Health-Washing of Ultraprocessed Products on Instagram: Prevalence and Strategies in an Emerging Market

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ABSTRACT

Objective: To evaluate the prevalence of health-related cues as part of the digital marketing of ultraprocessed foods on Instagram among food companies in Uruguay.

Methods: Cross-sectional exploratory study. All content posted by 118 Instagram accounts of companies promoting ultraprocessed foods in Uruguay over 6 months (from August 2020 to February 2021) was retrieved. The content of 1,893 Instagram posts was coded considering visual and textual cues conveying health-related associations. The number and percentage of posts, including cues within each category and theme, were calculated.

Results: More than half of all posts contained at least 1 visual or textual cue conveying health-related associations. Three main themes emerged: i) product composition, ii) healthy lifestyle, and iii) health and health benefits. The prevalence of health-related cues differed dramatically across product categories, ranging from 100% to 1.5%.

Conclusions and Implications: Health-washing constitutes an integral part of the digital marketing of ultraprocessed foods on Instagram in Uruguay. The inclusion of health-related cues can potentially undermine public health efforts targeted at reducing consumption of these foods. These findings suggest that strict and comprehensive regulations on the digital marketing of such products are needed in policies promoting healthy eating habits globally.

Key Words: food marketing, digital marketing, food environment, regulation, health-washing

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INTRODUCTION

Ultraprocessed foods, defined as “formulations of ingredients, mostly of exclusive industrial use, that result from a series of industrial processes”¹ (eg, sweetened beverages, confectionary, processed meats), have been associated with increased risk of several negative health outcomes, including diabetes, cardiovascular diseases, cancer, and all-cause mortality.²⁻⁴ Volume sales per capita of these foods have increased in emerging countries and have been positively associated with the trajectories of adult body mass index for both men and women.⁵ One of the drivers of this expansion is the commercial actions of the food industry to increase demand and market coverage, including food marketing.⁶

Marketing has been shown to influence eating and drinking behavior by making products more salient in consumers’ minds and influencing product-related attitudes and beliefs.⁶⁻¹¹ Social media marketing is now a key channel because of its increasing popularity, ubiquity, continuous availability, interactivity, and effective targeting tools.¹²,¹³ A growing body of evidence shows that social media, such as Instagram,
Facebook, and YouTube, are frequently used to promote ultraprocessed foods through various marketing techniques.\textsuperscript{14-19}

The content of social media posts promoting ultraprocessed foods highlights a wide range of product characteristics and creates associations between the products and different concepts (eg, music, celebrities).\textsuperscript{17-21} In particular, social media posts include multiple visual and textual cues that are heuristically linked to health (eg, green color, images of fruits, or textual references to homemade meals) to create health-related associations (ie, positive product–health associations).\textsuperscript{17,19} These health-related cues can instigate a “health halo,” making consumers overestimate product healthiness and increase their purchase intention.\textsuperscript{22-25}

This practice can be regarded as health-washing, resembling other misleading marketing practices, such as green-washing (ie, disseminating symbolic and misleading information to show an environmentally responsible public image to generate positive associations with products and corporate actions).\textsuperscript{26} In this work, health-washing is defined as companies or brands misleadingly conveying health-related associations and positioning themselves as offering healthy foods when, in fact, the consumption of ultraprocessed foods is increasingly associated with adverse health outcomes. Health-washing has the potential to raise positive health associations with ultraprocessed foods, reducing the impact of communication campaigns and policy actions targeted at reducing their consumption. In this sense, previous research has reported positive health associations with some categories of ultraprocessed foods (eg, yogurts and processed juices), particularly among low-income and low-educated citizens,\textsuperscript{27} and has identified health-related goals as a key motivation to consume such foods.\textsuperscript{28}

So far, few studies have performed an in-depth analysis of the digital marketing content of ultraprocessed foods.\textsuperscript{29,30} This information can increase understanding of how digital marketing influences behavior, providing relevant insights for developing strategies to reduce its persuasive power.\textsuperscript{31}

Aims and Context

The present study aimed to (1) evaluate the prevalence of health-related cues as part of the digital marketing of ultraprocessed foods on Instagram among food companies in Uruguay, (2) identify different types of health-related cues, and (3) analyze differences in the prevalence of such cues across product categories.

