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ARTICLE

Package design and nutritional profile of foods targeted at children in supermarkets in Montevideo, Uruguay

Desenho das embalagens e perfil nutricional de alimentos dirigidos ao público infantil em supermercados em Montevidéu, Uruguai

Diseño de envase y perfil nutricional de alimentos dirigidos a niños disponibles en supermercados en Montevideo, Uruguay

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Abstract

Marketing of unhealthy products has been identified as one of the main characteristics of the food environment that negatively affects children's eating patterns. Restrictions on advertising of unhealthy foods to children have already been imposed in different countries. However, marketing strategies are not limited to broadcast and digital advertising, but also include package design. In this context, the current study aimed to describe the food products targeted at children and sold in supermarkets in Montevideo, Uruguay, in terms of package design and nutrient profile. Two supermarkets in Montevideo were selected for data collection. In each supermarket, all products targeted at children were identified. Products were analyzed in terms of package design and nutritional profile, considering the Pan American Health Organization Nutrient Profile Model*. A total of 180 unique products were identified, which included a wide range of product categories. The great majority of the products corresponded to ultra-processed products with excessive amounts of sodium, free sugars, total fat, saturated fat, and/or trans fat, which are not recommended for frequent consumption. Several marketing strategies were identified in the design of packages to attract children's attention and drive their preferences. The most common strategies were the inclusion of cartoon characters, bright colors, childish lettering, and a wide range of claims related to health and nutrition, as well as the products' sensory and hedonic characteristics. The study's findings provide additional evidence on the need to regulate packaging of products targeted at children.*

Food Packaging; Food Composition; Food Publicity; Child

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Introduction

Childhood overweight and obesity have increased at an alarming rate in the last decades, affecting more than 170 million children under the age of 18 worldwide [1]. Although the majority of these children live in upper-middle income countries, the prevalence of overweight and obesity in low and middle income countries is showing the fastest growth rate [2]. In the specific case of Latin America, it has been estimated that 20-25% of children and adolescents are overweight or obese [3]. Uruguay is among the countries with the highest prevalence of overweight and obesity in Latin America, particularly among children under 4 years of age (10.5%) [4].

Childhood overweight and obesity are associated with various health problems and increased risk of premature onset of non-communicable diseases such as diabetes and cardiovascular disease, which lead to a reduction in quality of life and life expectancy [5,6,7]. This situation makes childhood obesity one of the most important public health challenges worldwide and stresses the need to urgently develop population-based strategies to cope with the global epidemic [1].

According to Hawkes et al. [8], effective public policies should take into account the interaction between food preferences and the environment. The environment in which children are born and raised can contribute to their risk of becoming overweight and obese [2]. In this sense, changes in the global food system have increased the availability of highly processed products with high sugar, salt, and fat content, such as candy, soft drinks, snacks, and fast food [9,10]. Consumption of these products has been associated directly with obesity and other non-communicable diseases [11,12,13,14,15].

Marketing of unhealthy products has been identified as one of the main characteristics of the food environment that negatively contributes to children's food preferences and dietary patterns by encouraging consumption of products with high fat, sugar, and salt content [16,17,18,19]. According to reports, a considerable share of food companies' advertising budget is spent on advertisements targeted at children through TV, radio, the internet, and magazines [16,20,21]. Therefore, restrictions on advertising of unhealthy foods to children have been recommended and have already been imposed in different countries [2,18,19]. However, marketing strategies are not limited to broadcast and digital advertising, but also include packaging, sponsorship, and merchandising [20].

The contribution of package design to the marketing of food products targeted at children has increased in recent years [22]. Package design plays a major role in attracting attention and influencing purchase intent, and provides food companies the last chance to persuade consumers to buy the product at the point of sale [23]. Foods targeted at children are usually marketed using unconventional flavor and colors, cartoon characters, photos of celebrities, household names, merchandising tie-ins, and direct references to fun and play on the packages [22,24,25,26]. These marketing strategies have been reported to encourage children to think that products are tastier, healthier, funnier, and more appropriate for them, increasing their liking and willingness to consume [27,28].

