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# Food Marketing Regulations and Childhood Obesity Across America

An Analysis on the Effects of Food Marketing on Childhood Obesity and the (In)effectiveness of Laws & Regulatory Measures on Food Marketing in The United States and Brazil, in comparison with Chile

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#### Abstract

**Research Question (RQ):** What is the impact of food marketing and advertising on childhood obesity?

**Purpose:** The purpose of this research is to analyze the existing regulatory measures and legislation on food marketing aimed at children, understand its effects and look for ways to reduce childhood obesity.

**Method:** This study adopts a comparative approach to the analysis of the current legislation and regulatory measures on food marketing enforced in Brazil, Chile and the United States. As well as, consulting multiple scholarly articles and scientific studies on the impact of food marketing and advertising on childhood obesity. This research also showcases the effectiveness of adequate regulation on child-oriented food marketing and advertisements in reducing the consumption of ultra-processed food by children, which, in turn, will lead to the decrease in childhood obesity.

**Results:** Regulations, such as the ones implemented in Chile, have shown to be effective when it comes to limiting the exposure of children to persuasive and manipulative food marketing. Consequently, causing a significant decrease in children's consumption of such food products, which, in turn, can lead to the decrease in childhood obesity.

**Organization:** This research can help governments and organizations find effective measures to create, improve as well as enforce legislation and regulations on child-oriented food marketing.

**Society:** People are susceptible to the influence and manipulation of persuasive marketing strategies. Thus, children, being the more easily influenced part of the population, are even more vulnerable to such tactics. This research paper helps further showcase this fact as well as the dangers posed by these marketing strategies, subsequently proposing options to counteract the impact of said damaging tactics.

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**Originality:** Unlike most others of its kind, this research brings a comparative approach when analyzing the effectiveness of regulations in Latin American countries and the United States when it comes to the marketing of ultra-processed food products directed at children.

Limitations / further research: Limitations faced were the lack of primary research sources and lack of in-depth research sources in this specific topic. Further research could expand the subject countries to include other Latin American countries, as well as European and Middle Eastern countries.

**Keywords:** child-oriented marketing, nutrition, law, regulations, food advertisement, childhood obesity, food labeling, comparative law.

#### 1 Introduction

Children, due to their still ongoing psychological development, are particularly susceptible to marketing tactics employed by companies. This evident vulnerability is due to most children younger than six years old being unable to distinguish between an advertisement and a television program, as well as most children under the age of eight being unable to recognize the intrinsically persuasive nature of advertisement (American Psychological Association, 2010). That being said, this demographic is increasingly exposed to immense amounts of food marketing in the form of televised advertisements and branding through the use of cartoon mascots developed by companies as well as associating products with positive impressions as marketing strategies to promote unhealthy foods and beverages. In view of this and the aforementioned susceptibility of children, subjecting this demographic to such content has proven to be detrimental to their health as well as a significant factor in the increase of childhood obesity (American Psychological Association, 2010). Taking this into account, the inefficiency of the regulations and laws currently in effect within the United States of America and Brazil should also be brought to attention and will be discussed within this paper. Therefore, it is paramount that governments and organizations create, improve and enforce legislation and regulations prohibiting the marketing of these products being directly targeted towards children.

This research aims to examine what is the impact of food marketing and advertising on childhood obesity, and present ways to reduce it. In this paper it is argued that food marketing strategies aimed at children are inherently exploitative of this demographic's vulnerability, and should be policed by regulations and laws. The argument is structured as follows. The next section addresses the effects of child-oriented food marketing, which contributes to the development of unhealthy eating habits in children and thus the increase in rates of obesity. This analysis is supported by studies on the way child-appealing advertisements are used to create familiarity, brand recognition and positive associations with the advertising companies. Subsequently, the following section analyzes how front-of-package labeling was implemented in different countries, as a tool aimed at reducing the prevalence of obesity in the population and incentivizing the consumption of healthier food choices. Lastly, a comparison is made

between the existing laws and regulations aimed at policing child-oriented food marketing and food labeling in the United States and in Brazil, exploring the reasons for their ineffectiveness in each country's context.

