Food Advertising on Television Targeting Children in Honduras

by

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Thesis submitted in partial fulfillment of
the requirements for the degree of Master of Science
in the Department of Global Health in the
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ABSTRACT

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Abstract

Background: Rates of childhood overweight and obesity have increased dramatically across Latin America in recent years. In Honduras, the problem is more common among children of upper and middle socio-economic status (SES). Evidence suggests that television advertising of high-energy-density (HED) foods may contribute to increased rates of overweight and obesity in children.

Objective: The purpose of this study was to characterize the advertising of foods during television programming that targets school-age children in Honduras.

Methods: Content analysis was performed on four different television stations accessible to children in Honduras, including one broadcast station and three cable networks. Programming for each station was observed and recorded for one complete week, during after-school hours (defined as 1:30 pm to 5:30 pm, Monday through Friday). Eighty hours of programming were recorded and analyzed. Foods were categorized as being high in energy density or not (HED or non-HED).

Results: A total of 2271 advertisements aired during the observation period; roughly half of these (49.3 percent) were product advertisements. Of the 1120 product advertisements, 397 marketed food-related products. Of these, 69.8 percent promoted HED foods. Children were targeted in the vast majority of advertisements for HED foods (92.1 percent). All of these foods were advertised on cable networks; none of the advertisements for HED foods were aired on broadcast television.

Conclusion: Cable television during after-school hours in Honduras included a high percentage of advertisements for HED foods. This may promote consumption of these foods by children, putting them at greater risk for overweight and obesity.

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1. Introduction

1.1 – Definition of overweight and obesity

The World Health Organization (WHO) defines overweight and obesity as "abnormal or excessive fat accumulation that may impair health". For adults and children, overweight and obesity are categorized according to body mass index (BMI), which is the weight-for-height ratio (kg/m^2) of the individual. Among children, the scale is adjusted according to age and gender. It is well-established that elevated BMI is a major risk factor for several chronic diseases in adulthood, including cardiovascular diseases, type 2 diabetes, musculoskeletal disorders, and some cancers [World Health Organization, 2011].

1.2 – Increased rates of overweight and obesity worldwide

Rates of overweight and obesity have increased dramatically in recent decades. The WHO reports that obesity has more than doubled across the globe since 1980. In 2008, there were more than 1.4 billion people worldwide who qualified as overweight; among them, about 500 million were considered obese [World Health Organization, 2011]. It is notable that overweight and obesity are now the fifth-highest risk of death across the entire planet.

1.3 – Increased rates of overweight and obesity in developing countries

For many years, it was commonly thought that overweight and obesity were exclusive concerns of the developed nations of the world [McLellan, 2002]. However, research indicates that overweight and obesity now pose serious threats to public health in many developing countries as well [Prentice, 2006]. Several studies have shown that this is especially true in Latin America [Filozof et al, 2001; Alvarez et al, 2009].

1.3.1 – Nutrition transition in Latin America

Much of Latin America is experiencing the "nutrition transition" as described by Barry Popkin [2001]. Recent changes in demographics, economics, and technology have dramatically altered the dietary intake of many people in developing countries, especially in Latin America [Uauy and Monteiro, 2004]. This change has resulted in increased consumption of foods that are high in fat, sugar, or both. This in turn contributes to overnutrition, which is defined by the Food and Agriculture Organization (FAO) as "excessive food intake in relation to energy requirements" [Food and Agriculture Organization, 2012]. Overnutrition is a major risk factor for overweight and obesity.

1.3.2 – The double burden of malnutrition in developing nations

Historically, undernutrition has been a serious problem in the developing world. There has been much success recently in the campaign against undernutrition in many low- and lower-middle-income countries. However, the problem has not been eliminated entirely, and remains a substantial concern in many parts of Latin America. For countries experiencing the nutrition transition, this presents a "double burden" of malnutrition, as public health initiatives must now consider both under-nourished and over-nourished segments of the population (Hawkes et al, 2009). As stated by the FAO in 2002: "It is a bitter irony that as developing countries continue their efforts to reduce hunger, some are also facing the opposing problem of obesity."

1.4 – Burden of overweight and obesity among children

In 2006, Wang and Lobstein noted that, even with increased awareness of overweight and obesity on an international level, knowledge of the global problem among children was relatively limited. They analyzed data from 60 nations around the world and found that the prevalence of childhood overweight and obesity had increased between 1980 and 2005 in all but two of those countries (Poland and Russia being the exceptions). Wang and Lobstein

concluded that a "growing global epidemic of childhood overweight and obesity" was in effect, and argued that strong policies and programs were needed to address the problem on a worldwide scale.

