

## Food advertising on pay-TV for children in Brazil

Leiliane de Carvalho Cordeiro<sup>1</sup>  Alder Mourão de Sousa<sup>1</sup>  Janaína Braga de Paiva<sup>2</sup>  Naíza Nayla Bandeira de Sá<sup>1</sup> 

<sup>1</sup>Universidade Federal do Pará - UFPA. Belém/PA, Brasil.

<sup>2</sup>Universidade Federal da Bahia - UFBA. Salvador/BA, Brasil.

E-mail: leilicarvalho28@hotmail.com

### Abstract

Resolution No. 163/2014 deals with the abusiveness of advertisements in general aimed at children. Considering the relevance of the topic for public health, it is important to carry out research on the subject. The objective was to investigate the adequacy of food advertising to Resolution No. 163/2014 in advertisements broadcast by pay-TV channels in Brazil, aimed at children. This is a cross-sectional, quantitative, and descriptive study. Simultaneously, the programming of two pay-TV channels with the highest audience, aimed at children in Brazil, was recorded for 03 complete consecutive days. A structured questionnaire was used to systematize the data. The food/products shown in advertisements were classified into seven groups: sweets, drinks, cereals, restaurant/pizzeria, fast food, dairy products, and snacks. Six types of marketing appeal were identified in the advertisements analyzed: nutritional, affective, gustatory, auditory, visual, and promotional. Principal Component Analysis was performed. More than 50% of the recording hours were used to broadcast advertisements with food content for children. Stimulating emotions and affectivity was the main appeal used to publicize the products. Promises of nutritional benefits, offers of gifts and promotions, and auditory, visual, olfactory, and gustatory stimuli were verified. It is concluded that food advertising does not comply with the norms established by the Resolution and goes against the recommendations that characterize adequate eating habits.

**Keywords:** Child Diet. Legislation. Advertising. Nutritional Consumption.

### INTRODUCTION

Television is the most widespread media tool in the world, especially in Brazil, demanding about 70% of the investments employed and enables the dissemination of different products through advertisements, generating in the general public the desire to acquire them<sup>1</sup>.

In Brazil, the expansion of access to television was greatly benefited during the military regime (1964-1985) as a result of measures adopted by the government that made the mass media its main mechanisms of manipu-

lation and social control<sup>2</sup>. In 2014, television was already present in 97% of Brazilian homes and in 2018 this number reached 96.4% of households<sup>3</sup>.

Regarding pay TV, in 2018, 31.8% of Brazilian households had access to this consumer good. In the Southeast region, which had the highest percentage, 41.4% of households had access to pay TV, while in the Northeast region 17.6% were reported, which was the lowest percentage. In the Northern region, the percentage represented

21.2% of households<sup>4</sup>.

A national survey carried out in 2015 with 102,301 schoolchildren in Brazil, reported that about 60% spent 2 hours or more watching television on a weekday. Among public school students, 61.2% and among private school students, 51.5% spend two hours or more a day watching television. The Northern region had 56.6% of the total, being the lowest proportion, while the Southeast region had the highest proportion, at 62.7%<sup>5</sup>.

The increased use of smartphones, tablets, and computers by children and adolescents in recent years has contributed to a decrease in the time spent in front of the television<sup>3</sup>. However, monitoring carried out by Instituto Alana, in 2019, found that children consume the most pay-TV services in the country, spending an average of four hours a day watching the programs of these channels<sup>6</sup>.

Advertising on television media is one way of presenting a product to potential consumers, including food products aimed at children<sup>7</sup>.

Used as a tool to generate opinions and desires, television has the capacity to influence the development of eating habits and children's choices. Moreover, it has increasingly induced the family's purchasing decision, a worrying fact, given the immaturity and little critical capacity during childhood<sup>8,9</sup>.

Advertising referring to food products represent a significant portion of the television programming of free channels in Brazil. Most refer to products with a high concentration of sugars and fats. Components that barely correspond to what is considered a healthy diet<sup>10</sup>. Ads related to foods such as fruits and vegetables were not identified.

Marketing tactics are strategies used by advertising agencies to influence a possible consumer. Sensory marketing theories and techniques use emotions and biases by stimulating the human senses, and advertising aimed at children seeks to reach emotional issues<sup>11,12</sup>.

By using marketing tools, advertisements create a fantasy and fascinating environment around the products, inducing an attraction favored by the genesis of a kind of fetish of men for these goods. The term 'commodity fetishism' is used in order to show it as something independent of the social relations that produce it, as something that has a life of its own, and as a subject disconnected from the human actions that created it<sup>11,13</sup>.

The use of these marketing tools aimed at children can influence eating habits, which are formed gradually throughout life. Learning and habits acquired in childhood and adolescence, especially during early childhood (0 to 4 years), have an impact on eating behavior, preferences, choices, values, perception of self-image, psychosocial development, and individual health<sup>14,15</sup>.

Habits acquired in childhood tend to remain during adult life. Healthy lifestyle habits are considered protective factors to avoid several health problems<sup>10,16</sup>. This reinforces the argument that healthy eating practices prioritizing the consumption of fresh or minimally processed foods, as opposed to processed and ultra-processed foods, are important from the first years of life and throughout it<sup>10</sup>.

Processed and ultra-processed foods have become increasingly present in families' diets and the consumption of these products is associated with the occurrence of childhood overweight and obesity and other chronic non-communicable diseases (CNCDs) in adulthood. Although CNCDs are also influenced by genetic factors, they are mainly related to environment factors<sup>15,17</sup>.

Given the above and assuming that more and more children and adolescents have access to television programming and, consequently, to marketing strategies that make use of ads, which are commercial tools with the primary objective of selling products and/or services, the need arises to guaran-

tee the full protection of children<sup>18</sup>.

Taking into account the condition of a vulnerable, immature person who is susceptible to suggestion, which is specific to the developmental stages of childhood and adolescence, the National Council for the Rights of Children and Adolescents (CONANDA), through Resolution No. March 13, 2014, established rules aimed at advertising tools generally intended for children and adolescents in order to curb marketing abuse<sup>19</sup>.

The Resolution deals with the abusiveness of advertisements in general aimed at children, regardless of the product and the means of dissemination, and determines that abusive advertising is prohibited at any time and through any media<sup>19</sup>.

