Product Display, Advertising, and Promotion around Primary and Secondary Schools
Written by:
Jennifer Brown, MPH
Caitlin Weiger, BS
Joanna Cohen, PhD

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Institute for Global Tobacco Control
Johns Hopkins Bloomberg School of Public Health
2213 McElderry St., Fourth Floor
Baltimore, MD 21205 USA
www.jhsph.edu/igtc
www.globaltobaccocontrol.org

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For more information, please contact:
igtc@jhu.edu
Background and Introduction
Tobacco use is the leading cause of preventable death and disease across the globe.\(^1\) Although global estimates of tobacco marketing expenditures are not available, US cigarette manufacturers alone are estimated to have spent over 26 billion US dollars between 2011 and 2013 on advertising and promotion.\(^2\) Tobacco companies use deceptive and predatory marketing practices to increase consumption of their products, and to make tobacco use appear glamorous or socially acceptable while dismissing the products’ adverse health effects.\(^3\) Article 13 of the World Health Organization’s (WHO) Framework Convention on Tobacco Control (FCTC) calls for a comprehensive ban on all forms of tobacco advertising, promotion and sponsorship (TAPS), including the retail display of tobacco products.\(^4\) Evidence shows that the tobacco industry responds to partial TAPS bans that regulate only certain types of TAPS strategies (such as television or radio) by re-directing their resources to market their brands on unregulated channels such as the point-of-sale (POS).\(^5\) Numerous longitudinal studies have demonstrated that exposure to tobacco product advertising and promotion increases the likelihood that youth will start to smoke.\(^6\) The display of tobacco products at the POS has the same effect and influence on behavior as traditional media advertising.\(^7\) Marketing in retail environments specifically has been shown to increase the likelihood of smoking initiation among youth.\(^8\) One study found that stores where adolescents frequently shop may contain nearly three times as many marketing materials and shelf space for popular tobacco brands.\(^9\)

The country of Nicaragua became a party to the FCTC on July 8, 2008.\(^10\) Among Nicaragua’s population of six million people\(^11\), an estimated 25.1% of youth use tobacco products on a regular basis.\(^12\) Prevalence of adult tobacco use is unknown. In October of 2010, Nicaragua issued Law No. 727 on Tobacco Control.\(^13\) Article 11 of this law prohibits advertising or promotion of tobacco products in newspapers, radio, television, and billboards but explicitly permits advertising inside points-of-sale.

Methods
This report describes a study about tobacco marketing at the point-of-sale in Managua, Nicaragua. The work was led by the Institute for Global Tobacco Control (IGTC) at the Johns Hopkins Bloomberg School of Public Health (JHSPH). IGTC partnered with the Universidad Católica Redemptoris Mater (UNICA). UNICA provided guidance and context about the sampling framework, and IGTC designed the survey instrument and data collection protocol. Investigators from IGTC trained six paid university students to conduct the fieldwork and submit daily reports for review in real-time. The IGTC study team was in Managua for training and data collection to troubleshoot any logistical or technical issues. Data cleaning, validation, and analysis were carried out by IGTC.

Sampling Approach
This study surveyed retailers in the city of Managua, Nicaragua’s capital and largest city with a population of around 900,000 people.\(^14\) Fifty-seven primary and secondary schools were selected within the city (Figure 1), with consideration for the surrounding neighborhood’s (1) retail density, (2) school density, (3) safety and (4) ease of accessibility for data collectors traversing the city. The 57 primary and secondary schools selected were assigned unique identification codes. An online mapping and distance tool was used to define a sampling area radius of 200 meters surrounding each school, ensuring that none of the sampling areas overlapped. The study surveyed a convenience sample of convenience stores, grocery stores, kiosks, street vendors, pulperías and bars within each sampling area.
Figure 1. Selected Schools (n=57)

Survey Instrument
The survey instrument was designed to assess tobacco product placement, advertising, promotion, presence of health warnings, and brand stretching, including known trends in POS marketing that may target youth (Figure 2). The survey also asked whether the store was within eyesight of the school and provided fields for data collectors to enter the sampling area code, retailer address, name brands of tobacco products displayed or advertised, and other notes or comments about the retailer.
**Figure 2. Survey Instrument Content**