1.4.1 – Consequences of overweight and obesity among children

The consequences of overweight and obesity during childhood are substantial. Foremost, a child carrying excess weight is at higher risk for overweight and obesity in adulthood. This, in turn, puts that individual at higher risk for developing many chronic diseases that are related to overweight and obesity. In fact, children may experience complications from these diseases even before reaching adulthood [Ebbeling et al, 2002]. Further, as explained by Lobstein [2010], some overweight children may carry early signs of chronic disease without being aware of the problem, thus potentially exacerbating the likely disease outcome. Additionally, children carrying excess weight may suffer psycho-social problems, such as low self-esteem and reduced social networking [Lobstein, 2010].

1.4.2 – Determinants of overweight and obesity among children

A recent publication by Gupta and colleagues (2012) agrees with the earlier findings of Wang and Lobstein (2006), confirming that the prevalence of childhood overweight and obesity continues to rise dramatically in many developing countries. The study also identifies several key determinants of childhood obesity in developing countries: reduced physical activity, increased caloric intake, higher socio-economic status (SES), socio-cultural factors, urbanization and residence in metropolitan cities, age and female gender, and school meal programs [Gupta et al, 2012].

1.5 – The role of television in childhood overweight and obesity

Television is closely linked to several of the key determinants listed by Gupta and colleagues. Television viewing – especially in excessive amounts – may reduce children's levels of physical activity [Meyer et al, 2008]. Television can also contribute to increased caloric intake, by exposing children to advertisements for foods and beverages of high energy density and low nutrient content [Kaiser Family Foundation, 2004]. Notably, in low- and lower-middle-income countries – including many parts of Latin America – access to television

is often associated with two other key determinants listed by Gupta and colleagues: higher SES and residence in an urban location [Gomez et al, 2007].

1.5.1 – Food advertising on television directed at children

There is much evidence indicating that food advertising has a powerful impact on the eating habits of children [Veerman et al, 2009]. Dietary intake is directly linked to levels of overweight and obesity, so it is not surprising that research has found a strong association between marketing of HED foods and increased prevalence of excess weight among children [Kaiser Family Foundation, 2004].

For food marketers, there are three specific reasons for targeting children: (1) Young children can influence the purchases of their parents; (2) Many older children and adolescents have their own purchasing power – independent of their parents; and (3) Children grow up to become adults, with much larger purchasing power, whose decisions may still be influenced by their experiences from childhood [Story and French, 2004].

1.5.2 – Susceptibility of children to television advertisements

The American Psychological Association (APA) states that children under six years of age cannot distinguish between television programming and advertising, and children less than eight years of age do not understand the persuasive intent of advertising [Kunkel et al, 2004]. Further, the APA notes that children between the ages of 10 to 12 years may understand the motives of advertising, but most are unable to explain sales techniques. In that same report, the APA declares that children can establish preferences for certain products in as little as a single exposure to a commercial, and that such preferences are strengthened by repeated exposures. These preferences, in turn, influence children's requests for food – and ultimately take effect in the purchasing decisions of parents [Jolly, 2011].

1.5.3 – "Pester power" as a means of selling products

One result of child-oriented advertising is a phenomenon originally described as "purchase request behavior" [Young et al, 1996], but now more commonly called "pester power" [McDermott et al, 2006]. Pester power has been defined as "the constant demand for parents to purchase items, be they clothes, toys, gadgets, or various other goods" [Jolly, 2011]. Companies who market

directly at children rely heavily on pester power to sell their products. As one advertising executive put it, "We're relying on the kid to pester the mom to buy the product, rather than going straight to the mom." [Media Smarts, 2012]. Such pestering takes advantage of the desires of parents to provide the best for their children, and also plays on the guilt that parents may feel about not spending enough quality time with their children [Jolly, 2011]. This phenomenon benefits manufacturers of HED foods, because it motivates parents to buy their products – even foods that parents themselves judge to be unhealthy for their children.

1.5.4 – Effect of advertising on older children and adolescents

Of particular interest to food manufacturers and marketers are older children and adolescents, who potentially have personal money available to spend, and therefore can make purchases independent of their parents. Thus, many companies place substantial emphasis on addressing older children and adolescents as direct consumers themselves. This emphasis includes strategies to build brand awareness among youth and to manipulate their purchasing habits [Jolly, 2011]. Advertisers have found these approaches to be very effective – to the point of investing hundreds of millions of dollars in such marketing methods [Dalmeny et al, 2003].