Thus, regulation of labelling thus seems necessary to encourage children to avoid consumption of unhealthy products [22]. Implementation of such regulation requires detailed identification of the strategies used by food companies to promote products targeted at children and evaluation of their impact on children's perception and food choices. However, few studies have analyzed the characteristics of products targeted at children in Latin American countries, thus calling for further studies on the topic [24,29].

In this context, the current study aimed to describe the products targeted at children sold in supermarkets in Montevideo, Uruguay, in terms of package design and nutrient profile.

Methodology

Sampling and data collection

Two of the most widespread and popular supermarkets in Montevideo, the capital city of Uruguay, were selected for data collection. In each supermarket, three researchers participated in the survey to ensure that all relevant products were identified. Data collection was carried out in October 2014.

All products targeted at children were identified according to the following criteria, previously addressed by other authors [24,26]: (a) direct references to children; (b) use of cartoon characters; (c) unusual package/product shape or color; (d) references to sports, TV programs, or movies; and (e) premium offers and promotions targeted at children (collectibles, raffles). Products were analyzed on site and photographed.

Products that were sold in both supermarkets were included only once in the product sample. Besides, when several products of the same brand but differing only in flavor or package size were found, only one one of them was included in the analysis. Considering that the products had identical package characteristics and nutritional composition, the product included in the analysis was randomly selected.

Data analysis

The following information was obtained from each of the identified products: food category, brand, product name, package characteristics (color, use of cartoon characters, use of images), nutritional information (calories, total fat, saturated fat, trans fat, sugar, salt), ingredients, promotions, links to sports, TV programs, or movies, and claims (nutritional claims, product usage, references to fun, and other benefits).

The information described above was coded in categories using inductive coding by three of the study's authors. The number of products in each category was determined at the aggregate level and for each of the identified product categories. Significant differences in the frequency of the categories were evaluated using the chi-square test. A chi-square per cell test was used to identify the source of variation of the global chi-square.

According to their ingredients and nutritional composition, products were classified according to the *Pan American Health Organization Nutrient Profile Model* [30]. This profile is limited to processed and ultra-processed products, as they normally contain high added sodium, sugar, total fat, saturated fat, and trans fat content. Free sugars were estimated following the recommendations proposed in the model [30].

Results

A total of 180 unique products were identified as targeted at children, which were classified in nine main categories (Table 1). The most common category was candy and chocolates, followed by cookies and pastries, dairy products, and breakfast cereals. These four categories accounted for 77% of the products. The category "other" comprised three different products: fruit puree, mayonnaise, and salami.

The identified products met between 1 and 5 of the criteria for classifying a product as targeted at children (average of 2 criteria). The inclusion of cartoon characters on food packages was the most common strategy, used by 76% of the products, followed by unusual package/product shape or color, found in 74% of the products. The other three criteria were used less frequently: direct references to children (26%), offers and promotions targeted at children (22%), and references to sports, TV programs, or movies (17%).

Package characteristics

Table 2 shows an overview of the package characteristics of the identified products. Marketing strategies related to package and label design were frequently used, particularly bright colors, cartoon characters, and childish fonts on the labels. Some products also included explicit references to children through text or pictures, as well as references to fun (Table 2).

Significant differences in the frequency of use of the categories among product categories were identified ($p < 0.001$). For example, products in the candy and chocolate category frequently used bright colors and unusual package shape, while unusual product shape was common in frozen ready-to-eat products such as animal-shaped nuggets (Table 2).

Table 1

Number of products targeted at children in nine food categories identified in two supermarkets in Montevideo, Uruguay.

