Title: Smokeless tobacco products, supply chain and retailers’ practices in England: a multi-methods study to inform policy

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Abstract

Background: In England, many people of South Asian origin consume smokeless tobacco (ST). ST use can lead to oral cancer, which is disproportionately high in South Asians. Our aims were to assess the compliance of ST product retailers with statutory regulations and to explore the supply chain of ST.

Methods: We undertook a multi-methods study between August 2017 and July 2019 in five English boroughs with a high proportion of ethnic South Asians. We purchased ST products and conducted field surveys with ST retailers at point-of-sale. Qualitative interviews were conducted with ST retailers and suppliers. ST packs were assessed for regulatory compliance, while quantitative and qualitative data triangulated information on retailers’ practices and the ST supply chain.

Results: We collected 41 unique ST products, which included dry snuff, *naswar*, *gutka*, chewing tobacco and *zarda*. ST products were not registered, and demonstrated low compliance with health warning (14.6%) and packaging (56.1%) requirements. ST availability in surveyed boroughs was high (38.2% - 69.7%); dry snuff, *naswar* and *zarda* were most commonly available. ST retailers demonstrated limited knowledge of regulations, and one-third were found to advertise ST at point-of-sale. Qualitative insights revealed illicit supply and distribution networks, as well as ST production in discreet locations.

Conclusion: ST products are widely available in England, yet non-compliant with statutory regulations. In order to safeguard consumers, in particular ethnic South Asians, stronger efforts are needed to regulate the supply chain of ST at both national and international levels.
Introduction

Smokeless tobacco (ST) is a heterogeneous group of non-combustible tobacco products.[1] ST products are consumed by >350 million individuals worldwide[2] especially in South Asia.[3] The variety of tobacco leaf, preparation methods and additives make South Asian ST products more harmful than non-South Asian ST, e.g. Swedish snus.[4] These ST products increase the risk of oral, pharyngeal and oesophageal cancers and lead to >300,000 deaths per year.[5]

ST is also popular among the South Asian diaspora.[6–10] In the UK, where South Asians are the largest minority,[11] ST products are cheap and accessible. Approximately, 23% and 28% of South Asians in the UK and the US have ever used ST, respectively.[12,13] ST is poorly regulated,[14] and strengthening of existing legislation is advocated.[15] A previous study reported frequent contraventions of the regulations controlling ST and highlighted the need for a better understanding of the ST supply chain.[6] These regulations have since been largely superseded by the Tobacco and Related Products (TRPR) Directive (2016)[16] and Tobacco Packaging Guidance.[17] Under these, ST products are classified as: nasal tobacco, chewing tobacco and tobacco for oral use (other than chewing) -the latter form is banned in the UK. These regulations still place fewer restrictions on chewing tobacco than cigarettes; key differences are outlined in Table 1. This paper describes the characteristics of ST products, retail outlets and the supply chain in England and reports on compliance with the existing regulations.

Methods

In a multi-methods study, we collected ST products and analysed their labels and packaging, surveyed ST retailers and interviewed them and ST suppliers.

We purposively selected five English boroughs with a high proportion of ethnic South Asians.[18] Within these, we identified electoral wards with an ethnic South Asian population
of at least 25%, and randomly selected 25 (five wards from each borough) for the ST retailers’ survey.

Our field investigator visited each ward and located all shops selling ethnic South Asian goods; those selling ST products were identified and their coordinates saved on Google Maps. All available varieties of pre-packaged ST products were purchased from these retailers. The retailers’ survey was conducted using a previous questionnaire.[19] An observation checklist assessing compliance with point-of-sale tobacco regulations was completed. All ST retailers were also invited to participate in qualitative interviews. Additionally, we used a snowballing approach to recruit ST suppliers. All participants were offered £20 as compensation.

We catalogued and categorised all purchased ST products. We checked their registration status with Public Health England’s (PHE) registry of notified tobacco products. [20] Product notification is an essential requirement for all tobacco producers and suppliers; all tobacco products must be notified to PHE before they can be introduced in the UK domestic market. In addition to notification status, we also assessed their compliance with the legal requirements for packaging and health warnings (Table 1). Using questionnaires and observation checklists (supplementary file), we elicited information on ST products (packaging, labelling, health warnings, price and taxation) and retailers’ practices (product display, advertisement, discounts and promotions, sales to minors and supply sources) and awareness of relevant regulations.