1.5.5 – Effect of advertising from childhood to adulthood

Marketers realize the importance of promoting their products to children of all ages. Companies attempt to plant "seeds" of brand recognition in children – even very young children – with hopes that such seeds will develop into lifetime relationships [Media Smarts, 2012]. The Center for a New American Dream found that babies as young as six months of age can form mental images of corporate logos and mascots. Further, it is possible to establish brand loyalties within a child as young as two years old, and most children can recognize hundreds of brand logos by the time they enter primary school [Media Smarts, 2012]. This is certainly advantageous for companies who see present-day children as potential consumers of their products throughout their future adult lives. Thus, advertising to children serves two important purposes for food manufacturers: (1) Promoting sales of products to children in the present and near-future; and (2) Establishing long-term relationships to promote sales of products many years into the future, as children continually transition into adulthood.

2. Background

2.1 – Double burden of malnutrition in Honduras

Historically, undernutrition has been one of the most important public health concerns in Honduras. That has changed somewhat in recent decades, as much progress has been made in this area. In fact, a World Bank report in 2010 showed that rates of childhood underweight in Honduras have decreased dramatically since 1990. However, a substantial burden of undernutrition remains: across the country, 29 percent of children under the age of five years suffer from physical stunting due to undernutrition [UNICEF, 2009]. Meanwhile, as the nutrition transition takes effect in Honduras, rates of childhood overweight and obesity have doubled over a five-year span [World Bank, 2010]. Thus, the nation now faces the classic double burden of undernutrition and overnutrition.

2.1.1 – Increased consumption of junk food in Honduras

It is certain that many different factors have contributed to the increased prevalence of overweight and obesity in Honduras in recent years. Among these factors, one of the most important is the dramatic rise of the fast food industry [Lizardo and Diaz, 2011], especially in urban parts of the country [Schortman,

2010]. Other junk foods – such as potato chips, cookies, and candy – are also gaining in popularity in Honduras. Like fast foods, these foods are also high in energy density and low in overall nutrient content. Increasingly, HED foods are replacing traditional foods in the daily diets of many Hondurans, and thus contributing to the growing burden of overweight and obesity throughout the country.

2.1.2 – Relative cost of fast food

In the United States and many other developed countries, fast food is relatively inexpensive, and thus more appealing to those who have limited financial resources for purchasing food. This is one factor – among many – that promotes overweight and obesity within the demographics of lower SES. Not surprisingly, the rates of overweight and obesity in developed countries are highest among those in the lowest income brackets [Kain et al, 2003].

However, the situation is very different in developing countries such as Honduras. As noted by Schortman [2010], fast food is actually expensive in Honduras, especially when compared to most foods in the traditional diet. Schortman further noted that eating American fast food seems to be a marker of social status: available only to the upper-class in the 1990's, then expanding to

some middle-class patrons within the past decade. However, fast food remains relatively expensive – and thus inaccessible to most people of lower SES in Honduras.

2.1.3 – Effect of socio-economic status on nutrition

In the United States and other developed nations, overweight and obesity are more common among those of lower SES. This is due, in part, to fast food, which is widely available and usually less expensive when compared to healthier foods. In contrast, in lower-middle income countries such as Honduras, overnutrition is more frequently seen among those of the upper- and middle-classes [Fernald, 2007]. The more serious concern for most citizens of lower SES is undernutrition, often associated with food insecurity [Ebbeling et al, 2002].

2.2 – Television in Honduras

According to the World Factbook of the Central Intelligence Agency, there are approximately 570,000 televisions sets in Honduras [Nation Master, 2012]. This translates into roughly 96 televisions per 1,000 population – a figure that is dwarfed by upper-income countries such as the United States (803 per 1,000) and upper-middle-income countries such as Mexico (273 per 1,000). Still, research by

the marketing firm Millward Brown [2008] shows that television is the medium of highest consumption in Honduras, with a 60 percent market share that dominates over newspaper, radio, and internet media.

2.2.1 – Access to cable television in Honduras

Subscription television in Honduras is comprised almost entirely of cable systems; however, due to high costs and lack of infrastructure, access to cable television is extremely limited. There are only 49,280 subscriptions for cable television in the entire country – a paltry 7.7 per 1,000 population [Kadrich, 2012]. Thus, access to cable programming is a luxury reserved mostly for the upper- and middle-class citizens of Honduras – especially those who live in urban locations that offer much greater availability [Frost and Sullivan, 2011].

2.2.2 – Advertising on cable television in Honduras

Although access to cable television is mostly limited to upper- and middle-class citizens in urban locations, it remains a valuable tool for advertisers hoping to reach that specific segment of the population. Certain products and services are too expensive or otherwise impractical for citizens of lower SES, therefore providing little incentive for companies to market such products to the

general public. Cable television provides a medium for focusing advertisements of "luxury products" – such as brand name clothing, electronics, and furniture – at those who have sufficient wealth to purchase them. In a developing country such as Honduras, expensive foods and beverages can also be defined as luxury products [Smith, 2011].

