



Food marketing to children in the United States: Can industry voluntarily do the right thing for children's health?



Frances Fleming-Milici*, Jennifer L. Harris

Rudd Center for Food Policy and Obesity, University of Connecticut, One Constitution Plaza, Suite 600, Hartford, CT, 06103, USA

ARTICLE INFO

Keywords:

Food and beverage marketing
Food and beverage advertising
Self-regulation
Childhood obesity
Health policy

ABSTRACT

Food marketing is a major contributor to high rates of obesity and diet-related disease among children. Researchers, advocates, and policymakers have called for improvements in the nutrition quality of foods marketed to children to improve children's health. In the United States, for over 10 years, the food and beverage industry has responded with self-regulatory initiatives, touting the success of these efforts. However, public health researchers have documented very limited improvements. As a product of conference proceedings, we briefly summarize US self-regulation of food and beverage marketing to children, argue that reliance on industry self-regulation limits meaningful change, and explain why existing food companies cannot market truly healthy foods to children. After over a decade of self-regulation, industry continues to exploit loopholes and bombard children with marketing for foods that can negatively impact their health. Still, the political will to advocate for effective government regulation remains a challenge. Shifts in parents' attitudes toward supporting policies to protect children from food marketing and local government actions to improve the food environment are promising indicators of increasing demand for action. However, sustained and well-publicized research and advocacy are necessary to generate broader support to enact such policies at the state and federal level in order to effectively address this public health crisis.

1. Introduction

In the US, 17% of youth ages 2–17 experience obesity and 5.8% have extreme obesity [28]. Food and beverage marketing aimed at children and adolescents promotes almost exclusively unhealthy products and is a major contributor to these alarming rates of obesity and lifelong negative effects on children's health [14,17,19,27,44]. Researchers, advocates and policymakers have called for dramatic changes in food marketing, focusing primarily on the poor nutritional quality of foods and beverages marketed directly to children [18,19,42]. In response, over 10 years ago the food and beverage industry implemented the Children's Food and Beverage Advertising Initiative [CFBAI], a voluntary self-regulatory program in which participating companies promised to become part of the solution to the childhood obesity crisis [5]. Over that time, public health researchers have documented very limited improvements in food marketing to children and identified numerous loopholes in industry self-regulation that allow companies to continue to aggressively market unhealthy foods to children [14,18,29].

We argue that the public health focus on the poor nutritional quality of foods marketed to children, and the corollary that marketing of

healthy foods to children would be beneficial, has contributed to an appearance of progress without any noticeable improvements in the unhealthy food marketing environment that continues to surround children. One major obstacle is that the food and beverage marketers believe companies have a right to market to children, and do not consider whether or not it is the right thing to do [7]. As such, public health advocates and researchers see “ethical problems that [food and beverage] companies do not see” [7].

In this paper we will describe industry self-regulation of food marketing to children in the US and why self-regulatory initiatives have only slightly moved the needle. We will also describe shifts in parents' attitudes about food marketing policies to protect children. In addition, we will explain how successful local government policy actions indicate an increasing demand for changes in the food environment and provide an opportunity to measure policy effectiveness. We will also argue that public health researchers and advocates must continue to evaluate and persuasively communicate the limitations in industry self-regulation to increase parents' and policymakers' understanding of the unhealthy impact of food marketing on children and support of government policies that create a healthier food environment for children.

* Corresponding author at: Rudd Center for Food Policy and Obesity, University of Connecticut, One Constitution Plaza, Suite 600, Hartford, CT, 06103, USA.
E-mail addresses: frances.fleming@uconn.edu (F. Fleming-Milici), jennifer.harris@uconn.edu (J.L. Harris).

1.1. Industry self-regulation

In the early 2000s, public health advocates began to focus on the toxic food environment, including massive amounts of unhealthy food marketing targeted to children, amidst skyrocketing rates of obesity among young people [1]. In 2006, the Institute of Medicine conducted a thorough review of the research in this area and concluded that food marketing “geared to children and youth is out of balance with recommended healthful diets and contributes to an environment that puts their health at risk” and that it increases children's preferences and purchase requests to parents for energy-dense nutrient-poor products [19]. The report's authors specifically recommended that food and beverage companies reformulate to make foods and beverages lower in calories, fat, salt, sugars, and higher in nutrition, and shift their advertising and marketing emphasis for child-directed foods and drinks to these reformulated products.