#### 2 Theoretical Framework

#### 2.1 The Effects of Child-Oriented Food Marketing and Childhood Obesity

Children between the ages of eight and twelve are the ones exposed to the highest amount of food advertising content, suffering exposure to an average of 7,609 televised food advertisements per year (American Psychological Association, 2010). Children within this age bracket are at the stage of their psychological development where they are in the process of establishing their food preferences and habits, and this is also when children start gaining access to money in order to purchase food products of their own choosing. This alarming statistic presented by the American Psychological Association (APA), from a study developed by the Kaiser Family Foundation (2007), clearly demonstrates how disconcertingly high the amount of food advertising exposed to children is. Children, according to the APA, have a "remarkable ability to recall content from the ads to which they have been exposed" (2010), as well as a tendency of believing these ads to contain unbiased, factual information about the advertised product. Due to this fact, children are unable to perceive and understand the inherent and intentional persuasive content created as a marketing strategy to sell such products. Consequently, such exposure leads to this young demographic having their food preferences and habits influenced by the marketing of food companies, as they begin associating unhealthy foods to happiness as well as other positive emotions propagated by this type of media. Furthermore, these factors contribute to an increased consumption of highly addictive and caloric food products that provide little to no nutritional value, which is one of the direct causes behind the increase in rates of childhood obesity in the last decade.

By using content analysis in the children-oriented channels Disney, Nickelodeon and PBS, Dr. Susan Connor was able to examine and measure children's exposure to food advertisements from 9 a.m. to 1 p.m. The results were that the majority of food product commercials were fast-food advertisements—all of Disney's food advertisements marketed McDonald's, while 59% of ads on PBS and 46% on Nickelodeon advertised fast-food products—, while the other food commercials were for cereal, snack foods and frozen treats (2006, p. 1481). The foods marketed towards children in these ads all had high amounts of calories, fat, sugar and/or sodium. These advertisements clearly intend to influence children into asking their parents to buy the advertised food products, which is inherently exploitative of children's exacerbated susceptibility to such manipulation. Moreover, in order to enact that influence, companies use strategies that appeal to a young audience, the most pervasive one being the "fun appeal", present in 82% of the commercials in the study. This was followed by "action appeal", present in 57% of said commercials, and "taste appeal"—which was most prevalent in Nickelodeon's advertisements, making up 43% of them (Connor, 2006, p. 1481). The "fun appeal" "associated fun and happiness with a product and contained no significant reference to the specifics of the

product itself' (Connor, 2006, p. 1481). Meanwhile the "action appeal" "associated excitement or energy with a product", by displaying children partaking in outside play or engaging in physical, high-energy activities alongside licensed characters (2006, p. 1481). Lastly, the "taste appeal" enticed children, in the case of the study, primarily with the promise of the advertised product's sweetness (Connor, 2006, p. 1481). Thus, children are inconspicuously manipulated into favoring food products they associate with the appeals in the advertisements and opting for unhealthy food choices rather than nutritional ones, which contributes to the increasing prevalence of obesity in children.

Helen Dixon et al., in their study The Effects of Television Advertisements for Junk Food versus Nutritious Food on Children's Food Attitudes and Preferences, employed the social cognitive theory to predict that children learn and emulate their eating behaviors not only from those modeled by "role models in their immediate social environment", but also from patterns of behavior "symbolically modelled in mass media" (Dixon et al., 2007, p. 1313). In the study, 1,522 students were submitted to a pre-test and a post-test, before and after viewing the stimulus video produced for the experiment. The results from the study support the researchers' hypothesis that "cumulative exposure to TV food advertising promotes beliefs and attitudes supportive of those foods most heavily represented in food advertising on children's TV- fast foods, and sweet drinks" (Dixon et al., 2007, p. 1319). As the researchers had hypothesized, the study results showed that cumulative exposure to televised food commercials promoted more positive views towards fast food and food products containing high amounts of fat and/or sugar—referred to, in the study, as "junk food" (Dixon et al., 2007, p. 1319). Another conclusion from the study was that children exposed to those commercials were more likely to perceive junk food as a product that is more prevalently consumed by others in their demographic (Dixon et al., 2007, p. 1319). Additionally, the study also presented an increase in the self-reported frequency with which these participants would consume junk food (Dixon et al., 2007, p. 1319). Another finding in this study was that there is an abundance of junk food advertisements which directly target children, with colorful, animated and/or cartoonish themes and aesthetics. On the other hand, healthy food advertisements have a tendency to be mostly parent-oriented, and therefore, unlike junk food advertisements, the way health information is transmitted does not appeal to children (Dixon et al., 2007, p. 1321).

Branding—defined by the Cambridge Dictionary as "the act of giving a company a particular design or symbol in order to advertise its products and services"—is one marketing strategy, designed to create familiarity and build positive associations in regard to a brand and its products. When targeted at children, branding is usually implemented with the use of child-appealing licensed characters, usually animated or otherwise cartoonish, such as Ronald McDonald (McDonald's), Chester Cheetah (Cheetos) and Tony the Tiger (Kellogg's Frosted Flakes) (Connor, 2006, p. 1479). The focal point of such commercials is depicting fun, happiness and "coolness" as synonymous with the brand and its products (Connor, 2006, p. 1482). These are the impressions brands aim to create within the media, which, consequently, have a lasting effect on children's minds. However, within these advertisements, the product