3. Methods

3.1 – Study design

The objective of this cross-sectional study was to investigate the advertising of HED foods during television programming targeting school-age children in Honduras. Broadcasts of programming were observed on site in Honduras and recorded as digital video files. The programming was coded according to a protocol established by Darcy Thompson and colleagues in 2008. Television content was classified as programs and non-programs. Non-programs were separated into the following categories: promotion of station programs, station identification, public service announcements, and product advertisements [Thompson et al, 2008]. Note that brief sponsorship messages, such as "This program was brought to you by Product X", were counted as product advertisements.

Product advertisements were further divided as food-related or non-food-related. In this context, "food-related" advertisements are defined as commercials that promote the purchase and/or consumption of any kind of food or beverage, including dietary supplements.

3.2 – Study location

The study was performed in the city of La Ceiba, on the North Coast of Honduras. With a population of roughly 150,000 people, it is the third-largest city in Honduras. This location was chosen because it offers complete access to all television programming broadcast in Honduras. Television stations are located in either Tegucigalpa (the national capital, in the southern part of the country) or San Pedro Sula (the industrial center, in the western region). The city of La Ceiba receives broadcasting from both cities.

3.2.1 – Selection of television stations

Telecadena (channel 7 in Tegucigalpa, channel 4 in San Pedro Sula) is the only publicly-available television station that broadcasts a full block of programming every day which specifically targets school-age children. Thus, Telecadena was the only broadcast station considered in this study. Three cable stations were included: Cartoon Network, Disney Channel, and Nickelodeon. These stations were chosen based on viewership. They represent the three most-watched cable networks in Central America, according to the IBOPE ratings released in February of 2012. These networks were included in the study,

because – as noted previously – cable television is an important means of advertising to upper- and middle-class citizens in Honduras.

3.2.2 – Time frame for viewing television programming

The study took place in May and June of 2012. Each station was observed and recorded for an entire week, Monday through Friday. Programming was viewed each day from 1:30 in the afternoon to 5:30 in the evening. Thus, a total of 20 hours were viewed each week, yielding an overall total of 80 hours of observation throughout the study. These recording times were chosen to best represent typical after-school hours for children in Honduras.

Of note, there are several different school schedules in Honduras; the most common runs from 7:00 or 7:30 in the morning till about noon. Many public schools have two separate schedules for students, with some children starting classes at 12:30 or 1:00 in the afternoon and attending till 5:00 or 5:30 in the evening. However, morning schedules are much more common for students – in both public and private schools – according to Nelson Denis Ponce, who is director at Escuela Urbana Francisco Morazán in La Ceiba.

3.3 – Classification of types of foods

Advertisements coded as food-related were categorized as follows: sweetened cereals, non-sweetened cereals, breads and tortillas, meats (including poultry and fish), fast foods, restaurants, grocery stores and supermarkets, candies, cookies, chips and snacks, dairy products (non-sweetened), desserts, fruits and vegetables, juices, sweetened beverages (including sweetened fruit juices), alcoholic beverages, water, dietary supplements, and "other" foods/beverages. This classification scheme was adapted from a similar study in Mexico by Ramirez-Ley and colleagues in 2009.

For the purposes of this study, a simple dichotomous model was used to calculate the percentage of advertisements for high-energy-density (HED) foods. In this model, foods were considered HED if they were high in calories and otherwise relatively low in nutritional content. Categorization of HED foods included the following: sweetened cereals, chips and snacks, fast food, candies, cookies, desserts, juices, and sweetened beverages. This classification was also adapted from the 2009 study by Ramirez-Ley et al.

Note that the scope of this study was limited to the burden of overnutrition – that is, excessive intake of calories. Therefore, little consideration was given to overall nutrient content or other aspects of the proverbial "well-

balanced diet" for children. Such considerations are indeed very important, but they are beyond the scope of this project. Thus, the dichotomous categorization of HED foods – although extremely simple – is entirely appropriate for the purpose of this study.

3.4 – Orientation towards children, adults, or both

The orientation (target audience) of each advertisement was determined by visual and textual cues, as described by Connor in 2006. The following were considered among the visual cues that indicated orientation towards children: use of animation, famous celebrities or characters that appeal to children, music and/or tone that appeal to children, appearance of pets or other child-friendly animals, and appearance of children themselves in the advertisement. In terms of textual cues, the research team considered whether announcers and characters in the commercial were specifically addressing children or adults (or both).