To avoid government regulation that could constrain successful marketing practices, food and beverage companies responded with promises to be part of the solution to childhood obesity [24]. Since 2007, major US food and beverage companies have implemented voluntary self-regulatory pledges through the Children's Food and Beverage Advertising Initiative (CFBAI), a Better Business Bureau program. Currently 17 major food and beverage companies and 2 fast food restaurant chains are members. The goal is to “shift the mix of foods advertised to children under 12 to encourage healthier dietary choices.” Participating companies agree to only advertise products that meet specific nutrition criteria on child-directed media [5]. Since its launch, the CFBAI has responded to criticism about lax nutrition criteria by adopting uniform nutrition standards in 2011 and further strengthening its nutrition standards in 2018.

Since 2007, research has shown some modest improvement in the nutritional quality of products advertised to children. In 2009, 86% of TV ads viewed by children were for products high in saturated fat, sugar, or sodium, down from 94% in 2003 [30]. However, a 2017 analysis showed that children (ages 2–11) continued to view, on average, more than 11 food-related ads on TV every day, and the majority (72%) of those ads were for products in primarily unhealthy categories, including fast food and other restaurants, cereal, candy, snacks, and sugary drinks. Further, less than 10% of food ads viewed promoted products in healthier categories, such as yogurt, other dairy, bottled water, or fruits and vegetables [14].

Despite limited improvement, the industry touts the success of self-regulation by highlighting product reformulations to conform with CFBAI nutrition standards [6]. However, a recent analysis of the nutritional quality of products that met CFBAI nutrition criteria and could be featured in child-directed advertising (i.e., listed products) found that the majority of these products do not support a diet that accords with the 2015–2020 Dietary Guidelines for Americans [[14],[41]]. For example, from 2007 to 2016 the sugar in child-targeted cereals was reduced from 13 grams per serving to 9 or 10 grams, but these cereals remain more than 1/3 sugar by weight per serving. (One serving of cereal is 27–30 grams by weight) [14]. Although these products meet the CFBAI's industry-established nutrition standards, they do not conform with health and nutrition experts' recommendations for foods and drinks that children should be encouraged to consume [[31],[40],[41]]. Of note, the CFBAI-approved products for advertising directed to children (i.e., those that meet their guidelines as “better for you”) include sugary cereals such as Fruity Pebbles and Reese's Peanut Butter Puffs, Popsicles, and Capri Sun Roarin' Waters and Kool-Aid sugary drinks [5].

As an indicator of successful self-regulation, industry also points to improvements in food advertising on children's programming (e.g., Nickelodeon, Cartoon Network). However, these “successes” also highlight additional loopholes in industry self-regulation. Although participating companies have complied with CFBAI pledges to only advertise “approved” products on child-directed TV programming

(defined as programs in which children ages 2 – 11 comprise 35% or more of the audience), children also view large numbers of TV ads on other types of TV, including “tween” and family programming [16]. Following self-regulation, research shows a 45% decline in food and beverage ads that children saw on child-directed TV from 2007 to 2016, together with a substantial increase in food ads viewed on other types of TV (+42% for younger children ages 2 to 5 and +26% for 6 to 11-year-olds) [14]. Furthermore, more than one-half of the ads children viewed on non-children's TV were for products that CFBAI-participating companies pledged they would not advertise to children. Therefore, some CFBAI-participating companies have shifted their advertising dollars to programming that does not qualify as “child-directed” under their pledges, but still has a large audience of child viewers. In addition, thirty percent of ads that children (ages 2–11) viewed in 2016 were from companies (primarily fast food) that do not belong to the CFBAI [14]. Further, companies promise to improve advertising only to children 11 years and younger, while children 12 years and older are also highly susceptible to influence from unhealthy food marketing [13]. These findings demonstrate that both the exploitation of loopholes by CFBAI companies and the voluntary nature of participation are major shortcomings of self-regulation.