The practice of advertising with the intention of persuading children to consume products using the following aspects is considered abusive: 1) childish language, special effects, and excess of colors; 2) sound-

track of children's songs or those sung by children's voices; 3) a representation of a child; 4) people or celebrities that appeal to children; 5) children's characters or presenters; 6) cartoons or animation; 7) dolls or the like; 8) promotions with distribution of prizes or collectible gifts or that appeal to children; and 9) promotions with competitions or games that appeal to children<sup>19</sup>.

Considering the relevance of this topic to public health, it is important to carry out research to find out how pay-TV channels aimed at children have disseminated food advertisements despite their regulation.

Therefore, the present study aimed to investigate the adequacy of food advertising to CONANDA Resolution No. 163/2014 in advertisements broadcasted by pay-TV channels in Brazil, aimed at children.

It is believed that the channels analyzed do not fully comply with the norms established of the said Resolution.

## METHODS

This is a cross-sectional, descriptive study with a quantitative approach that considered the aspects described in Art. 2 of CONANDA Resolution 163/2014<sup>19</sup> as parameters to assess the suitability of advertisements.

We analyzed the programs broadcasted by pay-TV channels aimed at children, in 2014, in Brazil. The two channels with the highest scores nationwide at that time were selected, indicated by an audience survey carried out by a competent institution<sup>20</sup>. Both channels – A and B – are from major international companies and broadcast their programs throughout the day.

Using a pay-TV signal receiver, the program schedule of the selected channels was simultaneously recorded for 24 hours, on 3 consecutive days (Thursday to Saturday),

covering the period from November 27 to 29, 2014. Information was collected in a structured questionnaire identifying product identification, food group, trade name, advertisement airing time, duration, type of marketing, and mention of nutritional and health benefits.

The foods identified in the advertisements were classified into seven groups: 1) sweets; 2) drinks; 3) cereals; 4) restaurants and pizzerias; 5) fast-food chains; 6) dairy products; 7) snacks.

Based on Art. 2 of CONANDA Resolution 163/2014<sup>19</sup>, which classifies the targeting of advertising that uses specific marketing strategies with the intention of encouraging children to consume products and services as abusive, the data was systematized

and categorized according to six types of marketing, as can be seen below:

- **Nutritional appeal:** Refers to health from the consumption of food and relates to a healthy lifestyle;

- **Affective appeal:** Uses representation of children, people, celebrities, children's characters or presenters, dolls or mascots;

- **Gustatory appeal:** Refers to the flavor of the products, with emphasis on the sense of taste as an attraction;

- **Auditory appeal:** Uses children's language, soundtracks of children's songs or sung by children's voices;

- **Visual appeal:** Employs special effects, excessive colors, cartoons or animation;

- **Promotional appeal:** Mentions distribution of prizes, gifts, among others.

We looked for the labels of the products that mentioned nutritional and health gains

so that it was possible to analyze the composition and, thus, verify the possibility of the product fulfilling what was promised by the advertisement.

Considering that ANVISA made it mandatory to include information regarding energy value, carbohydrates, proteins, total fats, saturated fats, trans fats, dietary fiber, and sodium on food product labels<sup>21</sup>, the list of ingredients and the nutritional information with the percentages of their daily recommendations were analyzed and compared with updated literature.

The questionnaire data were systematized in a Microsoft Excel® software spreadsheet in absolute and relative values.

The Principal Component Analysis (PCA) statistical method was used, which is a multivariate analysis technique that aims to investigate the correlation structures<sup>22</sup>, in order to demonstrate the influence exerted by each television channel on the data, as well as the relevance of the main variables studied.

It was not necessary to submit the research to the Ethics Committee because it is a study using information and data that do not involve human beings.

## RESULTS

Of the 144 hours of recording analyzed, only 84 hours (58.33%) contained advertisements for food and/or food products aimed at children. It is worth mentioning that between 22:00 and 08:00 no advertisements contributed to nearly 40% of broadcasts.

### **Quantity and Duration of Advertisements**

During the recording time of the two channels that contained advertisements for food and/or food products, 224 advertise-

ments were shown, totaling 83 minutes.

As can be seen in Table 1, channel A showed 87 advertisements, which represented 26 minutes of all its programming. Channel B aired 137 advertisements that occupied 57 minutes of programming at the searched time.

As for the duration of each advertising piece, in both channels, the shortest commercial was nine seconds and the longest was 31 seconds.

**Table 1** – Number and duration of commercials on channels A and B per day of the survey, Belém, PA, 2014.

Date	Channel A			Channel B		
	N	Duration*	PC**	N	Duration*	PC**
16/10/2014	25	8	-1.3510	35	13	0.2820
17/10/2014	33	9	0.1410	38	16	-0.6755
18/10/2014	29	9	1.2100	64	28	0.3935
<b>Total</b>	<b>87</b>	<b>26</b>		<b>137</b>	<b>57</b>	

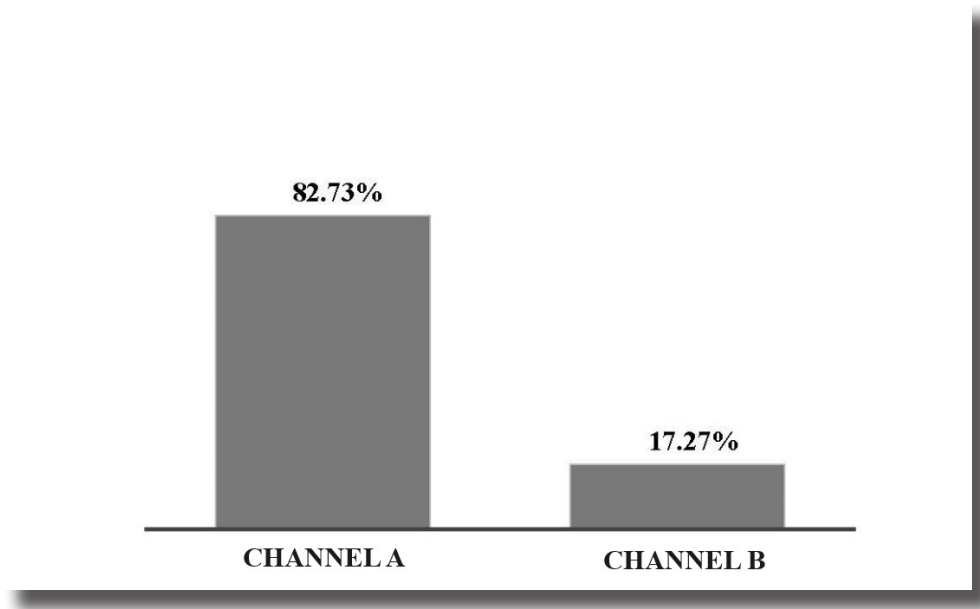
\* Duration in minutes

\*\* Principal component analysis

Considering the results of the PCA, as shown in Table 1, the day 10/18/2014 (Saturday) was when the amount and duration of advertisements for food and/or food products aired on channels A and B were most relevant