3.5 – Validation of content analysis

Initial coding was performed by the primary investigator on site in Honduras. All television programming was recorded and saved as digital video files. A research assistant in North Carolina performed a second content

analysis, viewing the digital video files via internet. This coding was completely independent of the initial coding. The results of each content analysis were compared, with an initial agreement of 93.9 percent (2222/2367). All discrepancies were resolved between the two coders, with final decisions approved by the professor advising in this study.

4. Results

4.1 – General results from content analysis

Programs viewed during this study included animated features, teen sitcoms, and telenovelas of particular interest to school-aged children. A total of 2271 advertisements were recorded during the 80 hours of television viewing. Product advertisements accounted for slightly less than half of this total (1120 advertisements, 49.3 percent); ads that promoted television programming represented a small majority (1151 advertisements, 50.7 percent). Of the product advertisements, 397 (35.4 percent) promoted foods or food-related products. A majority of the food-related advertisements promoted high-energy-density foods (277 advertisements, 69.8 percent). Further, a vast majority of the ads for HED foods specifically targeted children (255 advertisements, 92.1 percent). Only four of the ads for HED foods specifically targeted adults (1.4 percent). There were 18 ads for HED foods that targeted both children and adults (6.5 percent).

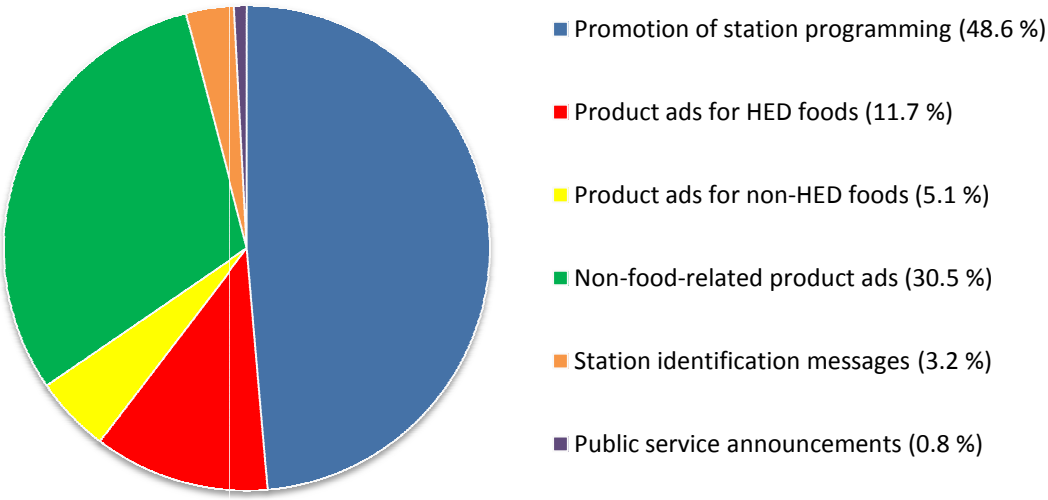

Figure 1: Non-programming, all stations combined

4.2 – Specific results from broadcast television

Telecadena is the only broadcast television station in Honduras that airs a full block of programming specifically for school-aged children during after-school hours. One complete week of Telecadena was registered in this study: five days, four hours each, for a total of 20 hours. The overwhelming majority of advertising promoted the station's programming (423 of 522 advertisements, 81.0 percent). Of the 99 product advertisements shown on Telecadena, only 10 (10.1 percent) were food-related. All 10 of those advertisements represented a supermarket chain named La Colonia; the ads portrayed adults purchasing

produce and other groceries. There were no advertisements directed at children, and there was no marketing whatsoever of HED foods.