1.2. Barriers to effective self-regulation

Public health experts have made numerous recommendations for closing these loopholes in food industry self-regulation, including strengthening nutrition standards, expanding the definition of child-directed advertising, increasing the age of children covered by pledges, and setting nutrition standards for all products sold by advertised brands (not just those pictured in the advertising) [18,20]. Interestingly, some analyses of the shortcomings of industry self-regulation have concluded with discussions of industry promises for future improvements in CFBAI, including strengthening nutrition standards, and hopes that these changes will help close the loopholes and bring about significant change in food marketing to children [[7],[33]]. Given the lack of meaningful progress after more than 10 years of industry self-regulation, it may be time to conclude that industry self-regulation cannot be effective and focus instead on the need for government regulation of food marketing to children.

A major barrier to effective self-regulation is that food and beverage companies' primary goal – to generate profits – is antithetical to improving the health of children. Developing and marketing healthier products to replace unhealthy, but highly successful, products in a company's portfolio will have negative consequences for a company's bottom-line. These consequences will be even greater when a company's major competitors do not also reduce their marketing of unhealthy products. Moreover, barriers to changing successful marketing strategies are even greater for publicly traded food companies. For example, PepsiCo's short-lived strategy to focus on developing and marketing “better-for-you” products and reduce advertising of its unhealthy brands resulted in lost revenue and market share to competitors who continued to aggressively advertise their sugary soft drinks and snacks. Due to significant shareholder pressure, the company was forced to refocus on its “core” brands (e.g., Pepsi, Doritos, and Cheetos) [35].

Furthermore, it is unclear how food and beverage companies could meet public health calls to market nutritious foods to children. Major food and beverage companies manufacture and market primarily ultra-processed foods, and there is growing evidence that consumption of highly processed food (not just foods high in sugar, fat, or salt) is linked with diet-related disease [[25],[32],[36]]. Most major food and beverage companies, including companies with the greatest amount of advertising directed to children, are not in the business of selling fruits, vegetables, and plain whole grain, and dairy foods – the products that children should be consuming in greater quantities. Therefore, even companies' “better-for-you” products are not beneficial for children's health.

Entrusting that self-regulation will someday deliver improvements in the food marketing environment for children appears to be unrealistic [23]. As noted in a study reporting interviews with food and beverage industry representatives on the topic of marketing to children, they confirmed that industry does adhere to regulations. But many also express the opinion that, “if it is legal, it is ethical,” giving them permission to market to children in any way that does not violate their self-regulatory pledges (or government regulation when applicable) [7]. Further, food and beverage marketers consider parents to be the “ultimate gatekeepers” so from the food marketers’ perspective the responsibility of healthy food consumption among children rests on parents, not food and beverage companies [7].

1.3. Shifts in attitudes about government regulation

Public health experts are pushing back on this premise that industry self-regulation can improve food marketing to children in a meaningful way [[23],[45]]. Early evaluations of self-regulation forecasted the need for governmental intervention if evaluations continued to show the absence of real improvements in child-directed food marketing [30]. Kumanyika [22] argues that “ethical principles should be leveraged” to justify interventions to regulate food marketing on behalf of children’s rights and acknowledges that it may be idealistic to consider that the rights of children will take precedence over the rights of “entities that stand to lose” (i.e., food and beverage companies). Kumanyika [22] also explains that “protecting the rights of different entities depends upon societal attitudes.” It appears that in the US societal attitudes toward food marketing policies to protect children are shifting toward greater government responsibility.

Research demonstrates that parents broadly support government policies to reduce unhealthy food marketing to children, including allowing only healthy food advertising on TV programs to children younger than age 12 and no advertising on TV programs targeted to children younger than age 8 [9]. Further, from 2012 to 2015 there was a significant increase in support for policies to restrict food advertising to children on TV (65–75%) and in schools (59–66%), including not allowing the marketing of any food or beverages on school grounds [15]. Support for policies that impact sugary drink marketing also increased. In 2012 approximately one-half of parents supported policies such as warning labels on sugary drinks and sugary drink taxes, but by 2015 64% supported such policies [15].

