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# Implementing smokeless tobacco control policy in Pakistan: a qualitative study among Naswar supply chain actors

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## ABSTRACT

**Objective** To obtain insights into the perceptions of barriers and facilitators to implementation of the WHO Framework Convention on Tobacco Control (FCTC) among smokeless tobacco (SLT) supply chain actors in the Khyber Pakhtunkhwa province of Pakistan.

**Methods** We conducted a qualitative study to investigate the perceptions about SLT control policy formulation and implementation among exclusive Naswar sellers and point of sale vendors. We conducted five focus group discussions in three districts of Khyber Pakhtunkhwa using combined deductive-inductive thematic analyses.

**Results** We identified three central themes that potentially impact policy formulation, its implementation and application. The first theme examines the role of children in the Naswar business: as potential customers, and as potential heirs to a Naswar-selling business. A second theme targets the 'business of Naswar', which includes a specific identity of Naswar sellers, its potential to generate profits and the special case of Naswar regulation as a socially accepted and culturally rooted product. The third theme addresses the unusual ingredients of Naswar and its production process, making Naswar a health risk for consumers and producers. We also report conflicting views regarding SLT control among the supply chain actors.

**Conclusions** This study provides insights into the perceptions of important SLT supply-side stakeholders regarding various SLT control policy options based on the FCTC. While there is some opposition to policy approaches like taxation and switching of business, implementing a ban on selling SLT to minors may be a viable option for policymakers in the short term.

## INTRODUCTION

The term smokeless tobacco (SLT) describes a range of products that contain tobacco as the primary ingredient, that are used without burning the product, usually consumed orally or through the nose.[1] A 2015 survey from 121 countries estimates that 351.9 million people use SLT in some form,[2] the majority (>90%) of these SLT users live in South Asia.[3] An estimated 13% of the Pakistani population uses SLT,[4] with marked geographic differences in type and use pattern within the country.[5] Naswar is a type of SLT used by an estimated 18 million Pakistanis.[6] It is essentially a mixture of tobacco (*Nicotiana rustica*), ash and slaked lime, to which condiments like green cardamom and mint are added according to the manufacturer's choice and market demand. Naswar is produced by the local cottage industry of Pakistan, with several manufacturers also selling the product directly to consumers (online supplementary file-Naswar supply chain).

Naswar is available in moulded forms in a cellophane packaging weighing approximately 20 g, costing 10 Pakistani rupees (US$0.06). Predominantly consumed by males, Naswar is used in the form of handmade or preformed pellets that are placed under the tongue or in the sulcus of the mouth several times a day.[5] The nicotine is absorbed through the mucous membrane of the mouth, the ash and slaked lime increase the pH of the oral cavity and aid in rapid absorption of the nicotine.[7] Dip durations are subjective, most lasting under 30 min.[8] The users report an intense 'buzz' that lasts approximately 10 min. However, first-time users report nausea, vomiting and other gastrointestinal effects.[9] In general, there is low awareness of the deleterious effects of Naswar on health, for example, upper aerodigestive tract cancers, oral lesions, cardiovascular and gastrointestinal disease.[10] Moreover, the absorption of nicotine through skin or inhalation of tobacco dust in tobacco workers results in symptoms like headache, nausea, vomiting, dizziness, increased perspiration, shortness of breath and, occasionally, fluctuation in blood pressure and heart rate.[1 11]

In 2005, Pakistan became a signatory to the WHO Framework Convention on Tobacco Control (FCTC).[12] Articles 6–14 of the FCTC address tobacco demand reduction through price and taxation, regulation of contents, packaging and labelling of products, advertisement, promotion and sponsorship. The central supply reduction provisions in FCTC consist of articles 15–17 including prevention of illicit trade in tobacco products, ban of sales to and by minors, and provision of support for economically viable alternatives to growing tobacco.[13] The FCTC can be an effective tool for the regulation and control of tobacco including SLT use.[14] Although Pakistan has made substantial progress in policies curbing smoking,[15] SLT control has been lagging.[12]

Gaps in SLT control policies in Pakistan have been highlighted, particularly in the regulation and taxation of products and the sale to minors.[12 15] Research involving Pakistan's SLT supply chain actors suggests that most FCTC articles are poorly implemented.[14]



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In contrast to smoking, SLT use is often deemed a regional issue within Pakistan,[16] perceived as less harmful than smoking and seen as a 'harm reduction' substitute.[10] Tobacco control efforts frequently focus on demand reduction, leaving the supply chain and retail context largely underexplored. Understanding the SLT supply chain may identify potential facilitators and barriers to policy formulation, implementation and compliance. We, therefore, studied perceptions of supply chain actors regarding the relevant provisions of the WHO FCTC that could be incorporated in potential SLT control policy.

