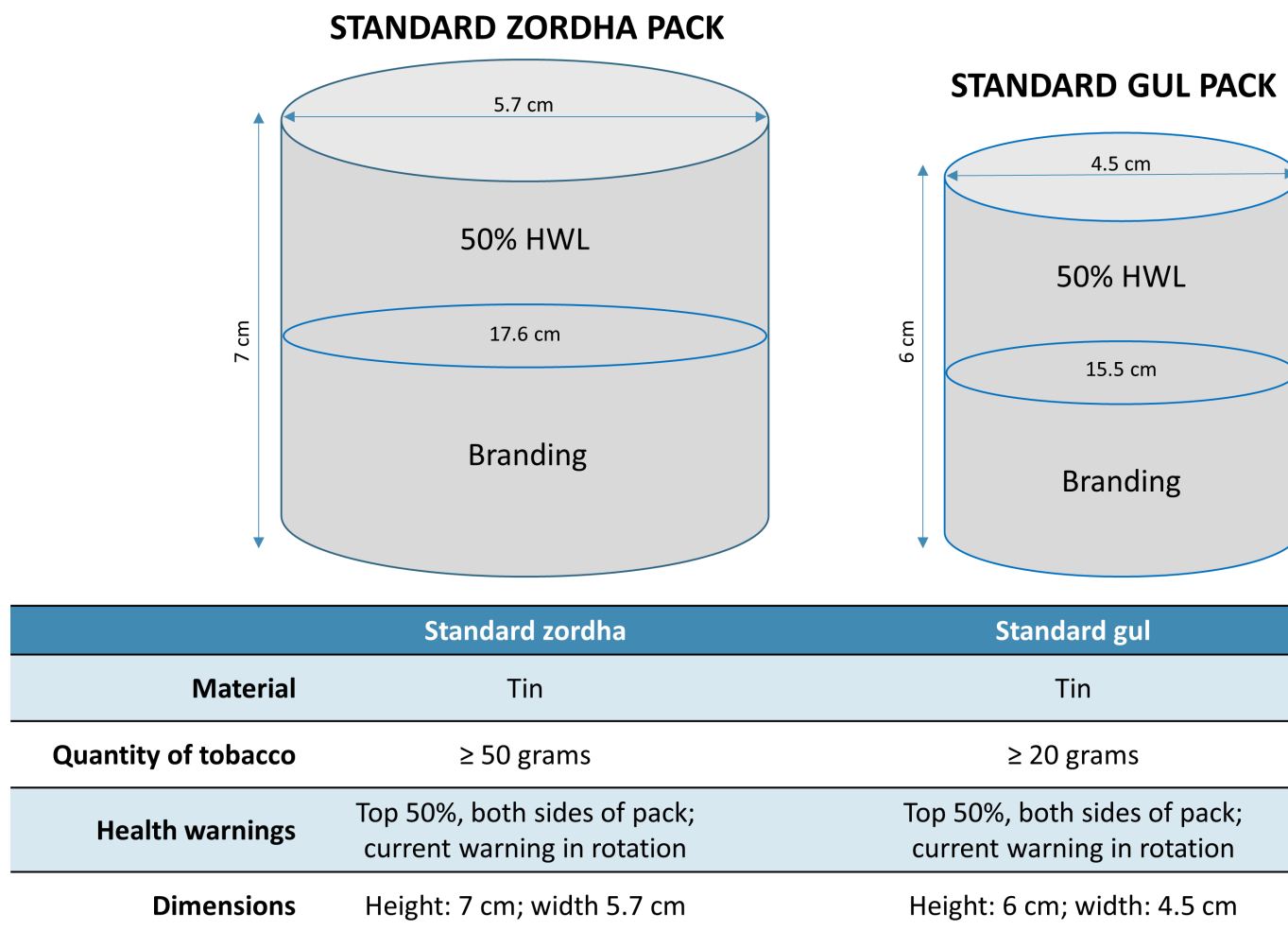
One way to increase knowledge of health harms of tobacco use is to implement pictorial health warning labels (HWLs) on product packaging.<sup>16 17</sup> The 2013 *Smoking and Tobacco Products Usage (Control) Act* requires that all SLT packs sold in Bangladesh include one of two HWLs showing the risks associated with SLT use.<sup>18 19</sup> The HWLs are required to cover the top 50% of the front and back of a pack.<sup>18 19</sup> However, studies suggest poor compliance with size (eg, HWL did not cover at least 50% of the pack) and placement (eg, HWL placed on bottom half; HWL placed on one side only) requirements.<sup>20 21</sup>

