

## Health and Food and Nutritional Security Policies: challenges in controlling childhood obesity

Patrícia Henriques<sup>1</sup>  
Gisele O'Dwyer<sup>2</sup>  
Patricia Camacho Dias<sup>1</sup>  
Roseane Moreira Sampaio Barbosa<sup>1</sup>  
Luciene Burlandy<sup>1</sup>

**Abstract** *The study analyzed the initiatives of prevention and control of childhood obesity, especially those of Adequate and Healthy Food Promotion (PAAS) which have been part of the policies of the Brazilian federal government for the last 15 years. All documents that feature PAAS initiatives in the food and nutrition security, as well as public health policy fields, were evaluated according to the following criteria: (1) the approach to PAAS initiatives; (2) the aspects of obesity that they intend to affect and (3) potential interest disputes. The main PAAS initiatives identified are intended to encourage: food and nutrition education; agroecological production systems; family agriculture; food accessibility; healthy environments and regulatory measures. These initiatives alter different aspects of childhood obesity and highlight different conceptions about the problem and affect different interests. We highlight the disputes between the interests of the processed foods and agribusiness corporations, and the governmental and corporate sectors guided by PAAS objectives. Measures aimed at regulating purchases and publicizing unhealthy products for children, are those that best express the interests involved.*

**Key words** *Infant obesity, Food and nutritional safety, Nutritional policies*

<sup>1</sup> Departamento de Nutrição Social, Faculdade de Nutrição, Universidade Federal Fluminense. R. Mario Santos Braga 30/4º, Centro. 24020-140 Niterói RJ Brasil.

patihenriques@gmail.com

<sup>2</sup> Escola de Saúde Pública Sérgio Arouca, Fiocruz. Rio de Janeiro RJ Brasil.

## Introduction

Obesity is being considered a priority for Brazilian government policy ever since the first National Food and Nutrition Policy (PNAN)<sup>1</sup> was approved when it emerged as a public health issue because of its rising prevalence. In this scenario, childhood obesity becomes particularly relevant because of its increasing magnitude in the national and international context<sup>2,3</sup>.

In Brazil, overweight and obesity have been recorded starting at the age of five, in all income groups and regions, and are more prevalent in the urban areas than in the rural areas<sup>4</sup>. Childhood is a particularly worrisome phase because, in addition to the diseases associated with obesity, the risk increases in adulthood, generating economic and health consequences for the individual and for society<sup>2,3</sup>. In addition, stigma and depression can impair the child's development, especially in school and leisure activities<sup>5</sup>.

There is a consensus that obesity is affected by biological, environmental, socioeconomic, psychosocial and cultural factors. However, its rise has been predominantly attributed to an environment that encourages excessive consumption of processed and ultra-processed foods and discourages physical activity<sup>6,7</sup>. Studies show that the main causes of obesity in children are the consumption of nutrient-poor products laced with high sugar and fat content, sugary drinks and insufficient physical activity<sup>2,3</sup>.

The consumption of processed and ultra-processed foods is increasing in Latin America<sup>8</sup>, a trend clearly shown in the metropolitan areas of Brazil since the 1980s and throughout the country from the year 2000<sup>9</sup>, thereby contributing to a significant increase in overweight and obesity in all age groups<sup>10</sup>. Almost a third of children under two years of age already drink soda and artificial juices containing sugar, while over 60% eat biscuits and cakes<sup>11</sup>. This scenario requires initiatives to address these factors and to target children mainly since feeding habits acquired in childhood are generally carried over to their adult lives<sup>12</sup>.

Therefore, food environment and exposure to childhood advertising are important causes of childhood obesity, and the concept of "obesogenic society" was coined to indicate how "environmental" factors related to food production, marketing and consumption are central to the problem<sup>7</sup>. The Brazilian government has addressed this scenario by developing initiatives to prevent and control obesity, including the Pro-

motion of Adequate and Healthy Food (PAAS), which is integrated into the National Policies for Health Promotion (PNPS)<sup>13</sup>, Food and Nutrition Security (PNSAN)<sup>14</sup> and the PNAN<sup>15</sup>.

Studies show how these policies utilize significant public resources and highlight the special interests involved in its appropriation. Government policies may affect the special interests of certain institutions whose own policies are in some way responsible for the current epidemiological and nutritional outlooks, such as the processed and ultra-processed food industry<sup>16,17</sup>. In reflecting upon these challenges, the present study analyzed initiatives in the prevention and control of childhood obesity, especially those of the PAAS, which, given the facts above, are part of Brazilian federal government policies. The study identified how these policies could affect special interests that are stakeholders in the processes of production, sales, and consumption of food products.

