



Revisión

TV Food advertising geared to children in Latin-American countries and Hispanics in the USA: a review

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Abstract

Introduction: Obesity is a pandemic disease in Latin America. The purpose of this review was to analyze the studies exploring food advertising in TV conducted in Latin-American countries and in the USA geared to Hispanics.

Methods: An electronic literature search was conducted in the MEDLINE/PubMed, EMBASE, SCIELO, and CINAHL, databases and open access internet, of food advertising directed to children in TV in Latin American countries and Hispanics living in the USA, published from 1985 to January, 2015

Results: Twenty three studies were found, six were conducted in Chile, five in Mexico, four in Brazil, three among Hispanics in the USA, and one in each of the following countries: Argentina, Peru, Colombia, Honduras and Venezuela. A high exposure of TV food advertised is geared toward children and their family. This exposure has been shown to be associated with the preference and purchase of those foods by adults and children with a high BMI, overweight and obesity.

Conclusion: An alarming high exposure of the TV food advertised directed toward children was reported, which warrants effective regulations, supervision and accountability.

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Key words: *TV advertising. Food advertising. Latin America. Hispanics.*

ANUNCIOS EN LA TV DE ALIMENTOS EN LATINOAMÉRICA Y DIRIGIDOS A NIÑOS HISPANOS EN LOS EEUU: UNA REVISIÓN

Resumen

Introducción: El propósito de esta revisión fue analizar los estudios sobre anuncios de alimentos en la TV en Latinoamérica y en los EEUU dirigidos a Hispanos.

Métodos: Se realizó una búsqueda electrónica de trabajos publicados de 1986 a 2015, en las bases de datos de MEDLINE/PubMed, EMBASE, SCIELO, y CINAHL, en internet de acceso abierto, sobre anuncios de alimentos en la televisión dirigidos a niños en países latinoamericanos y a Hispanos que viven en los Estados Unidos.

Resultados: La búsqueda dio como resultado veinticuatro estudios, seis realizados en Chile, cinco en México, cuatro en Brasil, tres en Hispanos de EEUU, y uno en cada uno de los siguientes países: Argentina, Perú, Colombia, Honduras y Venezuela. Una gran proporción de anuncios sobre alimentos en la TV están dirigidos a los niños y a sus familias. Esta exposición ha sido asociada a la preferencia y solicitud de compra de estos alimentos por los niños y con un aumento del IMC, sobrepeso y obesidad en niños y adultos.

Conclusión: Se observa una alarmante alta exposición de anuncios de alimentos en la TV dirigida a niños, lo que demanda políticas regulatorias, supervisión, y rendimiento de cuentas eficaces.

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Palabras clave: *Anuncios en TV. Anuncios de alimentos. Latin America. Hispanos.*

Introduction

Obesity is a pandemic disease causing approximately 3.4 million deaths annually, 3.9% years of life lost, and 3.8% disability worldwide¹. The prevalence of obesity has increased in children and adolescents in both developed and developing countries¹. In Latin-American countries the prevalence of overweight and obesity among 5 to 11 y ranged from 19 to 37%, from 17 to 36% in 12 to 19 years of age². In 2012-

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2013, Tijuana, a México-USA border town, the prevalence of overweight and obesity had reached 34% in preschool children under 5y in elementary school children (5 to 12y) 46%, and in middle school children (12 or 15y) 42%. Abdominal obesity in preschool children was 18%, in elementary school children was 17%, and in 12 to 15 y old was 15%³.

The negative effects that obesity has on health, including metabolic, psychological and health care costs warrant implementation of prevention programs associated with the obesity environment^{1,3}. TV viewing has been related to a sedentary life, consumption of energy dense foods while watching TV, and the exposure to advertisements of high energy dense foods⁴.

The exposure to high calorie and salty snacks via television might require stricter regulations to prevent an already an obesity toxic environment. Although a systematic review analyzing in RCT, has been published, the effect of TV food advertising on preferences and consumption of food in Latin- America have not been addressed. The purpose of this review was to analyze the studies conducted in Latin-American countries exploring food advertising in TV.

Methods

An electronic literature search was conducted in the MEDLINE/PubMed, EMBASE, SCIELO, and CINAHL, databases and open access internet, of food advertising geared to children in TV in Latin American countries and Hispanics living in the USA, published from 1985 to January, 2015. English, Spanish and Portuguese language publications were search exploring TV food advertising including food preference, food consumption, overweight, obesity, physical activity and sedentary life. Keywords, in English, Spanish and Portuguese, used in this electronic search were: “TV food advertising”, “food preferences” “food consumption”, “overweight”, “obesity”, “physical activity” “obesity” “TV food commercials” “children” and “Latin-America”. Additionally, we added keywords from each Latin American country name and presentation at congress on nutrition or obesity.