The wide variability in how SLT products are packaged in Bangladesh could partially explain the limited compliance with the HWL requirements. SLT packaging varies by material (plastic, tin), shape (cone shape, cylindrical) and size (grams).<sup>21 22</sup> Interviews with tobacco control stakeholders highlight concerns that variability in SLT size affects the visibility of HWL messages, where smaller or cone-shaped products may have more limited space for clear HWL placement.<sup>22</sup>

Recently, the Bangladeshi government's National Tobacco Control Cell (NTCC) and the Tobacco Control Research Cell (TCRC) at Dhaka International University developed a set of guidelines to standardise the quantity, material, shape and size of *zordha* and *gul* packs.<sup>23</sup> These guidelines recommend that *zordha* and *gul* should be sold in tin, cylindrical packs manufactured to a standard height and diameter for each product type (figure 1).<sup>23</sup> In addition, given that *zordha* is typically sold at a heavier weight than *gul*,<sup>24</sup> the guidelines suggest that standard *zordha* packs should contain at least 50 g of tobacco per pack, while standard *gul* should contain at least 20 g of tobacco per pack. All standard packs must include HWLs as required (ie, covering the top 50% of both sides of the pack).<sup>23</sup> However, the guidelines do not include plain packaging, and industry branding is allowed.

Branding and tobacco pack design play a role in consumer perceptions of product appeal and perceived harm.<sup>25–31</sup> Research from the USA and Norway found that the colour, shape and branding of existing, industry-designed SLT packs are influential factors in attracting current and never SLT users.<sup>29–31</sup> However, limited evidence is available regarding how standard SLT packaging may influence product appeal and harm perceptions, particularly in the context of a country like Bangladesh, where the use of SLT is high and compliance with HWL requirements is low.

This study addresses this gap and qualitatively explores perceptions of the proposed standard SLT packaging in Bangladesh. We conducted focus groups with current SLT users and



**Figure 1** Recommendations for the standard shape and size of *zordha* and *gul* packs. HWL, health warning label.

**Table 1** Distribution of focus groups by region, urbanicity, gender and tobacco use status

	Dhaka		Sylhet		Khulna		Total
	Urban	Rural	Urban	Rural	Urban	Rural	
Current SLT users							
Men	2	1	1	1	1	1	7
Women	2	1	1	1	1	1	7
Never tobacco users							
Women	2	1	1	1	1	1	7
Men	2	1	1	1	1	1	7
<b>Total</b>	<b>8</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>28</b>

SLT, smokeless tobacco.

never tobacco users to examine differences in the (1) perceived attractiveness, (2) noticeability of HWLs and (3) perceived harm of the standard *zordha* and *gul* packs compared with *zordha* and *gul* packs currently on the market.

## METHODS

Data for this study were collected from February to March 2021. We conducted 28 focus group discussions (FGDs) with 193 participants (table 1). Each FGD lasted 1.5 hours and included six to seven participants. Participants were recruited from low-income urban and rural areas in three states—Dhaka, Khulna and Sylhet. These areas were selected because they represent three distinct geographic areas of Bangladesh, where rates of SLT use were either similar to (Dhaka: 17%) or higher than (Khulna: 22.2%; Sylhet: 31.4%) the national rate (20.6%).<sup>6</sup> We focused on low-income areas given the disproportionate use of SLT among low-income populations<sup>6,8,9</sup> and conducted twice as many groups in urban Dhaka to reflect the larger population size of the capital city. An equal number of groups were conducted by gender and tobacco use status.

The Johns Hopkins Bloomberg School of Public Health Institutional Review Board (IRB No 14022) and Bangladesh Medical Research Council (IRB No 2019-2022/1093) approved this research. Participants provided informed oral consent to participate and received a US\$10 gift card as compensation for their participation in the study.