There are some indicators that the political will to address unhealthy food marketing to children and its negative effects on children’s diets and health through government regulation is also increasing. For example, the United States Department of Agriculture now requires schools to prohibit marketing foods and drinks to students that do not meet Smart Snacks in School nutrition standards for foods that can be sold to in schools [40]. In addition, policymakers have enacted some local regulations that limit unhealthy food marketing. To date, 3 states and 14 municipalities have enacted local laws to make healthier beverages (water, milk, or 100% juice) the automatic option with restaurant kids’ meals; Santa Clara, CA, and San Francisco have enacted nutrition standards for fast-food children’s meals that come with toys; and California passed legislation prohibiting schools from advertising unhealthy food or beverages during the school day [[3],[26]]. Also, some policies that have been enacted or proposed benefit children and adults. As outlined by Falbe [8] within these conference proceedings, sugary drink excise taxes have been passed in 8 US municipalities, and there is evidence that such taxes effectively decrease purchases and consumption of sugary drinks [39]. Notably, although these taxes do not directly address food marketing to children, price increases have been shown to affect purchases by youth more than adults [4]. In addition, these policies limit companies’ ability to price sugary drinks at a very low price, which is a key marketing strategy with disproportionate appeal to young people. As noted by Grummon et al. [12] in these proceedings, policies to require warning labels on sugary drinks have been proposed

in five US states and passed in one, however implementation of that ordinance (in San Francisco) has been delayed as the specific warnings proposed were struck down in court [34]. Both Falbe [8] and Grummon et al. [12] discuss the ethical issues related to enacting sugary drink taxes and food warning labels, respectively, and acknowledge the importance of ethical analyses of such policies in order to ensure the public health benefits outweigh the costs.

1.4. Researchers and advocates play a critical role

Public health experts increasingly recognize that industry self-regulation has not been effective and that government regulation is required [[10],[45]]. Yet, the implementation of government regulation faces major hurdles in the US due to corporations’ massive resources dedicated to increasing sales of processed food through marketing, lobbying against policies that would limit sales, and corporate social responsibility campaigns designed to deflect criticism of corporate practices [21], as well as the First Amendment protections that corporate speech enjoys. Therefore, enormous political will is required to counteract this influence, and public health researchers and advocates have an important role to play in strengthening that will.

Although support for government policies to restrict food marketing to children has increased, many parents believe that food marketing to children is annoying and makes parenting more difficult, but is essentially harmless [14,37]. Research has demonstrated that the belief that food marketing has a negative effect on children is the strongest predictor of support for restrictions on food marketing to children [9, 11]. Further, experts suggest that a failure to recognize the harm associated with food marketing exposure is a barrier to support for policies to regulate food marketing [2]. Therefore, informing parents and other constituents about the extent and harmful impact of food marketing to children remains a public health priority. Researchers must continue to document marketing practices, examine how food marketing affects children, publicize their results, and communicate their findings to advocates and policymakers. In addition, researchers must evaluate the implementation of existing policies, including determining impact on children’s consumption and weight status, both within and outside of the US as these evaluations may encourage future policy actions [[26],[38],[43]].

2. Conclusions

It appears it is time come to terms with the limitations that food and beverage industry self-regulation poses. The vast majority of food and beverage companies are in the business of marketing highly-processed products for profit and they are unable to produce and market the types of foods and beverages children are encouraged to consume for good health; therefore, policies to limit children’s exposure to food and beverage marketing are needed. Fortunately, outside of the US countries are pioneering policies that reduce food marketing to children and much can be learned by examining which elements of these policies are most effective [38]. Within the US, policies that directly address food and beverage marketing to children are more likely to be proposed and passed at the local level [26]. Given the growth of such policies within the past five years there is hope more will follow [[3],[26]]. Supreme Court Justice Louis Brandeis pointed out the importance of states and localities to serve as “laboratories” to try “novel social and economic experiments.” Policies that have been tested in one jurisdiction may be adopted in others, and possibly scaled-up. With this in mind, sustained effort on the part of researchers, advocates, and policymakers will be needed to develop, implement and evaluate policies that reduce food and beverage marketing to children and ultimately create a food environment that supports children’s health.