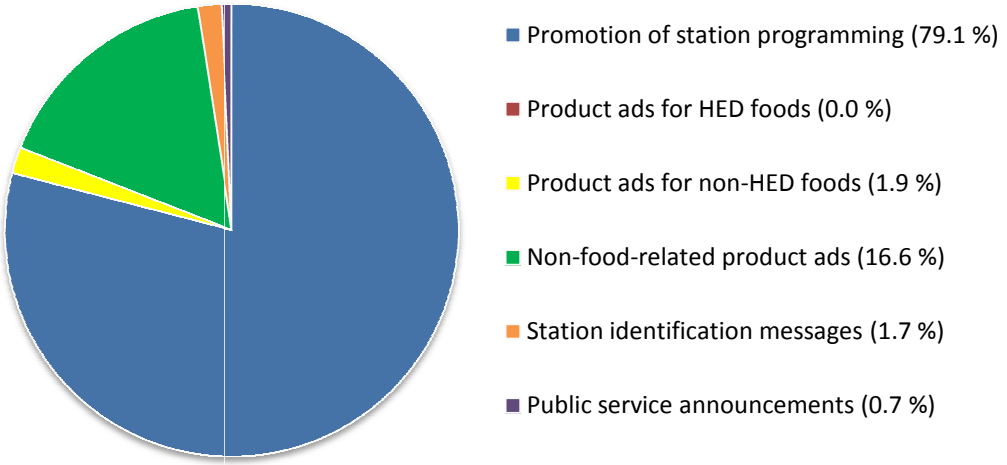

Figure 2: Non-programming, broadcast television only

4.3 – Specific results from cable television networks

Compared to broadcast television, product advertising was much more prominent on the cable television stations. This was especially true on the Disney Channel: 429 of 584 commercials (73.5 percent) were product advertisements. Overall, combined totals from the three cable networks yielded 1021 product advertisements out of 1749 commercials (58.4 percent). Food-related advertising was also more frequent on cable television: 387 of 1021

product advertisements (37.9 percent). Further, cable networks were much more likely to promote consumption of HED foods: of the 387 food-related ads, 277 (71.6 percent) marketed HED food products.

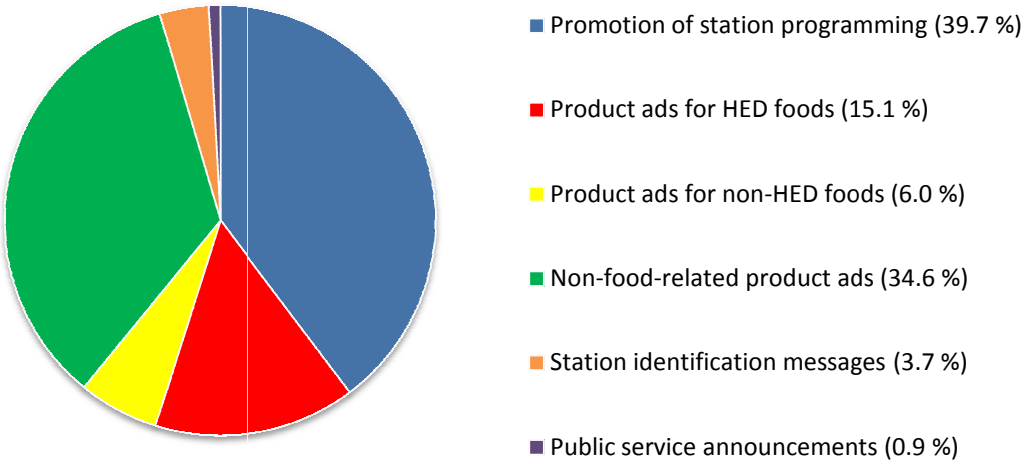

Figure 3: Non-programming, cable networks combined

Among the cable stations, the Disney Channel had the highest percentage of food-related advertisements (195 of 429 product advertisements, 45.5 percent) and the highest percentage of advertisements for HED foods (152 of 195 food-related advertisements, 77.9 percent). In contrast, Cartoon Network posted the lowest percentage of food-related advertisements (46 of 268 product

advertisements, 17.2 percent) and the lowest percentage of advertisements for HED foods (25 of 46 food-related advertisements, 54.3 percent).

