Rudd Report

Food marketing to children and adolescents: What do parents think?

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AUTHORS

Jennifer L. Harris, PhD, MBA

Frances Fleming Milici, PhD

Vishnudas Sarda, MBBS, MPH

Marlene B. Schwartz, PhD

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Executive Summary

Parents have the consumer power to insist that food and media companies improve their youth-targeted marketing practices and the political power to demand government action. This research is the first to examine what parents really think about food marketing to their children.

Food marketing contributes to poor diet and obesity among youth, and public health experts believe that the obesity crisis cannot be resolved without dramatic changes in food marketing to children and adolescents. The food industry has responded to these concerns with self-regulatory pledges that have produced some small changes, but questionable improvement. Further, the federal government's efforts to propose voluntary principles to guide companies have stalled due to industry opposition.

The Rudd Center for Food Policy & Obesity at Yale University conducted a survey of 2,454 parents with children ages 2-17 living at home in June-July of 2009, 2010, and 2011. An online panel of adults was used. The purpose was to assess parents' attitudes about food marketing, including its reach and influence on children and adolescents. The survey also examined parents' perceptions of possible environmental influences on their children's eating habits and their support for policies to promote healthy eating habits in children. As a non-probability based panel was used for this survey, the findings are not representative of the entire U.S. population of parents of children 2-17 years old.

PARENTS' ATTITUDES ABOUT ENVIRONMENTAL INFLUENCES ON CHILDREN'S EATING HABITS

The surveyed parents ranked the food and beverage categories marketed most often to their children fairly accurately. Fast food restaurants, cereal, and soda/pop were at the top of their lists, while milk and fruits and vegetables were at the bottom. However, parents tended to underestimate the frequency of their children's exposure to some highly advertised categories, such as other (i.e., not fast food) restaurants. They also overestimated the number of ads their children saw for the healthiest categories.

Parents were as concerned about junk food marketing to children as they were about alcohol and tobacco use in the media. The surveyed parents were highly aware of the "pester power" of food marketing and its effects on their children's food preferences. They were less likely to agree that food marketing affects their children's diet or the products they buy. Parents believed that TV commercials, in-store promotions, and cartoon characters on packages had the most impact on their children's eating habits.

Among parents surveyed, 69% rated the media as a negative influence on their children's eating habits, followed by the food industry (61%), and the government (55%).

Surveyed parents perceived a number of environmental obstacles to ensuring healthy eating habits for their children, including the expense of healthy foods, easy access to unhealthy foods, unhealthy food advertising, and children's media usage. In addition, 69% rated the media as a negative influence on their children's eating habits, followed by the food industry (61%), and the government (55%). However, they attributed 60% of the cause of increased childhood obesity to personal responsibility and 40% to the unhealthy food environment.

Black and Hispanic parents were more likely to report that their children saw and heard advertising on a daily basis for most categories of food compared

with non-Hispanic white parents. They also believed that food marketing has a greater impact on their children's eating habits and perceived more obstacles to ensuring healthy eating habits for their children. Similarly, parents with at least one overweight child were more likely to report that their children saw advertising for most food categories, and to believe that it had an impact on their children's eating habits, and to perceive a range of environmental obstacles to healthy eating by their children. There were fewer significant differences between parents based on other socio-demographic characteristics. Compared with parents of younger children, parents of adolescents tended to believe that their children saw daily marketing for more types of foods and felt that most specific types of food marketing affected their children more. They also perceived more environmental obstacles to ensuring healthy eating habits for their children.

Parents surveyed in 2011 were more likely to name internet marketing as one of the top-three places where their children see food marketing and more likely to name breakfast cereal as one of the most frequently advertised products. Parents' perceptions of how much food marketing impacts their children's eating habits increased for most types of marketing examined, as did their ratings of environmental obstacles to ensuring healthy eating habits. The percent of parents who indicated that the food industry, government, and local communities were a negative influence on their children's eating habits was also higher in 2011 versus 2009.

SUPPORT FOR POLICIES TO PROMOTE HEALTHY EATING

Approval was highest for policies that would set nutrition standards for foods sold in schools (supported by 72-81% of parents) and policies that would promote healthy eating in children's media (70-73%).

Among this sample of parents, there was broad support for nearly all proposed actions to promote healthy eating among children. Approval was highest for policies that would set nutrition standards for foods sold in schools (supported by 72-81% of parents) and policies that would promote healthy eating in children's media (70-73%). The majority of parents surveyed also endorsed policies to restrict food marketing to children, with highest support for prohibiting advertising on school buses (69%) and requiring companies to fund advertising for healthy and unhealthy foods equally (68%). Parents also approved of regulations to limit specific types of unhealthy food marketing to children under 12, including advertising/sponsorships in schools (65%), mobile marketing (65%), TV commercials (63%), viral marketing (62%), and internet advertising (61%).

Policy makers, the public health community, and food and media companies have a significant opportunity to take action and support parents' efforts to raise healthy children.

Black and Hispanic parents were more supportive of the majority of actions to promote healthy eating habits and limit unhealthy food marketing to children than were white non-Hispanic parents. Parents of overweight children showed higher support than other parents for some, but not all, proposed policies. In many cases, parents were more supportive of policies to limit types of food marketing that were likely to disproportionately reach their own children. For example, middle- and higher-income parents and parents of adolescents expressed greater support for regulating marketing in digital media, and parents of preschoolers were more likely to support prohibiting all advertising on TV programs targeted to children under 8. Both conservative and liberal parents supported most of the policies examined, though liberal parents showed greater support for approximately half of the proposed actions.

From 2009 to 2011, support for one specific policy action increased: disallowing games or other child-oriented features on unhealthy food websites. Support also increased for regulations to limit more than half of specific types of unhealthy food marketing to children, including TV commercials and promotions in stores.

CONCLUSIONS

In 2010, the White House called for key actors (food and beverage companies, restaurants, retailers, trade associations, media, government, and others) to create a "food marketing environment that supports, rather than undermines, the efforts of parents and other caregivers to encourage healthy eating among children and prevent obesity."[1] Parents in this survey perceived numerous environmental influences, including food marketing, that make it difficult for them to ensure healthy eating habits for their children. They also expressed broad support for limiting unhealthy food marketing and other policies to help them encourage their children to eat healthy. Policy makers, the public health community, and food and media companies have a significant opportunity to take action to improve the unhealthy food marketing environment that surrounds children and support parents in their efforts to raise healthy children.

Introduction

Experts believe that public health efforts to reduce obesity rates cannot succeed without substantial improvements in the food marketing environment that surrounds children and adolescents,[2-4] and that food industry self-regulation is unlikely to produce the meaningful change required.[5-6]

Young people are surrounded by food marketing messages. In 2011, on TV alone, adolescents (12-17 years) viewed 16.2 food ads per day on average, and children (2-11 years) viewed 12.8 food ads per day.[7] In 2006, food companies spent $1.6 billion on marketing to children and adolescents, with 46% of their youth-targeted marketing budgets dedicated to TV.[8] In their zeal to create lifelong loyal customers, they have expanded youth-targeted marketing beyond TV advertising. Food companies also spent $195 million on youth-targeted marketing in stores, including product packaging (12% of the total); $186 million marketing in schools (11%); and $130 million on youth-targeted events and sports sponsorships (8%).[9] In addition, they spent $77 million on youth-targeted digital marketing, including company-sponsored websites, advertising on third-party websites, and viral marketing.[10] However, new forms of digital marketing have emerged since 2006, including social media (e.g., Facebook, Twitter) and mobile marketing (e.g., branded smartphone apps, text messaging), and food companies have quickly adopted these techniques to target their messages to young people.[11-14]

The majority of food marketing that young people see or hear promotes calorie-dense nutrient-poor foods and beverages. On TV, 86% of food ads seen by children in 2009 were for products high in sugar, saturated fat, and/or sodium.[15] Just four food categories (fast food restaurants, sugary cereals, other restaurants, and candy) made up 58% to 60% of TV food ads seen by children and adolescents. Other forms of food marketing, including branded advergames and promotions on product packages, promote primarily calorie-dense nutrient-poor foods.[17-19] In contrast, food companies spent just $11 million marketing fruits and vegetables to youth in 2006 (<1% of the total).[20] Substantial marketing of unhealthy food and beverages has helped to fuel poor diet and rising obesity rates among youth in the United States and around the world.[21-22] Marketing increases young people's preferences for advertised foods and their requests to parents (i.e., "pester power"). In addition, advertising increases their consumption of fast food, sugary drinks, and other frequently advertised food categories.[23-25]

To address concerns about the harmful effects of food advertising to children, the U.S. Council of Better Business Bureaus established the Children's Food and Beverage Advertising Initiative (CFBAI) in 2006.[26] As of mid-2012, 16 food companies have voluntarily pledged to market only healthier dietary choices in child-directed advertising. However, recent evaluations of food advertising to children on TV demonstrate little progress in reducing children's exposure to advertising for unhealthy foods. From 2004 to 2011, children viewed just 8% fewer food, beverage and restaurant ads in total, while adolescents viewed 22% more ads.[27] The nutritional quality of food advertising children see on TV improved slightly; in 2003, 94% of food ads seen by children promoted high-fat, sugar, or sodium products versus 86% in 2009.[28] Similarly, 73% of food commercials during children's programming in 2009 featured nutritionally-poor products, compared with 84% in 2005.[29] From 2008 to 2011, cereal companies improved the overall nutritional quality of 13 out of 16 cereals advertised to children, but child-targeted cereals (such as Reese's Puffs, Froot Loops and Cocoa Pebbles) still contain 57% more sugar, 52% less fiber and 50% more sodium than cereals advertised to adults.[30]

In the United States, numerous limitations in the CFBAI substantially reduce its potential effectiveness, including insufficient nutrition standards to identify healthy foods that should be advertised to children; definitions of "child-directed advertising" that exclude advertising in media with large child audiences, as well as common forms of marketing to children (e.g., cartoon characters on product packaging, in-store promotions, and many in-school marketing programs); and defining children as 2- to 11-year-olds, with no limits on advertising to children 12 years and older. To address these limitations, experts from four U.S. government agencies (CDC, FTC, FDA and USDA) proposed principles for marketing foods to children that companies could voluntarily follow if they wished to help parents encourage their children to make healthier dietary choices.[31] These principles received overwhelming support from the public health community, and the FTC received 28,000 positive write-in comments (vs. 1,000 comments in opposition).[32] However, negative comments from food and beverage companies and industry groups, and the estimated $175 million these groups spent on federal lobbying from 2009, appeared to dampen the FTC's desire to officially propose voluntary standards. In March 2012, the Commissioner of the FTC reported that the proposed standards were no longer an agency priority.[33]

But what do parents think about food marketing to their children? Parents purchase an estimated $58 billion in food and beverages annually.[34] Parents also are important political constituents: 45% of families in the United States have children under 18 years old and 60 million U.S. adults live in households with their own children.[35] If parents demand that food companies change their youth-targeted marketing practices or that government step in if companies do not improve voluntarily, food marketing to children would change.

PUBLIC ATTITUDES ABOUT FOOD MARKETING TO YOUTH

To begin to understand parents' attitudes about food marketing, the Rudd Center conducted focus groups with parents in 2008.[36] These groups indicated that parents generally are not aware of food marketing and its negative impact on their children. However, when presented with examples of current food marketing practices (e.g., company-sponsored advergame websites, mobile game apps, Facebook pages) many concluded that food marketing to children must improve. Some parents supported government-imposed solutions and wanted to personally engage in actions to address the issue, but many parents also perceived potential barriers to the effective implementation of proposed solutions.

A few polls have assessed attitudes about food and beverage advertising as a contributor to childhood obesity. For example, in a study published in 2004, 41% of a nationally representative sample of adults believed that childhood obesity was a very serious problem, and the majority believed that junk food, fast food, TV viewing, and video games were significant contributors.[37] In a 2004 ABC News/Time Magazine poll, 65% of adults agreed that marketing of sweets to children causes obesity.[38] A 2007 Wall Street Journal/Harris Interactive poll found that 76% of parents agreed that food advertising directed towards children is a major contributor to rising rates of childhood obesity.[39]

Additional polls assessed public opinions about policies to reduce childhood obesity and found broad support for actions to reduce unhealthy food advertising to children. In 2004, 56% of adults supported a ban on advertising high-fat, high-sugar foods to kids.[40] In 2007, 63% of parents agreed that popular characters from television and movies should not be used to market products to kids, and 45% agreed that all advertising to children under the age of 12 should be prohibited.[41] In 2010, 66% of voters favored limiting how companies can advertise and market unhealthy foods and beverages to children, similar to what was done for smoking.[42]

Research also has examined factors that contribute to support for restrictions on marketing and other obesity-prevention policies. Among parents, greater awareness of the extent of food marketing to their children predicted perceptions that food marketing negatively impacted their children, which was highly correlated with support for restrictions on food marketing to children.[43] Perceptions that social institutions (i.e., government, schools, and local communities) contribute to childhood obesity also predicted support for marketing restrictions. Similarly, beliefs that obesity is caused by too much advertising for unhealthy food and that manufacturers and marketers of unhealthy foods are responsible for addressing obesity were strongly correlated with support for price-related obesity-prevention policies.[44] Beliefs about causes of the obesity crisis that place low blame on individuals (e.g., manipulation by the food industry, a toxic food environment) also predicted support for prohibiting high-fat, high-sugar food advertising on media watched primarily by children.[45]

Nonetheless, most adults continue to believe that individuals are responsible for solving the obesity problem. For example, 91% think that parents have a lot of responsibility for reducing childhood obesity, compared with 32% who think that food companies have a lot of responsibility.[46] Most also agree that individuals in their choice of diet and lack of exercise are responsible for addressing the obesity problem (3.96 on a scale of 1 to 4), compared with much lower agreement that marketers and manufacturers of unhealthy foods are responsible (2.80 and 2.75).[47]

Although few empirical studies have directly examined what parents think about food marketing to their children, these previous findings indicate that parents are generally supportive of a variety of policies to restrict food marketing to children. [48-50] However, they also suggest that parents are not aware of the extent of unhealthy food marketing and its negative impact on their children and that many fail to recognize how environmental factors (including food marketing) contribute to the problem of childhood obesity.[51-53]

Survey of parents' attitudes about food marketing to their children

Since 2008, The Rudd Center for Food Policy & Obesity at Yale University has conducted an annual survey to assess attitudes about food marketing to children, beliefs about environmental factors affecting children's eating habits, and support for policy actions to encourage healthy eating for young people and reduce unhealthy food marketing to children. In 2009, we published the results of our 2008 pilot survey.[54] This report presents the findings from parents surveyed in 2009, 2010, and 2011.

TABLE 1. SURVEY QUESTIONS

Questions	Response options
Awareness of food marketing	
Top 3 places where children see or hear marketing for food and beverages	Open-ended
Top 3 types of food and beverages children see being marketed	Open-ended
How often children see or hear marketing for different kinds of food and beverages	Daily, weekly, several times a month, once a month or less
Perceived impact of food marketing	
Concern about potential effects of media on children	Scale (1=not concerned at all, 10=extremely concerned)
Agreement with statements about the potential impact of food and beverage marketing to children	Scale (1=strongly disagree, 10=strongly agree)
Level of impact that different types of food and beverage marketing have on children's eating habits	Scale (1=no impact at all, 10=very strong impact)
Perceived environmental influences	
Proportion of increased obesity rates among children due to personal responsibility (individual parents or children) versus unhealthy food environment (school food, advertising, fast food restaurants, expense of healthy food, etc.)	Sliding scale (allocate 10 points in total)
Influence of different institutions and people on children's eating habits	Scale (1=very bad influence, 10=very good influence)
Obstacles to ensuring that children have healthy eating habits	Scale (1=not at all an obstacle, 10= very much an obstacle)
Support for policy actions	
Support for actions to promote healthy eating habits to children	Scale (1=definitely would oppose, 10=definitely would support)
Support for regulations to limit specific types of marketing of unhealthy foods to children under 12	Scale (1=definitely would oppose, 10=definitely would support)

Introduction

The online survey was conducted during June-July of 2009, 2010, and 2011 using an online panel of adults. Respondents included parents with children 2-17 years old living at home and non-parents who have responsibility for decisions regarding food and beverage choices in their households. This report presents the results of the parent sample. The results also compare responses between individuals in different socio-demographic categories. Quotas were established for gender, income groups, and black and Hispanic parents to enable comparisons between groups. The sampling procedures, sample size, data collection period, and most measures remained consistent over the three years to assess changes over time. A non-probability based panel was used for this survey. Therefore, the findings are not representative of the entire U.S. population of parents of children 2-17 years old. The results were not weighted to adjust for oversampling of some demographic groups (e.g., female, Hispanic, and black parents). Appendix A provides detailed information about the sampling methods and survey instrument.

Table 1 summarizes the questions that respondents answered in four topic areas: awareness of food marketing, perceived impact of food marketing, perceived environmental influences on childhood obesity and healthy eating, and support for policy actions. *Table 2* provides definitions of the socio-demographic characteristics used for between-group comparisons, including race/ethnicity of parents, characteristics of their children (overweight/obese and age), and other socio-demographic characteristics (household income, parents' political orientation, and parents' gender).

TABLE 2. COMPARISON GROUPS

Socio-demographic categories		Definition
Race/ethnicity	White	Parent identified self as Caucasian only (non-Hispanic).
	Black	Parent identified self as African-American, including those who also identified as another race or ethnicity.
	Hispanic	Parent identified self as Latino/Hispanic, but not African-American, Asian, or other.
Overweight or obese child		Parents of one or more children with a BMI-for-age in the 85th percentile or higher, according to the CDC growth charts. BMI-for-age was calculated for each child using parents' reports of their children's gender, age, height, and weight.
Age of oldest child		Age of the oldest child between the ages of 2 and 17 living at home reported by the parent. Grouped by 2-5 years, 6-11 years, and 12-17 years.
Household income		Annual household income reported by the parent. Grouped by lower- ($15,000-39,999), middle- ($40,000-74,999), and higher-income ($75,000+).
Political orientation		Parent's reported political orientation on a scale of 1 (strongly liberal) to 7 (strongly conservative). Grouped by liberal (1-3), middle-of-the-road (4), and conservative (5-7).
Parent's gender		Reported by parent.