Results

Twenty three studies^{5,7-29} were found, six were conducted in Chile, five in Mexico, four in Brazil, three among Hispanics in the USA, and one in each of the following countries: Argentina, Peru, Colombia, Honduras and Venezuela. Studies have been published since 1986 in Venezuela, 2002 in Brazil, 2005 in Chile, 2008 among Hispanics in the USA; 2009 in México, 2012 in Argentina, 2013 in Peru and 2014 in Colombia and Honduras. Seventeen of the

studies have been published during 2009 to 2014. Tables I-IV show the characteristics of the TV food advertising broadcasted in Latin American countries and those geared to Hispanic children in the USA. Eighteen studies have been directed to children, seven to the general population, three to mothers with children, and one to the family. Ten of the studies have focused exclusively on unhealthy foods, 12 on unhealthy and healthy, and two have not explored any type of food; most studies have found that the type of advertisement was mainly unhealthy food such as sugary drinks, ones high in sodium and saturated fat snacks, sweets, sweetened cereals, chocolate, chips, sweetened juices, and fast foods. Nine studies have reported specific persuasive broadcasting strategies, such as the high audience period of exposition, encouraging consumption with celebrity stars, cartoons, mascots, awards for the consumption of non-core foods, animations, music. All focusing on the “Spanish culture” with special effects; related to entertainment, taste, high performance, live action, positive emotions, “natural foods”, health, and foods for children. Twelve studies reported the time exposed to TV during the day, which ranged from 2-7 h a day. In one study from Chile, 59% of children watched TV ≥ 3 h a day¹⁷, in another study those with lower socioeconomic status (SES) viewed TV ≥ 2 h daily. One study in México reported 99% of mothers watched soap opera shows (telenovelas) a mean of 3.5 h daily and 56% of their \leq two yo babies were exposed to TV²⁴. In another study conducted in a Mexico with US border state and a Mexico with Guatemala border state the mean TV exposure of children was 2.7 h and obese children watched TV an average of 3.8 h daily⁵.

Only one study, conducted in Chile¹⁵ reported disclaimers about food. Fourteen studies reported the relative amount of food advertised during the period recorded. The percentage range of food advertised was from 11% in Brazil¹⁰, to 40% in Chile in 2009¹⁹. Most of the food advertised were geared toward children. Four studies explored the recall with the consumption of the food advertised. In all of them a high frequency of recalling and consumption of the food advertised was reported. In one study conducted in Brazil, an association between the foods advertised and purchasing the product was reported. The number of TV per household and body weight determined a negative association between TV viewing with the consumption of dairy products¹¹. In two studies conducted in México^{5,24}, an association between the frequency of food advertised and the food consumption of those foods by the mother and their children, and an association between food advertised consumption with a low SES and low level of education was reported²⁴. Only one study in Mexico⁵ explored the association of the hours of TV viewing and the mothers BMI and children Z-BMI score with a positive association found (Tables I to IV).

Table 1
TV Food Advertising marketed to children in Venezuela, Brazil, Argentina, Peru and Colombia

Author, year (Country)	Geared Population	Type of food advertised	Persuasive strategy	TV exposure h/day	Percentage of Food advertised	Results
Moya and Dehollain ⁷ , 1986 (Venezuela)	Mothers and < 13y	Sausages Cereals Chocolate Jelly Ice cream	Time of exposition Credibility	2-4	NA	Lower SES caused higher acquisition of food advertised. 89% of mothers and 55% of children preferred the food advertised.
De Souza Almeida et al. ⁸ 2002 (Brazil)	General (National TV)	Fat and sugar food: 60%	NA	2.5	22	Television promotes food predominantly high in fat and/or sugar and salt.
Barbani-Dantas ⁹ , 2006 (Brazil)	General (National TV)	Fat and sugar:60% Cereal and Cereal products:21% Dairy 12% Meat, egg and legumes:8%	Encouraging consumption with a celebrity TV stars or cartoons	2.5	22-27	Correlations between TV exposure and product shopping.
Kelly et al. ¹⁰ , 2010 (Brazil)	<13y (channels geared to children)	Core foods:55% Non-core foods: 5% Supermarkets: 45%	Awards for non-core foods:12% Specific icons food	NA	11-29	Noncore foods were featured in 53% -87%.
Costa et al. ¹¹ , 2012 (Brazil)	Private school children	NA	NA	3	NA	There was a direct association between the foods advertised and purchasing the product. A positive relationship between the number of televisions per household and body weight. Watching TV was associated with lower probability of daily consumption of fruits
Leal et al. ¹² , 2012 (Argentina)	9-11y	Low nutritional value foods: 48%	NA	NA	NA	Consumption of advertised food: 69% Recall low nutritional value food: 48%
Rojas-Huayllani et al. ¹³ , 2013 (Peru)	9-12y	Cookies: 32% Sugary drinks: 30% Chocolates:17% Candies: 9%	NA	7	NA	Consumption of unhealthy advertised foods: 94%. Association between the frequencies of advertised unhealthy foods and consumption.
Mejía-Díaz et al. ¹⁴ , 2014 (Colombia)	General Population Children (National TV)	Food 'rich' in Sugar (69%), sodium (56%), saturated fat (57%) geared to children	NA	NA	23% (most geared to children)	High exposure to unhealthy food and low exposure to healthy food.