(PC=1.2100 and PC=0.3935).

Figure 1 demonstrates that Channel A contributed to more than 80% of the information related to the amount and duration of advertisements for food and/or food products.



**Figure 1** – Percentage of Variance of Channels A and B on quantity and duration of advertisements for food and/or food products.

**Types of Advertised Products**

The food products identified in advertisements on the two channels surveyed were classified into seven groups.

As can be seen in Table 2, on channel A, the majority of commercials for food products were for the dairy products group, with an emphasis on petit suisse cheese, long-life whole milk, and

condensed milk, followed by the candy group.

In the commercials aired on channel B, most of the commercials were for the cereal group;

followed by the candy group; fast-food group, with greater investment by chain store 1; and the beverage group.

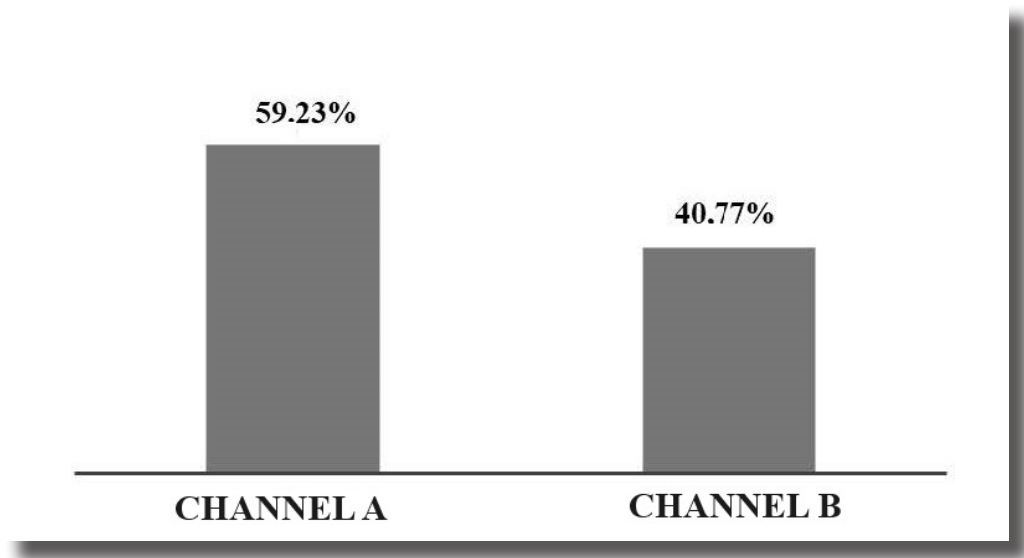
**Table 2** – Distribution and frequency of advertisements by food group and/or food products on channels A and B, Belém, PA, 2014.

Food Group/ Products/ Categories	Food/Product	Channel A			Channel B		
		N	%	CP	N	%	CP
Candy	Hard candy	0	0	0	2	1.46%	-0.8023
	Cake	8	9.2%	-1.0156	28	20.44%	1.3892
Drinks	Soy based juice	3	3.45%	0.2283	2	1.46%	-0.5836
	refreshment	0	0	0	18	13.14%	0.1875
Cereals	Morning cereal	0	0	0	36	26.28%	1.3010
	Cereal bar	0	0	0	5	3.65%	-0.6167
Restaurant/ Pizzeria	Homemade food (Kg)	3	3.45%	0.3520	0	0	0
	Pizza	3	3.45%	0.3520	0	0	0
Fast-food	Rede 1	0	0	0	24	17.51%	0.5587
	Rede 2	0	0	0	1	0.73%	-0.8641
	Rede 3	0	0	0	5	3.65%	-0.6167
Dairy products	Condensed milk	10	11.49%	0.4292	7	5.11%	0.2359
	Long-life whole milk	23	26.43%	1.4385	6	4.38%	1.1215
	Greek yogurt	3	3.45%	0.3520	0	0	0
	Petit suisse cheese	34	39.08%	2.6114	0	0	0
Chips	Packaged snacks	0	0	0	3	2.19%	-0.740

Table 2 shows that the most relevant products in terms of distribution and frequency of advertisements were *petit suisse* cheese (PC = 2.6114) and long-life whole milk (PC = 1.4385) on channel A. On channel B, cake (PC = 1.3892), breakfast cereal (PC = 1.30310),

and long-life whole milk (PC = 1.1215) were the most relevant products.

Figure 2 shows that almost 60% of the information related to the distribution and frequency of advertisements for food and/or food products was concentrated in channel A.



**Figure 2** – Percentage of Variance of Channels A and B on distribution and frequency of advertisements by food and product group.

### Marketing

Table 3 shows that both on channel A and on channel B, most of the commercials analyzed used an affective appeal followed by a nutritional appeal.

The use of promotional appeals was not observed in the advertisements aired on channel A, while on channel B this type of appeal was present in nearly 1/3 of the advertisements, as shown in Table 3.

**Table 3** – Intensity of use of marketing strategies in advertisements by channel, Belém, PA, 2014.

Appeal	Channel A			Channel B		
	N	%	CP*	N	%	CP*
Nutritional	34	39.08	0.7399	57	41.6	-0.0337
Affective	52	59.77	2.2639	79	57.66	0.0497
Gustative	26	29.88	-0.8222	23	16.78	-0.9556
Visual	17	19.54	-0.3422	46	33.57	0.2447
Auditory	17	19.54	-0.7805	34	24.81	-0.1936
Promotional	0	0	0	45	32.84	0.8885

As can be seen in Table 3, considering the results of the PCA, the affective appeal was more relevant in channel A (PC = 2.2639) while, in channel B, the promotional appeal was more significant (0.8885).