## Sampling approach and eligibility

We recruited participants in predetermined neighbourhoods following a systematic sampling approach (see online supplemental table 1 for details). In each neighbourhood, we visited every other household and recruited only one individual per household to reduce the likelihood that participants knew each other and thereby increase participants' ability to freely and confidentially share with the group. Participants were eligible if they lived in the identified neighbourhood and spoke/wrote Bangla. For current SLT user focus groups, participants were eligible if they were 18 years or older and reported the use of *zordha* and/or *gul* in the past 30 days. For never tobacco user focus groups, participants were eligible if they were 18–35 years old (to capture those at most risk of initiation)<sup>10</sup> and never used any tobacco product.

## Data collection

A team of six trained moderators conducted the FGDs. Moderators followed the same structured guide of discussion questions and pack rating activities (see online supplemental table 1 for guide development details).

We provided participants with an individual set of the most popular *zordha* (n=5 packs) and *gul* (n=3 packs) products sold in Bangladesh (figure 2A). We numbered the current packs the same across groups; participants referred to each pack number during the discussion. We also provided participants with one standard pack of *zordha* and one standard pack of *gul* (figure 2B). We designed the standard packs to the exact specifications recommended by the NTCC and TCRC. The standard pack HWL was based on the current image rotation for *zordha* and *gul*. Each HWL covered the top 50% of the front and back of the pack and started below the lip of the pack lid to ensure that no part of the HWL was covered per current rules.<sup>18,19</sup> The standard pack branding approximated what participants would see on the market; however, the brand itself was fake and not available for sale.

We also provided participants with individual ranking scales for *perceived attractiveness*, *HWL noticeability*, and *perceived harm*. Groups first viewed the current SLT packs. The moderator asked participants to physically place the packs on an attractiveness ranking scale from 1 to 5 that each participant received, where 1 indicated a pack was 'not at all attractive' and 5 indicated a pack was 'very attractive'. Next, participants were asked to rate the current packs as a group and discuss the reasons behind the group rating. This exercise was repeated for the HWL noticeability scale (1 'least noticeable', 5 'most noticeable'), followed by the perceived harm scale (1 'most harmful', 5 'least harmful'). We asked participants to individually rate packs to enhance their familiarity with all features of the pack and to generate initial



**Figure 2** Images of the (A) current *zordha* and *gul* packs and (B) standard *zordha* and *gul* pack provided to focus group participants for the pack rating activity and group discussion.

**Table 2** Demographic characteristics and smokeless tobacco (SLT) use of focus group study participants (n=193) by tobacco use status

	Current SLT users* (N=97)	Never tobacco users (N=96)
	n (%)	n (%)
Age, years		
18–20	5 (5.2)	31 (32.3)
21–35	50 (51.5)	65 (67.7)
36–50	29 (29.9)	0 (0.0)
≥ 51	13 (13.4)	0 (0.0)
Gender		
Men	48 (49.5)	48 (50.0)
Women	49 (50.5)	48 (50.0)
Highest level of education		
Primary school	56 (57.7)	15 (15.6)
Secondary school/high school	27 (27.8)	45 (46.9)
College/university	6 (6.2)	28 (29.2)
Postgraduate school	1 (1.0)	7 (7.3)
No formal schooling	7 (7.2)	1 (1.0)
Occupation		
Homemaker/housework	38 (39.2)	29 (30.2)
Business	16 (16.5)	11 (11.5)
Daily labourer	14 (14.4)	1 (1.0)
Self-employed	9 (9.3)	7 (7.3)
Farming	7 (7.2)	4 (4.2)
Government employee	4 (4.1)	1 (1.0)
Industrial worker	4 (4.1)	6 (6.3)
Student	4 (4.1)	34 (35.4)
Agricultural worker	1 (1.0)	0 (0.0)
Unemployed	0 (0)	3 (3.1)
SLT use		
<i>Zordha</i> use		
Daily	72 (74.2)	–
Non-daily	15 (15.5)	–
<i>Gul</i> use		
Daily	17 (17.5)	–
Non-daily	3 (3.1)	–
Other SLT product use†		
Daily	6 (6.2)	–
Non-daily	0 (0.0)	–

\*Current SLT use defined as the use of *zordha* and/or *gul* in the past 30 days.

†Other SLT products include *sada pata*, *khoinee*, *pan masala*, etc.

individual opinions that would inform the discussion and group rating.