itself is usually not the main focus. According to the data collected in Dr. Connor's study Food-Related Advertising on Preschool Television: Building Brand Recognition in Young Viewers, less than half of child-appealing advertisements depicted their products as the main focus of the ad (Connor, 2006, p. 1483). Dr. Connor concluded that fast food commercials "seemed to focus on building brand recognition through the use of licensed characters, logos, and slogans; advertisements seemed to be designed to build social or emotional associations with products or brands" (Connor, 2006, p. 1483). Their main intent is not to sell a specific product once, but to build familiarity and loyalty between the advertised brand and its target audience. These ads are designed to sell the idea that "people go to McDonald's for toys and fun, not fries, and people go to Chuck E. Cheese to play games and win things, not to eat pizza" (Connor, 2006, p. 1483). This is how companies achieve brand recognition among the still-developing, more easily influenced demographic. In reality, the scenes displayed in said commercials are not about promoting an active lifestyle or entertainment for children, despite depicting children having fun with licensed characters or participating in physical activities. This portrayal is promoted in order to achieve brand loyalty, making their target audience, in this case being both children and parents, associate the brand and its products with happiness, fun and wholesomeness. Taking this sense of connection developed between companies and children through the act of branding into account, it is evident that these factors directly influence this younger demographic's perceptions of products. Thus, building a contradicting narrative where unhealthy products are perceived as "good", incentivizing children to consume more of these products, disregarding their nutritional needs and health.

#### 3 Method

This research paper showcases the impact of food marketing and advertising on childhood obesity while also exploring existing regulatory measures and legislation on food marketing aimed at children. Thus, for this study, a quantitative approach was used, in order to prove and showcase the thesis in question. This method was the most fitting for the research at hand, since our hypothesis required the act of compiling several databases of records and information. This was followed by performing a meta-analysis on multiple prior studies, in order to identify statistical trends or patterns in the effect that food marketing and advertising have on the rate of childhood obesity.

The research (see Figure 1) involved extensive comparative analysis and examination of scientific studies conducted in the last two decades, scholarly articles, legislation and regulations from both Brazil and Chile as well as governmental policies implemented in the United States of America. Additionally, this paper also used data from international institutions such as the World Health Organization and the Pan American Health Organization, as well as reports from American Governmental Institutions such as the FDA, in conjunction with news articles produced between the years 2011 and 2019.

Said information was gathered by first selecting the subject countries, based on our familiarity with their official languages, coupled with prior knowledge of the respective effectiveness or

ineffectiveness of the approaches taken by each of those countries to combat child-oriented food marketing and childhood obesity. Then, regulations, legislations and policies from each of the subject countries were extensively analyzed, compared and contrasted, along with prior studies and scholarly articles, each analyzing the countries of interest individually.

In addition to this, there were several steps we took in order to ensure that all the data and studies used in the final research were accurate and showcased an authentic representation of the current social reality. We elected to use unbiased scientific studies independently conducted by researchers without a contingent interest in the final results. Additionally, we also made sure that said studies were not conducted by, nor endorsed by, any company with a vested monetary interest in the food industry as well as the marketing centered around said industry. Furthermore, all the data chosen for this study was taken from sources proven to be reputable by governmental and international organizations. Finally, we ensured to select the most recent literature available, which was produced in the last two decades, as data and studies taking a similar approach were scarce and seldom available.

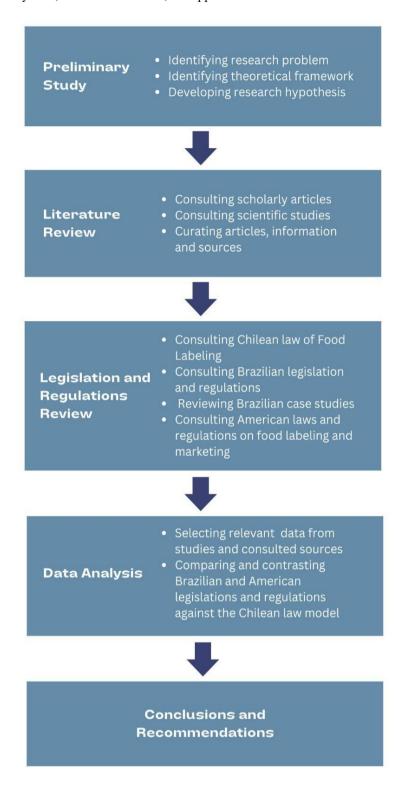


Figure 1. Research model

#### 4 Results and Discussion

## 4.1 Food Labeling Throughout the World

Alongside the marketing strategies used by companies to promote consumption of their food products, package labeling has been shown to influence people's food choices. Due to this fact, front-of-package labeling has become one of the key tools proposed by the World Health Organization (WHO), in collaboration with the Pan American Health Organization (PAHO), in order to regulate the nutritional information presented to the public. With the intent to encourage the consumption of healthier alternatives over foods high in sugar, fat and/or sodium, and ultra-processed ones. Front-of-package labeling (FOPL) consists of simplified warning labels, positioned at the front of the product packaging, which allow customers to easily identify if a food product contains high amounts of sugar, fats, sodium, and/or calories (Simões & Sales, 2019, p 116-117).