Results

Since 2008, The Rudd Center for Food Policy & Obesity at Yale University has conducted an annual survey to assess attitudes about food marketing, beliefs about environmental factors affecting children's eating habits, and support for policy actions to encourage healthy eating and reduce unhealthy food marketing to young people. This report presents the findings from parents surveyed in 2009, 2010, and 2011.

The total sample included 2,454 participants who had children between the ages of 2 and 17 living at home and were involved in decisions about food and beverage choices for their household (70% female), approximately 800 parents responded to the survey each year. On average, parents in the sample were 39 years old, and 66% reported being married. Parents averaged two children living at home: 40% had at least one child ages 2 to 5; 42% had at least one child ages 6 to 11; and 52% had at least one child ages 12 to 17. Their average household income was $59,000, and 76% had some college education.

Table 3 describes the socio-demographic characteristics of the total sample of parents. They were 52% white non-Hispanic, 21% black, and 22% Hispanic. Approximately one-third (34.5%) of these parents' children were overweight or obese, somewhat higher than the national rate of 31.8%,[55] but consistent with the higher representation of black and Hispanic parents in this sample. In addition, nearly one-half of parents (46%) had at least one child who was overweight or obese, including 42% of white non-Hispanic parents, 55% of black parents, and 49% of Hispanic parents. Approximately half of parents classified themselves as moderate in political orientation, while one-third considered themselves to be conservative.

TABLE 3. SAMPLE CHARACTERISTICS

		2009	2010	2011	Total
		n	n	n	Percent
Gender	Female	631	565	520	70.0%
	Male	228	232	278	30.0%
Race/ethnicity	White	448	377	462	52.4%
	Black	177	186	157	21.2%
	Hispanic	187	193	166	22.2%
	Other*	47	41	13	4.1%
Overweight or obese child	Yes	373	328	331	45.8%
	No	432	390	398	54.2%
Age of oldest child	2 to 5 years	156	148	149	18.5%
	6 to 11 years	242	247	244	29.9%
	12 to 17 years	461	402	405	51.7%
Annual household income	Less than $40,000	320	334	298	38.8%
	$40,000 to $74,999	314	283	294	36.3%
	$75,000 or more	225	180	206	24.9%
Political orientation	Liberal	179	132	156	19.0%
	Moderate	424	416	366	49.1%
	Conservative	256	249	276	31.8%
Total		859	797	798	

*Excluded from race/ethnicity analysis

The following sections highlight our findings regarding, 1) parents' awareness of food marketing that their children see and hear; 2) their concern about the impact of food marketing on their children; 3) perceived environmental influences on childhood obesity and their own children's eating habits; 4) parents' support for a range of public policies related to nutrition and food marketing; and 5) changes from 2009 to 2011. Results tables (see *Appendix B)* present responses to all survey measures for the total sample and for each of the socio-demographic groups examined, as well as significant differences between groups and over time.

Awareness of food marketing to children

When asked to name the top three places (other than TV) where their children saw or heard food marketing in the past month, parents listed the internet, radio, stores, billboards and magazines most often (see *Table 4*). Radio topped the list in 2009, but the internet moved to the top in 2010 and 2011. Billboards, stores, and magazines were mentioned by 23% to 34% of parents. Parents also named the top three types of food and beverages in marketing that their children have seen in the past month (see *Table 5*). Juice/fruit drinks and fast food topped the list in 2009, but fast food was mentioned most frequently in 2010 and 2011. Soda/pop also ranked in the top three all three years. In 2011 the percentage of parents mentioning juice/fruit drinks declined, while cereal mentions increased. Desserts were also among the most frequently mentioned categories all three years.

Table B1 (see *Appendix B)* presents the percent of parents who believed their children saw or heard marketing for specific foods and beverages at least once per day during the past month. Similar to the open-ended responses, fast food, cereal, and soda/pop were in the top tier with 50% or more of parents believing their children saw marketing for these products daily. Sports drinks, candy, cookies/crackers, potato chips/salty snacks, and fruit drinks comprised the second tier, with 35% or more of parents reporting daily exposure. Parents were least likely to report that their children saw marketing for milk and fruits and vegetables daily. *Table B2* (see *Appendix B)* lists the food and beverage products that parents believed their children saw or heard marketed the least. More than half of the parents surveyed reported that their children saw advertising for fruits and vegetables less than once per week. In addition, 35% or more of parents reported that their children saw marketing for milk, bottled water, energy drinks, other (i.e., not fast food) restaurants, fruit snacks, and prepared foods/meals less than once per week.

DIFFERENCES BY SOCIO-DEMOGRAPHIC CATEGORIES

Race/ethnicity. Differences were found between white non-Hispanic, black, and Hispanic parents in perceptions of food and beverage marketing their children saw or heard most often in the past month. Black parents as compared to white parents believed their children saw or heard significantly more marketing for all food and beverage categories (see *Figure 1*). In almost all cases, Hispanic parents also reported that their children saw significantly

TABLE 4. TOP PLACES WHERE CHILDREN SEE/HEAR FOOD MARKETING (AFTER TV)

(% of parents mentioning on a voluntary basis)

	2009	2010	2011
Internet	30%	32%	37%
Radio	42%	30%	34%
Billboards	28%	27%	32%
In stores	34%	31%	33%
Magazines	23%	23%	23%

Significant change versus 2009 (p<.05)

TABLE 5. TOP FOODS AND BEVERAGES IN ADVERTISING THAT CHILDREN SEE OR HEAR

(% of parents mentioning on a voluntary basis)

	2009	2010	2011
Fast food	42%	44%	41%
Soda/pop	35%	27%	35%
Juice/fruit drinks	42%	41%	37%
Cereal	27%	24%	29%*
Desserts	19%	21%	24%

Significant change versus 2009 (p<.05)

*versus 2010

more marketing than white parents reported, but somewhat less than black parents. The order of most- to least-advertised food and beverages was similar across race and ethnicity with the exception of fruit drinks, which ranked fourth highest in daily advertising exposure for black and Hispanic parents, but tenth for white parents.

When asked about food and beverage categories that their children saw marketed infrequently, white parents were more likely than black and Hispanic parents to think that their children saw or heard marketing for fruits and vegetables, milk, and bottled water less than once per week. Approximately 60% of both black and white parents reported that their children saw energy drink ads less than once a week.

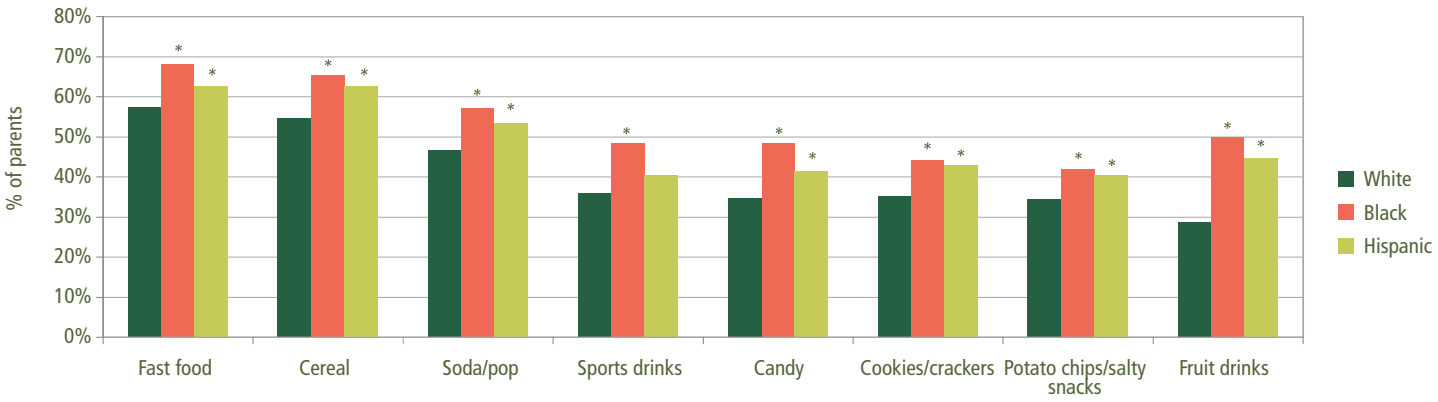
Parents of overweight children. Significantly more parents with at least one overweight or obese child, as compared to other parents, believed that their children saw advertising for most categories of food and beverages at least once a day. Although there were no differences according to their children's weight status for the two most frequently advertised product categories (i.e., fast food restaurants and cereal), parents of overweight children were less likely to report that their children infrequently saw marketing for healthier food categories.

Age of oldest child. Parents of older children were more likely to report that their children saw daily marketing for most food and beverage categories. As the age of the oldest child in the household increased, the percent of parents who reported daily exposure to advertising for fast food, soda/pop, energy drinks, and other restaurants increased. However, no significant differences were found by age of oldest child for some products, including fruit drinks, yogurt, 100% juice, and fruit snacks. Even parents of preschoolers believed their children saw daily marketing for some categories: 50% or more reported daily exposure to fast food and cereal marketing; 41% reported daily exposure to fruit drinks; and 36% reported daily exposure to soda/pop marketing.

Other socio-demographic characteristics. For most food categories, parents in lower-income households were more likely to report that their children saw marketing on a daily basis than parents at higher income levels. When examining political orientation, more moderate parents (vs. liberal and conservative parents) reported that their children saw or heard daily marketing for approximately one-half of food categories. There were few differences in perceptions of children's exposure to marketing by parents' gender. However, more fathers than mothers reported daily exposure to marketing for soda, candy, and energy drinks, while more mothers reported that their children received daily exposure to yogurt advertising.

FIGURE 1. CATEGORIES OF FOODS AND BEVERAGES THAT CHILDREN SEE ADVERTISED MOST OFTEN

(% of parents reporting that their children see/hear ads for these foods at least once per day)



* *Significantly higher ($p < .05$)*

CHANGES OVER TIME

There were few changes in parents' awareness of food marketing to their children from 2009 to 2011, with a few exceptions. Parents reporting daily exposure to marketing for energy drinks went down from 38% in 2009 to 31% in 2011, and daily exposure to prepared foods/meals marketing decreased from 34% to 29%. More parents reported that their children viewed marketing for ice cream/frozen desserts every day in 2011 (34%) versus 2009 (31%).

Perceived impact of food marketing to children

The parents in this survey expressed moderate concern about most youth-oriented media issues evaluated (6.6 to 7.9 on a 10-point scale) (see *Table 6*). Parents were most concerned about sexual permissiveness, materialism, violence, and thin models in the media. However, marketing and food-related issues ranked in the middle of the list, including media's influence on encouraging children to want/buy products (#5), marketing junk food to children (#7), and encouraging bad eating habits (#8). Use of alcohol and tobacco ranked sixth and ninth.

Table B3 (see *Appendix B)* presents parents' agreement with statements about how food marketing affects their children. Parents expressed moderate agreement with all statements provided (6.0 to 8.2 on a 10-point scale). They were most likely to agree that food marketing encourages children to ask parents for advertised foods and beverages, affects everyone, and increases preferences for the types of foods advertised. There was also fairly high agreement that food marketing promotes unhealthy foods, encourages snacking, leads to food cravings, and creates eating habits for life. Agreement that food marketing causes children to eat more, encourages large portions, and affects what you buy for your children were lowest. When asked to rate the impact of different types of beverage and marketing on their children's eating habits, TV commercials were rated the highest (7.4 overall), followed by promotions in stores and cartoon characters on packages (6.2 to 6.4), while mobile marketing, viral marketing, social media, and internet/banner ads were considered to have low impact (3.3 to 4.4) (see *Table B4, Appendix B)*.

DIFFERENCES BY SOCIO-DEMOGRAPHIC CHARACTERISTICS

Race/ethnicity. As evidenced by higher scores for most statements (see *Figure 2)*, black and Hispanic parents perceived food marketing to have a greater impact on their children compared with white non-Hispanic parents. They also rated the impact of all specific types of marketing higher, with the exception of TV commercials.

Parents of overweight children. Parents with overweight children expressed higher agreement than other parents with approximately half of statements about how food marketing affects their children, including food marketing encourages snacking between meals, creates eating habits for life, makes parents' jobs harder, causes children to eat more, encourages large portions, and affects what you buy for your children. Parents of overweight children also rated the impact of specific types of food marketing on their children's eating habits higher than other parents. However, there were two exceptions: parents with overweight children perceived less impact from cartoon characters on packages and advergames.

Age of oldest child. No differences were found between parents of older and younger children in their agreement with statements about how food marketing impacts their children. However, parents of children and adolescents perceived that most types of food marketing had a greater impact on their children's eating habits than did parents of preschoolers (see *Figure 3)*. Some of the biggest differences were found for sponsorships, social media, viral marketing, and mobile marketing. There were two notable exceptions: parents of preschoolers and children believed that cartoon characters on

TABLE 6. CONCERNS ABOUT MEDIA'S EFFECTS ON CHILDREN

(1=not concerned at all, 10=extremely concerned)

	2009	2010	2011
Sexual permissiveness	7.9	7.7	7.8
Materialism	7.7	7.6	7.6
Violence	7.8	7.5	7.5
Too-thin models	7.5	7.3	7.5
Encourages children to want/buy products	7.3	7.3	7.4
Alcohol use	7.2	7.1	7.3
Marketing junk food to children	7.2	7.1	7.2
Encourages bad eating habits	7.1	7.1	7.2
Tobacco use	7.1	6.9	7.1
Gender stereotypes	6.8	6.7	6.8
Marketing in general	6.6	6.8	6.6
Racial/ethnic stereotypes	6.6	6.6	6.6

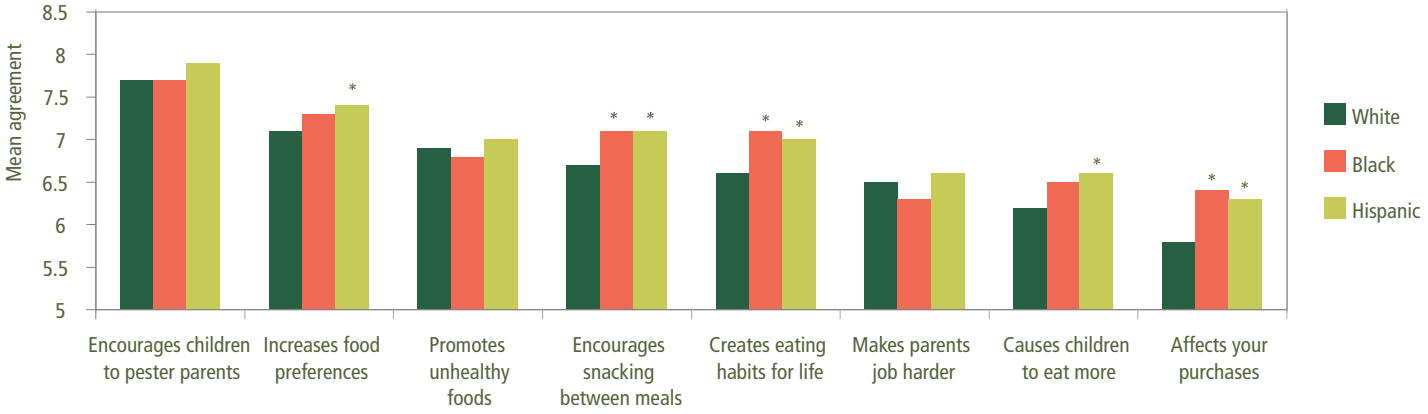
packages had a greater impact, and parents of 6- to 11-year-olds believed that toys/giveaways had a greater impact.

Political orientation. Liberal parents reported higher agreement than moderate or conservative parents with most statements about how food marketing affects their children. However, conservative parents were more concerned about the impact of food company websites, sponsorships, and social media on their children's eating habits than liberal parents, and both conservative and moderate parents were more concerned about the impact of viral and mobile marketing.

Other socio-demographic characteristics. There were no significant differences by household income in parents' agreement with statements about the effects of food marketing on their children or the impact of specific types of food marketing. Mothers were more likely to agree that food marketing encourages children to ask parents for advertised foods,

FIGURE 2. IMPACT OF FOOD MARKETING ON CHILDREN BY RACE/ETHNICITY

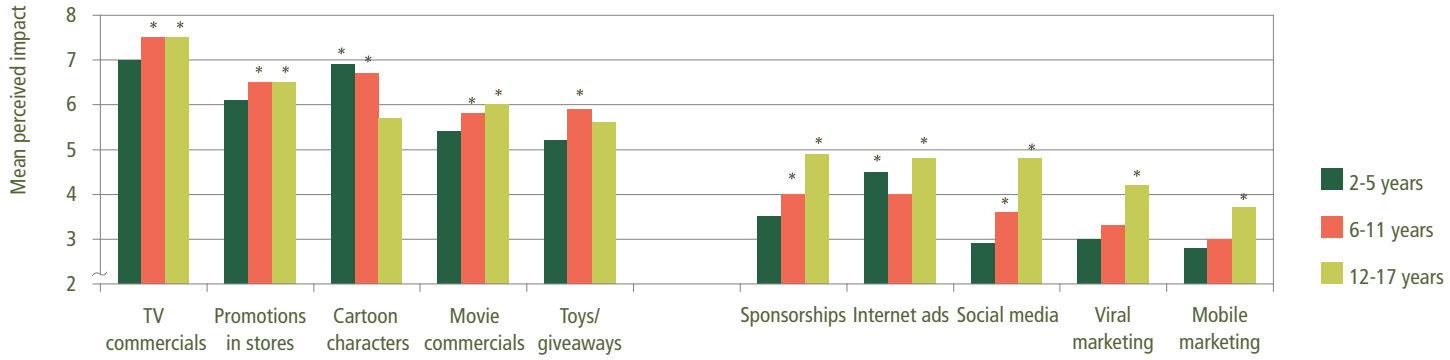
(1=strongly disagree, 10=strongly agree)



* *Significantly higher ($p < .05$)*

FIGURE 3. IMPACT OF DIFFERENT TYPES OF FOOD MARKETING ON CHILDREN BY AGE OF OLDEST CHILD

(1=no impact, 10=strong impact)



* *Significantly higher ($p < .05$)*

affects everyone, and leads to food cravings; but fathers were more concerned about the impact of specific types of marketing on their children, including product placements, food/beverage logos on other products, advertising in schools, and celebrity endorsements.