Product category	Number of products	Percentage of the total (%)
Candy and chocolate	45	25
Cookies and pastries	37	21
Dairy products	33	18
Breakfast cereals	24	13
Instant food	17	9
Soft drinks and juices	9	5
Savory snacks	8	4
Frozen ready-to-eat foods	4	2
Other *	3	2
Total	180	100

* This category included a meat product (salami), a fruit puree, and a mayonnaise.

Table 2

Percentage of products targeted at children with different package characteristics.

Characteristic	Percentage of products in each category (%)									
	Total	1	2	3	4	5	6	7	8	9
Package design *	66	87	51	52	75	41	56	100	100	33
Bright colors *	66	87	51	52	75	41	56	100	100	33
Unusual shape *	8	22	0	6	0	6	0	0	0	33
References to unusual product shape/color *	8	11	5	6	13	0	11	0	50	0
Cartoon characters	76	62	70	70	96	88	89	88	75	100
Generic character	61	44	57	67	67	82	56	88	50	100
Licensed character *	14	18	14	3	29	6	33	0	25	0
Childish lettering	57	64	59	45	75	47	56	13	100	33
References to children *	26	13	35	48	13	12	22	13	50	33
Textual reference to children *	20	11	30	36	4	6	22	13	50	33
Picture of children *	6	2	5	12	8	6	0	0	0	0
References to fun	26	20	38	33	25	24	0	13	0	33
Cross-advertisement *	12	4	22	0	17	35	0	13	0	0
References to the brand/Product website *	7	4	22	0	0	6	0	13	0	0
References to the company website *	7	0	8	0	17	35	0	0	0	0
Tie-ins *	17	16	14	18	13	35	11	13	25	0
Movies/TV programs *	9	16	16	0	13	0	0	0	25	0
Sports *	7	0	3	18	0	35	11	13	0	0
Promotions targeted at children	27	16	41	18	46	41	0	0	25	0
Games/Puzzles on the package *	14	7	8	6	46	35	0	0	25	0
Toys/Prizes	8	9	11	12	0	6	0	0	0	0
Online contests *	4	0	22	0	0	0	0	0	0	0
Price promotions	4	2	8	6	0	0	0	13	0	0
2 for 1 *	1	0	0	3	0	0	0	0	0	0
Larger package at reduced price	3	2	8	3	0	0	0	13	0	0

* Indicates package characteristics for which significant differences among product categories were identified according to the chi-square per cell test ($p < 0.05$).

Note: categories: 1 – candy and chocolate; 2 – cookies and pastries; 3 – dairy products; 4 – breakfast cereals; 5 – instant food; 6 – soft drinks and juices; 7 – savory snacks; 8 – frozen ready-to-eat foods; 9 – other.

The products included cross-advertisement or merchandising, or references to the brand/product or company website. This marketing strategy was more common in three categories: breakfast cereals, instant food, and cookies and pastries (Table 2). Tie-ins with movies, TV programs, and sports were also found in several products. In particular, tie-ins with sports were common in the instant food category.

Promotions targeted at children were found in 27% of the products. The main type of promotion used by food companies was the inclusion of games/puzzles on the packages, especially in three categories: breakfast cereals, instant food, and frozen ready-to-eat foods (Table 2). Food packages also contained prizes such as toys, stickers, and pencil cases. Besides, 22% of the cookies and pastries included references to online contests on the package.

Price promotions were also identified, although in a small proportion of products. Promotions included selling the second or selling product a larger package at a reduced price in four categories: candy and chocolate, cookies and pastries, dairy products, and savory snacks.

A wide range of claims were included on the packages, as shown in Table 3. At the aggregate level, health/nutrition claims were the most frequent on products targeted at children. However, differences in the frequency of use of such claims across product categories were found. As shown in Table 3, health/nutrition claims were markedly more frequent in breakfast cereals and soft drinks and juices than in the other categories. Claims about supplemented vitamins and minerals were the most frequent, and were found only in five categories: cookies and pastries, dairy products, breakfast cereals, instant food, and soft drinks and juices. Besides, claims about healthfulness/nutrition energy were only included on breakfast cereal packages. Other health and nutrition claims included references to energy, absence of trans fat, and inclusion of probiotics (Table 3).