After the current packs discussion, the group was asked to discuss the two standard packs. Participants rated the standard packs on the same scales in the same order mentioned previously; however, this time the moderator asked the group to discuss how the standard *zordha* or *gul* compared with current *zordha* or *gul* packs, respectively, in terms of attractiveness, HWL noticeability and perceived harmfulness. Following the discussion, all participants completed a questionnaire. Table 2 presents descriptive statistics of participant demographics and SLT use.

### Coding

We audio recorded all FGDs. A professional service transcribed the audio recordings into Bangla and translated the transcript from Bangla to English (see online supplemental table 1 for data processing approach). Three authors of this study (LC, SS,

LK) coded the English transcripts. The codebook (see online supplemental table 2) included 24 *a priori* codes (eg, attractive colours) based on the discussion questions and a cursory review of the transcripts. To assess inter-rater reliability between coders, LC, SS and LK tested the penultimate codebook version on the same three study transcripts (one per region). The agreement between coders was substantial, and code-specific prevalence-adjusted kappa scores were  $\geq 0.75$ . The coding team discussed any discrepancies and made changes to finalise the codebook. Coders applied the final codebook to all 28 transcripts in the qualitative analysis software Dedoose. Transcripts were assigned to each coder by region (see online supplemental table 1 for codebook development details).

### Data analysis

The coded data were thematically analysed to identify higher-order themes related to perceived attractiveness, HWL noticeability and perceived harm of current and standard SLT packs, as well as the influence of these features on the potential use of standard *zordha* or *gul* packs. We analysed data separately for current SLT (current) and never tobacco (never) user groups and identified differences and similarities in how groups discussed these themes. We also examined differences and similarities in how groups discussed themes by region, urbanicity and gender of the group and found that topics were discussed similarly by these factors. Online supplemental table 1 provides additional details on the analysis process.

## RESULTS

### Perceived attractiveness

#### Current packs

Overall, colour was the most influential factor in determining whether a pack was attractive or not across groups. All groups discussed that pack colour influenced perceived attractiveness, where packs with bright, clear colours (eg, red) were most attractive, while packs with dull or darker colours were often described as less attractive.

Most current and never user groups discussed that current packs that included a portrait image, perceived to be the 'brand owner' (see figure 2, packs 22 and 5), increased attractiveness of the pack and in some cases signalled that the pack was higher quality, whereas current packs without a 'brand owner' image were frequently viewed as lower quality packs. However, several current and never user groups pointed out that the attractiveness of the 'brand owner' image was offset by the HWL image. In one current user group, this conflict influenced their rating of current *zordha* pack 44:

P#1: We like it [*zordha* #44] because on the container there is a photograph of the owner.

P#5: And it is looking really ugly because of this other picture ... of a lesion.

Urban Dhaka—Men, SLT users (Group 1)

Most current and never user groups also discussed how HWLs on current packs generally reduced perceived attractiveness.

P#4: I think this [HWL] picture is the main reason for the lower ratings. The picture shouldn't have been posted in such a way. This one is the perverted condition of a human. The rest of the things were good. Only because of this picture ...

Urban Sylhet—Men, never tobacco users

Finally, current and never user groups discussed how the structural features of current packs influenced perceived attractiveness. Across all groups, larger sized *zordha* packs that were made

with a solid material like tin were seen as more attractive, higher quality and sturdier compared with the smaller *gul* packs made of plastic.

#### Standard packs versus existing packs

When comparing the standard packs to the current packs, all groups discussed that the standard packs were more attractive. Most current and never user groups felt the colours on the standard pack were more 'beautiful' and that the standard pack shape, material and design appeared to be better quality and more durable compared with the current packs. This was particularly relevant when groups compared the standard *gul* to the current *gul* packs.

P#4: The item [standard *gul*] is better as it made of metal (tin) instead of plastic

Moderator: Yes, sister, what do you want to say?

P#3: I am agreeing with them.

P#6: The quality of metal of this container is upgraded.

P#4: Color of this item seem very good, and it is easier to hold the item.

Urban Dhaka—Women, never tobacco users (Group 1)

#### Noticeability of HWLs

##### Existing packs

All groups discussed that smaller HWLs (<50% of the pack) or HWLs printed in lighter or darker colours than the government's reference images were less noticeable than larger HWLs or HWLs printed in clear, bright colours. Some current and never user groups discussed how a blurry HWL image might be an attempt to reduce focus on the HWL imagery and shift attention to other pack features.