The retailer interviews explored views and practices pertaining to different regulations while supplier interviews focussed on illicit trade. Qualitative interviews were audio-recorded, translated (if needed), transcribed verbatim and analysed using the framework approach.[21] A thematic framework was developed to capture the data, organised by the different regulations and any emergent ideas from the initial transcripts. Thematic charts were produced and summaries of responses and verbatim quotes were entered. These were reviewed and
interrogated to compare and contrast views, and seek patterns, connections and explanations within the data.

The survey and interview data were then triangulated using a matrix based on the regulatory framework (Table 1). Within this matrix, the interview data were interrogated to elucidate, confirm or contradict the survey data.

**Results**

We approached 368 shops between August 2017 and July 2019; 190 (52%) were ST retail outlets (Supplementary Table 1). Of these, 98 ST retailers participated in the survey and 12 in the interviews; three ST suppliers (of naswar) were also interviewed. Illustrative quotes from the interviews are presented throughout.

We purchased 41 unique ST products: *naswar* (12), dry snuff (12), *zarda* (8), chewing tobacco (6) and *gutka* (3). The type of ST available varied with wards’ ethnic composition (Supplementary Figure 1). For ST products with the country of origin printed on the pack, 20 originated from South Asia and 4 from Europe. The average prices varied by the type of ST products: *Gutka* (average £0.69; SD 0.30), *naswar* (£2.10; SD 0.87), chewing tobacco (£2.81; SD 2.12), dry snuff (£3.26; SD 1.31) and *zarda* (£3.61; SD 2.44). Pack weights varied between 5g and 225g. Qualitative insights revealed that the prices were relatively stable, with short-term fluctuations attributed to supply shortages. Two ST retailers linked price variability to the quality of ingredients.

None of the 41 ST products were listed in PHE’s registry of notified tobacco products (Table 2). ST packaging consisted of tin cans, transparent pouches, plastic bottles and sachets (Figure 1); only 23 (56%) complied with the packaging and labelling and 6 (15%) with the health warnings requirements (Table 1 and Supplementary Table 2).
ST retailers most commonly identified “product demand” (87%) as the reason for selling ST; besides “attracting customers” (11%) and “good profit margins” (7%). Qualitative accounts confirmed the importance of customer demand, mostly among users of Bangladeshi origin and ethnic Pathans. However, white British customers were also observed asking for naswar.

“Especially English people coming as well, so many goray [Englishmen], they go, "naswar? What is this naswar?" they are shown, and then they are happy and buy it.”

BRD1 (ST retailer, male, Bradford)

One-third of ST retailers (28) advertised ST at point-of-sale; 24 displayed dummy packs, product stands or posters inside while 4 displayed ST banners, posters or boards outside the shops. They felt no need to advertise ST because of their limited customer base familiar with the products.

“It’s not something we need to promote. People who want them, they know they are here, they will buy them. We wouldn’t really spend any money promoting these things”

BMG1 (ST retailer, male, Birmingham)

Those who advertised, either did not perceive ST as harmful, and/or saw it as a good business strategy. One ST retailer reportedly kept ST on display because the cigarette company salesmen did not allow the placement of any other tobacco products other than their own inside the cigarette cabinet.

Few retailers (8%) received incentives from their suppliers. Customer retention relied on maintaining relationships (25.5%), while discounts were less common (9.2%). As ST products were already considered very cheap including for bulk buyers, only a few offered either ‘loyalty discount’ or suggested alternate products if the customer's preferred product was not available. The retailers demonstrated limited knowledge of laws governing ST products. Some ST retailers believed that existing regulations were relevant to cigarettes only. Only 18% indicated
awareness of any regulations and of these, only six mentioned restrictions on underage sale; in fact, five retailers reported underage sales. However, most retailers were against underage-sale.

“It is just kind of like a moral game, obviously you wouldn’t want a youngster to be addicted.”

BMG4 (ST retailer, male, Birmingham)

ST supply sources were reported to be largely within the UK (79%); 60% mentioned that the exact source was unknown. Interviewees explained that products were mostly sourced from local cash and carries or grocery stores. In addition, some retailers used family or friends/acquaintances to smuggle ST in their luggage when they travelled from South Asia. One participant also mentioned independent “van suppliers”. The majority of retailers were not exactly sure of the supply routes; most believed that ST was imported via “proper” channels.