Table 3

Percentage of the products targeted at children, identified in two supermarkets in Montevideo, Uruguay, including different claims.

Type of claim	Percentage of products in each category (%)									
	Total	1	2	3	4	5	6	7	8	9
Health/Nutrition claims *	19	0	3	24	54	29	56	13	25	33
Added minerals *	14	0	0	18	46	29	33	0	0	0
Added vitamins *	14	0	3	18	46	18	44	0	0	0
References to healthfulness/Nutrition *	5	0	0	0	33	0	0	0	0	0
References to energy	3	0	0	3	8	0	11	0	0	33
No trans fat *,**	2	0	0	0	4	0	0	13	25	0
Probiotics *	1	0	0	6	0	0	0	0	0	0
Ingredient claims *	12	16	3	21	0	0	33	0	50	33
Gluten-free *	8	4	0	18	0	0	33	0	50	33
No colorings *	3	7	3	0	0	0	0	0	0	33
No flavorings *	3	9	0	0	0	0	0	0	0	33
No preservatives	2	2	3	3	0	0	11	0	0	0
Other claims *	18	11	22	12	33	6	22	25	0	100
Naturalness	1	0	0	0	4	0	0	0	0	0
Sensory (tasty/delicious/crunchy) *	13	4	22	9	29	6	0	25	0	33
Ideal for snacking *	1	0	0	3	0	0	0	0	0	33
References to fruit *	3	7	0	0	0	0	22	0	0	33

* Indicates claims for which significant differences among product categories were identified according to the chi-square per cell test ($p < 0.05$);

** The trans fat content of dairy products was not considered in the classification.

Note: categories: 1 – candy and chocolate; 2 – cookies and pastries; 3 – dairy products; 4 – breakfast cereals; 5 – instant food; 6 – soft drinks and juices; 7 – savory snacks; 8 – frozen ready-to-eat foods; 9 – other.

Claims about absence of specific ingredients were included on 12% of the product packages, mainly related to additives (colorings, flavorings, and preservatives). These claims were mainly found in three categories: candy and chocolate, cookies and pastries, and the other products category (Table 3). Gluten-free claims were also found on some packages, particularly in dairy products, soft drinks and juices, and frozen ready-to-eat-products.

Other claims were also identified on the packages, as shown in Table 3. The most common claim emphasized the products' sensory and hedonic characteristics, such as tastiness, deliciousness, or distinct sensory characteristics (e.g. crunchy). Such claims were common in cookies and pastries, breakfast cereals, savory snacks, and one product in the others category (salami) (Table 3). Other claims stressed product naturalness (ideal for snacking) or referred to fruits, although at the aggregate level they were less common than the other claims.

Nutrient profile

The great majority of products targeted at children and identified in the current study were classified as ultra-processed (97%). The remaining products (five, or 3%) corresponded to unprocessed or minimally processed products (sunflower seeds, pasteurized milk, and powdered milk).

All the ultra-processed products identified in the study were included in at least one of the categories of the *Pan American Health Organization Nutrient Profile Model* [30], indicating that they all contained excessive amounts of sodium, free sugars, total fat, saturated fat, and/or trans fat and/or contained artificial sweeteners. Products were included in an average of 2.0 categories. However, some products were included in only one category, whereas others were included in four. Most products contained excessive amounts of free sugars (Table 4), which represented more than 10% of their total energy content [29]. The majority of the savory products, particularly savory snacks and frozen ready-to-eat foods, also contained excessive amounts of sodium. The least frequent category related to ultra-processed products formulated with sweeteners, as only one of the products (soft drinks) fit this description.