CHANGES OVER TIME

From 2009 to 2011, parents' ratings of the impact of most specific types of marketing increased. Perceived impact of the lowest rated type of marketing (mobile marketing) increased from 2.9 in 2009 to 3.7 in 2011, and perceived impact of promotions in stores (the highest rated type of marketing other than TV) increased from 6.2 to 6.8. The only types of marketing that parents did not rate significantly higher in impact in 2011 versus 2009 were TV commercials and cartoon characters on packages, which were among the types of marketing with the highest perceived impact all three years. Parents' agreement that food marketing encourages large portions also was higher in 2011, but there were no other significant changes in parents' agreement with statements about how food marketing affects their children.

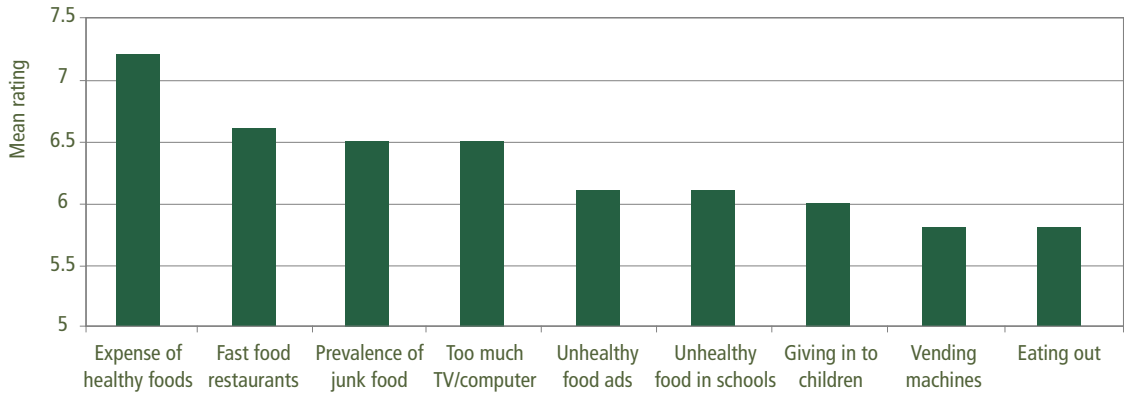
Perceived environmental influences

When asked to attribute responsibility for the increase in obesity rates among children, parents assigned 60% of the blame to personal responsibility and 40% to the unhealthy food environment (such as school food, advertising, and too many fast food restaurants). This 60/40 attribution was consistent across race and ethnicity, age of oldest child, household income, political orientation, gender, and year. However, parents with overweight children attributed higher responsibility to the unhealthy food environment (43%).

Parents perceived many obstacles to ensuring healthy eating habits for their children (see *Figure 4* and *Table B6, Appendix B*). The top perceived obstacles included expense (of healthy food and organic food), easy access (fast food restaurants, prevalence of snack/junk foods, unhealthy food in schools, vending machines), children's media usage, and unhealthy food advertising. Parents in this sample rated these obstacles from 5.4 to 7.3 (on a 10-point scale). They also perceived themselves to be an obstacle by giving in to their children's requests for healthy food and being poor role models with their own eating habits (rated 5.6 to 6.2). More than 60% of parents overall believed that the media and the food industry have a negative influence on their children's eating habits, and more than 50% reported that their children's peers and government have a negative influence (see *Table B7, Appendix B*). Just 32% reported that schools have a negative influence and local communities were rated negatively by 42%.

FIGURE 4. OBSTACLES TO ENSURING HEALTHY EATING HABITS IN CHILDREN

(1=not at all an obstacle, 10=very much an obstacle)



DIFFERENCES BY SOCIO-DEMOGRAPHIC CHARACTERISTICS

Race/ethnicity. Black and Hispanic parents perceive more obstacles to ensuring healthy eating habits for their children. With the exception of expense and not enough time for family meals, black and Hispanic parents rated all potential obstacles higher than white non-Hispanic parents rated them. In addition, black and Hispanic parents rated 13 of 16 obstacles at 6.0 or higher (out of 10), while white parents only rated one-third of obstacles at 6.0 or higher. However, white parents were more likely to indicate that institutions had a negative influence on their children's eating habits, including media, government, and local communities (see *Figure 5*). Although the percentage is small, significantly fewer Hispanic parents reported themselves to be a negative influence on their children's eating habits.

Child characteristics. Parents of overweight children rated the majority of potential obstacles to healthy eating higher than other parents rated them. Significantly more parents of overweight children also perceived the media to be a negative influence on their children's healthy eating habits, although no other significant differences versus other parents were found in their negative ratings of institutions or individuals. The age of their oldest child was also related to parents' perception of obstacles to healthy eating. Parents of adolescents were more likely to perceive obstacles related to unhealthy food access (i.e., prevalence of junk food, school foods, eating out of house, vending machines), media usage, and peer pressure as compared to parents of younger children. Parents with younger children were more likely to perceive themselves to be a negative influence on their children's eating habits.

Household income. The expense of organic and healthy foods was rated significantly higher as an obstacle to healthy eating by lower- and middle-income parents. Lower-income parents also rated their own behavior, such as giving in to their children's requests and being a poor role model, as more of an obstacle, and saw themselves and their families as more of a negative influence on their children's healthy eating habits. Lower-income parents also perceived the prevalence of vending machines and the lack of community programs as greater obstacles to their children's healthy eating. No differences by income were found in perceived negative influence of the media or the food industry, but lower- and middle-income parents rated the negative influence of the government and their local community higher than did higher-income parents.

Other socio-demographic characteristics. There were few differences in perceived obstacles to ensuring healthy eating between parents of different political orientations, but a higher percentage of liberal parents perceived the media and food industry to be a negative influence on their children. Moderate parents also perceived the government to be more of a negative influence than did liberal parents. Mothers were more likely to perceive the expense of healthy and organic food to be an obstacle, while fathers perceived eating out of the house and peer pressure to be greater obstacles. Mothers and fathers did not differ in their ratings of different institutions as a negative influence.

FIGURE 5. NEGATIVE INFLUENCE OF DIFFERENT INSTITUTIONS ON HEALTHY EATING BY RACE/ETHINITIY

(% of parents rating institution as a negative influence)

* *Significantly higher ($p < .05$)*

CHANGES OVER TIME

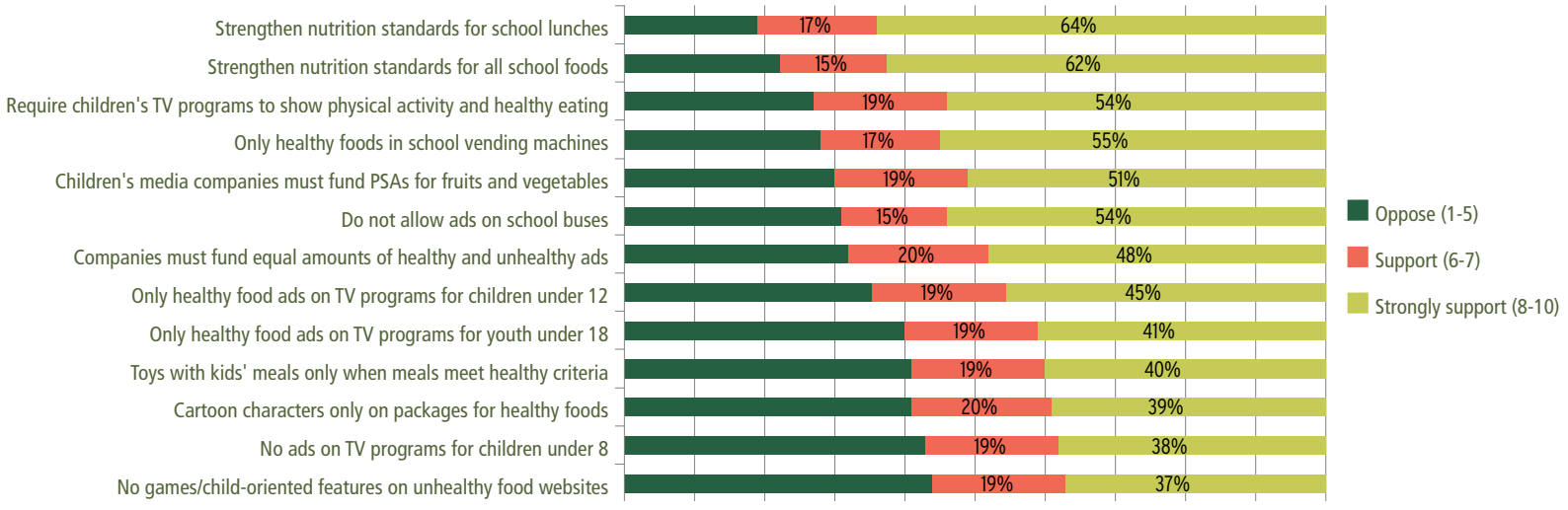
Table B8 (see *Appendix B)* shows that parents' ratings of more than half of obstacles increased from 2009 to 2011, including the expense of healthy foods, unhealthy food advertising, unhealthy food sold in schools, and not enough community programs. There was also an increase in the percent of parents who rated the food industry, government, and local communities as a negative influence in promoting healthy eating habits.

Support for policies regarding food marketing to children

The majority of parents surveyed supported nearly all policy-related actions that are currently being taken or could be taken to promote healthy eating habits among children (see *Appendix Table 9* and *Figure 6*). Three school-related food policies were supported by more than 72% of parents: stronger nutrition standards for school lunches, stronger nutrition standards for all foods and beverages sold at schools, and only allowing healthy foods in school vending machines. There was also high support for policies promoting healthy habits to children in the media, including requiring children's TV programs to show children being physically active and eating healthy food and requiring media companies to fund public service announcements that promote fruits and vegetables. Actions that required TV advertising to promote healthy foods were supported by 60% or more of parents surveyed, and 57% of parents supported no TV advertising at all to children under 8. Two-thirds of parents surveyed favored not allowing advertising on school buses, while support for regulating other types of marketing to children (games on unhealthy food websites, product packaging, and toy giveaways) was somewhat lower.

As shown in *Table B10* (see *Appendix B)*, more than 50% of parents surveyed also supported regulations to limit all specific types of marketing for unhealthy foods to children under 12. Support for limiting advertising/sponsorships in schools ranked at the top with 65% of parents supporting such regulations. Many newer forms of marketing were also in the top-five of parent support, with regulations to limit mobile, viral, and internet marketing at #2, #4, and #5, respectively. TV commercials came in third with 63% of parents supporting limiting unhealthy foods in TV advertising to children. In addition, 56% to 59% of parents surveyed supported regulations to limit unhealthy food marketing to children in commercials before movies, advergames, product placements, cartoon characters on packages, social media, and toys/giveaways.

FIGURE 6. SUPPORT FOR ACTIONS TO PROMOTE HEALTHY EATING HABITS



DIFFERENCES BY SOCIO-DEMOGRAPHIC CHARACTERISTICS

Race/ethnicity. Black and Hispanic parents were more supportive than white non-Hispanic parents of all but one of the proposed actions to promote healthy eating among children. However, white parents were significantly more likely to favor prohibiting advertising on school buses. Black and Hispanic parents also were more supportive of most regulations limiting specific types of marketing. However, there were no differences by race or ethnicity in parents' support for regulations to limit marketing to children in schools or several digital forms of marketing (i.e., mobile, viral, internet, and social marketing). Black and Hispanic parents had the highest support for limiting unhealthy foods in TV commercials, advertising in schools, and mobile marketing.

Parents of overweight children. Parents of overweight children expressed higher support for regulating non-television forms of marketing, including cartoon characters on food packaging, toy giveaways with kids' meals, and child-oriented features on unhealthy food websites. They also were more likely to support requiring companies to fund equal amounts of healthy and unhealthy food advertising. Similarly, parents of overweight children showed stronger support for regulations to limit specific types of non-television marketing, including advergames, cartoon characters on packages, logos on other products, websites, and sponsorships.

Age of oldest child. There were some differences in support for policies by age of parents' oldest child. Parents of children ages 6-11 were more supportive of regulating school vending machines, while parents of 2- to 5-year-olds expressed more support for only allowing healthy food advertising on children's TV and not allowing any advertising on TV programs for children under 8. Parents of adolescents expressed greater support for regulations limiting digital marketing (i.e., mobile, viral, internet, and social media

TABLE 7. SUPPORT FOR ACTIONS TO PROMOTE HEALTHY EATING HABITS BY POLITICAL ORIENTATION

		Political orientation		
		Liberals	Moderates	Conservatives
School food environment		Percent	Percent	Percent
1	Strengthen nutrition standards for school lunches	87%	80%	79%
2	Strengthen nutrition standards for all school foods	84%	77%	76%
4	Allow only healthy foods in school vending machines	76%	73%	69%
15	Allow only non-food rewards in classrooms	58%	54%	54%
17	Do not allow flavored milk in schools	44%	41%	44%
Promote healthy eating in the media				
3	Require children's TV programs to show physical activity and healthy eating	75%	74%	69%
6	Require children's media companies to fund PSAs for fruits and vegetables	71%	72%	65%
Require that TV advertising to children promotes healthy foods				
8	Require companies to fund equal amounts of healthy and unhealthy advertising	72%	69%	63%
9	Allow only healthy food ads on TV programs targeting children under 12	68%	66%	62%
10	Allow only healthy fiid ads on TV programs targeting youth under 18	62%	60%	59%
13	Do not allow any advertising on TV programs targeting children under 8	60%	57%	56%
Restrictions on other types of marketing				
7	Do not allow advertising on school buses	72%	70%	65%
11	Allow cartoon characters only on packages for healthy foods	60%	60%	57%
12	Allow toys with kids' meals only when meals meet healthy criteria	62%	63%	52%
14	Do not allow games/child-oriented features on unhealthy food websites	54%	58%	55%

Significantly higher ($p < .05$)

marketing), and parents of 6- to 11-year-olds were more supportive of regulating cartoon characters on packages.

Political orientation. As *Table 7* shows, the majority of parents, regardless of political orientation, supported most proposed actions to promote healthy eating. However, liberal parents were more likely to support about half of these actions compared with conservative parents. Moderate parents also were more likely than conservative parents to support policies to promote healthy eating in the media, require companies to fund equal amounts of advertising for healthy and unhealthy foods, and require kids' meals with toys to meet healthy criteria. On the other hand, there were few differences by political orientation in support for limiting specific types of marketing. Liberal parents were more likely than moderate parents but not conservative parents to support limits on mobile and viral marketing, but moderate and conservative parents were more likely to support limiting promotions in stores.

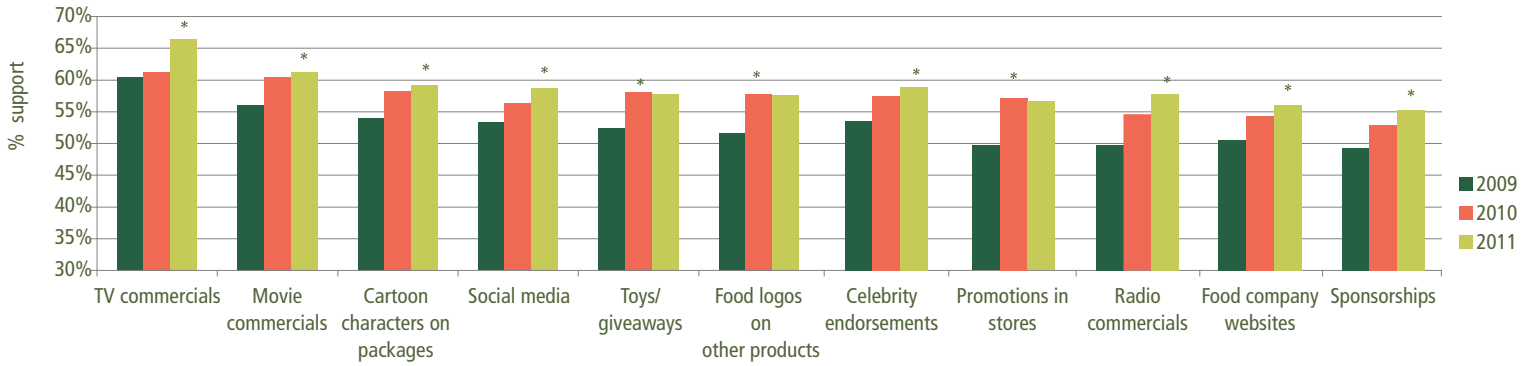
Other socio-demographic characteristics. Mothers showed more support for most policy actions to promote healthy eating habits for their children, but there were no significant differences between mothers' and fathers' support for regulations to limit specific types of marketing. There were few differences by household income in support for policy actions to promote healthy eating. However, higher-income parents were more likely to support regulating advertising/sponsorships in schools and digital marketing (60% to 70%). Higher-income parents also were more supportive of limiting viral marketing, internet advertising, and advergames, while lower-income parents were more supportive of limiting promotions in stores.

CHANGES OVER TIME

Support was significantly higher in 2011 than 2009 for not allowing games or other child-oriented features on unhealthy food websites (see *Table B11, Appendix B*). Further, support increased for regulating more than half of the specific types of food marketing to children examined (see *Figure 7*), while support for all other policies remained stable. The greatest increases in support were for limiting food marketing to children on radio commercials (+7.7%), promotions in stores (+6.6%), TV commercials (+6.0%), and food logos on other products (+6.0%).