“As far as I know, it comes in a parcel. You will just go to the airport, or it will get delivered. You can’t bring something into this country without being checked. No chance. It will be banned then and there at the airport.” BRD2 (ST retailer, male, Bradford)

The retailers and suppliers provided detailed insights on naswar. According to them, both raw ingredients and final products were sourced from Pakistan. While smaller quantities could be smuggled in travellers’ luggage, larger quantities were brought in through sea and land routes. Raw items were processed into naswar in small-scale production units set up either in the back of shops, in rented houses or at home, often involving the use of machinery called “Pico” which is used to grind spices.

“This naswar is you know, just a person like me and you, they are making it at home, or they are making it somewhere else. They just come to your shop and say, do you wanna buy naswar?”

LDS1 (ST retailer, male, Leeds)
Birmingham was mentioned as the hub of *naswar* production; three distributors were considered as the main controllers and profiteers of the ST market.

**Discussion**

ST products are widely available and used among the South Asian diaspora in the UK. Our study discovered evidence of illicit ST trade in England and reported that the manufacturing, distribution, marketing and sale of ST complied poorly with the regulations. These findings concur with the UK Trading Standards’ report, in which most ST products did not comply with statutory requirements. This low level of awareness and compliance with local regulations observed in England is comparable to South Asian countries.

Since 2010, ST products have remained widely available and their prices unchanged. As observed in Australia, ethnic shops were the main source of ST products. ST was available in >50% of all South Asian owned shops we identified, a proportion similar to that in South Asia.

Our study suggests that ST-related trade in England is largely illicit, encompassing smuggling and illegal manufacturing. ST manufacturing was discreet and its distribution network elaborate, yet concealed. Illicit ST trade appeared to thrive in the presence of weak regulations and poor enforcement; Easy access to cheap products might drive demand, encouraging smuggling and thus ensuring a steady supply.

Regulations for ST have historically been weaker than those for cigarettes. We noted several limitations of current regulations: the TRPR definitions and categories for ST do not account for the diversity within ST products, so traders are able to elude regulations. For example, *naswar* was labelled and sold as “snuff”, whereas its consumption behaviour suggests it is an oral tobacco product, which under UK legislation would be banned.
Our study has several limitations. Our sample was purposive, limiting the generalizability of our findings. It is likely that we may have underestimated ST access, as its sale was often ‘under the counter,’ to regular customers only. For example, there was reluctance to talk (many ST retailers/suppliers declined interviews) about specific ST products such as gutka. With a focus on pre-packaged products, we did not report on custom-made ST products such as paan. For the interviews, we achieved data saturation but our understanding of the supply chain was limited to naswar.

In order to safeguard South Asian minorities from ST-related harms, a strategic, multisectoral approach is required. The key disparities between ST and cigarette regulations need to be addressed in an updated TRPR. In particular, standardised packaging and flavouring bans should be extended to ST. For ST product surveillance, a Niche Tobacco Product Directory (now defunct) is urgently needed. Local capacity needs enhancing through community engagement activities based on awareness raising, health champions and dedicated cessation support.[12] The Challenge, Leadership and Results (CLeaR) tool for niche tobacco developed by PHE can be used as a self-assessment framework for local authorities.[28]

Our study is potentially relevant to settings within the UK and other countries where there is a large South Asian diaspora, and where ST may be just as accessible, cheap and unregulated. Future studies should explore the supply chain for specific ST products and quantify the health and economic burden of illicit ST trade.

What is already known:

ST products used by South Asian populations are highly addictive and carcinogenic. In the UK, consumption of these ST products among these populations predisposes them to a higher risk of oral, pharyngeal and oesophageal cancers than the general population. Past research demonstrates that these ST products are cheap and widely available in the UK.
What this study adds:
The regulations for ST products are substantially weaker than those applicable to cigarettes. A wide range of non-notified, poorly compliant products are available in the UK market; products are nonetheless either smuggled via illicit routes, or manufactured in discreet locations in the UK. Concerted action is required at both national and local levels to strengthen ST regulation, to avoid widening health inequalities in the UK.

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Author’s contributions: KS (Principal Investigator) along with AMcN, AR, AS, JMcC, SP (Co-Investigators) designed the original study and provided inputs throughout the project period. FS coordinated all project activities, prepared and presented progress reports, undertook quantitative and qualitative data analysis and prepared the manuscript drafts. TK conducted the piloting and all the field activities. CJ was involved in the refinement of the qualitative interview guide and developed the qualitative framework; she also guided qualitative analysis and write up. MK refined the quantitative analysis and results. RC and MD were involved in organising and conducting stakeholder engagement workshops. All the above listed authors reviewed and approved the final manuscript draft.