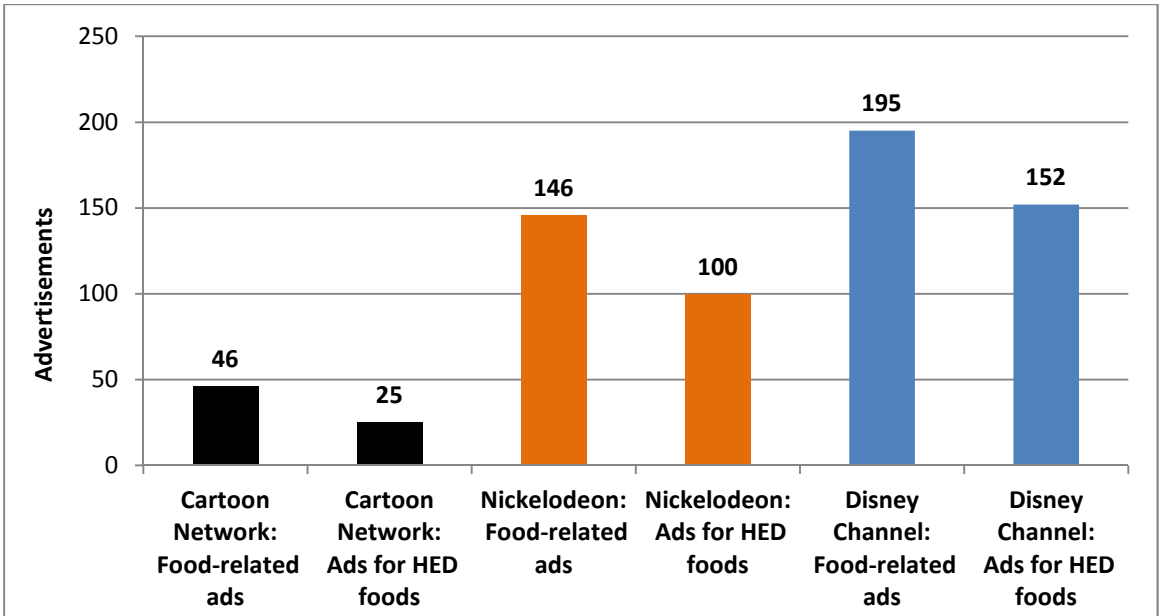

Figure 4: Food-related advertisements on cable networks

Not surprisingly, most of the food advertisements targeted children. Combined totals from all three cable networks yielded 387 food-related ads, with 263 of them (68.0 percent) specifically oriented towards school-aged children. Such marketing focused almost exclusively on HED foods: of the 263 food-related ads that targeted children, 255 (97.0 percent) promoted foods which were classified as HED. Conversely, of the 102 food-related ads that targeted adults,

only four (3.9 percent) marketed HED foods. Among food related-ads oriented towards both children and adults, HED foods were promoted in 18 of 32 (56.3 percent).

4.4 – Most commonly marketed food categories

The most highly-marketed food type in the study – by a wide margin – was sweetened cereals (131 of 397 total ads for food, 33.0 percent). Two stations in particular accounted for much of this total: 129 of those 131 advertisements appeared on either Disney Channel (69) or Nickelodeon (60). Among HED foods, the next-most commonly advertised were fast foods (37 advertisements, 9.3 percent of all food-related ads) and sweetened beverages (30 advertisements, 7.6 percent of all food-related ads). Overall, the most commonly advertised food product in the study was McDonald's Happy Meal® (32 advertisements).

Table 1: Food-related advertisements, categorized by food type

Food type	Advertisements	Percentage of total
Sweetened cereals	131	33.0%
Dairy products	49	12.3%
Dietary supplements	43	10.8%
Fast food	37	9.3%
Sweetened beverages	30	7.6%
Candies	24	6.0%
Chips and snacks	24	6.0%
Desserts	20	5.0%
Cookies	11	2.8%
Grocery stores and supermarkets	10	2.5%
Restaurants	7	1.8%
Meats, poultry, fish	6	1.5%
Other foods	5	1.3%
Non-sweetened cereals	0	0.0%
Breads and tortillas	0	0.0%
Fruits and vegetables	0	0.0%
Juices	0	0.0%
Alcoholic beverages	0	0.0%
Water	0	0.0%
Total food-related ads	397	

Among non-HED foods, the highest totals were dairy products (49 advertisements, 12.3 percent of all food-related ads) and dietary supplements (43 advertisements, 10.8 percent of all food-related ads). None of these commercials targeted children. Of the 49 total ads for dairy products, 39 were shown on Nickelodeon – most of these (29) were brief sponsorship messages for Alpura

Brand Dairy Products. Cartoon Network and Disney Channel accounted for all of the marketing of dietary supplements – 21 and 22 ads, respectively.

4.5 – Least commonly marketed food categories

Throughout the 80 hours of observation, there were no advertisements at all for non-sweetened cereals, breads and tortillas, fruits and vegetables, or juices. Also, there were relatively few advertisements (six total, 1.5 percent) for meat products, including poultry and fish. All of the commercials in the "other" category (five advertisements, 1.3 percent) were baby food products. Finally, there were no advertisements for water or alcoholic beverages.

5. Discussion

5.1 – Main findings of this study

The results of this study present three main findings. First, the data suggest that food advertising on broadcast television is not a significant factor in childhood overweight and obesity in Honduras. Telecadena – the only station in the country that broadcasts child-oriented programming during after-school hours – did not air any advertisements for HED foods during an entire week of recording. Second, in contrast to the first finding, advertising of HED foods was much more common on cable television stations that target school-aged children. Among the three most popular cable channels in Central America, Disney Channel aired the most commercials for HED foods, followed by Nickelodeon, with Cartoon Network a distant third. Lastly, these results suggest that advertisers of HED foods use television to target children in Honduras far more frequently than adults.