According to the results obtained from the PCA, channel A contributed more than 80% of the information related to the use of marketing appeals, as shown in Figure 3.

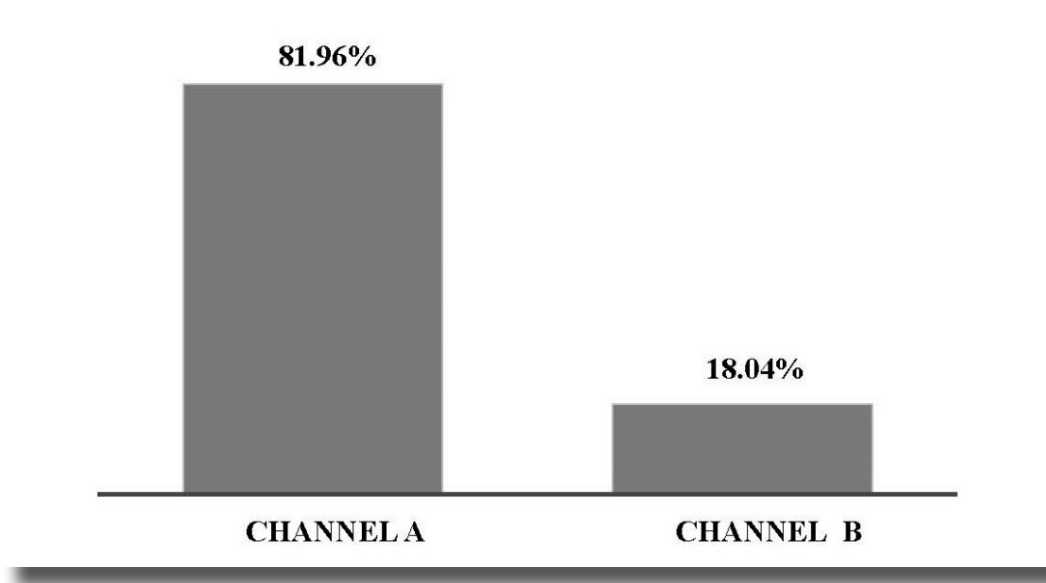


Figure 3 – Percentage of Variance of Channels A and B on the use of marketing strategies.

**Advertisement airtimes**

The advertisements were distributed throughout the channel's programming. In the scheduling of both channels, a pattern was observed regarding the peak hours of commercials

when comparing the three days considered by the study.

On channel A, the occurrence of three advertisement peaks was observed, as can be seen in Figure 4.

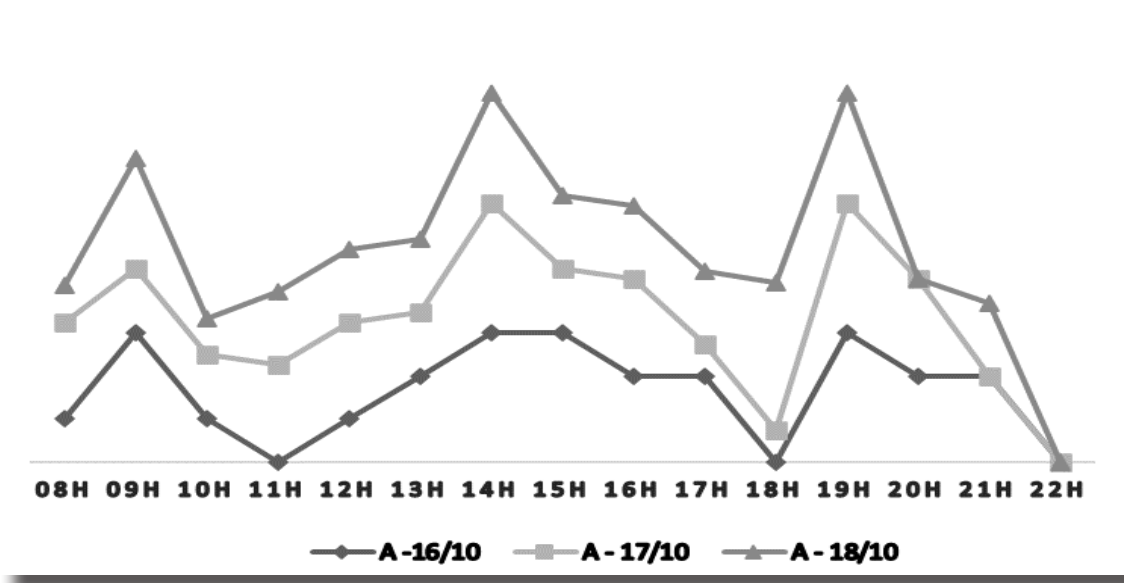


Figure 4 – Peak times for broadcasting food and/or product advertisements on Channel A, 2014.



In Figure 4, the first peak is observed at 09:00 in the morning, decreasing from that time onwards and rising again around 12:00 pm where it reaches the second peak at 2:00 pm. Then it gradually declines until the beginning of the evening, at 6:00 pm, when it rises again reaching the third peak at 7:00 pm. From that time onwards, the frequency of airing advertisements with food content gradually decreased, not observing the airing of this type of content between 10:00 pm and 8:00 am of the following day.

On channel B, three peaks for airing advertisements were also identified, however with varying times. In Figure 5, it is possible to observe that the first peak was reached at 11:00 am. From then on, there was a decrease in broadcasts which gradually increased again around 2:00 pm on Friday and Saturday (17 and 18/10). On Thursday, there was a slight decline in airtime between 2:00 pm and 4:00 pm. However, the occurrence of a second peak was recorded at 4:00 pm and the third at 7:00 pm (Figure 5).