In some countries, these labels have been implemented as a voluntary system. Such is the case of New Zealand, where, in 2014, the Health Star Rating (HSR) was introduced. The HSR assigns food products a grade in "stars", given in half-star increments, with 0.5 being the most unhealthy food products, and 5 stars being the healthiest. However, due to its voluntary nature, it was observed, by Mhurchu et al., that after two years of its implementation in New Zealand, "approximately 5% of packaged food and non-alcoholic beverage products displayed HSR star rating labels" (Mhurchú et al., 2017). That is to say, a voluntary system, even one as comprehensive as the HSR, is ineffective, since the lack of a legal, enforceable requirement for companies to implement the system makes it so that only those who will benefit from the adoption of said system will use it. Thus, FOPL is turned into yet another marketing strategy for brands that adopt it, while the ones which opt not to adopt it remain unregulated.

Chile, on the other hand, is an example where front-of-package labeling was implemented by a law. Implemented in 2016, the Ley 20,606—also known as Ley de Etiquetados de Alimentos (Law of Food Labeling)—made the health measures enforceable, and their non-compliance sanctionable. The aforementioned law determines that any food product that contains high levels of calories, fats, sugars and/or sodium—with the possibility of other ingredients being included by regulations—must be labeled as such. Furthermore, it prohibits the distribution, commercialization, promotion and publicization of the aforementioned labeled "high in" products inside pre-school, primary or secondary education establishments. The advertisements for these products also cannot be targeted at youths under the age of fourteen. Commercials that make use of games, competitions, or other child-appealing attractions and advertisements unrelated to the promotion of the food product itself, aimed at children and young teens under fourteen years old are also prohibited. With aims to reduce obesity, especially in children, and promote healthier eating habits, this law has already demonstrated short-term effects in shifting the population's food choices towards healthier alternatives.

A 2021 study by Dr. Lindsey Smith Taillie, et al. titled Changes in food purchases after the Chilean policies on food labeling, marketing, and sales in schools: a before and after study examined the effects of the first—and least strict—phase of implementation of the Law of Food Labeling. Said study achieved this by comparing data collected in the time span of three years, one and a half years before and after the date the law was implemented. The study found that, in comparison with the counterfactual scenario if the law had not been implemented, the implementation of this law resulted in purchases and consumption of products high in calories, fats, sugar and sodium being reduced. This result was mostly driven by the decrease in purchase of "high in" food products and beverages—purchases of sodium were the most affected, as its consumption per person was lessened by 37% per day. Meanwhile the rates of ingesting and purchasing products high in sugars, calories and fats were respectively lessened by 27%, 24% and 16%. It's worth noting that, while the purchase of "high in" products reduced noticeably, consumers in general still purchased products which were similar in nutritional composition, but not labeled as "high in", rather than ceasing to consume such products. Therefore, it was shown that there was a decline in the overall consumption of fats, sugars, sodium and calories, but this reduction was not as marked as the reduction in the purchases of products specifically labeled "high in". That being said, it's expected that the positive effects of the law will become even more pronounced after the implementation of the increasingly strict phases two and three, the latter of which accompanies the prohibition of television advertising for all "high in" products, from 06:00 a.m. to 10:00 p.m.

By comparing the systems in both of these countries, it is clear that a self-regulatory, voluntary system is insufficient. Especially in regard to implementing significant changes in people's lifestyles and consumption preferences due to only being adopted by companies who would profit from the system. Meanwhile, the legislation system adopted in Chile has had noticeable positive effects. Those of which have been documented and supported by studies, only two years after its implementation. Therefore, this is a model that should serve as a base and influence for future regulatory measures to be implemented by other countries in order to encourage healthier food choices and reduce obesity rates.