As expected, the study identified differences in the nutrient profile of product categories (Table 4). Cookies and pastries were included in an average of 3.5 categories in the Nutrient Profile Model, indicating that they contained excessive amounts of three to four nutrients. As shown in Table 4, the great majority of products in this category contained excessive amounts of free sugars, total fat, and saturated fat, while 62% of the products also contained excessive amounts of trans fat.

Dairy products and savory snacks were classified in an average of 2.2 categories in the Nutrient Profile Model, indicating that they contained excessive amounts of two nutrients on average. As shown in Table 4, dairy products frequently contained excessive amounts of sugar and saturated fat, while most savory snacks contained excessive amounts of sodium and total fat.

Discussion

In the current study, a wide range of product categories targeted at children were identified in two supermarkets in Montevideo, Uruguay. The most common categories were candy and chocolate, cookies and pastries, dairy products, and breakfast cereals. The products were not only limited to snack foods but included products suitable for different eating occasions, including breakfast and main meals. Marketing of such a diverse range of products for children may convey the idea that they should eat different foods than adults, as previously highlighted by Elliot [28].

The great majority of products corresponded to ultra-processed products with excessive amounts of sodium, free sugars, total fat, saturated fat, and/or trans fat, not recommended for frequent consumption [20]. These findings corroborate other studies conducted in different countries, which have classified child-oriented products as unhealthy [24,26,29,31,32]. Consumption of highly processed foods or ultra-processed products has been associated with obesity and other non-communicable diseases, even in children [11,12,14,33]. Sales of frozen products, cookies, snacks, candy, ice cream, and soft drinks have increased markedly in the last 10 years in several Latin American countries [14]. In particular,

Table 4

Percentage of products targeted at children, identified in two supermarkets in Montevideo, Uruguay, classified in each of the food groups defined by the *Pan American Health Organization Nutrient Profile* [30].

	Percentage of products in each category (%)									
	Total	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Unprocessed or minimally processed *	3	0	0	12	0	0	0	11	0	0
Ultra-processed foods *	97	100	100	88	100	100	100	89	100	100
Excessive amount of sodium *	17	0	0	7	50	6	22	86	75	33
Excessive amount of free sugars *	91	100	100	100	92	94	89	14	0	33
Contain sweeteners *	1	0	0	0	0	0	11	0	0	0
Excessive amount of total fat *	40	33	95	21	4	0	0	86	75	67
Excessive amount of saturated fat *	50	36	97	86	4	6	0	43	50	67
Excessive amount of trans fat *	14	2	62	0 **	0	0	0	25	0	0

* Indicates that differences among product categories were significant according to the chi-square per cell test ($p < 0.05$);
** The trans fat content of dairy products was not considered in the classification.
Note: categories: 1 – candy and chocolate; 2 – cookies and pastries; 3 – dairy products; 4 – breakfast cereals; 5 – instant food; 6 – soft drinks and juices; 7 – savory snacks; 8 – frozen ready-to-eat foods; 9 – other. Percentages within the ultra-processed foods category do not total exactly 100% because each product could be included in more than one category of the *Pan American Health Organization Nutrient Profile*.

consumption of these products in Uruguay has increased 68.4% between 2000 and 2013, in parallel with a marked increase in the prevalence of overweight and obesity [14,34].

Most products targeted at children were ultra-processed, which raises concerns about children becoming accustomed to such foods and losing the ability to appreciate the value of natural and homemade food [28]. It thus appears necessary to regulate marketing of ultra-processed products as appropriate foods for children [18]. Educational campaigns to discourage children and their parents from consuming such products are also advisable [14].

Food companies have used various marketing strategies in package design to attract children's attention and drive their preferences. The most common strategy was the inclusion of cartoon characters, as well as tie-ins with movies, TV, and sports, although less frequently. Children have been reported to create emotional bonds with familiar characters that encourage them to consume products associated with them [27,35,36,37]. In the current study, licensed characters were markedly less frequent than generic characters, probably due to the cost associated with using licensed characters. This trend has been also reported by Chacon et al. [24] when analyzing snack foods for children in Guatemala. Importantly, unfamiliar cartoon characters can be as effective as familiar ones in increasing children's positive hedonic reaction to products [38].