Table II
TV Food Advertising Marketed to children in Chile

Author, year (Country)	Geared Population	Type of food advertised	Persuasive strategy	TV exposure h/day	Percentage of Food advertised	Results
Uribe BR ¹⁵ , 2005 (Chile)	Children National public and private channels	Cereals, 32%; dairy and bread, 26%; candies and cookies, 23% sugary drinks, 7% High children audience: Cereals, 37%; candies, 34%	Entertainment, 22%; taste, 21%; health/nutrition 4%; 87% live action or animation.	NA	39	NA
Uribe BR ¹⁶ , 2012 (Chile)	Children National public and private	NA	Taste, 25%; performance, 25%; Entertainment, 16%; personal gain, 10%; health 9%	NA	31.5	NA
Olivares et al. ¹⁷ , 2003 (Chile)	5 th and 8 th elementary school children	Drinks, yogurt, fast food, snacks, chocolate, ice cream	NA	1-3 h: 40% ≥3 h: 59%	NA	Remembered advertised: drinks:15%; yogurt,13%;fast food, 13%; snacks, 10%
Olivares et al. ¹⁸ , 2012 (Chile)	8 to 14yo children	Preferred foods: cereals, chocolate, ice cream	NA	≥ 2 h: low SES:	NA	66% remembered advertised foods
Castillo-Lancellotti et al. ¹⁹ , 2010 (Chile)	Children, adolescents and family National TV channel	Pasta, flours, dairy products, sweetened beverages, cereals, chocolates, mayonnaise, margarine.	NA	NA	40% (57% to children)	12.8% were healthy 8.5 and 78.7% were moderately and unhealthy
Grovetto Mattassi et al. ²⁰ , 2013 (Chile)	Open TV	Non-alcoholic beverages, 47%; dairy products, 19.5%; candies, 9%.	NA	NA	19%	Healthy: 9% Unhealthy:64%
González y Samur ²¹ , 2011 (Chile)	Four channels General population	Dairy products, sweetened drinks, cereals:50%	NA	NA	18% (53% to school children)	Unhealthy:50%

Table III
TV Food Advertising Marketed to children in México

Author, year (Country)	Geared Population	Type of food advertised	Persuasive strategy	TV exposure h/day	Percentage of Food advertised	Results
Ramírez-Ley et al. ²² , 2009 (México)	Children	13% dairy products 13% sweetened beverages 11.5% candies 11% sweetened cereals 1% fruits	50% mascot, animation, celebrities or children in the advertisements.	2.5	22	NA
Pérez-Salgado et al. ²³ , 2010 (México)	General and children	Children: sweetened drinks, 34%; sweetened cereal, 29%; non sweetened cereals, 11%; fat, 5%	Awards, 56%; positive emotions, 25%; natural foods, 12%; celebrity TV stars, 12%; health, 9%	NA	General, 15; children, 26	NA
Díaz-Ramírez et al. ²⁴ , 2013 (Baja California, México)	Mothers of <2 yo children	Unhealthy: 67%	Mascot, animation, famous TV actor or sport men, children in the advertisements. Soap operas show	3.5 (99% of mothers, 56% of children)	25	Association between the frequency of food advertised and food consumption by the mothers (73%) and their children (66%). Food advertised consumption associated with low level of education and SES
Bacardi-Gascón et al. ⁵ , 2013 (Baja California and Chiapas, México)	Mothers of <2 yo children	Dairy, 17%; sweetened drinks, 10%; fried foods, 9%; cakes and cookies, 9%; sweets, 6%; juices, 5%; water, 4%; fruit and vegetables, 4%	Soap operas show	2.7 children 3.8 obese children	26	Association between the frequency of food advertised and food consumption by the mothers and their children. Association between hours of TV viewing and mothers BMI and children Z-BMI score.
INSP ²⁵ , 2014 (México)	General population and children	Sweetened drinks and cereals, snacks, fast food and dairy products, 76%; sweetened snacks	Most advertising geared to children on cartoon programs	NA	23	NA