## Methods

The study was based on the framework of public policies analysis<sup>18</sup>, presupposing them as socially constructed practices, processes and discourses that involve governments and civil society and operate as mediation dynamics in the transformation of a given reality<sup>19</sup>. It is also accepted that formal discussion of these policies is a result of society's involvement since specific measures that are implemented about questions considered in political processes are the essence of political activity. Government documents are molded by their own institutional, social and political contexts and highlight the ideas and interests being debated. Therefore, an analysis of the PAAS initiatives can contribute to identifying how the official discourse provides clarity about the theme and how this clearly points to current political struggles<sup>20,21</sup>.

Based on these assumptions, the study analyzed the PNAN, the PNPS, and the PNSAN, since these are the policies that set the national guidelines within this scope. The study opted to present wide-ranging measures, destined for the whole population, that could even if indirectly, limit the growth of childhood obesity. All documents and publications that present PAAS initiatives related to these policies in the last 15 years were analyzed, which is when concerns on obesity became a part of the government agenda<sup>1</sup>. The analysis also considered other policies that

interact with the PAAS objectives (Chart 1). The documents were obtained by searching the websites of the respective institutions and the Virtual Health Library of the Ministry of Health (MS). Factors that were considered in the analytical strategy are: (1) the approach to PAAS initiatives; (2) the obesity constraints that they intend to affect and (3) potential interest disputes. The extent to which policies may affect the behavior of the different segments involved was considered.

## Results

### Within the framework of Health Policies

The organization of the Nutrition Assistance in the Unified Health System (SUS) is a central guideline of the PNAN, which states that care related to food and nutrition (health promotion, prevention, diagnosis and treatment of diseases) should be a part of integrated care in the Health Care Network (RAS). In this context, we highlight the workflows and directives for the Treatment of Overweight and Obesity<sup>22</sup>, which establishes the initiatives that must be implemented across the RAS, including those of PAAS, planned according to the knowledge of the population's epidemiological and nutritional scenario. To this end, Food and Nutrition Surveillance (VAN) plays a significant role in the monitoring and analysis of nutritional problems and supporting the planning of nutritional care in the SUS<sup>23</sup>.

PAAS is also one of the PNAN guidelines that, according to the terms of the policy itself, is based on health promotion, support, protection and promotion initiatives planned in an integrated manner within the SAN. These initiatives include refocusing services, building health-promoting environments, Food and Nutritional Education (EAN) and, finally, the control and regulation of food products.

A set of initiatives is related to the organization of health services and aims to increase access and strengthen health promotion for the entire population, including children. The National Policy on Basic Needs<sup>24</sup> provides for the reorganization of services with a view to increasing the equity and quality of health care, thus creating environments that favor prevention, promotion, and integral health care<sup>24</sup>. In this perspective, the following stand out: the Breastfeeding and Feeding Brazil Strategy<sup>25</sup>, which aims to promote breastfeeding and the complimentary introduction of food in an adequate and healthy way, and

**Chart 1.** Health, food and nutritional security programs and initiatives to address childhood obesity.

<b>Health Initiatives and Programs</b>
Brazil Breastfeeding and Feed Strategy
Overweight and Obesity Care-Line
Health at School Program
Food Guides
Regulation of Food Marketing for Pregnant Women and Newborn Children
Nutritional Labeling
Healthy Eating at School Promotion
Agreements for the Reformulation of Nutritional Composition (The List of Ingredients)
<b>Food and Nutritional Security Programs and Initiatives</b>
National School Feeding Program
Food Acquisition Program
"Bolsa Familia" Program
Inter-Sectoral Strategy for the Prevention and Control of Obesity
National Pact for Healthy Eating

the Health at School Program (PSE). The promotion and care of the student's health involve both the PNAN and the PNPS, while the PSE proposes to coordinate in conjunction with the school basic health care and enabling initiatives of the PAAS and the monitoring of the nutritional status<sup>26</sup>.

Also, in the context of the construction of institutional health promoters, PAAS guidelines were formulated by the Ministries of Health (MS) and Education for public and private schools<sup>27</sup>. In addition, EAN and regulatory initiatives are highlighted.

EAN initiatives coordinate all analyzed policies and include the production of educational tools and materials that foster healthier food choices as well as educational processes developed in education and health networks and other public spaces. Aiming at valuing and qualifying these initiatives, the federal government has published the EAN<sup>28</sup> Framework for Public Policies.