## METHODS

We used a qualitative case study approach[17] to investigate the perceived barriers and facilitators to SLT control policy formulation and implementation, relevant to the SLT supply chain including exclusive SLT sellers and point of sale (POS) vendors.

### Sampling

We purposively selected three cities of the Khyber Pakhtunkhwa province of Pakistan: Peshawar, Mardan and Bannu, based on their status as hubs for large-scale manufacturing, distribution and sale of Naswar. At each study site, we recruited two groups of participants: (A) SLT POS vendors, and (B) exclusive Naswar sellers, Naswar suppliers, wholesale dealers and manufacturers. We employed a purposive sampling technique along with snowballing to include representatives from both groups. Our sampling approach was guided by Malterud *et al*'s concept of 'information power'.[18] Information power depends on the aim of the study, sample specificity, use of established theory, quality of dialogue and analysis strategy. Based on these criteria except for 'established theory', we conducted five focus group discussions (FGD), two each in Peshawar and Bannu, and one in Mardan. Three FGDs took place with exclusive Naswar sellers (one in each city) and two with POS vendors (Peshawar and Bannu).

Data were collected from September 2018 until February 2019. An English language topic guide (online supplementary file) grounded in the FCTC articles for supply and demand reduction (6, 9, 10, 11, 13, 15–17) and informed by previous research[12–14 19 20] was developed and was later on translated into Pashtu and pilot tested. An incentive in the form of cash payment (equivalent to €17) was provided to each participant. Focus groups were conducted in Pashtu, audio recorded and transcribed directly into English. Each FGD lasted up to 60 min. Two researchers transcribed all the FGDs with cross-checking. Following every FGD, the team discussed notes and compared them with the audio recordings.

### Analysis

Transcripts were coded using MAXQDA 2018 software.[21] We analysed the data using a combined deductive-inductive thematic analysis approach.[22] Two authors independently coded the transcripts. The first iteration of the codebook was mainly driven by categories used to develop the FGD guidelines. We grouped different codes expressing similar ideas into explicit themes. During a second coding round, we added inductively identified categories and synthesised into themes, where appropriate. Subsequently the coders compared their independently identified themes, refined and compared the final themes against the transcripts.

## RESULTS

We recruited 38 participants (six to eight per session) in the FGDs (online supplementary table 1). We identified three central themes that can impact policy formulation and hinder or foster its implementation and application. These include 'Children and Naswar'—as potential customers and heirs to a Naswar-selling business, 'business of Naswar'—identity and profit generation, and 'Naswar as a health risk'—for manufacturer and consumer. Further, some conflicting views regarding SLT control emerged among the supply chain actors.

### Children and Naswar

Although branded as a product for adults, children and adolescents play a role in Naswar's business on several levels. They may buy the product, either for themselves or for relatives, or act as the next generation of Naswar sellers in family-owned businesses. Most of the exclusive Naswar sellers opposed the sale of SLT to minors:

> …Children are the future of our nation. We should think positively about the minors. If there is a ban on the sale of SLT to minors, we will not complain… (FGD-5-ExS)

POS vendors reported that they only sell tobacco products to minors who buy them for the elders of the family—an established practice, and because Naswar is too 'hard to handle' by children due to the high levels of stimulants. Rather than themselves refraining from this practice, however, sellers proposed that parents should not send their children to buy Naswar, and researchers should investigate customers' views about this issue. POS vendors were not concerned that a ban of sale to minors could have negative effects on their revenue:

> …it (ban on sale to minors) will result in a very little effect on our business for which at least we are ready. Let it happen… (FGD-1-POS)

The participants believed that illicit SLT products from India that came in fancy packaging were more appealing to youth. They cited 'easy availability' in urban areas and the 'coolness factor' as the main factors for the popularity of these illicit products. Decreased dissolution in the mouth and the ability to use them stealthily were other reasons for the high demand of these products.

> …it's (illicit SLT) not good because its users are mostly youngsters and even underage… (FGD-1-POS)

Most of the participants urged a ban on sale of these products as they believed that they posed a unique danger to the nation's youth, unlike their products which they stated were not meant for young people.

The notion of their children continuing in the same business was dismissed by all small-scale manufacturers, who stated that they wanted their children to venture into other businesses that were less physically demanding, less physiologically harmful and/or had a higher revenue generation potential.

> …Never, it's not a clean job, not an easy to handle job especially the vomiting associated with this job in summers. I would never allow my child to continue this business… (FGD-2-ExS)

### The business of Naswar

Identity as a Naswar seller was linked to the type of business: exclusive sellers were closely connected to the future of their business, and any potential risks to the business such as taxes or a ban on sales were perceived as highly problematic.