## 4.2 A Comparative Study on Existing American and Brazilian Legislations

In the case of the United States of America (USA), the Federal Trade Commission (FTC)—the agency responsible for regulating food advertising in the USA—made a request in April of 2011 for public comments on its proposed set of voluntary principles for child-oriented food marketing (Joelving, 2011). This prompted the American Academy of Pediatrics (AAP) to respond with a public call for the banning of televised fast-food advertisements. Dr. Victor Strasburger, who wrote the AAP statement, declared that simply by "banning ads for fast food, one study says we could decrease obesity and overweight by 17 percent" (Joelving, 2011). While the AAP called for a complete ban on fast-food commercials, stating that voluntary guidelines would be insufficient, Dan Jaffe, the executive vice president of the Association of National Advertisers, claimed that "the guidelines would eliminate virtually all advertising presently directed toward kids under the age of 18" (Andrew Seidman, Washington Bureau,

2011). This debate is mirrored worldwide, placing agencies responsible for regulating health information and the food industry on opposing sides of the discussion, due to their contrasting interests. This ongoing debate, as well as the contrasting personal interests of all the parties involved, is one of the main reasons that in most cases there are insufficient implementations of regulations when it comes to food advertisements targeted at children. With this in mind, it is evident that food corporations and companies, whose main target audience is children, have capitalized and benefitted from this lack of regulations by continuously marketing their products to a young audience. This continued exploitation has contributed to the decline of children's overall nutritional and physical health, due to the previously mentioned effects of advertisements. The effects of such types of advertisements being spread world-wide are evident in the increased rates of obesity among children and adolescents between the ages of five to nineteen, going from 4% in 1975 to over 18% in 2016 according to the World Health Organization.

When it comes to the USA and its regulations on marketing, there is a process in place, known as the Central Hudson test, which is used to decide whether a regulation on commercial speech is constitutional (S. Thompson, 2016). The first part of the process is to determine whether the advertisement is misleading in nature and if it promotes actions that would not be considered to be within the law. If the advert passes the first test, the court moves on to the second step, which is to evaluate whether regulating commercial speech in this instance is within the government's legal competence. The third step in this test is to discern whether implementing a regulation will be effective. The fourth step is to establish if the regulation to be implemented is disproportionate to the purpose it was created for. It is within this fourth and final step where regulations tend to be overruled by the courts. The high rates of overruling within this final step are because, when the government tries to regulate freedom of speech, the courts lean towards setting a strict standard. Nonetheless, there is a lot of opposition when it comes to regulating freedom of speech within advertisements as well as a lot of resistance from the food industry, arguing that such regulations would be ineffective. However, similar regulations for the advertisement and marketing of alcohol and tobacco have been upheld in the past. These regulations on tobacco and alcohol have been proven to be effective, as the consumption of both these products have drastically reduced since the implementation of said regulatory measures.

Taking the previous regulation process discussed into account, it is important to mention one of the regulations for local school wellness policies released by the United States Department of Agriculture (USDA). In July 2016, the USDA released a policy mandating that any school district taking part in the federal school meals program has the legal obligation to update their school wellness policies. These schools were now required to address unhealthy food advertising to students. Additionally, a prohibition of advertisements of food and drinks that do not meet the nutritional standards, known as the "Smart Snacks in School", on school property was also put into effect. These standards are a series of regulations on a federal level that came to be after the implementation of the Healthy, Hunger-Free Kids Act of 2010. This

act required the USDA to establish nutrition standards for all the food products available to be purchased within schools. This rule, according to the USDA, "carefully balances science-based nutrition guidelines with practical and flexible solutions to promote healthier eating on campus" (United States Department of Agriculture, n.d.). This regulation employs and relies on recommendations provided by not only the Institute of Medicine, but also the healthy food and beverage products offerings available in the market, as well as the already existing voluntary standards implemented by schools around the USA.

It is also important to note that states have the power to establish laws serving as regulatory measures to supervise the types of products and content allowed to be advertised to children. In addition to this, the violations of such laws, usually prosecuted by the State Attorney General, or a separate commission responsible for monitoring advertisements, can result in serious sanctions and punitive measures as a consequence (V. Thompson, 2016). However, the issue with these is that state laws are confined to the state where they are enacted and are not required to be implemented throughout the whole country. Taking that into consideration, California and Louisiana are the only states who have enacted a change in advertising policies related to food and beverage products (Cantu-Pawlik, 2018). Furthermore, only eight municipalities within the USA have passed laws relating to regulating sugary drinks in kids' meals at restaurants, such as Lafayette and Colorado in 2017 followed by Baltimore in 2018 (Cantu-Pawlik, 2018). There was also an excise tax, which required wholesale distributors to pay a total of one cent to two cents per ounce on sugary drinks, passed by six municipalities (Cantu-Pawlik, 2018). The intended effect of this legislation was to discourage the purchase and consumption of such products by the general public. Furthermore, the implementation of this tax increased the shelf price of such products, which in turn affected distributors' and companies' ability to sell sugary drinks at low prices in the market.