References

- [1] K.D. Brownell, K.B. Horgen, *Food Fight: The Inside Story of the Food Industry, America's Obesity Crisis, and What We Can Do About it*, Contemporary Books, Chicago, 2004.
- [2] K.D. Brownell, R. Kersh, D.S. Ludwig, R.C. Post, R.M. Puhl, M.B. Schwartz, W.C. Willett, Personal responsibility and obesity: a constructive approach to a controversial issue, *Health Aff.* 29 (3) (2010) 379–387.
- [3] Center for Science in the Public Interest (2019). State and local restaurant kids' meals policies. Retrieved from <https://cspinet.org/sites/default/files/attachment/CSP%20chart%20of%20local%20km%20policies%20July%202019.pdf>.
- [4] F.J. Chaloupka, Macro-social influences: the effects of prices and tobacco-control policies on the demand for tobacco products, *Nicotine Tob. Res.* 1 (Suppl.1) (1999) S105–S109.
- [5] Council of Better Business Bureaus (BBB) (2020). Children's Food and Beverage Advertising Initiative (CFBAI). Retrieved from <https://www.bbbprograms.org/programs/cfbai/home>.
- [6] Council of Better Business Bureaus (BBB) (2017). The children's food and beverage advertising initiative (CFBAI) in action: a report on compliance and progress during 2017. Retrieved from <https://www.bbbprograms.org/programs/cfbai/cfbai-resources/docs/default-source/cfbai/2017-cfbai-progress-report>.
- [7] M.M. Drumwright, J.D. Williams, The role of ethics in food and beverage marketing to children, *Advances in Communication Research to Reduce Childhood Obesity*, Springer, New York, NY, 2013, pp. 79–99.
- [8] J. Falbe, Title TBD, *Physiol. Behav.* (2020).
- [9] F. Fleming-Milici, J.L. Harris, S. Liu, Race, ethnicity, and other factors predicting U.S. parents' support for policies to reduce food and beverage marketing to children and adolescents, *Health Equity* 2 (1) (2018) 288–295.
- [10] S. Galbraith-Emami, T. Lobstein, The impact of initiatives to limit the advertising of food and beverage products to children: a systematic review, *Obes. Rev.* 14 (12) (2013) 960–974.
- [11] A. Goren, J.L. Harris, M.B. Schwartz, K.D. Brownell, Predicting support for restricting food marketing to youth, *Health Aff.* 29 (3) (2010) 419–424.
- [12] A. Grummon, M. Hall, J.P. Block, S. Bleich, E. Rimm, L.S. Taillie, A. Barnhill, Ethical considerations for food and beverage warnings, *Physiol. Behav.* (2020).
- [13] J.L. Harris, F. Fleming-Milici, Food marketing to adolescents and young adults: skeptical but still under the influence, in: F. Folkvord (Ed.), *The Psychology of Food Marketing and Overeating*, Routledge, New York, NY, 2019, pp. 25–43.
- [14] Harris, J.L., Frazier, W., Romo-Palafox, M., Hyary, M., Fleming-Milici, F., Haraghey, K., ... Kalnova, S. (2017). FACTS 2017 Food industry self-regulation after 10 years: progress and opportunities to improve food advertising to children. Retrieved from http://www.uconnruddcenter.org/files/Pdfs/FACTS-2017_Final.pdf.
- [15] J.L. Harris, K.S. Haraghey, Y.Y. Choi, F. Fleming-Milici, Parents' attitudes about food marketing to children: 2012 to 2015: opportunities and challenges to creating demand for a healthier food environment, *Rudd Rep.* (2017) Retrieved from <http://www.uconnruddcenter.org/files/Pdfs/Rudd%20Center%20Parent%20Attitudes%20Report%202017.pdf>.