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Exclusive Naswar sellers believed that stricter pricing or tax regulations would result in an increased price per pack or reduced weight per pack, affecting them and their customers, but most POS vendors were indifferent to this issue:

> …If we get it at a higher price from supplier, we will sell it at a higher price, and customers would still buy… (FGD-1-POS)

SLT manufacturers considered printing of health warnings on packaging as constituting an extra burden on their already compromised income.

> …printing a health warning will cost a lot of money, we cannot afford it… (FGD-3-ExS)

Similarly, there were negative perceptions regarding the disclosure of ingredients. Participants thought that contents lists would go unnoticed or not be understood, manufacturers would be untruthful and printing expenses would force them to increase the price.

At the same time, exclusive Naswar sellers believed that no promotion or advertisement was needed for Naswar, supporting an obligation of an FCTC ban on tobacco advertising and promotion.

> …I don't need to advertise my product, no sticker or banner, nothing… (FGD-5-ExS)

Moreover, they denied violation of any law addressing the promotion of Naswar:

> …we are not doing any illegal work and if we are prohibited from it (promotion) we will protest… (FGD-3-ExS)

However, several respondents reported that they did promote their products by word of mouth, gave out free samples and extra packs and provided credit to customers.

FCTC Article 17 calls for the provision of support for economically viable alternatives to tobacco, which is an issue specifically for exclusive Naswar sellers. Approximately half of the exclusive sellers had considered switching their business, but others cited the profitability of the business, family connection to the business, affordability of the Naswar business compared with other types of stores and lack of skills to pursue a different profession, as reasons for not doing so.

> …In the last 30 years I haven't seen any other business, if I have to start another business I will start it from zero. Therefore, I will persist with this business… (FGD-3-ExS)

They cited several expenses such as taxes, employee wages, packaging costs, inflation and rising prices of raw materials as detrimental for their business, implying that further price hikes due to increased taxes would force them to switch businesses:

> …If this work is no more profitable, we will leave it because every person nowadays has a lot of expenses for living… (FGD-2-ExS)

POS vendors were unconcerned about potential taxes, as all taxes on tobacco are paid by manufacturers and suppliers.

> …we don't have any concern regarding this issue. The tax is imposed on dealers and manufacturers of Naswar… (FGD-4-POS)

Since POS vendors stocked Naswar and general grocery items, the proportion of their revenue generated from Naswar was perceived to be negligible. They were thus indifferent to a decrease in demand due to taxation, considering cigarettes as more profitable for their business:

> …Sale and profit from cigarettes is more because mostly young people are smokers, we earn little from Naswar… (FGD-1-POS)

Other POS vendors voiced fears of losing customers if they stopped selling Naswar:

> …A customer, once gone from your shop for anything not available—be it Naswar—he'll never come back. People are busy and they can't afford to come again to such a place where they won't get everything, they want… (FGD-1-POS)

### Naswar as a health risk

The respondents perceived that the formulation of Naswar rendered it susceptible to tampering, resulting in a potentially risky product for consumers. Participants discussed that ash from burnt tree bark, a traditional ingredient of Naswar, has been replaced by ash from poor-quality woods, coal burnt in hotel furnaces and other unknown materials that merely resemble ash, to satisfy the demand for Naswar. Moreover, some producers increase the amount of ash and slaked lime to intensify user experience. It was claimed that ammonium chloride was also being added to Naswar for smell reduction.

> …some of these ash dealers from Karachi are selling some different material by the name of ash which looks and weighs just like regular ash and is very cheap… (FGD-5-ExS)

Respondents were unable to fully describe Naswar formulation and its potential risks, and some exclusive sellers indicated they had a secret formula, which they refused to share. To protect their formula, they were willing to violate content disclosure, if it was in future required by law. Most participants thought that health warnings would have little impact on consumers:

> …Look at cigarettes, health warnings are not effective… (FGD-3-ExS)

However, exclusive sellers also reported the occupational hazards related to the Naswar business, citing vomiting, nausea, dehydration and sleeplessness caused by inhalation of toxic fumes from the products, particularly in summers:

> …We keep vomiting until green color vomit comes out which is [a] sign of relief from effects [of Naswar]… (FGD-3-ExS)

### Contradictory perceptions among types of sellers

POS vendors and exclusive Naswar sellers had some opposing views regarding taxation, health impacts of Naswar and health warnings printed on Naswar packs (online supplementary table 2), likely related to the degree of dependence of their business on Naswar sales. Between larger and smaller exclusive Naswar businesses, views on switching to another source of income also varied.

## DISCUSSION

This is the first study to explore perceptions about SLT control policy among supply chain actors in Pakistan. Participants were in clear agreement regarding a ban on sale to minors, which they supported, and opposed the sale of illicit products. They were in partial agreement on content disclosure of Naswar, its promotion and advertisement. Opposing views were voiced concerning the health impacts of Naswar, taxation and prospects of switching to another business.