Table IV
TV Food Advertising Marketed to children in Honduras and toward Hispanics in the USA

Author, year (Country)	Geared Population	Type of food advertised	Persuasive strategy	TV exposure h/day	Percentage of Food advertised	Results
Gunderson et al. ⁽²⁶⁾ , 2014 (Honduras)	General and children	33% sweetened cereals, non-sweetened dairy 12%, 11% dietary supplements, 9% fast food, 6% candies, 6% chips and snacks.	Cartoons, music, celebrities for children, pets.	NA	38 (68% for children)	Unhealthy food: 72% Unhealthy food for children: 97%
Thompson et al. ⁽²⁷⁾ , 2008 (Hispanics in the USA)	9 to 12 yo	Core foods, 36%, fast food, 31%, drinks (sport, sodas, and nutritional supplements) 29%.	Taste, happiness, health related content, Latino culture and music.	NA	15	46% showed actors eating the advertised product. 38% had child models.
Bell et al. ⁽²⁸⁾ , 2009 (Hispanics in the USA)	General and children	To children: cereals, 31%; sweets, 21%; fast food, 14%; salty snacks, 10%; dairy, 7%; sweetened drinks, 5% To General population: 29% fast food	28% novelty claim, 17% offers ("super-size")	NA	18 (32% children)	Food Advertised geared to children 76% higher than for adults Unhealthy: 64%
Barroso et al. ⁽²⁹⁾ , 2009 (Hispanics in the USA)	TV Texas	24% fast food; 21% cereals/bread; 17% sweetened drinks; 16% candy/sweets. In English channels, 1% of fruits and vegetables.	English, Spanish, and Mexican programs. In programs from Mexico higher use of narration of the product, displaying the product, animation, special effects, mascot, and celebrities		English: 15 USA Spanish: 7 Mexican TV: 40	>50% unhealthy food

Discussion

A high quantity of TV food advertised is directed to children, families and the general population in Latin America and to Hispanics in the USA. This exposure has been shown an association in food preference and purchases in families/children having a high BMI, and overweight and/or obese. Our results are similar to those reported in other regions³¹, and suggest that industry self-regulation does not work in Latin America, as has been shown in other countries³¹. In a recent systematic review conducted in Australia to assess the effect of the self-regulation started in 2009, found that during children's TV viewing times, signatories to industry initiatives advertise non-core foods at higher rates than non-signatories³². Since advertising self-regulation by the industry has failed in reducing exposure to unhealthy food to children, the WHO has established regulation norms that include the reduction of exposure to food with an unhealthy amount of fat, saturated fat, trans fatty acid, sugar and salt. It has also recommended continual monitoring to quantify the number of exposures and strategies of those foods used³³.

Peru, Chile, Colombia, Costa Rica, Brazil and Uruguay have specific regulations for healthy food. Brazil, Mexico and Peru have legislation for food advertising geared toward children; however, the results of studies conducted recently in these countries show that the governments has not implemented them. However, in 2014, the Ministers of Health at the Pan-American Health Organization summit approved a five-year plan to reduce the exposure to unhealthy food, including sweetened drinks³⁴, but not real effort to implement or to sanction those industries which are violating the legislation have been seen. In México, one of the countries in the world with highest prevalence of obesity¹⁻³, reports that the industry has developed a guide for foods considered nutritious, and approved by the government. Interestingly this include up to 30 g of sugar per 100 g of cereal products, which is twice the limit allowed in Peru, Chile and Ecuador, and six times more than limits allowed in Scandinavian countries³⁵. This policy is contradictory to the agreement signed by the Minister of Health in México in the same year, and increases the risk of obesity among all children. Increased efforts to reduce children's exposure to food advertising should be focused on advertising during children's peak viewing times and soap opera (telenovelas) shows. Additionally, consistent policies should be implemented to avoid continuance of this dangerous pandemic.

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