Other frequently identified design strategies were the use of bright colors, unusual shapes, and childish fonts, aimed at attracting children's attention to the packages. Package color and shape also create sensory and hedonic expectations that can drive preferences and have a large impact on food choices [39,40].

Packages also included references to fun, as well as promotions involving games, puzzles, toys, and other prizes, as reported by other authors [18,19,24,26]. This strategy may induce children to create a problematic relationship with foods, as they learn to frame foods as entertainment rather than contributing to their health and wellbeing [26]. Other promotions involved product discounts, targeted at parents, but were less frequent than those targeted at children.

Products made a wide range of claims on the packages, most related to health and nutrition. The inclusion of such claims has been reported to influence the perception of healthfulness, as well as hedonic expectations of school-aged children [41,42]. Nutrition claims have also been reported to influence parents, who usually base their healthfulness judgments of products on nutrition claims rather

than on an exhaustive evaluation of the nutritional information included on the packages [43]. In the current study, all products with health and nutrition claims contained excessive amounts of at least one of several nutrients that have been associated with negative health outcomes [20]. Similar results have been reported by other authors, stressing that nutrition claims on food packages and marketing campaigns are commonly used by food companies to convey the concept of healthfulness in products that are high in sugar, saturated fat, and/or sodium [44]. Therefore, claims related to health and nutrition can mislead parents and have a negative impact on the nutritional composition of the packaged food products selected by parents for their children. Strict regulations on the use of nutrition claims on packages of products targeted at children are thus necessary. In this sense, nutrient profiling tools to determine the eligibility of foods to display health and nutrition claims should be developed in Latin American countries, as previously implemented in Australia and New Zealand [45].

Finally, it is important to highlight that some products made claims related to naturalness, as well as lack of colorings, flavorings and preservatives, which may also induce healthful associations by children and parents. The use of claims related to naturalness is particularly relevant in light of the increased importance attributed to processed products in the global obesity epidemic [14,15,30]. Therefore, regulation of such claims on food packages and advertising is also advisable.

In closing, it is important to address some of the study's potential limitations. First, only products sold at two supermarkets in Montevideo were analyzed, which does not provide a representative overview of products targeted at children and available in Uruguay as a whole. Although products available at other supermarket chains may be similar to those identified in the present study, further research should also consider products sold at convenience stores and other informal stores located in different neighborhoods. It would be interesting to compare differences between products targeted at children and available in neighborhoods with different income levels. In this study, sampling was done at a single point in time, which does not provide an overview of how the products' characteristics change throughout the year, or particularly in relation to special events such as Christmas or Easter. Despite such limitations, the study provides a comprehensive analysis of the characteristics of products targeted at children available in Uruguay and is the first study to apply the Pan American Nutrient Profile Model to analyze the nutritional composition of such products.

Conclusions

The contribution of advertising unhealthy products to the global childhood obesity epidemic has been recognized, and various countries have implemented regulations [18]. However, the contribution of package design to the marketing of child-oriented products has still not been fully acknowledged. The current study's results provide additional evidence of the nutrient profile of products targeted at children, as well as the wide range of strategies related to package design frequently used by the food industry to market their products. Considering that self-regulation has proven unsuccessful [18], it is necessary to strictly regulate package design and product shape of products targeted at children, with particular emphasis on the use of cartoon characters and health/nutrition claims. Records of such regulation exist in anti-tobacco campaigns, as companies have been forced to remove all logos and images from packages [46]. Although this type of regulation may be excessive, the relevance of package design on children's perception of food products should be acknowledged in public policies [18]. In this sense, additional empirical evidence of the extent to which package design influences children's preferences and perception of healthfulness is needed to support the development of appropriate and effective public policies.