Naswar is interwoven in the social fabric of Khyber Pakhtunkhwa province to an extent that it is considered a confectionery item,[23] and is often promoted as a 'harm reduction'



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alternative to cigarettes.[24] Children cannot smoke in front of elders but Naswar use is acceptable, and elders frequently send children to fetch it for them. SLT use starts at a very young age in the South Asian population.[25 26]Although statutory regulations in Pakistan only prohibit the sale of smoking products to and by minors, and not all tobacco products,[14 27] some participants considered selling Naswar to minors unacceptable. However, some of the POS vendors admitted they sold to a minor if he/she claimed to buy it for their elders, similar to previous reports.[14] Most participants favoured a ban on illicit SLT products in the local market, partly to regain their market share but also due to the concerns about the unknown composition of the products. The respondents claimed that these products attracted youth, focusing on a modern recreational lifestyle as reported previously.[28]

Research on tobacco advertising and promotion highlights the impact of POS advertisement on sales growth.[29 30] For a product as accepted as Naswar, some exclusive Naswar sellers in our study asserted that there was no need for formal advertisement and believed word of mouth promotion was sufficient. The typical packaging of different Naswar products in transparent cellophane without any printed tags seems to lend credence to this viewpoint. Other sellers, however, believed that advertisements and promotions were required to generate more business. Promotions included giving credit lines, free samples and payment by retailers after the sale of products. In this group, the suggestion of a promotion ban was ill received.

Tobacco warning labels are potentially effective in influencing behaviours.[31 32] A US study reported that SLT pack appearances had a quantifiable effect on health perceptions through the use of graphic warning labels.[33] The Naswar packs used in Khyber Pakhtunkhwa province are devoid of any textual or graphic health warnings but POS vendors favoured health warning labels (if implemented), while exclusive Naswar sellers assumed it would be a useless practice. Manufacturers of Naswar deemed it an extra burden, adding to expenses. However, many manufacturers are using business identity stickers on their products. This could be regarded as a facilitator as they are already investing in stickers and adding health warnings would cause little additional cost.

FCTC Articles 9 and 10 addressing the regulation of contents and regulation of product disclosure[13] are violated in the case of Naswar, which is unregulated. Our participants reported the use of added ingredients like cardamom, husk, colouring agents and ammonium chloride in Naswar along with poor-quality ash and its substitutes. Some claimed to have a secret formula and indicated they would be unwilling to disclose this even if content disclosure laws were implemented. Despite the absence of detailed information about the composition of these products, some manufacturers and POS vendors believed that 'Naswar is harmless'.

Tobacco taxation is an effective tobacco control strategy.[34–36] Proposed tax increases are frequently opposed by the tobacco industry, based on the assumption that they will predominantly burden the poor.[37] The same argument was given by exclusive Naswar sellers. In the case of tax increases, however, attention must be paid to indirect effects such as product switching. Although some participants were aware of a tax paid on guar gum used for softening, it is still unclear whether all the ingredients used in Naswar are being taxed.

### Limitations and strengths

Although participants were recruited from geographically varied sites in each district, findings may be distinctive to the study sample only. Furthermore, we only addressed Naswar, so these perceptions may have limited generalisability to other SLT products. The study sample included no women due to cultural restrictions. The FGD approach may have led to some socially desirable answers. Despite these limitations, this qualitative study provides novel insights about supply chain actors' perceptions that can be useful for further policy development.

## CONCLUSION

Banning culturally ingrained products like Naswar is often difficult for legislators due to fears of a public backlash. There are, however, possibilities for incremental policies. Policies such as a ban on sale to and by minors, and a ban on promotion and advertisement were not particularly controversial and should be a starting point for a Naswar control policy. Most manufacturers engage in printing business details on Naswar packages, so printing of health warnings might also be feasibly implemented without much opposition. There was less support for taxation and disclosure of ingredients policies among the Naswar supply chain in Pakistan.

### What this paper adds

- In 2005, Pakistan ratified the WHO's Framework Convention on Tobacco Control (FCTC). Although Pakistan has made substantial progress in tobacco control policy implementation aimed at curbing smoking, the progress for smokeless tobacco (SLT) control has been lagging.
- Most articles of the FCTC (Articles 6, 9–13, 15–17) pertinent to the control of SLT are poorly implemented in Pakistan.
- Tobacco control efforts mostly focus on demand reduction, leaving the supply chain and retail context largely underexplored.
- We obtained insights about perceptions of supply chain actors regarding the implementation of the WHO FCTC as SLT control policy for Pakistan.
- The findings are expected to provide guidance for the formulation of a WHO-FCTC-based policy and to help with eventual policy implementation.

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**Data availability statement** Data are available upon reasonable request. All data relevant to the study are included in the article or uploaded as supplementary information. The qualitative raw data for this study can be provided upon reasonable



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request and on merit to research students of Masters/PhD or any policy-making body.

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