The food guides destined for children under two years of age<sup>29</sup> and the Brazilian population<sup>30</sup> provides principles for healthy eating, among them the appreciation for local food culture. Within the context of complementarity and the discussion among the materials produced, the book "Brazilian Regional Foods" disseminates the variety of fruits, vegetables, and legumes,

highlights cultural diversity and enhances the country's indigenous food<sup>31</sup>. Regarding the access to and the classification of information, the food guide breaks new ground by basing itself in a classification of food products that shows the correlation between the growing consumption of processed and ultra-processed foods, and the resulting obesity. In addition, it addresses food products from the perspective of Food and Nutrition Security (SAN).

Regulatory initiatives create guidelines and/or limits for the business sectors and strive to protect the population against abusive practices, especially the ones that originate in the corporate sector. As far as regulating and controlling food products, PNAN provides for nutritional labels, the regulation of advertising, agreements with industry for the reformulation of processed and ultra-processed food products and specific norms for regulating commercial publicity and labels for foods and other products destined for pregnant women and newborn children. The regulation methods identified differentiate between those that impose compliance with legal provisions under penalty of fine, and those that are characterized by establishing guidelines and agreements.

The regulation of advertising and food marketing, especially for children, has been the subject of government policies since 2006 and characterized by acrimonious discussions with the corporate sector<sup>16</sup>, with significant progress being made only in the protection of infants and young children<sup>32</sup>. Nutritional labeling requirements<sup>33</sup> have also been regulated to guarantee consumer access to product information and to suppress label advertisements. The country has seen advances made in this type of regulation, but there are still challenges regarding the quality of information and its information potential<sup>34</sup>.

Since 2007, voluntary agreements have been established between the Health Ministry and the Brazilian Association of Food Industries to improve the ingredients of industrialized products, especially those preferred by children and adolescents. There has been a gradual reduction of free sugar levels, sodium, and trans fats<sup>35</sup>. However, nutritional classification may represent a new consumer market, therefore it is not in conflict with the interests of the corporate food sectors. But it should be noted that the agreements to reduce sugar levels have not yet been reached.

### **Under the National Policy on Food and Nutrition Security**

The PNSAN was formulated with broad social participation and it is characterized by the multi-sector approach to the processes of production, access, supply, and food consumption. The intent is to create various programs and initiatives from different sectors, both government and private, to guarantee access to the Human Right to Adequate Nutrition (DHAA). Therefore, it may affect the interests of sectors whose practices are not guided by the DHAA, with different levels of interest disputes.

Considering food production, the rural development policies that define the institutional market for family agriculture through the Food Acquisition Program<sup>36</sup> (PAA) and the National School Feeding Program<sup>37</sup> (PNAE) have been strategic for the production and supply of healthy food, especially because of the requirement to use at least 30% of the resources of the PNAE to purchase food from family agriculture<sup>37</sup>. Changing the criteria for public food procurement can directly affect the interests of the corporate sectors that traditionally supply to government programs. In addition, initiatives aimed at the transition to agroecological or organic food production systems<sup>38</sup> conflict with the interests of large-scale monoculture crop exports. These interests drive transnational corporations to sell seeds, agrochemicals, raw materials, and equipment, even if these practices are not guided by the DHAA<sup>17</sup>. As far as food access is concerned, the following stand out: popular restaurants; food banks; community gardens and kitchens; cisterns; the distribution of food; the Worker's Feeding Program and income transfer programs, such as Bolsa Família (PBF), which increases purchasing power and therefore, accessibility. The PBF also reinforces the use of health and education services, which can contribute to the PAAS, as EAN initiatives progress in these networks<sup>38</sup>.

In a differentiated approach to PAAS, the Inter-Sectoral Strategy for the Prevention and Control of Obesity<sup>39</sup> (EIPCO) and the National Pact for Healthy Eating<sup>40</sup> (PNAS) prioritize obesity from an inter-sectoral perspective. EIPCO has, as one of its main objectives, prioritizing basic health care aiming at providing full attention to the health of the person who is overweight and obese. The pact was created to increase the

supply, availability, and consumption of healthy foods and to combat overweight, obesity, and diseases caused by the poor diet of the Brazilian population. Both seek to coordinate initiatives of different governmental sectors, with the purpose of preventing and controlling obesity through the convergence of goals and initiatives of the PAAS and they innovate by correlating health and nutrition to the current food system.