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Table 1: A summary of existing UK tobacco control policies for regulation of tobacco products and point-of-sale practices for ST and cigarette products

<table>
<thead>
<tr>
<th>Component</th>
<th>Statutory requirements for all Tobacco products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco products</td>
<td>1. Product notification - All tobacco products available for sale to the UK domestic market should be notified (TRPR, Part 4 and 5)</td>
</tr>
<tr>
<td></td>
<td>2. Contents and limits - Contents: No vitamins, colourings or prohibited additives</td>
</tr>
<tr>
<td></td>
<td>ST products - No additional specifications for content or limits specified.</td>
</tr>
<tr>
<td></td>
<td>Cigarettes - Contents: Restriction on use of characterising flavours. - Limits: specified maximum emission levels (10 milligrams of tar, 1 milligram of nicotine and 10 milligrams of CO per cigarette)</td>
</tr>
<tr>
<td>3. Product Packaging</td>
<td>Packaging features prohibited on all tobacco products: - Information about tar, nicotine or CO content - Discounts, price reductions or other offers - Indicating less harm than other products - Indicating vitalising, energising, healing, rejuvenating, natural or organic properties - Environmental benefit - Indication of taste, smell or flavours - Appearance of food or cosmetic product</td>
</tr>
<tr>
<td>4. Health warnings</td>
<td>General health warning requirements for all tobacco products:</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>- In English</td>
<td>- Fully visible</td>
</tr>
<tr>
<td>- Permanent</td>
<td>- Irremovably printed</td>
</tr>
<tr>
<td>- Printed on the pack</td>
<td>- Surrounded by a black border of width 1mm inside the area reserved for it</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ST products</th>
<th>Cigarettes</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Appear on front &amp; back surface</td>
<td>- Standardised packaging requirements (shape, number of cigarettes, pack colour, pack material, pack texture, duty marks)</td>
</tr>
<tr>
<td>- Cover 30% of the surface area on each side</td>
<td>- Combined health warning covering 65% of the surface area</td>
</tr>
<tr>
<td>- Black (Helvetica) font with white background</td>
<td>- General warnings and information messages on tobacco products for smoking, covering 50% of the surface area</td>
</tr>
<tr>
<td>- Placed in the centre of the area</td>
<td></td>
</tr>
<tr>
<td>- Parallel to the main text</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POS practices</th>
<th>5. Tobacco Advertising and Promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Tobacco advertisements:</td>
<td>Only inside or outside premises of a specialist tobacconist</td>
</tr>
</tbody>
</table>

- **Display of products at POS:** Illegal for any business selling tobacco products to display products at point of sale. Products can only temporarily be displayed if:
  - Requested by customers over 18
  - Incidental displays
  - Specified circumstances by tobacconists
  - Request by enforcement officer.

- **Display of prices at POS:** Restricted display of Price lists
  - Size: A3 poster style lists for permanent display
  - List with products pictures, for those who request information
  - Price labels on covered shelf or front of storage unit
6. Sales to minors
- No sale of cigarettes or tobacco products to individuals under 18 years.

* Regulations listed are common to ST and cigarettes unless otherwise specified by use of split boxes

Table 2: Overall and product specific compliance of ST products with packaging and health warning requirements

<table>
<thead>
<tr>
<th></th>
<th>No. of ST products analysed (N)</th>
<th>Products compliant with notification requirement (%)</th>
<th>Products compliant with Packaging requirements (%)</th>
<th>Products compliant with Health warning requirements (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All ST products</td>
<td>41</td>
<td>0 (0%)</td>
<td>23 (56.1%)</td>
<td>6 (14.6%)</td>
</tr>
<tr>
<td>Individual ST categories</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naswar</td>
<td>12</td>
<td>0 (0%)</td>
<td>8 (66.6%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Dry snuff</td>
<td>12</td>
<td>0 (0%)</td>
<td>12 (100%)</td>
<td>3 (33.3%)</td>
</tr>
<tr>
<td>Zarda</td>
<td>8</td>
<td>0 (0%)</td>
<td>2 (25%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Gutka</td>
<td>3</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>1 (33.3%)</td>
</tr>
<tr>
<td>Chewing tobacco</td>
<td>6</td>
<td>0 (0%)</td>
<td>1 (16.6%)</td>
<td>1 (16.6%)</td>
</tr>
</tbody>
</table>

* Compliance (n, %) is reported for all ST products identified overall and in each category (N).