<table>
<thead>
<tr>
<th><strong>Display or Ad Characteristic</strong></th>
<th><strong>Product Placement</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Signage</td>
<td>Cashier zone</td>
</tr>
<tr>
<td>Use of movement</td>
<td>Behind the cashier zone</td>
</tr>
<tr>
<td>Use of lights</td>
<td>On a branded stand or cabinet</td>
</tr>
<tr>
<td>Signage with warning labels</td>
<td>On a power wall</td>
</tr>
<tr>
<td>Mention of flavor</td>
<td>Eye level of children</td>
</tr>
<tr>
<td>Mention of menthol</td>
<td>Near sweets, snacks, or soda</td>
</tr>
<tr>
<td>Any text in English</td>
<td><strong>Brand Stretching</strong></td>
</tr>
<tr>
<td></td>
<td>Tobacco accessories with tobacco branding</td>
</tr>
<tr>
<td><strong>Promotion</strong></td>
<td>Tobacco accessories with tobacco branding</td>
</tr>
<tr>
<td>Discounts</td>
<td>Imitation tobacco products (candy and toys)</td>
</tr>
<tr>
<td>Free tobacco products</td>
<td>Functional products with tobacco branding</td>
</tr>
<tr>
<td>Free gift</td>
<td>Products with tobacco branding (not accessories)</td>
</tr>
<tr>
<td><strong>Loyalty scheme</strong></td>
<td><strong>Other</strong></td>
</tr>
<tr>
<td>Presence of brand representative</td>
<td>Tobacco accessible to customer</td>
</tr>
<tr>
<td>Tobacco brand sponsorship of event or activity</td>
<td>Signage stating that vendor does not sell cigarettes to minors</td>
</tr>
<tr>
<td>Contest or competition</td>
<td></td>
</tr>
</tbody>
</table>

**Data Collection Protocol**

Observations and photos were collected from retailers during normal business hours from July 13-15, 2016. Each data collector received a packet of sampling area maps including the unique school identification code and space to record the addresses of retailers in that area (Appendix A). Street names and radii boundaries were clearly visible on all sampling area maps. Data collectors identified convenience stores, grocery stores, kiosks, street vendors, pulperias and bars within the sampling area by using the maps to follow a systematic walking pattern, observing all streets within the 200-meter radius. All convenience stores, grocery stores, kiosks, street vendors, pulperias and bars within the sampling area were observed, but an abbreviated survey was used to record data about retailers that did not sell tobacco. Data collectors wrote the address of each retailer they observed on the corresponding sampling area map. Observational data and photos of tobacco product displays or ads were recorded and uploaded to a cloud-based database in real-time within Magpi, a mobile data collection application installed on smartphones. The mobile app automatically captured the date, geographic coordinates, and data collector name for each record uploaded to the dataset. The order of questions and format of response options were designed to facilitate rapid and discrete observation by data collectors. At the end of each day, data collectors reported the address and sampling area code of each retailer they observed by entering information into a spreadsheet hosted on Google Drive. The IGTC study team reviewed these reports daily in order to check the uploaded dataset and ensure that the mobile software application was functioning properly.

**Training**

Six paid university students attended one and a half days of training on how to implement the study protocol on July 12 and 13, 2016 – immediately before the data collection period. The IGTC study team explained the purpose of the study, the current tobacco control law, the survey content, key terms and definitions, the Magpi software application, and data collection procedures in detail. Data collectors were instructed to behave as customers in order to discretely observe
the retail environment and capture photos. In order to estimate the placement of products at the eye level of children, each data collector used a measuring tape to identify a 1-meter reference point on their body. The data collection team was trained to recognize required health warnings and signage announcing age sales restrictions. During the training, data collectors participated in a field test of the study protocol to practice using the survey, mobile app, and data collection procedures in nearby retailers.

**Results**

There were a total of 57 school sampling areas. Data collectors observed 355 convenience stores, grocery stores, kiosks, street vendors, pulperias or bars within a 200-meter radius of the 57 schools. Of the retailers observed, 174 retailers sold tobacco products - 61 of which were located within eyesight of the school. Retailers that sold tobacco products were identified within 54 of the 57 school sampling areas. The remaining three areas were primarily residential and did not contain any retailers.

Warnings were visible on all tobacco advertisements in about half (51%) of the retailers that displayed advertisements.

Many retailers (40%) that sold tobacco products did not display signage stating that tobacco is not sold to minors.

Some stores (10%) displayed tobacco in a manner that the product was directly accessible to the customer.

Packs were frequently displayed in or around the cashier zone and on a branded stand or cabinet (Figure 3). Packs with flavors, including menthol, were frequently displayed (Figures 3 and 4).

**Figure 3. Number of Tobacco Retailers with Tobacco Product Displays**

[Bar chart showing the number of tobacco retailers with product displays in different locations within the school's vicinity.]
Tobacco products were frequently displayed with sweets, snacks, or soda in or near the cashier zone. Some tobacco products were displayed with sweets, snacks or soda on a branded stand or cabinet (Figures 5 and 6).