- [16] J.L. Harris, V. Sarda, M.B. Schwartz, K.D. Brownell, Redefining "child-directed advertising" to reduce unhealthy television food advertising, *Am. J. Prev. Med.* 44 (4) (2013) 358–364 <https://doi.org/10.1016/j.amepre.2012.11.039>.
- [17] Hastings, G., Stead, M., McDermott, L., Forsyth, A., MacKintosh, A., Rayner, M., ... Angus, K. (2003). Review of research on the effects of food promotion to children. Retrieved from <https://www.foodstandards.gov.uk/multimedia/pdfs/foodpromotiontochildren1.pdf>.
- [18] Healthy Eating Research (HER) (2015). Recommendations for responsible food marketing to children. Retrieved from http://healthyeatingresearch.org/wpcontent/uploads/2015/01/HER_Food-Marketing-Comm_1-2015.pdf.
- [19] Institute of Medicine (IOM), *Food Marketing to Children and Youth: Threat or Opportunity?* The National Academies Press, Washington, DC, 2006 Retrieved from <https://www.nap.edu/catalog/11514/food-marketing-to-children-and-youth-threat-or-opportunity>.
- [20] Institute of Medicine (IOM), *Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation*, The National Academies Press, Washington, DC, 2012.
- [21] I. Kickbusch, L. Allen, C. Franz, The commercial determinants of health, *Lancet Glob. Health* 4 (12) (2016) e895–e896.
- [22] S.K. Kumanyika, A question of competing rights, priorities, and principles: a post-script to the Robert Wood Johnson Foundation Symposium on the ethics of childhood obesity policy, *Prev. Chronic Dis.* 8 (5) (2011).
- [23] D.L. Kunkel, J.S. Castonguay, C.R. Filer, Evaluating industry self-regulation of food marketing to children, *Am. J. Prev. Med.* 49 (2) (2015) 181–187 <https://doi.org/10.1016/j.amepre.2015.01.027>.
- [24] D. Kunkel, B. Wilcox, Children and media policy, *Handbook of Children and the Media*, (2012), pp. 589–604.
- [25] M.A. Lawrence, P.I. Baker, Ultra-processed food and adverse health outcomes, *BMJ* 365 (2019), <https://doi.org/10.1136/bmj.l2289>.
- [26] Mancini, S. & Harris, J.L. (2018). Policy changes to reduce unhealthy food and beverage marketing to children in 2016 and 2017. Retrieved from http://www.uconnruddcenter.org/files/Pdfs/Food%20marketing%20policy%20brief_Final.pdf.
- [27] Institute of Medicine (IOM), *Food Marketing to Children and Youth: Threat or Opportunity?* National Academies Press, Washington, D.C., 2006 Retrieved from <https://www.nap.edu/catalog/11514/food-marketing-to-children-and-youth-threat-or-opportunity>.
- [28] C.L. Ogden, M.D. Carroll, H.G. Lawman, C.D. Fryar, D. Kruszon-Moran, B.K. Kit, K.M. Flegal, Trends in obesity prevalence among children and adolescents in the United States, 1988–1994 Through 2013–2014, *JAMA* 315 (21) (2016) 2292–2299, <https://doi.org/10.1001/jama.2016.6361>.
- [29] L.M. Powell, R.M. Schermbek, F.J. Chaloupka, Nutritional content of food and beverage products in television advertisements seen on children's programming, *Child. Obes.* 9 (6) (2013) 524–531, <https://doi.org/10.1089/chi.2013.0072>.
- [30] L.M. Powell, R.M. Schermbek, G. Szczypka, F.J. Chaloupka, C.L. Braunschweig, Trends in the nutritional content of television food advertisements seen by children in the United States: analyses by age, food categories, and companies, *Arch. Pediatr. Adolesc. Med.* 165 (12) (2011) 1078–1086, <https://doi.org/10.1001/archpediatrics.2011.131>.
- [31] M. Rayner, P. Scarborough, A. Boxer, L. Stockley, *Nutrient profiles: Development of Final Model*, Food Standards Agency, London, UK, 2005.