Given its popularity worldwide, particularly among adolescents and young adults, Instagram was selected as the target social media platform.\textsuperscript{32,33} It is a platform in which users can share photographs and videos and send messages to other users.\textsuperscript{14} Food companies usually have Instagram accounts that post content to promote their products.\textsuperscript{19,34} These posts are shown to the followers of the account and a specific target of users when the company pays for Instagram advertising services.

The study was conducted in Uruguay, a high-income Latin American country with widespread internet access.\textsuperscript{36} At the time of the study, the country had no specific regulation on food advertising. However, there was a technical regulation about the use of health and nutrient claims on food labels, which follows Codex recommendations.\textsuperscript{37}

METHODS

This cross-sectional study was exploratory. It was based on a re-analysis of the data from a previous study analyzing the content of Instagram posts promoting ultraprocessed foods or brands of such foods in Uruguay.\textsuperscript{19} Results from the former study showed that Instagram posts included a wide range of information, including references to pleasure sensory characteristics and emotions; consumption context; nutrition, health, and well-being; product processing; and other product characteristics (eg, novelty, convenience, portion size). This work intends to deepen these former findings by focusing on visual and textual health-related cues at the aggregate level and separately for different categories of ultraprocessed foods.

Data Collection

A multistep approach was used to collect Instagram posts promoting ultraprocessed foods. A master list of ultraprocessed foods commercialized in the Uruguayan marketplace was used to identify the Instagram accounts of Uruguayan companies or Uruguayan branches of international companies. The master list was created by the research team and included the names and brands of all the products commercialized on the websites of the 2 largest supermarket chains in the country. Searches were performed with the names of the brands and product names in the Instagram search tool, yielding 118 accounts. All the content posted by the accounts over 6 months (between August 15, 2020 and February 15, 2021) was retrieved. The length of the period was selected to capture diversity in the type of content posted by the accounts. The link to each post was recorded in a spreadsheet, including the name of the account, the number of likes, and the number of comments. For the analysis, coders clicked on the link to access each post and analyze their content.

Data Analysis

A total of 3,037 posts were identified. Not all the posts promoted ultraprocessed foods, as some companies also commercialized other foods (eg, culinary ingredients, minimally processed foods, and processed foods). Thus, the first step of the data analysis involved sorting the posts according to the NOVA system. The NOVA system defines 4 categories on the basis of the extent and purpose of food processing: unprocessed or minimally processed foods, culinary ingredients, processed foods, and ultraprocessed foods.\textsuperscript{38} The ingredient information on the website or product label was used for categorization. Posts promoting brands but not describing specific products were only included if the brand solely commercialized a single category of ultraprocessed foods (eg, chewing gum). The classification of all the posts was independently performed by 2 of the
authors, with backgrounds in nutrition and food engineering (coders 1 and 2, respectively). No disagreements between the coders were found. Posts were also sorted into 23 food categories, defined as they emerged from the data: processed meat; chocolate; cookies, pastries, and alfajores; sweet spreads; frozen meals; ice cream and desserts; plant-based dairy products; bread and bread products; confectionary; savory snacks; sport and energy drinks; cookies and biscuits; juices; flavored water; yogurt; crackers/savory biscuits; pasta and pie crusts; soda; cereal bars and granola; processed cheese; dairy desserts; sauces and dressings; dry mixes; and bouillon and soups.

The second step of the data analysis involved coding the data following an inductive approach (ie, the codes were defined as they emerged from the posts and were not defined a priori). This research restricted the analysis to visual and textual cues conveying health-related associations. Coders clicked on the link to the Instagram post and created categories to capture the content included in the picture and the textual description. Binary variables corresponding to columns of the spreadsheet were used to indicate whether each of the posts included content related to each category (1 [yes] or 0 [no]). The content of 10% of the posts was independently coded by 2 authors with previous experience in content analysis (coder 1 and coder 3). These coded categories were different for each coder and they were combined to code all the posts independently. Interrater reliability was high according to Cohen’s k (0.93). Disagreements were solved through open discussion between the 2 coders, and the final codes were determined by consensus. Categories were then merged into themes through discussion between the 2 researchers.