FIGURE 7. INCREASE IN SUPPORT FOR REGULATIONS TO LIMIT MARKETING OF UNHEALTHY FOODS TO CHILDREN UNDER 12

(% of parents supporting)



* *Significantly higher ($p < .05$)*

(Types of marketing with significantly higher support in 2011 versus 2009)

Conclusions

In 2010, the White House called for key actors (food and beverage companies, restaurants, retailers, trade associations, media, government, and others) to create a "food marketing environment that supports, rather than undermines, the efforts of parents and other caregivers to encourage healthy eating among children and prevent obesity."[56]

Parents in this survey agreed that numerous environmental factors, including food marketing, make it difficult for them to ensure healthy eating habits for their children. The findings in this report demonstrate broad support among parents for regulations to limit food marketing to children and other policy-related actions to help them ensure that their children are able to eat healthy.

AWARENESS OF FOOD MARKETING TO THEIR CHILDREN

Parents understood what types of foods are marketed most often to their children, although they tended to underestimate the amount of marketing for some categories. Fast food, cereal, and soda/pop were at the top of parents' lists, and these categories correspond with the three categories with the highest youth-targeted marketing expenditures in 2006 (carbonated beverages, restaurant foods, and breakfast cereal).[57] On the other hand, less than one-third of parents thought their children saw marketing for other (i.e., not fast food) restaurants, prepared meals, or energy drinks daily. Yet analyses of exposure to TV advertising demonstrate that, on average, children and adolescents see more than one ad per day for each of these categories on TV alone.[58-59]

Parents also recognized that healthier products are marketed less often to their children, but they tended to overestimate the amount of marketing for these categories. The two categories that parents reported their children see marketed the least (fruits/vegetables and milk) correspond with the two categories with the lowest youth-targeted marketing expenditures (fruits/vegetables and dairy).[60] Although 20% of parents thought their children saw marketing for fruits and vegetables daily, and 30% thought they saw marketing for bottled water daily, in 2011, children and adolescents actually saw less than one TV ad per week for fruits and vegetables and bottled water.[61]

In 2011 the greatest changes in parents' awareness of food marketing to their children were found in increased mentions of internet marketing and cereal marketing and a reduction in mentions of juice/fruit drink marketing. When prompted to answer how often their children saw marketing for specific foods and beverages, few changes were noted.

CONCERNS ABOUT FOOD MARKETING AND OTHER ENVIRONMENTAL FACTORS

Parents expressed a number of concerns about the impact of food marketing on their children. When asked about different effects of media on their children, parents were as concerned about junk food marketing as they were about alcohol and tobacco use. Parents also were highly aware of the "pester power" of food marketing in encouraging their children to ask them for advertised products and the effects of food marketing on their children's food preferences. However, they were less likely to agree that food marketing affects their children's diet or what they buy for their children. When rating the impact of specific types of food marketing on their children's eating habits, parents believed that more traditional forms of child-targeted marketing (i.e., TV commercials, in-store promotions, cartoon characters on packages) had the most impact, while newer forms of marketing, including

most forms of digital marketing (i.e., social media, viral marketing, mobile marketing, advergames, company-sponsored websites) had much less impact. These findings suggest that parents may be less familiar with forms of marketing that did not exist when they were young (e.g., advergames, social media) or marketing that children encounter on their own when using a computer or mobile phone.

Parents attributed 60% of the rise in childhood obesity to personal responsibility and 40% to an unhealthy food environment. Although they believe that the responsibility lies more with parents and individuals than the environment, they perceived a wide variety of obstacles to ensuring healthy eating habits for their own children. For example, the expense of healthy food, easy access to unhealthy foods, unhealthy food advertising, and children's media usage were all considered to be obstacles. Two-thirds rated the media as a negative influence on their children's eating habits and 61% rated the food industry as a negative influence. However, the majority of parents also recognized the part they play by giving in to children's requests and being a poor role model.

Parents' concerns about food marketing and other negative influences on their children's eating habits appear to be increasing. Parents rated the impact of nearly all specific types of food marketing higher in 2011 versus 2009, which indicates that they may be becoming more aware of food marketing issues. Parents' ratings of most obstacles to healthy eating also increased from 2009 to 2011, as did the percent of parents who indicated that the food industry, government, and local communities were a negative influence in promoting healthy eating for their children. These changes may indicate a future increase in support of policy-related actions to reduce children's exposure to unhealthy food marketing and create a healthier food environment for children.

DIFFERENCES BY SOCIO-DEMOGRAPHIC CATEGORIES

Awareness and concerns about food marketing to their children were quite similar between socio-demographic groups, including parents of differing incomes, political orientations, and genders. The most significant differences were found between black and Hispanic parents and white parents, as well as for parents with and without an overweight child. Of note, 46% of the parents in this sample had at least one overweight child.

Black and Hispanic parents and parents of overweight children were more likely to report that their children saw and heard advertising on a daily basis for most categories of food. These differences could be due to actual higher rates of advertising and media exposure to these youth.[62-63] However, they also could indicate that these parents are more aware and concerned about the food marketing their children see. This hypothesis is supported by the finding that black and Hispanic parents and parents with overweight children also believed that food marketing has a greater impact on their children's eating habits than other parents believed. These parents also perceived greater obstacles to ensuring healthy eating habits for their children, perhaps because they were more likely to have tried to improve their children's eating habits and to personally experience more external barriers to healthy eating.

Parents' concerns about food marketing and other negative influences on their children's eating habits increased from 2009 to 2011.

However, black and Hispanic parents were less likely than white parents to indicate that institutions, including the media, government, or local communities, negatively affect their children. Across all groups, greater perceived environmental obstacles (e.g., unhealthy food advertising, unhealthy food in schools) did not necessarily coincide with perceptions that the institutions placing those obstacles (e.g., the media and food industries, schools) were a negative influence on their children's eating habits. Liberal parents were more likely than moderate or conservative parents to agree with most statements about how food marketing affects their children, and they were more likely to view the media, food industry, and government as negative influences on their children's eating habits. However, conservative parents expressed more concern about the impact of sponsorships and newer forms of digital marketing on their children's eating habits.

Conclusions

Parents of older children and adolescents also were more aware of marketing to their children for many food categories that are frequently targeted to adolescents, including fast food, soda/pop, and energy drinks.[64-65] However, one-third or more of parents of younger children also reported that their children saw daily marketing for fast food and soda/pop daily. Similarly, parents of younger children were also aware that their children saw marketing for many products that are targeted to children (e.g., fruit drinks, yogurt, fruit snacks).[66] Parents of older children and adolescents also perceived that specific types of food marketing had a greater impact on their children, especially sponsorships and digital media. In addition, parents of adolescents also perceived unhealthy food access (e.g., prevalence of junk food, unhealthy food in schools) and media usage to be greater obstacles to healthy eating for their children. These findings underscore a potentially greater need to improve the unhealthy food environment for older children and adolescents, as parents are less able to affect their behavior.

POLICY SUPPORT

In this sample of parents, there was broad support for nearly all actions to promote healthy eating habits among children. Actions supported by two-thirds or more of parents surveyed include, setting nutrition standards for foods sold in schools, requiring children's media and TV advertising to promote healthy foods, and not allowing advertising on school buses. In addition, 60% or more of parents surveyed supported limiting advertising/sponsorships in schools, mobile marketing, TV commercials, viral marketing, and internet advertising. More than half of parents also supported limiting advergames and social media. Although parents were less likely to indicate that these newer forms of marketing were having an impact on their own children, their support for limiting these types of marketing may reflect a fundamental objection to food companies marketing to children in these ways.

Consistent with higher perceived impact of specific types of food and beverage marketing in 2011 versus 2009, support for regulations to limit more than half of specific types of food and beverage marketing was higher in 2011. Support also increased for not allowing games or other child-oriented features on unhealthy food websites. It is interesting to note that the internet was the one place where parents were more likely to indicate, without prompting, that their children saw food advertising in 2011 compared with 2009.

Nearly all proposed actions to promote healthy eating habits and regulate specific types of unhealthy food marketing to children were supported by the majority of parents in this sample, regardless of gender or political orientation. Although liberal parents indicated higher support for approximately half of actions to promote healthy eating for their children, the majority of conservative parents supported all but two. In addition, there were few differences by parents' political orientation in support for regulations to limit specific types of food marketing. Mothers were generally more supportive of most proposed actions than fathers, but fathers were equally supportive of limiting most specific types of marketing.

Differences in policy support between parents in different socio-demographic groups reflected the unique challenges they face. Black and Hispanic parents and parents with at least one overweight child were more inclined to support the majority of actions to promote healthy eating habits, reflecting the greater obstacles they face to ensure healthy eating habits for their own children. Black and Hispanic parents also were more supportive of regulations to limit specific types of unhealthy food marketing to children. However, parents without overweight children were equally supportive of regulating many specific types of marketing as parents with overweight children. Middle- and higher-income parents and parents of adolescents showed higher support for regulating marketing in digital media. Similarly, parents of preschoolers were more likely to support prohibiting advertising on TV programs targeted to children under 8, and parents of 6- to 11-year-olds were most supportive of limiting cartoon characters on packages.

The majority of liberal and conservative parents supported nearly all proposed policies to promote healthy eating, including regulating most types of unhealthy food marketing to children.

Implications for policy makers and public health advocates

Parents who responded to this survey perceived numerous obstacles, including food marketing, that make it difficult for them to ensure healthy eating habits for their children. They also expressed broad support for policies to limit unhealthy food marketing to children and other actions to help them encourage their children to eat healthy. These findings suggest numerous opportunities for policy makers, the public health community, and food and media companies to take action to improve the unhealthy food environment that surrounds children and support parents in their efforts to raise healthy children. For legislative policymakers in particular, it should be noted that support for actions to promote healthy eating comes from both liberal and conservative parents.

SCHOOL FOODS AND FOOD MARKETING IN SCHOOLS

At least two-thirds of parents across all demographic groups supported nearly all the policies we examined related to foods sold in schools and marketing in schools. In particular, strengthening nutrition standards for school lunches, all other foods sold in schools (i.e., competitive foods), and school vending machines received very high levels of support. As the USDA continues to implement the Healthy Hunger-Free Kids Act,[67] proposes new standards for competitive foods sold in school, and considers revisions to nutrition standards for school meals, it will likely face substantial resistance. It will be important to emphasize that parents overwhelmingly support these changes.

Two-thirds or more of parents supported strengthening nutrition standards for school foods and not allowing school bus advertising.

Many states and municipalities view corporations as a source of funding for cash-strapped schools, and food marketers see schools as an opportunity to reach a captive audience of young consumers. However, policy makers must recognize that most parents do not support marketing to children in schools. For example, since 2011, 18 bills have been introduced to allow school districts and other jurisdictions to sell advertising space on school buses.[68] Yet our research shows that the majority of parents, regardless of their income, race, or political orientation, do not want advertising on school buses. To support parents' concerns, states and municipalities could instead implement laws to prohibit any school bus advertising or to ensure that school bus advertising does not undermine children's health.[69]

States and school districts could also enact policies to limit advertising and sponsorships of unhealthy foods in schools and on school property that would likely be widely supported by parents and withstand legal challenges.[70] One state (Maine) has implemented such a law, and two states (Massachusetts and Indiana) have proposed legislation to study or regulate commercialism in schools.[71] Implementing legislation regarding food marketing in schools faces numerous political barriers,[72] but individual school districts can also restrict food marketing in schools by establishing marketing standards within school wellness policies.[73] For example, schools could prohibit corporate logos on school property and curricular materials, as well as fund-raising programs that encourage the sale or purchase of branded foods. Policies in early childcare and preschool facilities that prohibit branded foods and other forms of marketing (e.g., McDonald's play sets, M&M counting books, restaurant certificates as rewards) should also be considered, as very young children are especially vulnerable to advertising influence.[74-75]

Parents have become more supportive of regulations limiting specific types of food marketing to children, including TV commercials, cartoon characters on packages, and social media.

REGULATING TV ADVERTISING AND DIGITAL MEDIA

There was also broad support among parents surveyed for policy actions to promote healthy eating to children in the media and to reduce unhealthy food marketing on TV and in digital media. The U.S. Congress and federal agencies (e.g., Federal Trade Commission, Federal Communications Commission) have purview over marketing that crosses state lines. Therefore, regulation of marketing in most media (including TV, radio, the Internet, and other digital media) must be instituted at the federal level.[76] Regulating

these media also imposes legal challenges due to the First Amendment, which protects commercial speech. However, legal scholars argue that there are opportunities to legislate and regulate advertising primarily viewed by children that would likely withstand these challenges.[77-79]

This research also presents an opportunity for food and media companies to implement policies to help parents raise healthy children. The food industry's self-regulatory program to promote healthier dietary choices among children (CFBAI) has been in place since 2009, yet 65% of parents surveyed viewed the food industry as a negative influence on their children's eating habits, up from 59% in 2009. These findings suggest that parents have not seen improvements in food marketing to children and that food companies could do much more to reduce marketing of unhealthy foods in a variety of media. Furthermore, parents of children 12 years and older also support these changes, although the food industry has strongly resisted implementing standards for marketing to this age group.[80] Media companies could also support parents by promoting healthy eating messages during children's programming and restricting unhealthy food marketing in children's media. Disney recently introduced nutrition standards for foods advertised during its TV programming and websites targeted to children.[81] Efforts such as these could present a substantial public relations opportunity and begin to counteract the view of most parents that the media is a negative influence on their children's eating habits.

In 2011, 65% of parents surveyed rated the food industry as a negative influence on their children's eating habits, up from 59% in 2009.

COMMUNITY-LEVEL HEALTH PROMOTION POLICIES

This research also suggests ample opportunity for city councils and local and state health agencies and legislators to take action to address poor diet and obesity among youth. In our survey, 42% of parents viewed their local community as a negative influence on their children's eating habits. However, policies enacted at the community level can be well-suited to address parents' concerns about children's easy access to unhealthy foods and the lack of community programs to support healthy eating. In addition to school-based policies, states and local communities have the authority to implement a wide variety of health-promoting policies, including regulating foods sold in retail and food service establishments, product location in retail establishments, location and density of billboards and retail signage, vending and food service contracts in recreation and other public facilities, and sponsorships of community programs.[82-84] Our research suggests that many parents would welcome such policies in their communities to help encourage better eating habits for their children.

City councils and local and state health agencies can implement a wide variety of policies to limit food marketing and promote healthy eating in local communities.

ADDRESSING HEALTH DISPARITIES

Higher rates of obesity among black and Hispanic youth compared with white non-Hispanic youth raise significant public health concerns.[85] In this survey, black and Hispanic parents also believed that their children saw more food advertising and were more affected by that advertising compared with white parents. In addition, they perceived more obstacles to ensuring healthy eating habits for their children, and were more supportive of most policies to promote healthy eating habits and limit food marketing. Surprisingly, black and Hispanic parents did not view the influence of food companies on their children's eating habits more negatively. This may be because food companies, including McDonald's and Coca-Cola, invest significant amounts in targeted marketing to black and Hispanic youth and programs to support black and Hispanic communities.[86-87] It appears that these programs may be successful in deflecting blame for obesity away from the food companies. This finding suggests an opportunity to raise awareness among black and Hispanic parents about the role of food companies in creating the unhealthy

food environment that surrounds their children. It also indicates an opportunity to inform Congressional, state and local legislators about this issue, as well as alert caucuses of black and Latino legislators about food marketing in their communities and parents' support for policies to address the issue.

Lower-income parents also rated the expense of healthy foods and a lack of community programs to support healthy eating as greater obstacles than higher-income parents. This suggests that legislation and other initiatives to increase access to healthy foods and reduce their price, such as healthy corner stores and fresh food financing, may be welcomed in low-income neighborhoods. A sugary drink tax could provide revenue for healthy food financing.

PUBLIC HEALTH COMMUNICATION STRATEGIES

This research identified several opportunities to better inform parents about current food marketing practices and its influence on their children. Although parents understood that their children saw much more marketing for unhealthy foods than for healthy foods, they were not aware of how much food marketing to children is out-of-sync with a healthy diet. In particular, they overestimated the amount of marketing for healthy foods that their children see. Raising awareness of the specific techniques companies use to market unhealthy food to children, especially in schools and newer digital forms, may be another effective way to get parents' attention. It is interesting to note that few parents thought their own children were affected by mobile marketing, viral marketing, social media, or banner ads on the internet, but the majority of parents supported regulating these forms of marketing to children.

Increasing awareness of how the unhealthy food environment limits parents' ability to ensure healthy eating habits for their children is another important message for public health advocates. Although parents rated most environmental factors as greater obstacles to ensuring that their children eat healthy than their own behavior (e.g., giving in to children's requests, being a poor role model), they believed that 60% of the childhood obesity crisis was due to lack of personal responsibility. The public health community must do more to counteract industry messages, such as "all foods are fine in moderation," and "the solution is more physical activity," that place the blame for the obesity crisis on individual behaviors and poor choices by parents. Legislators (often parents themselves) must also hear the message that effective legislative solutions should focus on environmental change, rather than personal responsibility. Advocates could look for ways to channel negative perceptions of the media and food industries into demands that companies change their practices, and public health campaigns could better communicate that reducing unhealthy food marketing will help improve children's eating habits. Messages that focus on how the food and media industries undermine parents' best efforts to raise healthy children would likely resonate with many parents.

Raising awareness of the specific techniques used to market unhealthy foods to children, especially in schools and newer digital forms, may be an effective way to get parents' attention.