Figure 5. Tobacco Displayed Near Sweets and Snacks at the Point-of-Sale
Figure 6. Number of Tobacco Retailers with Tobacco Product Displayed Near Sweets, Snacks, or Soda

![Bar chart showing the number of tobacco retailers with tobacco products displayed near sweets, snacks, or soda.](image)

Tobacco was frequently advertised using signage (Figure 7). Many advertisements mentioned flavored tobacco products, including menthol flavored tobacco products. Some retailers displayed advertising signage with lights (Figure 8).

Figure 7. Advertising Signage for Flavored Cigarettes at the Point-of-Sale
Signs mentioning free tobacco products, contests or competitions, or a loyalty scheme were present at one retailer for each instance. Free tobacco products, with or without purchase, were advertised at five retailers.

Four retailers distributed tobacco accessories (e.g. matches) with tobacco branding and one retailer displayed a functional product with tobacco branding (e.g. outdoor table umbrella). No retailers sold or distributed other products (e.g. cups, hats) with tobacco branding or imitation tobacco products.

Belmont and Dunhill were the most frequently displayed and advertised tobacco brands displayed in retailers, followed by Pall Mall, Marlboro, Casino, and L&M (Figure 9).

**Figure 9. Tobacco Brands Displayed at the Point-of-Sale**

<table>
<thead>
<tr>
<th>Brands Displayed at the POS</th>
<th># of Retailers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belmont</td>
<td>136</td>
</tr>
<tr>
<td>Dunhill</td>
<td>116</td>
</tr>
<tr>
<td>Pall Mall</td>
<td>96</td>
</tr>
<tr>
<td>Marlboro</td>
<td>93</td>
</tr>
<tr>
<td>Casino</td>
<td>91</td>
</tr>
<tr>
<td>L&amp;M</td>
<td>88</td>
</tr>
<tr>
<td>Windsor</td>
<td>14</td>
</tr>
</tbody>
</table>
Display of tobacco products and tobacco product advertising were frequently visible from outside the retailer (Figure 10).

**Figure 10. Number of Tobacco Retailers with Tobacco Product Promotion, Advertising and Display Visible From Outside the Point-of-Sale**

Discussion

This study identified numerous examples of retailers that sell tobacco and advertise and market tobacco products in close proximity to schools and thus are easily accessible by students. Many retailers displayed and/or advertised flavored cigarettes, products that appeal to youth. Some retailers displayed tobacco so that it was directly accessible to the customer. In many retailers near schools tobacco products were displayed at the point-of-sale alongside products that appeal to children, such as candy and soda.

Limitations

This study used a convenience sample of schools in one city in Nicaragua. Therefore, the results may not be representative of all types of tobacco retailers or generalizable to all areas of Nicaragua. In addition, the lack of a formal address system and street names in Nicaragua made it difficult to identify where the 200-meter radius around schools extended to, therefore, in some areas data collectors may have potentially collected data outside the 200-meter radius or missed some retailers inside the radius.

Conclusions

Partial bans of tobacco marketing allow the tobacco industry to exploit deficiencies or loopholes in regulations by redirecting their resources to mediums that are not regulated – thereby violating the spirit of the Nicaragua tobacco control law which aims to “protect the health of present and future generations of the Nicaraguan population from the harmful effects, the consequences and the damage caused by tobacco consumption or exposure to tobacco smoke”.

This study clearly demonstrates that the tobacco industry places their products and ads in areas that are visible and accessible to youth. A complete ban of tobacco product display, advertising, and promotion at
point-of-sale would comply with FCTC provisions and more effectively achieve the goal of protecting the public from the harms of tobacco products.
Key Terms and Definitions

**Advertising signage**: branded print or digital/electronic media such as posters, banners, flyers, or shelf liners that are intended to promote awareness and favorable opinions of a tobacco brand or product

**Brand stretching**: the presence of non-tobacco items that carry a tobacco brand name

**Cashier zone**: directly on top of, in front of, or to the side of the counter or cash register where consumers make a purchase

**Eye level of children**: placement of products 1 meter or less from the ground

**Power wall**: an excessive display of tobacco products showing multiple packs on multiple shelves

**Product display**: physical packs of tobacco products that are visible to potential consumers
Appendix A. School Sampling Area Map

101, Instituto Benjamin Zeledon

Please record the address of each store you observe. If needed, continue lettering and addresses on next page.

<table>
<thead>
<tr>
<th>A.</th>
<th>F.</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.</td>
<td>G.</td>
</tr>
<tr>
<td>C.</td>
<td>H.</td>
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<tr>
<td>D.</td>
<td>I.</td>
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<td>E.</td>
<td>J.</td>
</tr>
</tbody>
</table>
References