The number and percentage of posts, including elements within each category, themes, and posts including at least 1 health-related cue, was calculated at the aggregate level and separately for each category of ultraprocessed products. Examples of posts, including cues within each category, were selected for illustrative purposes. The text of the posts was translated from Spanish to English for publication.

RESULTS

Ninety-one of the 118 accounts (77%) posted content in the target period, whereas 27 did not post any content. The number of posts of these 91 accounts ranged between 1 and 139, with an average of 29 ± 26. A total of 1,893 Instagram posts promoting specific ultraprocessed foods were identified.

Of the 1,893 Instagram posts promoting ultraprocessed products, 56% included at least 1 visual or textual cue conveying health-related associations. Three main themes were identified in the content analysis: product composition, healthy lifestyle and health, and health benefits. The prevalence of health-related cues differed dramatically across product categories, ranging from 100.0% to 1.5% (Figure). Bouillon and soups, yogurt, pasta and pie crusts, plant-based dairy products, cereal bars and granola, and juices were the categories with the highest prevalence of health-related cues. More than half of the posts promoting these categories included at least 1 health-related cue. Conversely, the lowest prevalence of health-related cues was registered in posts promoting confectionary, dairy desserts, savory snacks, ice cream and desserts, soda, cakes, pastries and alfajores, and chocolate, with < 20% of the posts including health-related cues. As shown in Table 2, the categories of ultraprocessed products also largely differed in the prevalence of specific health-related cues. Some categories identified in the content analysis were only included in posts promoting certain categories. For example, references to protein content were exclusively found in posts promoting cereal bars and granola, processed meat, plant-based dairy products, and yogurt, whereas posts promoting fruit juices, sports, and energy drinks included references to hydration.
More than half of the Instagram posts promoting ultraprocessed foods in Uruguay included at least 1 visual or textual cue to convey health-related associations. Including these cues can be regarded as misleading, given that consuming ultraprocessed foods is increasingly associated with numerous negative health outcomes.2−4 Accordingly, health-washing is a prevalent practice to promote ultraprocessed products on social media platforms. This result matches results from previous studies reporting the inclusion of references to health as part of digital marketing and other types of...
advertising.\textsuperscript{17,20,21,41} Karageuzian et al\textsuperscript{21} reported that 36% of Facebook posts promoting dairy products and juices included at least 1 reference to nutrition and health. Bleakley et al\textsuperscript{20} reported that approximately 25% of the advertisements for sports and energy drinks included references to nutrition and health.\textsuperscript{20} Several studies have also reported a high prevalence of references to health and nutrition on food packages.\textsuperscript{21,42–44} Consumers increased interest in health may contribute to the inclusion of health-related cues as part of the marketing strategies of ultraprocessed foods.\textsuperscript{45} Evidence on the effects of marketing on attitudes and beliefs suggests that the use of health-related cues on Instagram posts may create positive health-related associations with the potential to undermine public health efforts to reduce the consumption of ultraprocessed foods. Additional research is needed to expand the findings to other settings and generate empirical evidence of the effect of exposure to health-related cues as part of the digital marketing strategies of ultraprocessed foods on consumer attitudes and beliefs regarding product healthiness and purchase intentions.

**IMPLICATIONS FOR RESEARCH AND PRACTICE**

This work provides evidence of using health-washing as part of the digital marketing of ultraprocessed foods on Instagram. Including health-related cues may create positive health-related associations with the potential to undermine public health efforts to reduce the consumption of ultraprocessed foods. Additional research is needed to expand the findings to other settings and generate empirical evidence of the effect of exposure to health-related cues as part of the digital marketing strategies of ultraprocessed foods on consumer attitudes and beliefs regarding product healthiness and purchase intentions.
Table 2. Percentage of the Instagram Posts Including Cues Related to Each of the Themes and Categories Identified in the Content Analysis Per Food Category