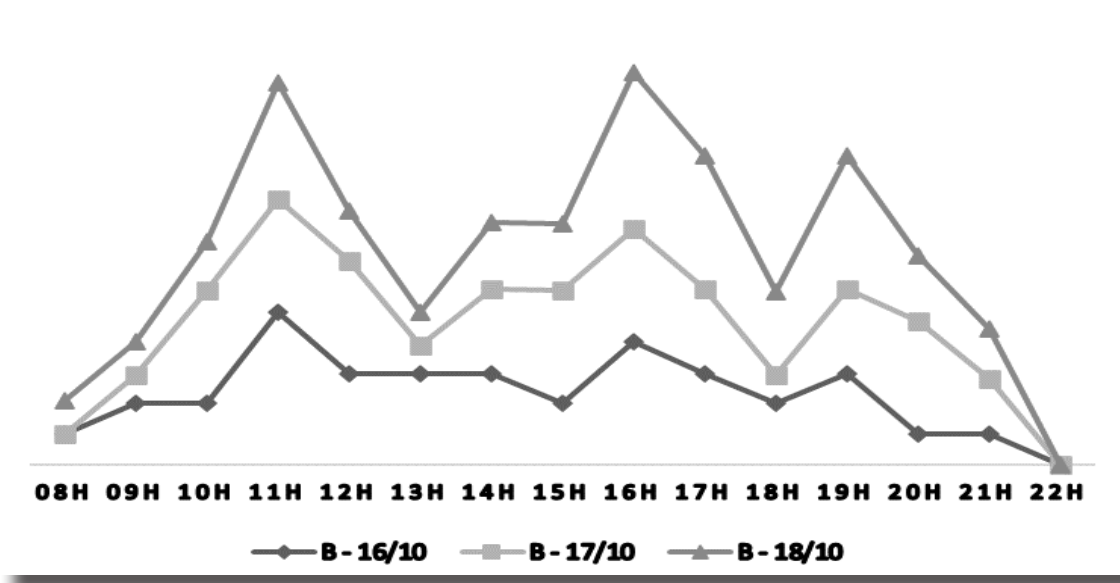


Figure 5 – Peak times for broadcasting food and/or product advertisements on channel B, 2014.

## DISCUSSION

The study identified that advertisements for food and/or food products are broadcasted on the two channels aimed at children and that use marketing techniques would be considered abusive and persuasive to children according to Resolution 163/2014 – CONANDA<sup>19</sup>. It was noticed that advertisements for natural foods were not aired and that advertisements reach peaks at certain times of the day and are more frequent in a

certain period of the week.

Fresh and minimally processed foods are characterized by not having undergone any or the least possible intervention when taken from nature. These should be prioritized when seeking a healthy diet, as opposed to processed foods that, in turn, undergo industrial processes such as the addition of substances that contribute to their conservation and palatability, and ultra-processed foods,

which are industrialized products that are derived from substances extracted from food or other compounds and which contain additives in their composition. These additives are artificial ingredients used to add attractive sensory characteristics to the product<sup>10</sup>.

Economic development caused changes in the lifestyle of Brazilians, also interfering with issues related to consumption and eating habits. With modern life and the insertion of women in the labor market, priority is given to practicality. As a result, the increase in consumption of processed and ultra-processed products by families and, consequently, by children, is increasing mainly in social classes with higher income availability. However, over time, such products have become accessible to different economic classes as a result of the decrease in their prices<sup>10,16</sup>.

The parents' preferences and habits play an important role in the child's food culture<sup>23</sup>. However, currently, the child exerts a strong influence on family choices, especially on decisions related to food consumption<sup>23</sup>.

Considering that the results of the present study show that 26 minutes of airtime on channel A and 57 minutes on channel B are allocated to food advertising during the 03 days surveyed, and that the American Dietetic Association emphasizes that only 30 seconds exposure to food advertisements are needed to influence children's food choices, it is possible to see that this means of communication significantly contributes to children's eating habits<sup>24</sup>.

Marketing strategies are components of advertisements used to make the product more attractive. In the case of food products identified by the survey, a significant percentage of these appeals show non-compliance with what is determined by current legislation, such as the use of language and images of children, animations, comics, mascots and characters, music, and colors present in commercials<sup>12</sup>.

The advertisements analyzed place signifi-

cant emphasis on affective relationships such as those with mothers, siblings, and friends, as well as the use of children's images to promote products. These relationships are linked to the product in a way that appeals to consumers' emotions. Children's emotional connections are a powerful tool for encouraging consumption and are often the primary means of attracting them to a product<sup>14</sup>.

Flavor is mentioned; however, visual strategies are highlighted. The use of cartoons is constant. Another factor that deserves mention when comparing the results obtained with the legislation in question is the use of auditory resources such as music, which establishes an association between the music and the product. Furthermore, the use of children's voices stimulates affectivity, as well as the use of characters and mascots, which personify and humanize the product. The offer of gifts and prizes is also common among the advertisements studied. This fact, in turn, gives the child the feeling of winning something, being rewarded<sup>12,23</sup>.

The promise of providing health benefits is the second most recurrent strategy and most highlighted by the investigated advertisements, which may represent a risk, given the possibility of excessive consumption of a given product that does not properly supply the needs or nutritional demands. These products are insufficient or inadequate in nutritional terms, and do not promote human nutrition satisfactorily, adding a lot of energy to their consumers' diets with little or no nutritional value<sup>10,23</sup>.

The study identified that, despite the importance of consumption of natural foods<sup>10</sup>, these lose ground to industrialized food products in television ads aimed at children.

With the intention of keeping consumers informed about what they are consuming and, consequently, reducing damage to health, the National Health Surveillance Agency (ANVISA) makes it mandatory that information regarding nutritional adequacy, such as

nutrient deficiency and/or excess of others are made explicit in advertisements<sup>21</sup>.

Furthermore, the products identified in the advertisements are advertised as potential sources of vitamins, minerals, and proteins, as well as other nutrients capable of ensuring disposition, mood, energy, and benefits for child growth and development. However, considering the analysis of the nutritional labels, they have a high content of ingredients such as: sugar (mainly fast-absorbing simple sugars), fat, and sodium, which represent health risks, since the excessive consumption of these items contributes to the development of CNCs, an epidemic that has strongly affected Brazil<sup>10,25</sup>.