Contributors

A. Giménez participated in the study design and implementation, data analysis, and writing of the article. L. Saldamando participated in the study design and implementation and data analysis. M. R. Curutchet participated in the study design and writing of the article. G. Ares participated in the study design and implementation, data analysis, and writing of the article. All authors approved the final version of the paper for publication.

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Resumo

A publicidade de produtos alimentícios pouco saudáveis tem sido identificada como uma das principais características do ambiente alimentar com efeito negativo sobre a alimentação das crianças. Diversos países já impuseram restrições sobre a publicidade de produtos alimentícios pouco saudáveis para crianças. Entretanto, as estratégias publicitárias não se limitam à radiodifusão e às mídias digitais; incluem também o desenho das embalagens. Nesse contexto, o estudo buscou descrever os alimentos dirigidos ao público infantil e vendidos em supermercados em Montevidéu, Uruguai, em termos de desenho de embalagem e perfil de nutrientes. Dois supermercados em Montevidéu foram selecionados para a coleta dos dados. Em cada supermercado, foram identificados todos os produtos dirigidos ao público infantil. Os produtos foram analisados quanto ao desenho da embalagem e perfil nutricional, considerando o Modelo de Perfil de Nutrientes da Organização Pan-Americana da Saúde*. Foi identificado um total de 180 produtos, incluindo uma ampla variedade de categorias de produtos. A grande maioria dos produtos correspondia aos ultra-processados, com teores excessivos de sódio, açucares livres, gordura total e gordura saturada e/ou trans, que são contraindicados para consumo frequente. Foram identificadas diversas estratégias mercadológicas no desenho das embalagens para atrair a atenção das crianças e moldar suas preferências. As estratégias mais comuns foram a inclusão de personagens de desenho animado, cores brilhantes, letras infantilizadas e uma ampla gama de alegações em relação à saúde e nutrição e às características sensoriais e hedônicas dos produtos Os achados do estudo fornecem evidências adicionais sobre a necessidade de regulamentar as embalagens dos produtos alimentícios para crianças.*

Embalagem de Alimentos; Composição de Alimentos; Publicidade de Alimentos; Criança

Resumen

El marketing de productos poco saludables se ha identificado como una de las características del entorno alimentario que afecta negativamente los hábitos alimentarios de los niños. Diferentes países han impuesto restricciones a la publicidad de alimentos poco saludables dirigidos a niños. Sin embargo, las estrategias de marketing no se limitan a la publicidad visual y digital, sino que también incluyen el diseño de envases. En este contexto, el presente estudio tuvo como objetivo describir los productos alimenticios dirigidos a niños y vendidos en supermercados de Montevideo, Uruguay, en términos de diseño del envase y perfil nutricional. Se seleccionarondos supermercados em Montevideo para la recollección de datos. En cada supermercado, se identificaron todos los productos dirigidos a niños. Se analizaron los productos en términos de diseño del envase y perfil nutrientes, considerando el Modelo de Perfil Nutricional de la Organización Panamericana de la Salud*. Se identificaron un total de 180 productos, que incluyeron una amplia variedad de categorías. La gran mayoría de los productos correspondieron a productos ultraprocesados con excesivas cantidades de sodio, azúcares, grasa total, grasas saturadas, y/o grasas trans, cuyo consumo frecuente no está recomendado. Se identificaron diversas estrategias de* marketing *en el envase de los productos para atraer la atención de los niños e influenciar sus preferencias. Las estrategias más comunes fueron la inclusión de personajes de infantiles, colores vivos, letras infantiles y una amplia variedad de alegaciones sobre salud y nutrición, así como relacionadas con caracteriticas sensoriales y hedónicas de los productos. Los hallazgos del estudio proporcionan evidencias adicionales sobre la necesidad de regular el diseño de los envases de los productos dirigidos a niños.*

Embalaje de Alimentos; Composición de Alimentos; Publicidad de Alimentos; Niño

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