- [32] A. Rico-Campá, M.A. Martínez-González, I. Alvarez-Alvarez, R.D. Mendonça, C. Fuente-Arrillaga, C. Gómez-Donoso, M. Bes-Rastrollo, Association between consumption of ultra-processed foods and all cause mortality: SUN prospective cohort study, *BMJ* 365 (2019), <https://doi.org/10.1136/bmj.l1949>.
- [33] M.B. Schwartz, A. Ustjanauskas, Food marketing to youth: current threats and opportunities, *Child. Obes. (Formerly Obes. Weight Manag.)* 8 (2) (2012) 85–88 <https://doi.org/10.1002/ob.2012.0082.schw>.
- [34] A. Sheeler, Health warnings on soda in San Francisco must be smaller than proposed, court says, *The Sacramento Bee* (2019, Feb 1) Retrieved from <https://www.sacbee.com/latest-news/article225373830.html>.
- [35] M. Simon, A leopard like PepsiCo cannot change its spots, *The Guardian* (2012, March 21) Retrieved from <https://www.theguardian.com/sustainable-business/blog/pepsico-corporate-social-responsibility-public-health>.
- [36] B. Srour, L.K. Fezeu, E. Kesse-Guyot, B. Allès, C. Méjean, R.M. Andrianasolo, ... M. Touvier, Ultra-processed food intake and risk of cardiovascular disease: prospective cohort study (NutriNet-Santé), *BMJ* 365 (2019), <https://doi.org/10.1136/bmj.l1451>.
- [37] Ustjanauskas A., Eckman B., Harris J., Goren A., Schwartz M., Brownell K. (2010). Focus groups with parents: what do they think about food marketing to their kids?. *Rudd Report*. May http://www.uconnruddcenter.org/files/Pdfs/RuddReport_FocusGroupsParents_5_10.pdf.
- [38] L.S. Taillie, E. Busey, F. Mediano Stoltze, F.R. Dillman Carpentier, Governmental policies to reduce unhealthy food marketing to children, *Nutr. Rev.* 77 (11) (2019) 787–816, <https://doi.org/10.1093/nutrit/nuz021>.
- [39] A.M. Teng, A.C. Jones, A. Mizdrak, L. Signal, M. Genç, N. Wilson, Impact of sugar-sweetened beverage taxes on purchases and dietary intake: systematic review and meta-analysis, *Obes. Rev.* 20 (9) (2019) 1187–1204 <https://doi.org/10.1111/obr.12868>.
- [40] United States Department of Agriculture (2016). USDA announces additional efforts to make school environments healthier. Retrieved from <https://www.usda.gov/media/press-releases/2016/07/21/usda-announces-additional-efforts-make-school-environments>.
- [41] U.S. Department of Health and Human Services & U.S. Department of Agriculture, 2015–2020 Dietary Guidelines for Americans, 8th Edition, (2015) Retrieved from <https://health.gov/our-work/food-nutrition/2015-2020-dietary-guidelines>.
- [42] White House Task Force on Childhood Obesity (2010). Solving the problem of childhood obesity within a generation. Retrieved from https://letsmove.obamawhitehouse.archives.gov/sites/letsmove.gov/files/TaskForce_on_Childhood_Obesity_May2010_FullReport.pdf.
- [43] World Cancer Research Fund International (2018). Building momentum: lessons on implementing a robust sugar sweetened beverage tax. Retrieved from www.wcrf.org/buildingmomentum.
- [44] World Health Organization. (2010). Set of recommendations on the marketing of foods and non alcoholic beverages to children. Retrieved from <https://www.who.int/dietphysicalactivity/publications/recsmarketing/en/>.
- [45] World Health Organization (2019). Reducing the impact of marketing of foods and non-alcoholic beverages on children. Retrieved from https://www.who.int/elena/titles/food_marketing_children/en/.