This reality contributes, among other factors, to the increased incidence of overweight and obesity among children and even makes their diet monotonous, which is characterized by the little diversity of foods, given the potential of products with hypercaloric characteristics to promote satiety. The picture gets worse when bad eating habits, which lead to overweight and obesity, are associated with a sedentary lifestyle, smoking, alcoholism, among others<sup>25,26</sup>.

Most food products also have additives in their composition. Adverse health reactions are caused by these compounds in the short and long term, since, in addition to allergies, which are acute symptoms, these substances also have a cumulative effect on the body and are associated with the occurrence of attention deficit hyperactivity disorder, metabolic alterations, and cancer<sup>27,28</sup>.

Milk, the main ingredient in foods widely publicized by one of the investigated channels, is considered a fundamental food source in Western culture and is extremely important for children's health. Apart from the innate and inherent drive that compels infants to consume nourishment, particularly breast milk which not only satisfies their nutritional needs but also strengthens emotional bonds due to the hormonal effects of the breastfe-

eding process, cultural and social influences also play a significant role in the consumption of milk throughout childhood, attributed to shared meanings and representations<sup>29</sup>.

In Brazil, the consumption of milk and dairy products was boosted in the period between 2005 and 2014 due to the increase in the real income of the population, causing a 62% growth in milk production in the country in the same period<sup>30</sup>.

In this sense, with the aim of further increasing domestic consumption and expanding the market, the dairy industry is increasingly approaching civil society, the government, the press and the final consumer and, for this, investments in technologies that enable the diversified offer of products at accessible prices and in advertisements and marketing strategies are strongly employed<sup>30</sup>.

Regarding the times when the advertisements are broadcast, it was observed that the peaks in the airtime of food ads on the channels occurred when children were more likely to be watching, which are after meals or after school, which is often close to lunch.

In view of this, it is important to emphasize that, in order to define the times at which advertising pieces will be aired, the advertising industry considers issues related to children's routine, such as times when they usually watch television, class, and mealtimes. They direct their strategies with the intention of stimulating unconscious consumption in children through the fascination provoked in them, which becomes an easy task because they are still too immature to critically analyze these subjects. Children also have their routine adapted to television programming, as they have knowledge and awareness of programming contents and schedules<sup>1</sup>.

Considering the Food Guide for the Brazilian Population, the diet should consist primarily of fresh or minimally processed foods, varied throughout the day, including all food groups (beans; cereals; roots and tubers; vegetables; fruits; nuts; milk and chee-

se; meat and eggs) in appropriate portions that meet the energy and nutritional needs of each individual. The same rule applies for feeding children<sup>10</sup>.

However, what was identified when analyzing the results obtained by this study was the excessive advertising of processed and ultra-processed foods and no reference to the consumption of fruits, vegetables and legumes, or the consumption of any other food in natura, thus representing a divergence in what are adequate and healthy eating habits promoting and/or maintaining health<sup>10</sup>.

When referring to healthy eating, it is important to highlight that this term has undergone transformations in its concept and meaning, as well as the epidemiological and demographic issues related to the nutritional

transition. In this sense, the term “healthy eating”, until then designated to characterize nutrient-centered eating practices, is expanded to “adequate and healthy eating” (AHE)<sup>31</sup>.

Thus, AHE constitutes itself as a basic human right and refers to eating practices that: consider biological, social, cultural, ethnic-racial and gender aspects; are composed of quality and safe foods, free of components harmful to the body; produced in an ecologically and socially responsible manner; are accessible from a physical and economic point of view, enabling the regular and perpetual guarantee of food in sufficient quantities and varieties, in a balanced way, capable of meeting nutritional needs, considering the affective and emotional aspects, in addition to special needs related to food<sup>10,31</sup>.

## CONCLUSION

Marketing abuse was identified, since the sanctions of Resolution 163/2014 were not respected by advertisements, which makes them inappropriate according to Brazilian legislative standards.

The finding of the frequent presence of persuasive marketing strategies demonstrated the exposure of children to marketing techniques that children are not yet able to judge, due to the stage of cognitive maturity characteristic of this phase of life.

The consequence and effects of children's exposure to such marketing strategies deserve to be analyzed in detail, using specific methodologies capable of answering such questions, which was not the objective of this study.

It is worth noting that, in accordance with current legislation, the reality identified by the study is characteristic of abusive advertising and its placement, aimed at children, is prohibited in any form of media and at any time.

It is recommended that further research be carried out so that the production of

knowledge about advertising aimed at children, especially related to food, contributes to the protection of children, especially considering the current Brazilian reality, in which the demand for consumption is constantly increasing.

The targeting of pay-TV channels, the number of channels analyzed and the fact that data were collected from Thursday to Saturday may characterize the limitations of this study.

Therefore, studies are needed that delve deeper, for example, into the sociocultural and affective dimensions of eating in advertisements. This would include studying the narratives (dialogues), settings, characters, and other elements that appear in the aired scenes. These elements give meaning to the consumption of the products in question since they are linked to the universe of children and families. The meanings conveyed through the scenes (in text and image) make children identify with the product and want to consume it.