Moderator: Would you tell us why you put it [zordha #44] at 1 [least noticeable]?

P#1: It looks blurry.

P#3: It's not eye-catching. The health warning picture doesn't grab attention initially. Rather the man's photo [owner's portrait] catches attention.

Urban Khulna—Men, never tobacco users

Most current and never user groups discussed how the placement of large HWLs on both sides of the pack increased HWL visibility 'wherever you look'. Some never user groups also pointed out that placing a HWL image on just one side of a current pack might be an attempt to hide the HWL information.

##### Standard packs versus current packs

All groups discussed how the HWLs on the standard packs were more noticeable compared with the HWLs on the current packs, whereby the print quality and colour of the HWL allowed the HWL to stand out and made it easier to understand the health message. Several current and never user groups also discussed how the size and placement of the warning at the top half of both sides of the standard pack increased attention to the HWL information.

P#2: The existing packs we saw earlier you cannot understand whether they are harmful or not. The warning messages were given on one side in those items. However, the warning message is given all around this [standard *gul*] container. It can be visible from all the sides.

Urban Dhaka—Men, never tobacco users (Group 2)

#### Perceived harm

##### Current packs

Across groups, the presence, location and colour of HWLs influenced perceived harm of the current packs. All current and never user groups discussed how current packs with a small HWL or no HWL appeared less harmful compared with current packs with a large HWL or those with a HWL placed on both sides of the pack. To some current and never user groups, the lack of HWL or the placement of a single, small HWL seemed intentional:

P#7: No picture has been given here [on *gul* #5], they didn't give anything here, they kept it secret.

Rural Sylhet—Men, SLT users

P#3: If this product is given to someone, that person will not have any idea if it is harmful or not. That is why I gave it a 1 [least harmful], but the other one has a picture, so its effects are visible from the picture.

Rural Khulna—Women, never tobacco users

Most current and never user groups discussed how discoloured, dark or blurry HWLs were harder to understand and, therefore, made a current pack seem less harmful. Some current and never user groups also suggested that the pack branding competed with the HWL image for visual attention. One group of never tobacco users indicated that branded content, including branded imagery, should be replaced with HWLs.

P#5: It would be more beneficial if the health warning picture or the text has been given bigger rather than giving the owner's picture here. But they have given the owner's picture and the text is also not clear enough.

Urban Dhaka—Women, never tobacco users (Group 1)

##### Standard packs versus current packs

All groups discussed that the standard packs seemed more harmful compared with the current packs, largely because the HWL was more prominently featured on the pack. This was particularly salient when groups compared the larger, clearer HWL on the standard *gul* pack versus the HWLs on the current *gul* packs.

P#1: The [*gul*] containers available in the market are small, as a result, nothing is discernible. Whereas, everything is clearly visible on this [standard *gul*] container as it's bigger.

LC04\_Dhaka Urban SLT Users\_MEN

Several current and never user groups also discussed how the placement of HWLs on both sides of the pack increased perceived harm as the HWL 'will catch your eyes' no matter how the standard pack is turned or displayed.

#### DISCUSSION

Our study provides insight into how consumers might respond to standard SLT packs in Bangladesh across three domains: perceived attractiveness, HWL noticeability and perceive harm. First, our findings suggest that current SLT packs with bright colours, 'brand owner' portrait imagery, and strong, sturdy pack material were more attractive across current and never tobacco user groups. This aligns with prior research conducted in the USA and Norway, where colour and shape of industry-designed SLT packs increased participant interest in and attraction to products.<sup>29–31</sup> The presence of 'brand owner' portrait imagery is commonly found on SLT products sold in South Asia.<sup>32</sup> Our results suggest that the presence of this imagery might be particularly important in how consumers judge SLT pack attractiveness and could imply higher quality. For standard packs, we

found that many of the same features that increased perceived attractiveness of current SLT packs also increased perceived attractiveness of the standard SLT packs. These features included the durable shape and material of the standard packs and the remaining ability to use attractive colours and imagery.