Perceptions that food marketing and other environmental factors negatively affect their children's eating habits appears to have increased among parents in just three years. Parents were also more likely to support regulations to limit specific types of unhealthy food marketing to children in 2011 compared with 2009. These changes likely reflect increased attention to the issue through policy attempts, research studies, and industry announcements and the resulting news coverage. It will be important for the public health community to ensure that unhealthy food marketing to young people remains a top-of-mind concern for parents and provide ways to empower parents to advocate for regulation and other policies that help them ensure healthy eating habits for their children.

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Appendix A

The survey was conducted three times using an online non-probability sample of adults during June-July 2009, 2010, and 2011. Sampling procedures, sample size, data collection period, and most measures remained consistent over the three years.

Sample

Participants ages 21-65 with an annual income of at least $15,000 who have primary or shared responsibility for household food and beverage choices were recruited via email through Survey Sampling International (SSI) (www.surveysampling.com). SSI provides consumer panels for survey research. It recruits panel members through thousands of websites to obtain a representative sample of the online population. Panelists are screened to provide high quality respondents and minimize fraud. They do not receive a direct reward for completing individual surveys to ensure more honest responses. Instead, participants are compensated for being active panelists with rewards that vary from charitable donations and information, to monetary and point rewards for overall participation. All participants accessed the survey through an email link. Participation rates for the total sample were 81% in 2009, 78% in 2010, and 86% in 2011.

Quotas were established for parents with children between the ages of 2 and 17 living at home (n=600) versus other adults (n=300); ethnicity and race (11% African-American/black; 12% Latino/Hispanic); income level (37% $15,000 to <$40,000; 36% $40,000 to <$75,000; 27% $75,000+); and gender (60% female; 40% male). The sample of 600 parents per year was augmented with at least 100 additional black and Hispanic parents (with children ages 2-17) to ensure that sample sizes were large enough for comparison by race and ethnicity. The total results were not weighted to adjust for oversampling of some demographic groups (e.g., female, Hispanic, and black parents). In this report, we present only the responses of parents with children 2-17 years old living at home.

It must be noted that the use of a non-probability based panel for an online survey has limitations as these findings are not representative of the population. However, there are advantages in cost and the ability to evaluate differences between specific populations. This research was not intended to produce precise estimates of population attitudes, but rather to understand how attitudes differ between groups and examine changes over time.

SOCIO-DEMOGRAPHIC CATEGORIES

Respondents were assigned to socio-demographic categories according to the following criteria:

Race/ethnicity. Respondents were asked to identify their own racial and ethnic background (Caucasian, African-American, Latino/Hispanic, Asian, and other) and to select all that apply. A respondent was coded as non-Hispanic white (i.e., white) if he/she selected Caucasian and no other race or ethnicity. Persons selecting African-American, but not Caucasian, Asian, or other, were coded as black, even if Latino/Hispanic was also indicated. If a person selected Latino/Hispanic, but not African-American, Asian or other, the person was coded as Hispanic, even if he/she also selected Caucasian.

Child characteristics. Parents provided the age, gender, height and weight of all their children 2-17 years old living with them. Children's weight status was calculated according to the U.S. Centers for Disease Control

and Prevention (CDC) growth charts (www.cdc.gov/growthcharts/). Children with a BMI-for-age between the 85th and 95th percentile were classified as overweight and those with a BMI-for-age above the 95th percentile were classified as obese. Parents who had one or more overweight or obese child living at home were identified. Parents were also grouped according to the age of their oldest child: 2-5 years old, 6-11 years old, or 12-17 years old.

Other socio-demographic characteristics. Respondents indicated their household income in the previous year. Individuals with a household income less than $40,000 were categorized as lower-income; middle-income if their household income was $40,000 to less than $75,000; and higher-income if their household income was $75,000 or higher. Respondents also indicated their political orientation on a scale of 1 to 7 (1=strongly liberal, 4=middle-of-the-road, 7=strongly conservative). If 1 to 3 was chosen, the respondent was coded as liberal; respondents who chose 4 were coded as moderate; and respondents choosing 5 to 7 were coded as conservative. Respondents also indicated their gender.

Measures

The objective of this survey was to obtain an in-depth understanding of how parents view food and beverage marketing to their children. The study questions were designed to assess 1) awareness of food marketing their children see and hear; 2) concern with the impact of food marketing on their children; 3) perceived environmental influences on childhood obesity and their children's eating habits; 4) support for a range of policies related to healthy eating and food marketing; and 5) changes from 2009 to 2011. Questions regarding parents' attitudes about children's media usage and eating behaviors and children's diet also were asked, but are not reported here. A copy of the full survey is available at http://www.yaleruddcenter.org/surveyquestionnaire.

This questionnaire was designed to obtain respondents' attitudes about a wide range of youth-related issues regarding the media, food marketing, and children's diet. As a result, earlier questions may have affected individuals' responses to questions that followed. All respondents answered questions in the same order to ensure valid differences between the socio-demographic groups examined. To ensure valid comparisons across the three years, only minor adjustments were made in possible responses from year-to-year and the order of questions did not change. Questions regarding awareness of food marketing were asked first to ensure that prior questions did not affect respondents' awareness. Questions about policy support also were asked early in the questionnaire to reduce potential bias resulting from the in-depth questions about children's diet and media issues that followed.

The following details the survey questions used to assess parents' attitudes about each topic. Question numbers indicate the order in which questions were asked.

AWARENESS OF FOOD MARKETING TO CHILDREN

Three questions assessed parents' perceptions of the quantity and types of foods and beverages marketed to their children, as well as where they believe their children see or hear food marketing.

Q1a. Thinking about the way in which food and beverages are marketed to children, what are the top 3 types of food and beverages you think your children have seen being marketed in the past month?
No prompts were provided. The five product categories mentioned most often are reported.

Q1b. And, what do you think are the top 3 places (besides on TV) where your children have seen or heard marketing for food and beverages in the past month?
No prompts were provided. The five types of marketing indicated most often are reported.

Q2. How often do you think your children have seen or heard any marketing for the following different kinds of food and beverages in the past month?
A list of 18 food and beverage product categories was provided. Response options were daily, weekly, several times a month, and once a month or less. Parents who responded "daily" then indicated how many times per day (10+, 4-9, 1-3). Parents who responded "weekly" indicated how many times per week (4-6, 2-3, once). The percent of parents who responded that their children see ads for a product category daily or more often and the percent of parents who responded that their children see ads for a product category several times a month or once a month or less are reported.

Appendix A

PERCEIVED IMPACT OF FOOD MARKETING TO CHILDREN

Three questions asked parents about their perceptions of the impact of food marketing on their children. One question gauged their concern about food marketing and unhealthy eating depictions in the media relative to other youth-related media issues, such as sexual permissiveness, tobacco use, alcohol use, and gender or racial stereotypes. Parents also indicated their agreement with statements regarding how food marketing affects their children and rated the impact of different types of marketing on their children's eating habits.

Q7. Please indicate how concerned you are with the media in the areas listed below.
A list of 12 different media issues was provided. Responses ranged from 1 (not concerned at all) to 10 (extremely concerned). Mean responses are reported.

Q6. Using the scale below, please indicate how much you agree with the following statements about food and beverage marketing and advertising to your children.
A list of 13 possible effects of food marketing was provided. Responses ranged from 1 (strongly disagree) to 10 (strongly agree). Mean responses are reported.

Q3. Using the scale below, please indicate the level of impact you think these different types of food and beverage marketing have on your children's eating habits.
A list of 18 types of marketing was provided. Responses ranged from 1 (no impact at all) to 10 (very strong impact). Mean responses are reported.

PERCEIVED ENVIRONMENTAL INFLUENCES

Three questions assessed parents' perceptions of environmental factors that could influence childhood obesity and eating habits of their children. Parents allocated responsibility for childhood obesity to personal responsibility versus environmental factors. They also rated the negative or positive influence of individuals and institutions in promoting healthy eating habits and rated a list of sixteen potential obstacles (including expense, access to unhealthy foods, media time, and eating out of the house) that make it difficult to ensure their children have healthy eating habits.

Q11c. Please allocate 10 points below based on how much increased obesity rates among children are due to each of the following:
- Personal responsibility on the part of the individual parents or children
- Unhealthy food environment, that is, outside influences, such as school food, advertising, too many fast food restaurants, high price of fresh fruits and vegetables, etc.

Respondents answered each option on a sliding scale, totaling 10 points. The percent of points allocated to each option are reported.

Q9. Please indicate whether you think these institutions and people have a positive or negative influence on your children's eating habits, using the scale below.
A list of 8 institutions (e.g., media, schools) and individuals (e.g., your children's peers, yourself) was provided. Responses ranged from 1 (very bad influence) to 10 (very good influence). The percent of respondents who answered that the institution or individual was a negative influence (1-5) are reported.

Q2. How much of an obstacle is each of the following things to ensuring that your children have healthy eating habits?
A list of 16 potential obstacles was provided. Responses ranged from 1 (not at all an obstacle to healthy eating) to 10 (very much an obstacle to healthy eating). Mean responses are reported.

SUPPORT FOR POLICY-RELATED ACTIONS REGARDING FOOD MARKETING TO CHILDREN

Two questions measured parents' support for policy solutions to address unhealthy eating among children. One question asked about support for specific actions, including regulation of school foods, TV commercials, and other types of marketing. The other assessed support for limiting specific types of unhealthy food marketing to children under 12, including traditional advertising (on TV, radio, and billboards), as well as digital marketing, sponsorships, and product packaging.

Appendix A

Q5. Below is a list of actions that are either currently being taken or could be taken to promote healthy eating habits and physical activity to your children. Using the scale below, please indicate how much you would support each of the following actions.

A list of 17 policy options was provided. Responses ranged from 1 (definitely would oppose) to 10 (definitely would support). Percent of respondents who support each regulation (6-10) are reported.

Q4. Using the scale below, please indicate how much you would support regulations to limit each type of marketing of unhealthy foods to children under 12.

A list of 18 types of marketing was provided. Responses ranged from 1 (definitely would oppose) to 10 (definitely would support). Percent of respondents who support each regulation (6-10) are reported.

Analyses

Differences between socio-demographic groups (race/ethnicity, child characteristics, and other demographics) and differences by year (2009, 2010, and 2011) were tested for statistical significance. Reported level differences are at least $p < .05$. One-way Analysis of Variance (ANOVA) was used to compare measures reported as means, and chi-square of significance tests were used to compare percentages. Significance of multiple comparisons was adjusted using Tukey's post-hoc test for ANOVAs and Bonferroni corrections for chi-square tests. Data collected all three years were combined for the analyses. Significant differences from 2009 to 2011 are also reported.

Appendix B

Note about tables of results

The tables in Appendix B use superscript letters to indicate significant differences between means and percentages for comparison groups. Within each row (within a comparison group), only means and percentages that do not share a common superscript differ significantly at $p < .05$. Means and percentages with a common superscript or without any superscript do not differ significantly from each other.

TABLE B1. PERCEPTIONS ABOUT THE FOODS AND BEVERAGES MARKETED MOST OFTEN

Percentage of parents who report their children see or hear marketing for these foods and beverages at least once per day

		Race/ethnicity			Overweight or obese child		Age of oldest child			Household income			Political orientation			Gender of parent	
	Overall n= 2454	White n=1287	Black n=520	Hispanic n=546	No n= 1220	Yes n= 1032	2 to 5 n=453	6 to 11 n=733	12 to 17 n=1268	<$40k n=952	$40-75k n=891	>$75k n=611	Liberal n=467	Moderate n=1206	Conservative n=781	Female n=1716	Male n=738
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Fast food restaurants	60.8%	57.4%^{a}	68.1%^{b}	62.8%^{b}	60.4%	61.1%	52.3%^{a}	58.5%^{b}	65.2%^{c}	61.2%	61.6%	59.1%	61.9%	62.2%	58.1%	60.1%	62.5%
Cereal	58.6%	54.6%^{a}	65.4%^{b}	62.7%^{b}	57.1%	61.0%	50.8%^{a}	60.2%^{b}	60.5%^{b}	58.8%	58.7%	58.1%	57.8%	60.9%	55.6%	58.2%	59.5%
Soda/pop	50.2%	46.6%^{a}	57.3%^{b}	53.5%^{b}	48.5%^{a}	53.4%^{b}	36.0%^{a}	46.8%^{b}	57.3%^{c}	53.1%^{a}	49.4%^{ab}	47.0%^{b}	48.6%	51.2%	49.7%	47.6%^{a}	56.2%^{b}
Sports drinks*	39.6%	35.9%^{a}	48.4%^{b}	40.4%^{ab}	36.4%^{a}	45.3%^{b}	25.5%^{a}	40.6%^{b}	44.2%^{b}	38.6%	40.1%	40.3%	37.2%	41.0%	39.1%	37.7%	43.2%
Candy	39.2%	34.8%^{a}	48.5%^{b}	41.4%^{c}	36.9%^{a}	41.8%^{b}	32.0%^{a}	38.9%^{b}	42.0%^{b}	42.3%^{a}	38.6%^{ab}	35.2%^{b}	37.9%^{ab}	41.79%^{a}	36.0%^{b}	37.0%^{a}	44.4%^{b}
Cookies and crackers	38.8%	35.3%^{a}	44.2%^{b}	42.9%^{b}	36.3%^{a}	40.7%^{b}	35.1%^{a}	37.9%^{a}	40.7%^{b}	40.3%	38.6%	36.8%	37.5%	39.8%	38.2%	38.2%	40.4%
Potato chips, other salty snacks	37.3%	34.4%^{a}	41.9%^{b}	40.3%^{b}	34.7%^{a}	41.0%^{b}	29.6%^{a}	34.1%^{a}	42.0%^{b}	39.7%^{a}	36.6%^{ab}	34.7%^{b}	34.9%	38.5%	37.0%	36.2%	40.0%
Fruit drinks	37.2%	28.8%^{a}	49.8%^{b}	44.7%^{b}	33.9%^{a}	39.6%^{b}	40.8%	37.4%	35.8%	42.3%^{a}	33.9%^{b}	34.0%^{b}	34.7%^{ab}	39.6%^{a}	35.0%^{b}	37.5%	36.6%
Yogurt	32.7%	29.2%^{a}	33.1%^{a}	40.7%^{b}	31.2%	33.0%	34.4%	34.9%	30.8%	34.8%^{a}	33.7%^{a}	28.2%^{b}	28.1%^{a}	35.9%^{b}	30.6%^{a}	34.2%^{a}	29.4%^{b}
100% fruit juice	32.7%	24.3%^{a}	45.0%^{b}	40.3%^{b}	35.4%^{a}	28.2%^{b}	36.4%	32.3%	31.6%	37.2%^{a}	30.5%^{b}	28.8%^{b}	25.3%^{a}	35.5%^{b}	32.8%^{b}	33.1%	31.7%
Energy drinks	32.0%	29.8%^{a}	37.9%^{b}	32.2%^{ab}	32.4%	33.2%	18.1%^{a}	26.9%^{b}	39.9%^{c}	34.1%	30.0%	31.6%	32.8%	33.1%	29.8%	30.4%^{a}	35.8%^{b}
Ice cream, frozen desserts	31.4%	27.6%^{a}	35.8%^{b}	35.5%^{b}	27.9%^{a}	34.5%^{b}	29.4%	32.9%	31.2%	35.9%^{a}	30.5%^{b}	25.5%^{c}	28.1%^{a}	35.3%^{b}	27.3%^{a}	31.9%	30.2%
Prepared foods and meals	30.5%	26.4%^{a}	37.5%^{b}	33.7%^{b}	27.3%^{a}	33.7%^{b}	26.3%^{a}	28.1%^{a}	33.4%^{b}	33.6%^{a}	30.4%^{a}	25.7%^{b}	27.0%^{a}	32.9%^{b}	28.8%^{ab}	31.2%	28.7%
Bottled water	30.2%	23.9%^{a}	40.4%^{b}	35.4%^{b}	26.4%^{a}	34.1%^{b}	24.3%^{a}	29.3%^{ab}	32.9%^{b}	35.0%^{a}	27.6%^{b}	26.7%^{b}	26.1%	31.7%	30.5%	28.7%^{a}	33.9%^{b}
Other restaurants	28.8%	23.5%^{a}	37.5%^{b}	33.5%^{b}	27.5%	30.0%	20.8%^{a}	28.0%^{b}	32.2%^{c}	29.4%	28.8%	27.8%	27.6%	28.9%	29.3%	28.2%	30.4%
Fruit snacks	28.6%	23.9%^{a}	37.3%^{b}	31.7%^{b}	24.8%^{a}	31.6%^{b}	30.2%	29.1%	27.7%	33.0%^{a}	25.4%^{b}	26.4%^{b}	26.3%	30.0%	27.7%	27.6%	30.8%
Milk	26.2%	20.3%^{a}	33.5%^{b}	32.2%^{b}	23.2%^{a}	27.4%^{b}	26.7%	26.9%	25.6%	30.9%^{a}	24.7%^{b}	21.0%^{b}	20.1%^{a}	28.5%^{b}	26.1%^{b}	25.4%	27.9%
Fruits and vegetables	19.9%	14.5%^{a}	29.8%^{b}	23.8%^{c}	16.0%^{a}	23.0%^{b}	21.2%	20.9%	18.9%	24.4%^{a}	17.1%^{b}	17.0%^{b}	15.2%^{a}	21.3%^{b}	20.5%^{b}	19.9%	19.8%

Significantly higher ($p < .05$)

Numbers with different letters are significantly different than each other after Bonferroni corrections

*Data collected in 2011 only (n=729)

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TABLE B2. PERCEPTIONS ABOUT THE FOODS AND BEVERAGES MARKETED LEAST OFTEN

Percentage of parents who report their children see or hear marketing for these foods and beverages less than once per week