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### REFERENCES

1. Araújo VES. A influência da publicidade no consumo infantil: Uma ação motivadora no consumo das famílias [monografia]. Brasília: Centro Universitário de Brasília. Faculdade de Tecnologia e Ciências Sociais - FATECS. 2016. Disponível em: <https://repositorio.uniceub.br/jspui/handle/235/9514>
2. Santos PVF, Luz CRM. História da televisão: do analógico ao digital. Imovcom [revista em Internet]. 2013 [acesso 05 de junho 2014]; 4(1):34-46. Disponível em: <https://docplayer.com.br/17271250-Historia-da-televisao-do-analogico-ao-digital.html>
3. IBGE - Instituto Brasileiro de Geografia e Estatística. Pesquisa Nacional por Amostra de Domicílios (PNAD) - Síntese de Indicadores 2015 [publicação na Internet]. IBGE. 2016 [acesso 05 de outubro de 2017]. Disponível em: <https://biblioteca.ibge.gov.br/visualizacao/livros/liv98887.pdf>
4. IBGE - Instituto Brasileiro de Geografia e Estatística [página da internet]. Pesquisa Nacional por Amostra de Domicílios Contínua (2017-2018) [acesso 19 de outubro de 2019]. Disponível em: <https://www.ibge.gov.br/estatisticas/sociais/trabalho/9171-pesquisa-nacional-por-amostra-de-domicilios-continua-mensal.html?edicao=20652&t=o-que-e>
5. IBGE - Instituto Brasileiro de Geografia e Estatística. Pesquisa nacional de saúde do escolar 2015 [publicação na Internet]. Rio de Janeiro: IBGE; 2016 [acesso 19 de outubro de 2019]. Disponível em: <https://crianca.mppr.mp.br/pagina-2004.html>
6. Alana. Publicidade Infantil na TV paga: Monitoramento 2019 [publicação na Internet]. São Paulo: Criança e Consumo; 2019 [acesso 08 de outubro de 2020]. Disponível em: <https://criancaconsumo.org.br/wp-content/uploads/2019/10/relatorio-monitoramento-de-publicidade-em-canais-tv-fechada-2019.pdf>
7. Prado RADP, Acevedo CR, Lopes EL, Moretti SLA, Silva MA. Propaganda televisiva para crianças: um ensaio teórico sobre sua regulamentação nacional e internacional. Rev Adm UEG [revista em Internet]. 2012 [acesso 20 de agosto de 2014]; 3(2):1689-99. Disponível em: <https://www.academia.edu/30810229/propaganda-televisiva-para-criancas-um-ensaio-teorico-sobre-sua-regulamentacao-nacional-e-internacional>
8. Ueda MH, Porto RB, Vasconcelos LA. Publicidade de alimentos e escolhas alimentares de crianças. Psic Teor e Pesq [revista em Internet]. 2014 [acesso 15 de agosto de 2014]; 30(1):53-61. Disponível em: <https://doi.org/10.1590/S0102-37722014000100007>
9. Ferreira MCO, Silva MF, Silva JG, Cucato JST, Bizarrias FS. Influência do consumidor infantil no processo de compra familiar. Anais do Congresso Internacional de Administração; 13-17 ago 2018; Sucre - Bolívia; Universidade Estadual de Ponta Grossa, Universidad Mayor San Francisco Xavier; 2018 [acesso 09 de outubro de 2019]. Disponível em: [https://admpg2018.com.br/anais/2018/arquivos/06032018\\_220608\\_5b14983c6a9a8.pdf](https://admpg2018.com.br/anais/2018/arquivos/06032018_220608_5b14983c6a9a8.pdf)
10. Brasil. Guia alimentar para a população brasileira. 2 ed. [publicação na Internet] Brasília: Ministério da Saúde. 2014 [acesso 19 de agosto de 2014]. Disponível em: [https://www.gov.br/saude/pt-br/assuntos/saude-brasil/publicacoes-para-promocao-a-saude/guia\\_alimentar\\_populacao\\_brasileira\\_2ed.pdf/view](https://www.gov.br/saude/pt-br/assuntos/saude-brasil/publicacoes-para-promocao-a-saude/guia_alimentar_populacao_brasileira_2ed.pdf/view)
11. Paiva MS, Souza KCA, Mendes MLGC. O mundo imaginário da publicidade infantil. CMC [revista em Internet]. 2014 [acesso 19 de outubro de 2014]; 11(32):73-92. Disponível em: <http://revistacmc.espm.br/index.php/revistacmc/article/view/625>
12. Gonçalves AS. Publicidade de consumo dirigida ao público infantil: regulamentação estatal e ação comunitária [publicação na Internet]. Santa Cruz do Sul (RS): Essere nel Mondo; 2017 [acesso 01 de outubro de 2019]. Disponível em: <https://www.esserenelmondo.com/pt/direito-publicidade-de-consumo-dirigida-ao-publico-infantil-regulamentacao-estatal-e-acao-comunitaria-ebook110.php>
13. Pitó YU, Catalan MJ. A comunicação mercadológica direcionada ao público infantil: uma análise empírica de embalagens de doces à luz da Resolução n. 163/2014 do CONANDA. Anais da XII Semana Científica Unilasalle - SEFIC 2016; 17-21 out 2016; Canoas (RS); Unilasalle; 2016 [acesso 11 de novembro de 2019]. Disponível em: <https://anais.unilasalle.edu.br/index.php/sefic2016/article/view/364>
14. Cardoso AAR, Lima MRS, Campos MOC. Educação nutricional para pais e pré-escolares em uma creche. Rev Bras Promoç Saúde [revista em Internet]. 2019 [acesso 11 de novembro de 2019]; 32:8926. Disponível em: <https://doi.org/10.5020/18061230.2019.8926>
15. Brasil. Ministério da Saúde. Política Nacional de Atenção Integral à Saúde da Criança (PNAISC): Orientações para implementação [publicação na Internet]. Brasília: Ministério da Saúde; 2018 [acesso 11 de novembro de 2019]. Disponível em: <https://>