Nonetheless, even though such regulations and processes are a step forward in decreasing children's consumption of "junk food" and the rates of childhood obesity, it is still not enough to bar corporations from having a strong influence within the media on a federal level. In the current day, as discussed beforehand, children are still bombarded daily with advertisements and other marketing tactics employed by these companies within the media. The overexposure to such content makes it so that, even if regulations such as the Healthy, Hunger-Free Kids Act are implemented during school hours, children are still susceptible to the adverse effects of the marketing of unhealthy foods on a daily basis. Additionally, the implementation of state laws, as well as laws followed by a few municipalities, while a positive progress, are very isolated and are not required to be enforced throughout the whole country. This restrictive nature of state laws makes it so only a few states reap the benefits of such laws improving overall health, while others continue to aggravate the issue, causing a continuous imbalance.

In the Brazilian context, the right to a healthy diet is considered, by the Federal Law No. 11,346/2006 (Lei Federal no 11.346/2006), to be a human right. This guarantee has also been subsequently included in the Article 6 of the Constitution of the Federative Republic of Brazil

as a social right. When discussing consumer law, the Brazilian Consumer Protection Code (Código de Defesa do Consumidor), in its Art. 6 (III), defines the "adequate and clear information about different products and services, with correct specifications of quantity, characteristics, composition, quality, applicable taxes and pricing, as well as the risks they pose", as a basic consumer right. Furthermore, it is reaffirmed in its Art. 31 that:

The offer and the presentation of products and services must ensure to contain correct, clear, precise and overt information in Portuguese regarding the characteristics, qualities, quantity, composition, price, warranty, expiration and origin dates, among other pieces of information, as well as regarding any risks that the product or service may present to consumers' health and safety.

That being said, the Brazilian population's right to a healthy diet and access to accurate information regarding consumer products has already been established independently. The following legal provisions develop a direct connection between these aforementioned rights and regulations in regard to the labeling and marketing of products targeted at children. The Consumer Protection Code determines that marketing and publicity must be, as dictated by Art. 36, "conveyed in such a way that consumers, easily and immediately, identify it as such". In addition to this, the Art. 37 prohibits the circulation of "any misleading or abusive marketing". This regulation defines the term 'misleading' as any type of advertised information or communication that is either completely or partially false, or that could lead consumers to have the wrong preconception regarding significant aspects of a product or service (Art. 37, para. 1). In the second paragraph, the regulation states that:

Any advertisement with a discriminatory nature, which incites violence, or exploits fear or superstition, or takes advantage of children's lack of discernment and experience, or disrespects environmental values, or which may cause the consumer to behave in a way harmful to their health or safety, will be considered abusive.

Furthermore, the Brazilian National Council of Children and Teenagers' Rights (Conselho Nacional dos Direitos da Criança e do Adolescente - CONANDA) published a policy ascertaining the abusiveness of advertising directed at children (Resolução CONANDA nº 163/2014). The policy went further on to say that these abusive advertisements aim to persuade children to buy a product or service by utilizing elements such as child-like language, especial effects and excessive colors, cartoon characters or celebrities which appeal to young audiences, distribution of child-appealing prizes or collectibles and the promotion of competitions or games.

When it comes to food labeling, ANVISA, Brazil's health regulatory agency, published and proposed the Policy No. 429/2020 of the Board of Directors (RDC nº 429/2020). Said policy came into effect on the 9th of October of 2022, 24 months after its original publication. This policy dictates the standards for food labeling, such as the information included on nutrition labels and front-of-package labeling, on a nationwide level. This can be observed within Art.

4, which states that "the disclosure of food nutrition labels is mandatory in the labeling of food products packaged in the absence of consumers, including beverages, ingredients, food additives...". Another noteworthy article in this policy is Art. 18., which establishes that "front-of-package labeling is mandatory on labels of food products packaged in the absence of consumers, and which contain amounts of added sugars, saturated fats or sodium equal or higher than the limits established...".

Similarly to the Healthy, Hunger-Free Kids Act in the USA, Brazil has the National School Food Program (Programa Nacional de Alimentação Escolar - PNAE), which was expanded by the Federal Law No. 11,947/2009 (Lei Federal nº 11.947/2009). This law, besides expanding the PNAE coverage to encompass all public primary education establishments, also presents standards for the types of food offered in school establishments during school hours. This federal law also establishes, as one of the principles of the "school diet", a healthy and balanced diet guideline as well as the inclusion of nutritional education within the school curriculum, in order to teach and encourage students to develop healthy eating habits. The aforementioned law goes on to determine that the elaboration of school menus must be done by a nutritionist—here, this word is used to mean the Brazilian professional with a Nutrition university degree, who in the USA would be called a "dietician".