		Race/ethnicity			Overweight or obese child		Age of oldest child			Household income			Political orientation			Gender of parent	
	Overall n= 2454	**White** n=1287	**Black** n=520	**Hispanic** n=546	**No** n= 1220	**Yes** n= 1032	**2 to 5** n=453	**6 to 11** n=733	**12 to 17** n=1268	**<$40k** n=952	**$40-75k** n=891	**>$75k** n=611	**Liberal** n=467	**Moderate** n=1206	**Conservative** n=781	**Female** n=1716	**Male** n=738
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Fruits and vegetables	55.1%	62.8%^{a}	37.9%^{b}	52.6%^{c}	59.5%^{a}	51.8%^{b}	53.0%	53.9%	56.5%	50.3%^{a}	57.9%^{b}	58.3%^{b}	59.3%	53.1%	55.6%	56.7%^{a}	51.2%^{b}
Milk	46.2%	51.6%^{a}	34.0%^{b}	44.1%^{c}	50.7%^{a}	42.3%^{b}	50.8%^{a}	47.8%^{ab}	43.7%^{b}	41.4%^{a}	49.2%^{b}	49.4%^{b}	53.5%^{a}	44.9%^{b}	43.9%^{b}	48.7%^{a}	40.5%^{b}
Bottled water	43.5%	48.7%^{a}	33.9%^{b}	38.8%^{b}	47.0%^{a}	40.2%^{b}	54.5%^{a}	44.3%^{b}	39.0%^{c}	39.6%^{a}	47.4%^{b}	43.9%^{ab}	48.0%	42.3%	42.6%	45.9%^{a}	37.9%^{b}
Energy drinks	41.9%	58.0%^{ab}	62.5%^{a}	45.1%^{b}	41.9%	39.2%	64.5%^{a}	47.1%^{b}	30.8%^{c}	41.9%	43.7%	39.3%	43.5%	42.0%	40.9%	44.9%^{a}	65.2%^{b}
Other restaurants	40.4%	43.5%^{a}	35.2%^{b}	38.3%^{b}	41.2%	39.9%	50.8%^{a}	43.4%^{b}	35.0%^{c}	42.2%	40.2%	38.0%	40.9%	41.1%	39.1%	42.8%^{a}	34.8%^{b}
Fruit snacks	37.0%	39.9%^{a}	30.8%^{b}	35.0%^{b}	38.7%	35.7%	39.1%	36.4%	36.6%	35.1%	39.1%	37.0%	63.4%	62.9%	63.0%	37.8%	35.1%
Prepared foods and meals	36.7%	40.4%^{a}	29.0%^{b}	35.9%^{a}	39.3%^{a}	33.5%^{b}	45.0%^{a}	37.7%^{b}	33.2%^{c}	36.0%	36.4%	38.3%	36.0%	36.2%	38.0%	37.8%	34.3%
Ice cream, frozen desserts	33.3%	36.1%^{a}	28.9%^{b}	29.9%^{b}	35.1%	31.4%	37.5%^{a}	33.7%^{a}	31.6%^{b}	32.3%	33.7%	34.4%	32.3%	32.6%	35.0%	34.3%	31.0%
Yogurt	33.2%	35.2%^{a}	32.1%^{ab}	29.3%^{b}	35.1%^{a}	31.1%^{b}	35.5%	30.3%	34.1%	34.5%	32.0%	33.1%	33.8%	33.3%	32.8%	32.8%	24.2%
Sports drinks*	31.5%	34.4%^{a}	29.3%^{ab}	25.9%^{b}	30.9%	29.6%	53.7%^{a}	34.0%^{b}	21.7%^{c}	34.9%	29.9%	28.6%	29.5%	31.2%	33.0%	32.7%	29.1%
100% fruit Juice	31.4%	37.1%^{a}	23.5%^{b}	26.0%^{b}	33.5%	29.9%	29.6%	30.4%	32.7%	30.7%	31.9%	31.9%	31.9%	31.8%	30.5%	32.1%	30.0%
Candy	29.6%	30.9%	26.4%	28.9%	27.3%	31.1%	40.8%^{a}	28.8%^{b}	26.1%^{b}	28.6%	28.6%	32.7%	27.2%	29.6%	31.1%	33.0%^{a}	21.8%^{b}
Fruit drinks	29.4%	36.7%^{a}	17.1%^{b}	24.9%^{c}	31.6%	27.9%	27.6%	27.8%	31.0%	27.4%^{a}	31.8%^{b}	29.1%^{ab}	31.3%	28.7%	29.5%	29.4%	29.4%
Potato chips, other salty snacks	28.6%	30.2%^{a}	23.5%^{b}	28.9%^{a}	30.9%^{a}	25.3%^{b}	39.1%^{a}	30.0%^{b}	24.0%^{c}	28.4%	28.1%	29.6%	26.1%	29.1%	29.2%	30.2%^{a}	24.7%^{b}
Cookies and crackers	26.7%	28.9%^{a}	22.7%^{b}	24.7%^{ab}	27.0%	26.4%	32.0%^{a}	31.0%^{a}	22.4%^{b}	26.6%	26.3%	27.7%	24.8%	26.7%	27.9%	28.4%^{a}	22.8%^{b}
Soda/pop	23.1%	24.2%	21.2%	22.5%	23.1%	21.9%	37.5%^{a}	24.6%^{b}	17.1%^{c}	22.9%	21.6%	25.7%	21.4%	23.6%	23.4%	25.5%^{a}	17.6%^{b}
Fast food restaurants	17.2%	18.7%^{a}	15.2%^{ab}	14.7%^{b}	17.5%	16.0%	24.3%^{a}	18.6%^{b}	13.8%^{c}	18.8%^{a}	15.3%^{b}	17.4%^{ab}	14.4%	17.9%	17.7%	18.1%	15.0%

Significantly higher ($p < .05$)

Numbers with different letters are significantly different than each other after Bonferroni corrections

*Data collected in 2011 only (n=729)

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TABLE B3. BELIEFS ABOUT THE IMPACT OF FOOD AND BEVERAGE MARKETING

Agreement with statements on a scale of 1 to 10 (1=strongly disagree, 10=strongly agree)

			Race/ethnicity						Overweight or obese child				Age of oldest child						Household income						Political orientation						Gender of parent			
	Overall n= 2454		White n=1287		Black n=520		Hispanic n=546		No n= 1220		Yes n= 1032		2 to 5 n=453		6 to 11 n=733		12 to 17 n=1268		<$40k n=952		$40-75k n=891		>$75k n=611		Liberal n=467		Moderate n=1206		Conservative n=781		Female n=1716		Male n=738	
	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)
Encourages children to ask parents for advertised foods and beverages	7.7	(2.4)	7.7	(2.5)	7.7	(2.5)	7.9	(2.3)	7.7	(2.4)	7.8	(2.4)	7.8	(2.4)	7.8	(2.3)	7.7	2.5	7.7	(2.5)	7.8	(2.4)	7.7	(2.3)	8.2[a]	(2.2)	7.7[b]	(2.4)	7.5[b]	(2.6)	7.9[a]	(2.4)	7.4[b]	(2.5)
Affects everyone, not just children	7.7	(2.4)	7.6[a]	(2.4)	7.9[b]	(2.4)	7.8[ab]	(2.4)	7.7	(2.5)	7.7	(2.4)	7.7	(2.5)	7.7	(2.4)	7.8	2.4	7.7	(2.5)	7.8	(2.4)	7.6	(2.4)	7.9[a]	(2.2)	7.7[ab]	(2.4)	7.6[b]	(2.5)	7.8[a]	(2.4)	7.5[b]	(2.4)
Increases preferences for the types of foods advertised	7.2	(2.4)	7.1[a]	(2.5)	7.3[ab]	(2.4)	7.4[b]	(2.4)	7.1	(2.5)	7.2	(2.4)	7.3	(2.4)	7.2	(2.4)	7.1	2.5	7.2	(2.5)	7.2	(2.4)	7.1	(2.4)	7.5[a]	(2.3)	7.1[b]	(2.4)	7.1[b]	(2.6)	7.2	(2.5)	7.1	(2.4)
Promotes unhealthy foods	6.9	(2.7)	6.9	(2.6)	6.8	(2.8)	7.0	(2.7)	6.9	(2.7)	7.0	(2.7)	7.0	(2.7)	7.0	(2.7)	6.9	(2.7)	6.8	(2.8)	7.0	(2.7)	7.0	(2.6)	7.5[a]	(2.5)	6.8[b]	(2.7)	6.7[b]	(2.8)	7.0	(2.7)	6.8	(2.6)
Encourages snacking between meals	6.9	(2.6)	6.7[a]	(2.7)	7.1[b]	(2.5)	7.1[b]	(2.5)	6.7[a]	(2.6)	7.0[b]	(2.5)	6.9	(2.6)	6.8	(2.6)	6.9	2.6	6.9	(2.7)	6.8	(2.6)	6.8	(2.5)	7.2[a]	(2.4)	6.8[b]	(2.6)	6.8[b]	(2.7)	6.9	(2.6)	6.8	(2.5)
Encourages unhealthy snacking	6.9	(2.7)	6.8	(2.7)	6.9	(2.7)	7.0	(2.7)	6.8	(2.7)	7.0	(2.6)	7.0	(2.8)	7.0	(2.7)	6.8	2.7	6.8	(2.8)	7.0	(2.7)	6.9	(2.6)	7.3[a]	(2.5)	6.8[a]	(2.7)	6.8[b]	(2.8)	6.9	(2.7)	6.8	(2.6)
Leads to food cravings	6.9	(2.7)	6.7[a]	(2.7)	7.0[ab]	(2.6)	7.1[b]	(2.6)	6.8	(2.8)	7.0	(2.6)	6.9	(2.7)	6.9	(2.7)	6.9	2.7	6.9	(2.7)	7.0	(2.6)	6.8	(2.6)	7.2[a]	(2.5)	6.9[b]	(2.7)	6.7[b]	(2.8)	7.0[a]	(2.7)	6.7[b]	(2.7)
Creates eating habits that stick with you for life	6.8	(2.7)	6.6[a]	(2.7)	7.1[b]	(2.5)	7.0[b]	(2.6)	6.7[a]	(2.7)	6.9[b]	(2.6)	6.7	(2.7)	6.8	(2.6)	6.9	2.6	6.9	(2.7)	6.8	(2.7)	6.8	(2.6)	7.2[a]	(2.5)	6.7[b]	(2.6)	6.7[b]	(2.8)	6.8	(2.7)	6.8	(2.5)
Affects children the most	6.8	(2.6)	6.6[a]	(2.7)	7.0[b]	(2.6)	7.2[b]	(2.5)	6.7[a]	(2.7)	6.9[b]	(2.6)	6.7	(2.8)	7.0	(2.5)	6.8	2.7	6.8	(2.7)	6.8	(2.6)	6.8	(2.5)	7.3[a]	(2.4)	6.8[b]	2.6	6.6[b]	(2.8)	6.9	(2.7)	6.8	(2.6)
Makes parents' jobs harder	6.5	(2.9)	6.5	(2.9)	6.3	(3.0)	6.6	(2.9)	6.4[a]	(2.9)	6.6[b]	(2.9)	6.6	(2.8)	6.6	(2.9)	6.4	2.9	6.5	(3.0)	6.6	(2.9)	6.4	(2.9)	6.8[a]	(2.7)	6.4[b]	(2.9)	6.5[ab]	(2.9)	6.5	(2.9)	6.6	(2.8)
Causes children to eat more	6.3	(2.8)	6.2[a]	(2.8)	6.5[ab]	(2.8)	6.6[b]	(2.8)	6.2[a]	(2.8)	6.5[b]	(2.8)	6.2	(2.8)	6.3	(2.8)	6.4	2.8	6.4	(2.8)	6.3	(2.8)	6.3	(2.8)	6.7[a]	(2.7)	6.3[b]	(2.8)	6.3[b]	(2.9)	6.3	(2.9)	6.4	(2.7)
Encourages large portions	6.2	(2.8)	6.1	(2.9)	6.3	(2.8)	6.3	(2.8)	6.0[a]	(2.9)	6.4[b]	(2.8)	6.1	(2.8)	6.2	(2.8)	6.9	2.9	6.1	(2.9)	6.2	(2.9)	6.2	(2.8)	6.5[a]	(2.8)	6.1[b]	(2.8)	6.2[ab]	(2.9)	6.2	(2.9)	6.2	(2.7)
Affects what you buy for your children	6.1	(2.8)	5.8[a]	(2.9)	6.4[b]	(2.8)	6.3[b]	(2.8)	5.9[a]	(2.9)	6.2[b]	(2.8)	6.1	(2.8)	6.1	(2.8)	6.1	2.9	6.1	(2.9)	6.1	(2.8)	6.0	(2.7)	6.2	(2.8)	6.1	(2.8)	6.0	(2.9)	6.0	(2.9)	6.2	(2.7)

Significantly higher ($p < .05$)

Numbers with different letters are significantly different than each other after Tukey's multiple comparision at 0.05

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TABLE B4. PERCEPTIONS ABOUT THE IMPACT OF DIFFERENT TYPES OF FOOD AND BEVERAGE MARKETING ON CHILDREN'S EATING HABITS

Ratings of impact from 1 to 10 (1=no impact, 10=very strong impact)

			Race/ethnicity						Overweight or obese child				Age of oldest child						Household income						Political identification						Gender of parent			
	Overall n= 2454		White n=1287		Black n=520		Hispanic n=546		No n= 1220		Yes n= 1032		2 to 5 n=453		6 to 11 n=733		12 to 17 n=1268		<$40k n=952		$40-75k n=891		>$75k n=611		Liberal n=467		Moderate n=1206		Conservative n=781		Female n=1716		Male n=738	
	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)
TV commercials	7.4	(2.6)	7.3	(2.6)	7.4	(2.7)	7.6	(2.5)	7.3[a]	(2.7)	7.6[b]	(2.5)	7.0[a]	(2.8)	7.5[b]	(2.6)	7.5[b]	(2.5)	7.4	(2.7)	7.5	(2.5)	7.3	(2.6)	7.5	(2.6)	7.4	(2.6)	7.4	(2.6)	7.4	(2.7)	7.4	(2.4)
Promotions in stores	6.4	(2.7)	6.3[a]	(2.7)	6.6[ab]	(2.8)	6.6[b]	(2.5)	6.2[a]	(2.7)	6.6[b]	(2.6)	6.1[a]	(2.9)	6.5[b]	(2.6)	6.5[b]	(2.6)	6.4	(2.7)	6.6	(2.6)	6.3	(2.6)	6.5	(2.7)	6.4	(2.7)	6.4	(2.5)	6.4	(2.7)	6.5	(2.6)
Cartoon characters on packages	6.2	(2.9)	5.9[a]	(2.9)	6.3[b]	(3.0)	6.6[b]	(2.8)	6.4[a]	(2.8)	5.9[b]	(3.0)	6.9[a]	(2.8)	6.7[a]	(2.7)	5.7[b]	(3.0)	6.3	(3.0)	6.2	(2.9)	6.0	(2.9)	6.0	(3.0)	6.3	(2.9)	6.1	(2.9)	6.2	(3.0)	6.2	(2.7)
Commercials before movies	5.8	(2.8)	5.5[a]	(2.8)	6.1[b]	(2.8)	6.3[b]	(2.7)	5.6[a]	(2.8)	6.1[b]	(2.7)	5.4[a]	(3.0)	5.8[b]	(2.8)	6.0[b]	(2.7)	5.8	(2.8)	6.0	(2.8)	5.7	(2.8)	5.6	(2.8)	5.9	(2.8)	5.9	(2.8)	5.8	(2.8)	5.9	(2.7)
Toys/giveaways	5.6	(3.0)	5.4[a]	(3.0)	5.7[ab]	(2.9)	5.9[b]	(2.9)	5.4[a]	(3.0)	5.9[b]	(2.9)	5.2[a]	(3.1)	5.9[b]	(2.9)	5.6[a]	(2.9)	5.5	(3.0)	5.8	(2.9)	5.5	(2.9)	5.5	(3.0)	5.6	(3.0)	5.6	(3.0)	5.5	(3.0)	5.7	(2.8)
Product placements	5.5	(2.8)	5.3[a]	(2.8)	5.7[b]	(2.9)	5.8[b]	(2.8)	5.3[a]	(2.8)	5.8[b]	(2.8)	5.1[a]	3.0	5.4[ab]	(2.8)	5.7[b]	(2.8)	5.5	(2.9)	5.6	(2.8)	5.5	(2.9)	5.3	(2.7)	5.5	(2.8)	5.6	(2.9)	5.4[a]	(2.9)	5.8[b]	(2.7)
Food/beverage logos on other products	5.4	(2.8)	5.2[a]	(2.8)	5.7[b]	(2.9)	5.6[b]	(2.8)	5.2[a]	(2.8)	5.7[b]	(2.7)	5.4	(2.9)	5.4	(2.8)	5.4	(2.8)	5.5	(2.8)	5.5	(2.8)	5.2	(2.8)	5.2	(2.7)	5.5	(2.8)	5.5	(2.8)	5.3[a]	(2.8)	5.6[b]	(2.7)
Billboards/outdoor signs	5.2	(2.7)	4.9[a]	(2.7)	5.6[b]	(2.8)	5.5[b]	(2.7)	5.0[a]	(2.7)	5.5[b]	(2.7)	4.9[a]	(2.9)	5.2[ab]	(2.8)	5.4[b]	(2.7)	5.2	(2.8)	5.3	(2.7)	5.2	(2.8)	5.0	(2.7)	5.2	(2.8)	5.3	(2.7)	5.2	(2.8)	5.4	(2.6)
Advertising/sponsorships in schools	5.0	(2.9)	4.6[a]	(2.9)	5.4[b]	(2.9)	5.4[b]	(2.8)	4.8[a]	(2.9)	5.3[b]	(2.8)	4.1[a]	(3.1)	5.1[b]	(2.8)	5.2[b]	(2.8)	5.0	(2.9)	5.0	(2.9)	5.0	(2.9)	4.7[a]	(2.8)	5.1[b]	(2.9)	5.1[ab]	(3.0)	4.9[a]	(2.9)	5.3[b]	(2.8)
Celebrity endorsements	4.9	(3.0)	4.6[a]	(3.0)	5.4[b]	(3.0)	5.1[b]	(3.0)	4.6[a]	(2.9)	5.3[b]	(2.9)	3.8[a]	(3.0)	4.8[b]	(3.0)	5.4[c]	(2.9)	4.8	(3.0)	4.9	(3.0)	5.0	(3.0)	4.7	(2.9)	4.9	(3.0)	5.0	(3.0)	4.7[a]	(3.0)	5.3[b]	(2.9)
Radio commercials	4.8	(2.8)	4.7[a]	(2.7)	5.2[b]	(2.8)	4.9[ab]	(2.8)	4.6[a]	(2.7)	5.1[b]	(2.8)	4.2[a]	(2.8)	4.7[b]	(2.8)	5.2[c]	(2.7)	4.7	(2.8)	5.0	(2.8)	4.9	(2.8)	4.5[a]	(2.7)	4.9[a]	(2.7)	5.0[b]	(2.9)	4.7[a]	(2.8)	5.2[b]	(2.7)
Advergames	4.6	(3.0)	4.3[a]	(3.0)	5.1[b]	(3.0)	4.8[b]	(3.1)	4.8[a]	(3.0)	4.4[b]	(3.0)	3.6[a]	(3.1)	4.5[b]	(3.0)	5.0[c]	(2.9)	4.6	(3.0)	4.7	(3.1)	4.5	(3.0)	4.3	(2.9)	4.6	(3.0)	4.6	(3.1)	4.4[a]	(3.0)	4.9[b]	(3.0)
Food company-sponsored websites	4.4	(2.9)	4.2[a]	(2.9)	4.8[b]	(2.9)	4.6[b]	(2.9)	4.2[a]	(2.9)	4.7[b]	(2.9)	3.5[a]	(2.9)	4.2[b]	(2.9)	4.9[c]	(2.8)	4.4	(2.9)	4.4	(3.0)	4.5	(2.9)	4.1[a]	(2.8)	4.5[ab]	(2.9)	4.6[b]	(3.0)	4.3[a]	(2.9)	4.9[b]	(2.9)
Sporting event/concert sponsorships	4.4	(2.9)	4.0[a]	(2.9)	4.8[b]	(3.0)	4.7[b]	(2.9)	4.2[a]	(2.9)	4.6[b]	(2.9)	3.5[a]	(2.9)	4.0[b]	2.8	4.9[c]	(2.9)	4.3	(2.9)	4.4	(2.9)	4.5	(2.9)	4.1[a]	(2.8)	4.4[ab]	(2.9)	4.5[b]	(3.0)	4.2[a]	(2.9)	4.8[b]	(2.9)
Internet/banner ads	4.3	(2.9)	4.1[a]	(2.9)	4.7[b]	(3.0)	4.5[b]	(2.9)	4.1[a]	(2.9)	4.6[b]	(3.0)	4.5[a]	(3.0)	4.0[b]	(2.9)	4.8[c]	(2.9)	4.3	(2.9)	4.4	(3.0)	4.4	(2.9)	4.1	(2.8)	4.3	(2.9)	4.5	(3.0)	4.2[a]	(3.0)	4.7[b]	(2.9)
Social media	4.1	(3.0)	3.8[a]	(3.0)	4.5[b]	(3.1)	4.3[b]	(3.0)	3.9[a]	(2.9)	4.4[b]	(3.1)	2.9[a]	(2.8)	3.6[b]	(2.9)	4.8[c]	(3.0)	4.1	(3.0)	4.1	(3.0)	4.2	(3.0)	3.8[a]	(2.8)	4.1[ab]	(3.0)	4.3[b]	(3.1)	3.9[a]	(3.0)	4.5[b]	(2.9)
Viral marketing	3.7	(2.9)	3.5[a]	(2.8)	4.2[b]	(3.0)	3.9[b]	(3.0)	3.5[a]	(2.8)	4.0[b]	(3.0)	3.0[a]	(2.9)	3.3[a]	(2.8)	4.2[b]	(2.9)	3.6	(2.9)	3.7	(2.9)	3.9	(3.0)	3.3[a]	(2.7)	3.7[b]	(2.9)	4.0[b]	(3.1)	3.5[a]	(2.9)	4.2[b]	(2.9)
Mobile marketing	3.3	(2.8)	3.1[a]	(2.7)	3.7[b]	(3.0)	3.5[b]	(2.9)	3.1[a]	(2.7)	3.6[b]	(2.9)	2.8[a]	(2.7)	3.0[a]	(2.7)	3.7[b]	(2.9)	3.2	(2.8)	3.2	(2.8)	3.5	(2.9)	2.8[a]	(2.6)	3.3[b]	(2.8)	3.5[b]	(3.0)	3.1[a]	(2.8)	3.7[b]	(2.9)