<table>
<thead>
<tr>
<th>Theme/Category</th>
<th>Processed Meat</th>
<th>Chocolate Cakes, Pastries, Sweet Spreads</th>
<th>Frozen Ice Cream, Dairy Products</th>
<th>Plant-based Bread, Biscuits</th>
<th>Savory Energy and Snacks Drinks</th>
<th>Juices</th>
<th>Flavored Water</th>
<th>Yogurt Biscuits</th>
<th>Pasta, Pie Crusts</th>
<th>Processed Dairy Products</th>
<th>Sauces, Dry Mixes</th>
<th>Bouillon, Broth</th>
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<tbody>
<tr>
<td>Product composition</td>
<td>22.6</td>
<td>5.3</td>
<td>10.1</td>
<td>40.2</td>
<td>5.4</td>
<td>5.5</td>
<td>48.1</td>
<td>17.8</td>
<td>0</td>
<td>1.6</td>
<td>11.5</td>
<td>22.4</td>
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<td>Gluten-free</td>
<td>10</td>
<td>1.0</td>
<td>4.7</td>
<td>32.7</td>
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<td>0</td>
<td>36.7</td>
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<td>0</td>
<td>0</td>
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<td>1.7</td>
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<td>Naturalness</td>
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<td>0</td>
<td>4.7</td>
<td>0</td>
<td>0</td>
<td>12.7</td>
<td>8.2</td>
<td>0</td>
<td>1.6</td>
<td>0</td>
<td>1.7</td>
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<tr>
<td>No additives</td>
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<td>0</td>
<td>0</td>
<td>12.1</td>
<td>0</td>
<td>0</td>
<td>10.1</td>
<td>5.5</td>
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<td>Sugar-free/ reduced in sugar</td>
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<td>5.3</td>
<td>2.3</td>
<td>9.3</td>
<td>0</td>
<td>5.5</td>
<td>5.1</td>
<td>6.8</td>
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<td>0</td>
<td>0</td>
<td>13.8</td>
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<td>Lactose-free</td>
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<td>0</td>
<td>2.8</td>
<td>0</td>
<td>0</td>
<td>40.5</td>
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<td>0</td>
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<td>Vitamins and minerals</td>
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<td>0</td>
<td>0</td>
<td>4.7</td>
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<td>0</td>
<td>11.4</td>
<td>2.7</td>
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<td>Salt-free/no sodium/no salt</td>
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<td>0</td>
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<td>0</td>
<td>0</td>
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<td>No warning signs</td>
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<td>10.1</td>
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<td>Exercise and sports</td>
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<td>5.8</td>
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<td>7.6</td>
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<td>0</td>
<td>37.7</td>
<td>0</td>
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<tr>
<td>Healthy habits</td>
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<td>Health and health benefits</td>
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<td>13.0</td>
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<td>Health and effects on body functioning</td>
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<td>0.5</td>
<td>0</td>
<td>11.2</td>
<td>12.0</td>
<td>1.1</td>
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<td>Taking care</td>
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<td>3.3</td>
<td>2.5</td>
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<td>1.5</td>
<td>6.5</td>
<td>1.6</td>
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<td>19.7</td>
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<td>Feeling good/well-being</td>
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<td>Endorsements from health professionals</td>
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<td>0</td>
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<td>0</td>
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<tr>
<td>Endorsements from health professional organizations</td>
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<td>0</td>
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<tr>
<td>No. of posts</td>
<td>239</td>
<td>206</td>
<td>129</td>
<td>107</td>
<td>92</td>
<td>91</td>
<td>79</td>
<td>73</td>
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</tr>
</tbody>
</table>
These findings suggest that the commitment of advertisers and food companies to health may not be enough to protect consumers from misleading information. The development of comprehensive regulations on the digital marketing of ultra-processed foods is needed as part of a set of policies to reduce the consumption of ultra-processed foods and promote healthy eating habits globally. Social media platforms, such as Instagram, could adopt restrictions on marketing activities of unhealthy foods and beverages. However, the introduction of total restrictions on online advertisements featuring foods and beverages high in fat, sugar, and salt seems the most promising way forward to reduce the potential deleterious effects of marketing, as proposed by the United Kingdom.

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