Furthermore, in opposition to the reality of the USA, the unlawfulness of marketing aimed at children is being increasingly recognized by Brazilian authorities, public agencies and organizations for the protection of children's rights and consumers' rights. Among the aforementioned authorities and public agencies are the Consumer Protection and Defense Program (PROCON) and even the Superior Court of Justice (Superior Tribunal de Justiça). An example of such a decision is the REsp 1613561, in which the Superior Court of Justice determined a commercial by the Brazilian brand Sadia to be abusive, and sentenced the brand to pay a fine of R\$ 428,000.00 reais. The decision was based on the aforementioned advertisement regulations in the Consumer Protection Code. The commercial targeted children, persuading them to buy highly caloric snacks, which contained stamps that could, upon the payment of R\$ 3.00, be exchanged for stuffed animals of the brand mascot dressed in sports clothes. This publicity campaign was developed with the intent of commemorating the Pan American Games. The report to PROCON was made by a nonprofit organization, which stated that the advert encouraged the consumption of highly caloric snacks by children, which could present harm to their health. The brand argued that, by selling the mascots dressed in sportswear, they were "promoting a healthy lifestyle" and encouraging children to participate in sports. This is one of the strategies that brands use in order to evade regulation and go unpunished after marketing their products to children. Although the final sentencing was in favor of protecting children from abusive marketing, it was only finalized in 2017, a decade after the fact. Thus, it was futile in its attempt to protect the children who were exposed to the commercial.

Therefore, while in the United States of America there is a lack of comprehensive, countrywide regulations, in Brazil there are several federal laws and regulations. However, these nationwide laws are, for the most part, unenforceable, and in cases where they are enforced, it is done in an inefficient manner, such as in the aforementioned example. When observing other legal systems and their regulations on an international level, Chile's Law of Food Labeling, aimed at reducing rates of obesity, especially in children, is composed of comprehensive, efficient and enforceable regulations. This law was able to have short term effects, shifting the population's purchasing behavior towards healthier alternatives in the span of two years. In the long term, it is expected that this law will have even more significant effects, encouraging healthier eating habits and preventing obesity. Thus, Chile has proven that it is possible to make drastic changes in the overall behavior and choices of the general population, and protect their youngest and most vulnerable members through a singular, comprehensive and concise nationwide law.

Table 1. Countries' Regulatory Measures in Comparison with the Chilean Model

Chile	United States of America	Brazil
Any food product that contains high levels of calories, fats, sugars and/or sodium—with the possibility of other ingredients being included by regulations—must be labeled as such.	No	Yes
Prohibition of the distribution, commercialization, promotion and publicization of "high in" products inside pre-school, primary or secondary education establishments.	Yes, but it's not enforced nationwide and their regulations do not encompass all "high in" products	Yes, but it's not enforced nationwide and it does not include all the aforementioned "high in" products
Advertisements for "high in" food products cannot be targeted at youths under the age of fourteen. Commercials that make use of games, competitions, or other childappealing attractions and advertisements unrelated to the promotion of the food product itself, aimed at children and young teens under fourteen years old are also prohibited.	No	Yes, but the regulation is not enforced
Legislative measures are enforceable, and their non-compliance sanctionable	No	No
Prohibition of television advertising for all "high in" products, from 06:00 a.m. to 10:00 p.m.	No	No
Has a singular, comprehensive and concise nationwide law.	No	No

#### 5 Conclusion

The susceptibility of children to food marketing and content showcased within the media is undoubtedly a concerning issue that has direct ties to the worryingly rising rates of childhood obesity within the last fifty years. As showcased within this study, the marketing and branding tactics employed by companies, such as the use of televised advertisements, the use of mascots as well as creating brand familiarity within a younger demographic, have detrimental effects on lifestyle choices made by children. This study also explored the different approaches to implementing front-of-package food labeling taken by different governments. The first approach being a voluntary system, as a means of self-regulation, and the second one being a legally mandated process. With the previous analysis, it was proven that self-regulation is insufficient as a way to police food labeling and marketing. Meanwhile, a straightforward and nationwide legislation system, similar to the Chilean model, is a significantly more effective alternative. Additionally, as was thoroughly explored in this analysis, it is apparent that within the USA and Brazil there are laws and regulations in place to monitor the circulation of nutritional information as well as restrictions on junk food marketing targeted towards children. However, as was demonstrated previously, while these regulations are a part of the legal system within these countries, they have proven to be inefficient. These laws were shown to be either isolated to singular states rather than the country as a whole, when it comes to the USA, or have little to no penalties as well as no way of being enforced, which is the case of the Brazilian laws. Taking this into consideration, the lack of effectiveness of these laws has facilitated the rise in the rates of childhood obesity. Nonetheless, as was proposed within this study, the implementation of laws and regulations such as the ones seen in Chile's legal system would be a solution to this growing epidemic. This law prohibits advertising and promoting "high in" food products to children under the age of fourteen and is enforced through the imposition of significant penalties if they are not followed. That being said, as was stated beforehand, these regulations have shown to be effective when it comes to limiting the exposure of children to persuasive and manipulative food marketing, consequently, causing a significant decrease in children's consumption of such food products, which will, in turn, lead to the decrease in childhood obesity.