Table 2: Orientation of food-related advertisements

	Total	Children	Adults	Both
HED foods	277	255	4	18
		92.1%	1.4%	6.5%
Non-HED foods	120	8	98	14
		6.7%	81.7%	11.7%

5.2 – What was already known about this topic

There is much evidence to support the assertion that food advertising on television is a contributing factor in childhood overweight and obesity. Studies have found an association between exposure to television and children's attitudes related to higher consumption of junk foods and increased requests directed at parents to purchase junk foods [Story and French, 2004; Aktas Arnas, 2006]. In 2007, Dixon et al. found that increased television viewing and frequent viewing of television commercials were independently associated with more positive attitudes towards junk food, and that increased television viewing was independently associated with increased consumption of junk food. Many other researchers have argued that the strong influence of food advertising – especially the promotion of HED foods – contributes significantly to the current trend of

increasing childhood overweight and obesity around the world [Hastings et al, 2006; Kelly et al, 2010]. In 2009, Veerman and colleagues hypothesized that at least 14 percent of obese children would not be obese if advertisements for unhealthy foods were banned from television.

Knowledge about food advertising in Honduras is extremely limited. However, studies have been done in populations comparable to the people of Honduras, such as Spanish-speaking residents of the United States and Mexico. In 2008, Thompson et al. found that children viewing Spanish-language television during after-school hours in the United States were exposed to many advertisements for unhealthy foods, possibly contributing greatly to the high risk of overweight and obesity among Latino children. Barroso et al. [2011] observed television stations (both English and Spanish) along the Texas-Mexico border; they found that many advertisements promoted continued viewing of television – possibly encouraging sedentary behavior – as well as promoting foods of poor nutritional quality. A large study in Mexico [Ramirez-Ley et al, 2009] found that children are systematically more exposed to advertisements for HED foods (compared to adults). Further, the results of the study suggested that food advertising on television could be a major contributor to the recent pandemic of childhood overweight and obesity in Mexico.

5.3 – What this study adds

Foremost, this content analysis study provides baseline information about food advertising that targets children in Honduras. Previously, very little research had been done to explore possible associations between television viewing and increased childhood overweight and obesity in the country. This study presents data for Honduras that did not exist beforehand. Now, it is possible to make comparisons with similar populations in the United States and Mexico, where content analysis studies have been performed in recent years. Similar patterns are seen among the studies: in Honduras – as in the United States and Mexico – children are specifically targeted by advertisers of HED foods. Also, in agreement with the findings of Ramirez-Ley et al. in Mexico, the most commonly advertised HED foods in Honduras are sweetened cereals. Fast foods are frequently advertised as well in Honduras, similar to the studies among Spanish-speakers in the United States. Of note, Barroso and colleagues commented that children in Texas and Mexico are exposed to many advertisements that encourage further viewing of television – and thus more sedentary behavior. This is especially true in Honduras, where promotion of station programming accounts for more than half of all advertising on television.

Lastly, a unique point of this study in Honduras is the revelation that broadcast television does not promote consumption of HED foods.

5.4 – Limitations

There are some limitations to this study. First, observation and recording of television programming were limited to after-school hours only; this study does not account for viewing of programs on evenings or weekends. Also, this content analysis does not evaluate any programming during morning hours. This is notable, as some children in Honduras attend school during the afternoons, and thus would be more likely to watch television in the mornings before their classes. In addition, this study does not include all possible television programming that may be viewed by children during after-school hours. There are programs on other stations that may be of interest to school-aged children, such as Disney Channel XD and Discovery Kids. However, viewership of those stations is lower than the channels considered in this study [IBOPE, 2012]. Another limitation is the relatively simple classification of foods (HED or non-HED); the overall nutritional content was not analyzed for any of the food products. Finally, this study considers only one of many possible factors that likely influence childhood overweight and obesity in Honduras.

5.5 – Future research

Future research should consider observation of television programming beyond the traditional after-school hours – for example: mornings, evenings, and/or weekends. In addition, more information is needed regarding the television viewing habits of school-age children in Honduras. It would be especially useful to identify any differences that might exist between younger children and adolescents. Lastly, for comparison purposes, it may be worthwhile to perform content analysis of television programming that specifically targets adults in Honduras.

6. Conclusion

This content analysis study is the first to characterize food advertising during television programming that targets school-age children in Honduras. Food manufacturers use cable television as a medium to promote their products directly to school-age children. The overwhelming majority of such products marketed to children are high-energy-density foods, consumption of which may increase the risk of overweight and obesity among children in Honduras. In contrast to the cable networks, broadcast television in Honduras does not promote consumption of high-energy-density foods.

Currently, there is very little regulation of food advertising on television in Honduras. However, this study may provide useful information for establishing national policies related to nutrition, public health, and television advertising towards children. Hopefully, such changes can help address the growing problem of childhood overweight and obesity in Honduras.

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