Significantly higher ($p < .05$)

Numbers with different letters are significantly different than each other after Tukey's multiple comparision at 0.05

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TABLE B5. CHANGES IN PERCEPTIONS ABOUT THE IMPACT OF FOOD MARKETING (2009 TO 2011)*

Perceptions about the impact of different types of food and beverage marketing on children's eating habits

Ratings from 1 to 10 (1=no impact, 10=very strong impact)

	2009 n=859		2010 n=797		2011 n=798	
	Mean	(SD)	Mean	(SD)	Mean	(SD)
Promotions in stores	6.2[a]	(2.7)	6.3[a]	(2.7)	6.8[b]	(2.6)
Commercials before movies	5.7[a]	(2.8)	5.8[ab]	(2.9)	6.1[b]	(2.7)
Toys and giveaways	5.4[a]	(3.0)	5.6[ab]	(3.0)	5.8[b]	(2.9)
Product placements	5.3[a]	(2.9)	5.7[ab]	(2.8)	5.7[b]	(2.8)
Food/beverage logos on other products	5.2[a]	(2.8)	5.4[ab]	(2.8)	5.6[b]	(2.8)
Billboards, outdoor signs	5.0[a]	(2.7)	5.1[a]	(2.8)	5.6[b]	(2.7)
Advertising/sponsorships in schools	4.7[a]	(2.9)	5.1[b]	(2.9)	5.3[b]	(2.9)
Celebrity endorsements	4.7[a]	(2.9)	4.9[ab]	(3.0)	5.1[b]	(3.0)
Radio commericals	4.6[a]	(2.7)	4.8[ab]	(2.8)	5.1[b]	(2.8)
Advergames	4.1[a]	(3.0)	4.7[b]	(3.0)	5.0[b]	(3.0)
Food company-sponsored websites	4.0[a]	(2.8)	4.5[b]	(3.0)	4.8[b]	(2.9)
Sporting event or concert sponsorships	4.0[a]	(2.8)	4.4[b]	(2.9)	4.7[b]	(3.0)
Internet, banner ads	3.8[a]	(2.8)	4.5[b]	(2.9)	4.7[b]	(3.0)
Social media	3.6[a]	(2.9)	4.2[b]	(3.0)	4.5[b]	(3.1)
Viral marketing	3.4[a]	(2.8)	3.8[b]	(3.0)	4.0[b]	(3.0)
Mobile marketing	2.9[a]	(2.6)	3.4[b]	(2.8)	3.7[b]	(3.0)

Significantly higher ($p < .05$)

Numbers with different letters are significantly different than each other after Tukey's multiple comparision at 0.05

*Significant increases from 2009 to 2011

Beliefs about the impact of food and beverage marketing

Agreement on a scale of 1 to 10 (1=strongly disagree, 10=strongly agree)

	2009 n=859		2010 n=797		2011 n=798	
	Mean	(SD)	Mean	(SD)	Mean	(SD)
Encourages large portions	6.0[a]	(2.9)	6.3[ab]	(2.9)	6.3[b]	(2.8)

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TABLE B6. PERCEIVED OBSTACLES TO ENSURING HEALTHY EATING HABITS FOR CHILDREN

Rating on a scale from 1 to 10
(1=not at all an obstacle , 10=very much an obstacle)

			Race/ethnicity						Overweight or obese child				Age of oldest child						Household income						Political orientation						Gender of parent			
	Overall n= 2454		White n=1287		Black n=520		Hispanic n=546		No n= 1220		Yes n= 1032		2 to 5 n=453		6 to 11 n=733		12 to 17 n=1268		<$40k n=952		$40-75k n=891		>$75k n=611		Liberal n=467		Moderate n=1206		Conservative n=781		Female n=1716		Male n=738	
	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)
Expensive cost of organic food	7.2	(2.8)	7.1	(2.8)	7.2	(2.8)	7.3	(2.6)	7.0^{a}	(2.9)	7.3^{b}	(2.9)	7.0	(2.8)	7.1	(2.9)	7.3	(2.7)	7.3^{a}	(2.8)	7.3^{a}	(2.8)	6.9^{b}	(2.7)	7.3^{a}	(2.8)	7.3^{a}	(2.7)	6.9^{b}	(2.8)	7.3^{a}	(2.8)	6.8^{b}	(2.7)
Expensive cost of healthy foods	7.1	(2.7)	7.1	(2.7)	7.1	(2.7)	7.3	(2.5)	7.0^{a}	(2.8)	7.4^{b}	(2.8)	6.9	(2.7)	7.0	(2.8)	7.2	(2.6)	7.3^{a}	(2.6)	7.3^{a}	(2.6)	6.6^{b}	(2.8)	7.3	(2.6)	7.1	(2.7)	7.0	(2.7)	7.3^{a}	(2.7)	6.7^{b}	(2.6)
Easy access to fast food restaurants	6.6	(2.8)	6.4^{a}	(2.8)	7.0^{b}	(2.8)	6.9^{b}	(2.7)	6.5^{a}	(2.8)	6.8^{b}	(2.8)	6.5	(2.9)	6.6	(2.8)	6.7	(2.8)	6.7	(2.9)	6.7	(2.8)	6.5	(2.8)	6.9^{a}	(2.7)	6.6^{ab}	(2.8)	6.5^{b}	(2.8)	6.6	(2.9)	6.7	(2.6)
Prevalence of snack foods and junk foods	6.5	(2.7)	6.4^{a}	(2.7)	6.7^{b}	(2.7)	6.8^{b}	(2.7)	6.5	(2.7)	6.6	(2.7)	6.3^{a}	(2.8)	6.5^{ab}	(2.7)	6.7^{b}	(2.6)	6.7	(2.7)	6.5	(2.7)	6.5	(2.7)	6.7	(2.6)	6.6	(2.7)	6.4	(2.8)	6.5	(2.7)	6.7	(2.6)
Too much time watching TV or spent on the computer	6.5	(2.8)	6.3^{a}	(2.8)	6.5^{ab}	(2.9)	6.8^{b}	(2.8)	6.3^{a}	(2.9)	6.7^{b}	(2.9)	6.2^{a}	(2.9)	6.2^{a}	(2.9)	6.8^{b}	(2.7)	6.4	(2.9)	6.6	(2.8)	6.4	(2.8)	6.7	(2.7)	6.4	(2.9)	6.5	(2.8)	6.4	(2.9)	6.6	(2.7)
Unhealthy food advertising	6.1	(2.8)	6.0^{a}	(2.8)	6.4^{b}	(2.8)	6.3^{b}	(2.7)	6.0^{a}	(2.8)	6.4^{b}	(2.8)	5.9	(2.8)	6.2	(2.8)	6.2	(2.8)	6.2	(2.8)	6.2	(2.8)	5.9	(2.8)	6.3	(2.7)	6.2	(2.8)	6.0	(2.9)	6.1	(2.8)	6.3	(2.7)
Unhealthy food sold in schools	6.1	(2.9)	5.8^{a}	(2.9)	6.3^{b}	(2.9)	6.5^{b}	(2.8)	5.9^{a}	(2.9)	6.2^{b}	(2.9)	5.7^{a}	(3.0)	6.0^{ab}	(2.9)	6.3^{b}	(2.8)	6.2	(2.8)	6.0	(3.0)	6.0	(2.8)	6.3	(2.8)	6.1	(2.9)	6.0	(2.9)	6.1	(3.0)	6.2	(2.6)
Giving in to children's requests for unhealthy foods	6.0	(2.8)	5.7^{a}	(2.8)	6.3^{b}	(2.9)	6.3^{b}	(2.8)	5.8^{a}	(2.9)	6.2^{b}	(2.9)	6.0	(2.8)	6.0	(2.9)	6.1	(2.8)	6.2^{a}	(2.8)	6.0^{ab}	(2.8)	5.7^{b}	(2.8)	6.1	(2.7)	6.1	(2.8)	5.9	(2.9)	6.0	(2.9)	6.1	(2.6)
Me being a poor role model with my own eating habits	5.9	(2.9)	5.7^{a}	(2.9)	6.2^{b}	(3.0)	6.0^{ab}	(2.9)	5.6^{a}	(2.9)	6.2^{b}	(2.9)	5.9	(2.9)	5.8	(2.9)	5.9	(2.9)	6.1^{a}	(2.9)	5.8^{ab}	(2.9)	5.7^{b}	(2.8)	5.9	(2.9)	5.9	(2.9)	5.8	(2.9)	5.9	(3.0)	5.9	(2.7)
Eating out of the house	5.8	(2.9)	5.7^{a}	(2.9)	6.1^{b}	(3.0)	6.0^{ab}	(2.9)	5.8	(3.0)	5.9	(3.0)	5.7^{ab}	(2.9)	5.7^{a}	(3.0)	6.0^{b}	(2.9)	5.8	(3.0)	5.8	(2.8)	5.8	(2.9)	5.9	(2.8)	5.8	(2.9)	5.8	(2.9)	5.7^{a}	(3.0)	6.1^{b}	(2.7)
Prevalence of vending machines	5.8	(3.0)	5.5^{a}	(3.0)	6.2^{b}	(3.0)	6.2^{b}	(2.9)	5.6^{a}	(3.0)	6.0^{b}	(3.0)	5.4^{a}	(3.1)	5.6^{a}	(3.1)	6.1^{b}	(2.9)	6.0^{a}	(2.9)	5.7^{b}	(3.0)	5.6^{b}	(3.0)	5.8	(2.9)	5.9	(2.9)	5.6	3.0	5.7	(3.1)	6.0	(2.8)
Not enough time to prepare healhy meals	5.7	(2.9)	5.6^{a}	(2.8)	5.9^{b}	(2.9)	5.9^{ab}	(2.9)	5.6	(2.9)	5.8	(2.9)	5.8	(2.8)	5.6	(2.9)	5.8	(2.9)	5.8	(2.9)	5.7	(2.8)	5.6	(2.9)	5.8	(2.9)	5.8	(2.8)	5.6	(2.9)	5.7	(2.9)	5.8	(2.7)
Relatives serving what they like	5.7	(2.8)	5.3^{a}	(2.8)	6.1^{b}	(2.9)	6.0^{b}	(2.8)	5.5^{a}	(2.8)	5.8^{b}	(2.8)	5.6	(2.8)	5.7	(2.9)	5.6	(2.8)	5.9^{a}	(2.8)	5.6^{ab}	(2.8)	5.4^{b}	(2.8)	5.6^{ab}	(2.8)	5.8^{a}	(2.7)	5.5^{b}	(2.9)	5.6	(2.9)	5.7	(2.6)
Peer pressure to eat unhealthy foods	5.6	(2.8)	5.5^{a}	(2.8)	5.8^{b}	(2.9)	5.9^{b}	(2.9)	5.5	(2.9)	5.7	(2.9)	5.3^{a}	(2.8)	5.7^{ab}	(2.8)	5.7^{b}	(2.8)	5.8	(2.9)	5.6	(2.8)	5.5	(2.8)	5.7	(2.7)	5.7	(2.8)	5.6	(2.9)	5.5^{a}	(2.9)	5.9^{b}	(2.7)
Not enough community programs that support healthy eating	5.6	(2.9)	5.2^{a}	(2.9)	6.0^{b}	(2.9)	6.2^{b}	(2.8)	5.5^{a}	(2.9)	5.7^{b}	(2.9)	5.5	(3.0)	5.6	(2.9)	5.7	(2.9)	6.0^{a}	(2.9)	5.5^{b}	(2.9)	5.2^{b}	(2.8)	5.7^{a}	(2.8)	5.8^{a}	(2.8)	5.3^{b}	(3.0)	5.6	(2.9)	5.6	(2.8)
Not enough time for family meals	5.5	(3.0)	5.5	(3.0)	5.8	(3.1)	5.5	(3.0)	5.5	(3.1)	5.6	(3.1)	5.4^{ab}	(3.0)	5.3^{a}	(3.0)	5.8^{b}	(3.0)	5.6	(3.1)	5.6	(3.0)	5.4	(3.0)	5.6	(3.0)	5.5	(3.0)	5.6	(3.0)	5.5	(3.1)	5.7	(2.9)

Significantly higher ($p < .05$)

Numbers with different letters are significantly different than each other after Tukey's multiple comparision at 0.05

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TABLE B7. PERCEPTIONS ABOUT THE NEGATIVE INFLUENCE OF DIFFERENT INSTITUTIONS AND INDIVIDUALS IN PROMOTING HEALTHY EATING HABITS

Percent of parents responding 1 to 5 on a 10-point scale (1=bad influence, 10=good influence)