This research faced limitations to its scope due to a lack of primary research sources and lack of in-depth research sources in the research topics. The studies which were available and possible to access were conducted around two decades ago, and newer literature, if conducted, was not made available. Furthermore, most of the studies found were focused on the United States of America, with few studies analyzing the Chilean or Brazilian models. In addition to this, throughout this research it became apparent that most widely publicized studies and information were either conducted, endorsed or sponsored by companies that are directly involved in the food industry. Unlike most others of its kind, this research combined previous studies in a comparative analysis that can be beneficial to all three countries, as it brings light to the success of the Chilean model. Additionally, this analysis can be used to help governments

and organizations find effective measures when creating, improving as well as enforcing legislation and regulations on child-oriented food marketing.

Thus, the conduction of further research could expand to encompass a larger number of countries of interest, such as other Latin American countries, as well as European and Middle Eastern countries. It could also approach alternatives for other countries in which the proposed regulatory measures are not optimally effective, adapting the proposed recommendations to the countries' reality. Additionally, future research could approach the prevalent lack of regulations in food deserts.

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#### Povzetek:

Predpisi o trženju hrane in debelost otrok v Ameriki:

Analiza učinkov trženja hrane na debelost pri otrocih ter (ne)učinkovitosti zakonov in regulativnih ukrepov na področju trženja hrane v Združenih državah Amerike in Braziliji v primerjavi s Čilom

Raziskovalno vprašanje (RQ): Kakšen je vpliv trženja in oglaševanja hrane na debelost pri otrocih?

Namen: Namen te raziskave je analizirati obstoječe regulativne ukrepe in zakonodajo o trženju živil, namenjenih otrokom, razumeti njegove učinke in poiskati načine za zmanjšanje debelosti pri otrocih.

**Metoda:** V tej študiji je uporabljen primerjalni pristop k analizi veljavne zakonodaje in regulativnih ukrepov o trženju živil, uveljavljenih v Braziliji, Čilu in Združenih državah Amerike. Prav tako se je posvetovala s številnimi strokovnimi članki in znanstvenimi študijami o vplivu trženja in oglaševanja živil na debelost pri otrocih. Ta raziskava tudi kaže na učinkovitost ustrezne ureditve trženja in oglaševanja hrane, usmerjene v otroke, pri zmanjševanju uživanja ultra predelane hrane pri otrocih, kar bo posledično privedlo do zmanjšanja debelosti pri otrocih.

**Rezultati:** Predpisi, kakršni se izvajajo v Čilu, so se izkazali za učinkovite pri omejevanju izpostavljenosti otrok prepričljivemu in manipulativnemu trženju hrane. Posledično povzročajo znatno zmanjšanje porabe takšnih živilskih izdelkov pri otrocih, kar lahko privede do zmanjšanja debelosti pri otrocih.

**Organizacija:** Ta raziskava lahko pomaga vladam in organizacijam pri iskanju učinkovitih ukrepov za oblikovanje, izboljšanje ter uveljavljanje zakonodaje in predpisov o trženju živil, usmerjenih v otroke.

**Družba:** Ljudje so dovzetni za vpliv in manipulacijo prepričljivih tržnih strategij. Tako so otroci, ki so lažje vplivni del prebivalstva, še bolj ranljivi za takšne taktike. Ta raziskovalna naloga pomaga dodatno prikazati to dejstvo in nevarnosti, ki jih predstavljajo te tržne strategije, ter predlaga možnosti za preprečevanje vpliva omenjenih škodljivih taktik.

**Originalnost:** Za razliko od večine drugih tovrstnih raziskav ta prinaša primerjalni pristop pri analizi učinkovitosti predpisov v latinskoameriških državah in Združenih državah Amerike, ko gre za trženje ultra predelanih živilskih izdelkov, namenjenih otrokom.

Izzivi prihodnosti / Challenges of the Future, Maj / May 2024, leto / year 9, številka / number 2, str. / pp. 88-107.

Omejitve / nadaljnje raziskave: Omejitve, s katerimi smo se soočili, so bile pomanjkanje primarnih raziskovalnih virov in pomanjkanje poglobljenih raziskovalnih virov na to specifično temo. Nadaljnja raziskava bi lahko razširila obravnavane države na druge latinskoameriške države ter evropske in bližnjevzhodne države.

**Ključne besede:** trženje, usmerjeno v otroke, prehrana, pravo, predpisi, oglaševanje živil, debelost otrok, označevanje živil, primerjalno pravo.

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