Second, we found that HWLs on most of the current SLT packs examined in this study had limited visibility and were not placed on packs in a way that complied with current HWL requirements which aligns with prior research showing low compliance with warning placement on *zordha* and *gul*.<sup>21</sup> In contrast, we found that the HWL placement on the standard packs examined in this study increased the visibility and noticeability of HWLs. It is important to note that the standard SLT pack HWLs were applied exactly as recommended on both sides of the pack at the top 50% of the principal area, starting underneath the product lid.<sup>18 19</sup> This suggests that a policy to standardise SLT pack shape *alone* may not increase warning noticeability, but that standard pack recommendations need to be aligned with proper implementation of warning label printing and placement requirements, potentially at the point of manufacture, to enhance noticeability.

Third, we found that the lack of HWLs or presence of non-compliant HWLs (small HWLs, miscoloured HWLs, HWLs placed only on one side) on current SLT packs contributed to lower perceived harm among current and never tobacco users. This was particularly true for the smaller, cone-shaped, current *gul* packs, where the product size and irregular shape of the packs limited correct placement and visibility of HWLs. When HWLs were larger in size and more prominently placed on current *zordha* packs, their presence often increased perceived harm and reduced pack attractiveness as attention was drawn away from other branded features on the pack. For standard SLT packs, the prominence and visibility of the HWLs on the standard packs increased perceived harm of the products across current and never tobacco user groups. Collectively, these findings suggest that current and standard pack shape and size were linked to HWL placement and ability to see and comprehend the HWL and implementing HWLs as required on standard packs of the recommended size and shape could influence harm perceptions and potential SLT-related behaviour, particularly among those who never tried SLT before but may be susceptible to use. In addition, our findings suggest that there may be opportunity to leverage the impact of the improved noticeability of HWLs on standard packs by increasing the HWL size from 50% to a larger size. This would increase the effectiveness of HWLs on increasing perceived harm and reduce the space and influence of industry branding in the form of pack colour or imagery.

Overall, the study findings have several broad policy implications for SLT packaging in Bangladesh. Our results demonstrate the potential for unintended consequences in implementing a standard SLT pack that could increase product attractiveness on balance, suggesting a standard pack alone may not reduce perceived attractiveness of SLT sold in Bangladesh. Additional plain packaging policies that also standardise the colour of packs to a single, dull olive colour and remove the ability to use appealing imagery, including 'brand owner' portraits, may be needed to further reduce attractiveness and appeal to current and novice tobacco users. In addition, the quality of tin used to construct the study standard packs was appealing to current and never SLT users. Additional standards that require SLT products be sold in a lower quality tin canister could help mitigate this appeal. Our results also highlight the importance of aligning a standard pack recommendation with proper implementation of HWL printing standards (ie, colour, image quality) and placement requirements during the manufacturing process. This may

require enhanced enforcement by the NTCC to ensure that companies are following all standard pack requirements along with the HWL standards when producing packs.

Findings are subject to several limitations. By design, we only recruited low-income individuals who could read/write Bangla and lived in three regions of the country. In addition, we examined opinions among never tobacco users aged 18–35 years who are at most risk of initiating tobacco use; however, it is possible that the findings across never user groups would be different if adults over 35 years were also included. Further, we only examined perceptions of *zordha* and *gul* and did not ask or discuss any other SLT products. We also only tested one standard shape requirement for *zordha* and *gul*, respectively. Other potential features, such as product price, also influence consumer perceptions and were not accounted for in this analysis. Finally, transcripts of the FGDs were ultimately analysed in English, so the nuance of some issues as they were discussed and transcribed in Bangla may not be fully reflected in the results presented. However, our rigorous FGD protocol and choice to examine the most prevalent SLT products disproportionately used by lower-income populations in Bangladesh are key strengths of this study.

Overall, results from this study have the potential to influence the current and future standard SLT pack specifications in Bangladesh. We also highlight supportive policy measures that might be needed for standardisation to be most impactful. This study fills an important research gap related to perceptions of current and standard SLT packs. Findings can help inform standard SLT pack strategies in other countries with similar SLT context to Bangladesh.

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**Competing interests** None declared.

**Ethics approval** This study involves human participants, and this research was approved by the Johns Hopkins Bloomberg School of Public Health Institutional Review Board (IRB No 14022) and Bangladesh Medical Research Council (IRB No 2019-2022/1093). Participants gave informed consent to participate in the study before taking part.

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