		Race/ethnicity			Overweight or obese child		Age of oldest child			Household income			Political orientation			Gender of parent	
	Overall n= 2454	**White** n=1287	**Black** n=520	**Hispanic** n=546	**No** n= 1220	**Yes** n= 1032	**2 to 5** n=453	**6 to 11** n=733	**12 to 17** n=1268	**<$40k** n=952	**$40-75k** n=891	**>$75k** n=611	**Liberal** n=467	**Moderate** n=1206	**Conservative** n=781	**Female** n=1716	**Male** n=738
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Media	68.5%	71.3%[a]	62.9%[b]	67.4%[ab]	66.9%[a]	70.8%[b]	70.6%	69.2%	67.4%	67.1%	70.7%	67.6%	73.2%[a]	67.4%[b]	67.5%[b]	69.3%	66.8%
Food industry	61.2%	62.1%	57.7%	61.7%	60.2%	63.0%	62.0%	63.8%	59.5%	62.4%	61.4%	59.1%	68.1%[a]	62.1%[b]	55.7%[c]	62.1%	59.1%
Government	54.9%	59.1%[a]	50.0%[b]	51.3%[b]	54.7%	55.2%	58.1%	56.2%	53.1%	57.9%[a]	55.4%[a]	49.6%[b]	50.3%[a]	56.6%[b]	55.1%[ab]	55.7%	53.1%
Your children's peers	50.5%	52.5%[a]	48.7%[ab]	46.2%[b]	50.4%	51.1%	47.5%	50.5%	51.5%	53.3%[a]	50.7%[ab]	45.7%[b]	51.6%	51.7%	47.9%	49.5%	52.6%
Local communities	41.9%	43.7%[a]	41.2%[ab]	38.3%[b]	40.6%	43.0%	43.9%	43.8%	40.1%	43.8%[a]	42.8%[a]	37.6%[b]	40.9%	43.5%	40.0%	42.6%	40.2%
Schools	31.6%	33.3%	28.7%	29.7%	30.9%	32.7%	33.1%	32.3%	30.7%	32.4%[ab]	33.1%[a]	28.3%[b]	32.1%	32.3%	30.4%	32.4%	29.8%
Your family	15.2%	14.7%	16.7%	13.7%	15.5%	14.9%	16.8%	16.9%	13.7%	17.7%[a]	15.2%[ab]	11.6%[b]	15.2%[a]	18.0%[a]	11.0%[b]	15.4%	14.9%
Yourself	10.7%	10.9%[a]	11.7%[a]	7.9%[b]	11.0%	10.2%	12.1%[ab]	12.7%[a]	9.1%[b]	12.4%[a]	10.7%[ab]	8.2%[b]	10.1%[ab]	12.8%[a]	7.9%[b]	10.3%	11.7%

Significantly higher ($p < .05$)

Numbers with different letters are significantly different than each other after Bonferroni corrections

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TABLE B8. CHANGES IN PERCEIVED ENVIRONMENTAL INFLUENCES (2009 TO 2011)*

Perceptions about the negative influence of different institutions and individuals in promoting healthy eating habits

Percent of parents responding 1 to 5 on a 10-point scale
(1=bad influence, 10=good influence)

	2009 n=859	2010 n=797	2011 n=798
	Percent	Percent	Percent
Food industry	59.1%[a]	60.1%[ab]	64.5%[b]
Government	54.0%[ab]	52.3%[a]	58.3%[b]
Local communities	39.9%[a]	39.9%[a]	46.0%[b]

Perceived obstacles to ensuring healthy eating habits

Rating on a scale from 1 to 10
(1=not at all an obstacle , 10=very much an obstacle)

	2009 n=859		2010 n=797		2011 n=798	
	Mean	(SD)	Mean	(SD)	Mean	(SD)
Expensive cost of healthy foods	7.0[a]	(2.8)	7.0[a]	(2.6)	7.4[b]	(2.5)
Unhealthy food advertising	6.0[a]	(2.8)	6.0[a]	(2.8)	6.4[b]	(2.7)
Unhealthy food sold in schools	5.9[a]	(2.9)	6.1[ab]	(2.9)	6.3[b]	(2.8)
Eating out of the house	5.6[a]	(3.0)	5.7[a]	(3.0)	6.3[b]	(2.7)
Not enough time to prepare healthy meals	5.5[a]	(2.9)	5.6[a]	(2.9)	6.0[b]	(2.8)
Relatives serving what they like	5.2[a]	(2.8)	5.7[b]	(2.8)	6.1[c]	(2.7)
Peer pressure to eat unhealthy foods	5.3[a]	(2.8)	5.6[a]	(2.8)	6.1[b]	(2.7)
Not enough community programs that support healthy eating	5.5[a]	(2.9)	5.5[ab]	(2.9)	5.8[b]	(2.9)
Not enough time for family meals	5.3[a]	(3.0)	5.5[ab]	3.1	5.8[b]	(2.9)

Significantly higher ($p < .05$)

Numbers with different letters are significantly different than each other after Tukey's multiple comparision at 0.05

*Significant increases from 2009 to 2011

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TABLE B9. SUPPORT FOR ACTIONS TO PROMOTE HEALTHY EATING HABITS TO CHILDREN

Percent of parents responding 6 to 10 on a scale of 1 to 10 (1=definitely would oppose, 10=definitely would support)

		Race/ethnicity			Overweight or obese child		Age of oldest child			Household income			Political orientation			Gender of parent	
	Overall n= 2454	White n=1287	Black n=520	Hispanic n=546	No n= 1220	Yes n= 1032	2 to 5 n=453	6 to 11 n=733	12 to 17 n=1268	<$40k n=952	$40-75k n=891	>$75k n=611	Liberal n=467	Moderate n=1206	Conservative n=781	Female n=1716	Male n=738
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Strengthen nutrition standards for federally funded school lunches	81.1%	78.1%[a]	82.7%[b]	86.3%[b]	80.5%	81.3%	79.9%	80.9%	81.6%	80.3%	80.8%	82.7%	87.2%[a]	79.9%[b]	79.3%[b]	82.5%[a]	77.8%[b]
Strengthen nutrition standards for ALL foods and beverages sold at school	77.7%	74.0%[a]	80.8%[b]	81.7%[b]	77.1%	78.5%	76.6%	77.5%	78.2%	76.6%	76.8%	80.7%	83.9%[a]	76.5%[b]	75.8%[b]	78.1%	76.7%
Require children's TV programs to show children being physically active and eating healthy food	72.7%	67.0%[a]	79.2%[b]	79.9%[b]	71.0%	74.1%	74.0%	72.9%	72.1%	74.8%[a]	72.5%[ab]	69.6%[b]	75.4%[a]	73.8%[a]	69.3%[b]	74.9%[a]	67.3%[b]
Allow only healthy foods and beverages in school vending machines	72.1%	69.2%[a]	73.7%[ab]	77.3%[b]	70.3%	73.7%	71.1%[ab]	75.0%[a]	70.7%[b]	70.4%	72.2%	74.5%	76.2%[a]	72.6%[ab]	68.8%[b]	73.7%[a]	68.2%[b]
Require restaurants to list calorie information on menus	71.0%	66.5%[a]	78.1%[b]	75.1%[b]	69.3%	72.1%	71.7%	68.6%	72.2%	71.1%	69.1%	73.7%	73.7%	71.6%	68.6%	73.6%[a]	65.0%[b]
Require children's media companies to fund public service announcements for fruits and vegetables on TV	69.5%	64.2%[a]	74.8%[b]	76.0%[b]	68.1%	71.1%	70.6%	71.1%	68.1%	69.9%	68.6%	70.2%	71.3%[a]	71.5%[a]	65.3%[b]	71.5%[a]	64.8%[b]
Do not allow advertising on school buses*	68.7%	69.3%	62.4%	72.3%	68.3%	69.8%	69.8%	70.9%	66.9%	66.1%	69.4%	71.4%	72.4%	69.7%	65.2%	69.0%	68.0%
Require companies to fund equal amounts of advertising for healthy and unhealthy foods.	67.5%	61.5%[a]	74.6%[b]	75.5%[b]	65.4%[b]	70.3%[a]	64.9%	67.0%	68.8%	69.4%	66.7%	65.8%	72.0%[a]	69.1%[a]	62.5%[b]	70.1%[a]	61.6%[b]
Allow only healthy food advertising on TV programs targeted to children under 12	64.7%	59.8%[a]	69.8%[b]	71.4%[b]	62.5%	66.1%	68.0%[a]	66.2%[ab]	62.6%[b]	65.1%	63.9%	65.1%	67.5%[a]	65.5%[ab]	61.7%[b]	66.3%[a]	61.0%[b]
Allow only healthy food advertising on TV programs targeted to youth under 18	59.9%	54.8%[a]	66.2%[b]	65.2%[b]	58.0%	61.1%	60.7%	61.5%	58.7%	61.1%	59.6%	58.4%	62.1%	60.0%	58.5%	61.7%[a]	55.8%[b]
Allow cartoon characters only on packages for healthy foods	59.2%	53.2%[a]	63.9%[b]	68.3%[b]	55.7%[b]	62.4%[a]	61.6%	60.7%	57.4%	61.9%	57.5%	57.5%	59.5%	60.2%	57.4%	60.5%[a]	56.1%[b]
Allow toys with kid's meals only when meals meet healthy regulations*	58.9%	52.8%[a]	68.2%[b]	66.9%[b]	53.8%[b]	64.1%[a]	56.4%	62.3%	57.8%	61.1%	58.8%	55.8%	62.2%[a]	62.8%[a]	51.8%[b]	60.6%	55.8%
Do not allow any advertising on TV programs targeted to children under 8	57.1%	53.6%[a]	58.9%[b]	63.0%[b]	55.6%	57.6%	61.8%[a]	56.6%[ab]	55.8%[b]	56.7%	57.8%	56.8%	60.4%	56.7%	55.8%	58.6%[a]	53.8%[b]
Do not allow games or other child-oriented features on unhealthy food websites	56.3%	52.3%[a]	60.8%[b]	60.3%[b]	53.0%[b]	59.2%[a]	57.6%	55.9%	56.0%	56.6%	55.7%	56.6%	54.4%	57.9%	54.9%	57.0%	54.6%
Allow only non-food rewards in the classroom	54.7%	49.5%[a]	62.1%[b]	58.8%[b]	51.2%[b]	58.2%[a]	55.4%	55.0%	54.3%	54.2%	54.9%	55.2%	57.6%	54.2%	53.8%	55.1%	53.7%
Tax all sugar-sweetened soft drinks and use the money to provide healthy foods to children	48.6%	41.1%[a]	58.1%[b]	56.2%[b]	46.3%	50.1%	48.8%	48.7%	48.4%	49.3%	47.9%	48.5%	53.8%[a]	48.1%[b]	46.2%[b]	48.7%	48.2%
Do not allow chocolate or other flavored milk to be served in schools	42.5%	37.4%[a]	49.0%[b]	46.8%[b]	38.6%[b]	45.8%[a]	45.5%	41.8%	41.9%	43.7%[ab]	38.8%[a]	46.1%[b]	43.8%	41.3%	43.6%	41.5%	44.7%

Significantly higher ($p < .05$)

Numbers with different letters are significantly different than each other after Bonferroni corrections

*Question asked in 2011 only

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TABLE B10. SUPPORT FOR REGULATIONS TO LIMIT SPECIFIC TYPES OF UNHEALTHY FOOD MARKETING TO CHILDREN UNDER 12

Percent of parents responding 6 to 10 on a scale of 1 to 10 (1=definitely would oppose, 10=definitely would support)

		Race/ethnicity			Overweight or obese child		Age of oldest child			Household income			Political orientation			Gender of parent	
	Overall n= 2454	**White** n=1287	**Black** n=520	**Hispanic** n=546	**No** n= 1220	**Yes** n= 1032	**2 to 5** n=453	**6 to 11** n=733	**12 to 17** n=1268	**<$40k** n=952	**$40-75k** n=891	**>$75k** n=611	**Liberal** n=467	**Moderate** n=1206	**Conservative** n=781	**Female** n=1716	**Male** n=738
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Advertising/sponsorships in schools	64.8%	64.0%	65.8%	65.2%	65.1%	65.7%	64.2%	66.0%	64.4%	63.6%^{a}	63.4%^{ab}	69.1%^{b}	67.5%	64.2%	64.4%	65.3%	63.8%
Mobile marketing	64.5%	65.4%	63.5%	63.4%	63.6%	67.0%	58.7%^{a}	62.1%^{a}	67.9%^{b}	59.6%^{a}	65.7%^{b}	70.4%^{b}	69.8%^{a}	61.7%^{b}	65.6%^{ab}	64.5%	64.4%
TV commercials	62.8%	60.1%^{a}	65.8%^{b}	65.8%^{b}	61.4%	63.0%	64.5%	64.7%	61.0%	63.2%	62.4%	62.5%	64.0%	63.8%	60.4%	63.7%	60.6%
Viral marketing	61.6%	62.2%	60.6%	60.8%	60.0%	63.9%	56.7%^{a}	59.1%^{a}	64.8%^{b}	56.6%^{a}	62.7%^{b}	67.6%^{b}	65.3%^{a}	59.4%^{b}	62.7%^{ab}	61.5%	61.8%
Internet/banner ads	61.2%	60.8%	62.1%	60.6%	60.8%	61.8%	57.6%^{a}	59.1%^{a}	63.6%^{b}	57.9%^{a}	61.6%^{ab}	65.6%^{b}	63.0%	59.9%	62.1%	61.4%	60.6%
Commercials before movies	59.2%	55.9%^{a}	64.8%^{b}	61.4%^{b}	57.4%	60.4%	57.8%	61.1%	58.5%	59.0%	59.0%	59.6%	60.2%	59.5%	58.1%	59.0%	59.5%
Advergames	59.1%	57.0%^{a}	63.1%^{b}	59.5%^{ab}	57.1%^{a}	61.3%^{b}	55.9%	58.7%	60.5%	58.7%^{ab}	57.0%^{a}	62.7%^{b}	60.8%	58.5%	59.0%	59.4%	58.3%
Product placements	57.6%	55.6%^{a}	61.9%^{b}	59.0%^{ab}	59.2%	55.7%	56.1%	58.8%	57.5%	56.2%	57.6%	59.9%	60.4%	56.3%	58.0%	58.4%	55.8%
Cartoon characters on packages	57.1%	53.4%^{a}	62.9%^{b}	59.7%^{b}	53.6%^{a}	60.3%^{b}	57.8%^{ab}	60.0%^{a}	55.1%^{b}	57.6%	56.1%	57.8%	58.0%	57.4%	56.1%	57.8%	55.6%
Social media	56.1%	55.1%	58.7%	56.0%	54.4%	58.0%	49.2%^{a}	55.1%^{b}	59.1%^{b}	53.5%	57.6%	57.9%	55.9%	55.6%	57.0%	56.6%	54.9%
Toys/giveaways	56.0%	53.0%^{a}	61.4%^{b}	57.5%^{ab}	54.1%	57.8%	57.0%	56.9%	55.1%	57.0%	54.0%	57.3%	54.6%	56.6%	55.8%	56.5%	54.9%
Food/beverage logos on other products	55.6%	52.1%^{a}	61.7%^{b}	58.8%^{b}	52.2%^{a}	58.5%^{b}	55.0%	56.6%	55.2%	56.3%	54.7%	55.8%	52.7%	57.0%	55.2%	56.4%	53.8%
Celebrity endorsements	55.4%	52.5%^{a}	60.4%^{b}	57.0%^{ab}	53.8%	57.2%	52.3%	56.2%	56.1%	56.7%	53.8%	55.8%	53.3%	55.6%	56.3%	56.2%	53.5%
Promotions in stores	53.3%	48.4%^{a}	60.8%^{b}	58.1%^{b}	50.6%	54.6%	54.5%	55.1%	52.7%	56.2%^{a}	50.8%^{b}	52.2%^{ab}	48.8%^{a}	54.3%^{b}	54.3%^{b}	53.9%	51.8%
Radio commercials	52.9%	49.4%^{a}	59.8%^{b}	54.2%^{ab}	51.2%	54.2%	52.1%	52.8%	52.8%	52.2%	52.1%	55.2%	51.8%	53.8%	52.1%	53.9%	50.7%
Food company-sponsored websites	52.5%	50.0%^{a}	57.3%^{b}	54.2%^{ab}	50.4%^{a}	54.8%^{b}	49.9%	52.1%	53.7%	53.2%	51.6%	52.9%	51.6%	53.8%	51.1%	53.3%	50.7%
Billboards/outdoor signs	52.3%	47.3%^{a}	59.6%^{b}	57.9%^{b}	50.1%	53.9%	53.6%	53.1%	51.9%	52.8%	51.3%	54.0%	51.0%	53.2%	52.6%	53.0%	51.6%
Sporting event/concert sponsorships	51.4%	48.1%^{a}	56.0%^{b}	55.3%^{b}	49.0%^{a}	53.9%^{b}	48.6%	50.9%	52.8%	51.0%	50.7%	53.2%	50.5%	51.4%	52.0%	51.6%	51.1%

Significantly higher ($p < .05$)

Numbers with different letters are significantly different than each other after Bonferroni corrections

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TABLE B11. CHANGES IN SUPPORT FOR REGULATIONS (2009–2011)*

Percent answering 6 to 10 on a scale of 1 to 10
(1=definitely would oppose, 10=definitely would support)

	2009 n=859	2010 n=797	2011 n=798
	Percent	Percent	Percent
Do not allow games or other child-oriented features on unhealthy food websites	53.8%[a]	55.6%[ab]	59.7%[b]
Support for limiting specific types of food marketing			
TV commercials	60.5%[a]	61.3%[a]	66.5%[b]
Commercials before movies	56.1%[a]	60.5%[ab]	61.2%[b]
Cartoon characters on packages	54.0%[a]	58.3%[ab]	59.2%[b]
Social media	53.3%[a]	56.3%[ab]	58.8%[b]
Toys/giveaways	52.4%[a]	58.1%[b]	57.8%[b]
Food/beverage logos on other products	51.6%[a]	57.8%[b]	57.6%[b]
Celebrity endorsements	52.5%[a]	56.3%[ab]	57.6%[b]
Promotions in stores	48.8%[a]	56.0%[b]	55.4%[b]
Radio commericals	48.9%[a]	53.5%[ab]	56.6%[b]
Food company-sponsored websites	49.6%[a]	53.3%[ab]	54.9%[b]
Sporting event/concert sponsorships	48.4%[a]	51.9%[ab]	54.1%[b]

Significantly higher ($p < .05$)

Numbers with different letters are significantly different than each other after Tukey's multiple comparision at 0.05

*Significant increases from 2009 to 2011

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