portaldeboaspraticas.iff.fiocruz.br/biblioteca/pnaisc/

16. Caivano S, Lopes RF, Sawaya AL, Domene SMÁ, Martins PA. Conflitos de interesses nas estratégias da indústria alimentícia para aumento do consumo de alimentos ultraprocessados e os efeitos sobre a saúde da população brasileira. *Demetra* [revista em Internet]. 2017 [acesso 19 de outubro de 2019]; 12(2):349–60. Disponível em: <https://doi.org/10.12957/demetra.2017.26928>
17. Barcelos GT, Rauber F, Vitolo MR. Produtos processados e ultraprocessados e ingestão de nutrientes em crianças. *Rev Cienc Saúde* [revista em Internet]. 2014 [acesso 20 de outubro de 2020]; 7(3):155–61. Disponível em: <https://doi.org/10.15448/1983-652X.2014.3.19755>
18. Freitas ESL, Tuna SG. Novas metodologias e abordagens em apelos publicitários: formas responsáveis de consumo na publicidade contemporânea. *Estudos comunic* [revista em Internet] 2015 [acesso 19 de outubro de 2019]; 18:159–76. Disponível em: <http://ec.ubi.pt/ec/19/pdf/n19a08.pdf>
19. CONANDA. Resolução n. 163, 13 de março de 2014. Dispõe sobre a abusividade do direcionamento de publicidade e de comunicação mercadológica à criança e ao adolescente. Conselho Nacional dos Direitos da Criança e do Adolescente [Internet]. De março de 2014 [acesso 19 de dezembro de 2014]. Disponível em: <https://www.direitosdacrianca.gov.br/conanda/resolucoes/163-resolucao-163-de-13-de-marco-de-2014/>
20. IBOPE. TV por assinatura no Brasil [Internet]. 2014. [acesso 19 de dezembro de 2014]. Disponível em: [endereço eletrônico indisponível; instituto encerrou suas atividades em 2021].
21. Anvisa. Manual de orientação aos consumidores: educação para o consumo saudável [publicação em Internet]. Brasília: Ministério da Saúde, Agência Nacional de Vigilância Sanitária, Universidade de Brasília, 2005 [acesso 19 de dezembro de 2014]. Disponível em: [https://www.prefeitura.sp.gov.br/cidade/secretarias/upload/saude/vigilancia\\_em\\_saude/arquivos/manual\\_consumidor.pdf](https://www.prefeitura.sp.gov.br/cidade/secretarias/upload/saude/vigilancia_em_saude/arquivos/manual_consumidor.pdf)
22. Hongyu K, Sandanielo VLM, Oliveira Junior GJ. Análise de componentes principais: resumo teórico, aplicação e interpretação. *E&S* [revista em Internet]. 2016 [acesso 15 de julho de 2022]; 5(1):83-90. Disponível em: <https://doi.org/10.18607/ES201653398>
23. Rodrigues VM, Fiates GMR. Hábitos alimentares e comportamento de consumo infantil: Influência da renda familiar e do hábito de assistir à televisão. *Rev Nutr* [revista em Internet]; 2012 [acesso 19 de outubro de 2019]; 25(3):353–62. Disponível em: <https://doi.org/10.1590/S1415-52732012000300005>
24. Moura TB, Viana FT, Loyola VD. Uma análise de concepções sobre a criança e a inserção da infância no consumismo. *Psicol cienc prof* [revista em Internet]. 2013 [acesso 19 de outubro de 2019]; 33(2):474–89. Disponível em: <https://doi.org/10.1590/S1414-98932013000200016>
25. Brasil. Política Nacional de Alimentação e Nutrição [publicação na Internet]. Brasília: Ministério da Saúde. 2013 [acesso 21 de outubro de 2019]. Disponível em: [https://bvsms.saude.gov.br/bvs/publicacoes/politica\\_nacional\\_alimentacao\\_nutricao.pdf](https://bvsms.saude.gov.br/bvs/publicacoes/politica_nacional_alimentacao_nutricao.pdf)
26. Mendonça RD, Lopes MS, Freitas PP, Campos SF, Menezes MC, Lopes ACS. Monotonia no consumo de frutas e hortaliças e características do ambiente alimentar. *Rev Saúde Pública* [revista em Internet] 2019 [acesso 21 de outubro de 2019]; 53:63. Disponível em: <https://doi.org/10.11606/S1518-8787.2019053000705>
27. McCann D, et al. Aditivos alimentares e comportamento hiperativo em crianças de 3 e 8/9 anos de idade na comunidade: um estudo randomizado, duplo-cego, controlado por placebo. *The Lancet* [revista em Internet]. 2007 [acesso em 19 de julho 2019]; 370(9598):1560–7. Disponível em: [https://doi.org/10.1016/S0140-6736\(07\)61306-3](https://doi.org/10.1016/S0140-6736(07)61306-3)
28. Polônio MLT, Peres F. Consumo de aditivos alimentares e efeitos à saúde: desafios para a saúde pública brasileira. *Cad. Saúde Pública* [revista em Internet]. 2009 [acesso 15 de dezembro de 2014]; 25(8):1653–66. Disponível em: <https://doi.org/10.1590/S0102-311X2009000800002>
29. Lima RS, Ferreira Neto JA, Farias RCP. Alimentação, comida e cultura: o exercício da comensalidade. *Demetra* [revista em Internet]. 2015 [acesso 19 de julho de 2019]; 10(3):507–22. Disponível em: <https://doi.org/10.12957/demetra.2015.16072>
30. Vilela D, Ferreira RP, Fernandes EM, Juntolli FV. Pecúaria de leite no Brasil: cenários e avanços tecnológicos [publicação na Internet]. Brasília: Embrapa, 2016 [acesso 19 de julho de 2019]. Disponível em: <https://ainfo.cnptia.embrapa.br/digital/bitstream/item/164236/1/Pecuarria-de-leite-no-Brasil.pdf>
31. Paiva JB, Magalhães LM, Santos SMC, Santos LAS, Trad LAB. A confluência entre o “adequado” e o “saudável”: análise da instituição da noção de alimentação adequada e saudável nas políticas públicas do Brasil. *Cad Saúde Pública* [revista em Internet]. 2019 [acesso 19 de de 2019]; 35(8):e00250318. Disponível em: <https://doi.org/10.1590/0102-311X00250318>

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## Supplementary Material

### QUESTIONNAIRE

DATE: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

CHANNEL: ( ) A ( ) B

DURATION:

01 – What is the food/product group?

- ( ) Instant foods
- ( ) Candies and Sweets
- ( ) Drinks
- ( ) Cereals
- ( ) Fast food
- ( ) Dairy Products
- ( ) Salty food
- ( ) Others. Which?

- ( ) Prize raffle?
- ( ) Attractive price
- ( ) associated awards

06 – In the event of a PRIZE GIVEAWAY, which?

07 - In case of an ASSOCIATED AWARD, which?

02 – What is the food/product?

03 - Commercial name of the food/product.

04 – What marketing appeal is explicit in the advertisement?

- ( ) Visual
- ( ) Auditory
- ( ) Taste
- ( ) Nutritional/Health
- ( ) Emotional
- ( ) Promotional

08 – Does the advertisement use images of children?

( ) Yes ( ) No

09 – Does advertising use characters?

( ) Yes ( ) No

10 - If YES, what are they?

11 – Analyzing the labeling of the food/product in question, does it match what is passed on by the advertisement?

( ) Yes ( ) No

05 – In the case of PROMOTIONAL APPEAL, which?