## Discussion

The main PAAS initiatives identified are intended to encourage: food and nutrition education; agroecological production systems; family agriculture; food accessibility; healthy environments and regulatory measures. Therefore, they provide for the encouragement, support, and protection of the population in enabling the adoption of healthy food practices. Such initiatives potentially affect childhood obesity, have different conceptions about how to use them and, consequently, affect different interests in dispute.

Health sector policies encompass initiatives that aim to alter factors related to obesity, among them: its recognition as a health issue that demands specific actions through the diagnosis and monitoring of the nutritional status that provide visibility into the problem, present in VAN<sup>23</sup> and PSE<sup>26</sup>; the expansion of access to information and qualification of socially disseminated messages about food, by providing information that encourages the adoption of healthy food practices and the regulation of advertising practices of the corporate sectors in order to curb messages that stimulate the consumption of processed and ultra-processed products; the creation of healthy food environments in schools and workplaces; and voluntary agreements with the food industry to change the ingredients of their products.

The factors related to obesity affected by the PNSAN are the processes of production, sale, and consumption of foods that have been carefully considered. Therefore, we highlight the reorganization of the food production system, mainly through the promotion of agroecological production and FA, thus guaranteeing the purchasing of these products by the government and coordinated with the expansion of school access to fresh foods, produced locally. It should be noted that the mobilization of different government sectors and government entities regarding the fight against obesity and PAAS was carried out by the shared management and social participation

of the SAN policy, where EIPCO was created and where the PNAE and the PAA were reformulated.

The strategies with the greatest potential to affect institutional environments, such as health services and schools, are those that strengthen the capacity of these spaces to deal with prevention, care, and health promotion activities at different stages of the life cycle. However, school compliance to the proposed guidelines may, on occasion, be resisted by schoolchildren, families, and members of the school community as regulating food availability could be infringing on the individual's freedom to choose his own food products<sup>41</sup>.

Instituting the EAN Reference Framework, which was achieved in coordination between the health sector and SAN, although indicating the need to plan EAN actions from production to food consumption<sup>28</sup>, does not foresee initiatives that directly affect the interests of the productive sectors. However, the food guide for the Brazilian population, which is part of the PNAN, clashes with industry interests because it: proposes a classification of food products according to their degree of processing; underscores that processed and ultra-processed foods have a higher energy density, higher free sugar content, and lower fiber content than fresh foods; and recommends limiting the consumption of processed foods and avoiding the consumption of ultra-processed foods. It should be noted that the obstacles to the adoption of the recommendations contained in the guide are a part of the document itself. They stress the need for initiatives and individual changes as well as of public policies and regulatory initiatives of the State that make the environment more conducive to the adoption of healthier choices.

Regulatory initiatives are the ones that most illustrate political tensions and the interests in dispute. As far as regulation of corporate sector practices is concerned, the only law in force is law<sup>32</sup>, that protects breastfeeding and regulates the sale of food products to pregnant women and newborn children. Important challenges remain regarding the regulation of food advertising as a crucial measure in the field of health protection and of the SAN, in several public policies<sup>14,15,42</sup> and in the Action Plan for the prevention of obesity in children and adolescents of the OPAS<sup>8</sup>. Notwithstanding these recommendations, the suspension of the guideline shows a tension between the private sector and government and highlights the political influence of industry in Brazil, while illustrating the complexity of the

regulatory field insofar as it deals with social issues and practices that involve interests of different institutions<sup>16,17</sup>.

Considering also regulatory issues, it is important to note that agreements to reduce the levels of sodium, sugar and trans fats, create less conflict with the private sector, but are ineffective in solving problems related to an unhealthy diet. A study on the process of monitoring sodium levels revealed weaknesses which could compromise this strategy<sup>43</sup>, such as the lack of standardization of food categories and the periodicity and comprehensiveness of the analyses. Even if such agreements result in products with a lower content of certain ingredients, it will still be considered an ultra-processed food.

Such agreements may not be in accordance with other PNAN initiatives since the Food Guide itself advocates that processed and ultra-processed foods be avoided, highlighting the interests in dispute. Although the agreements are intended to modify the products and consequently its food consumption profile, the idea that the product has been “improved” from the nutritional point of view can also stimulate its consumption. This discrepancy among the proposals for the prevention and control of obesity can encourage, at the very least, the dissemination of conflicting information to a population that needs to be well informed about the health risks caused by the consumption of these products. In addition to these issues, the participation in the government decision-making process by private industry, whose policies run counter to the principles and objectives of public policy, may delay, water down or even block the reaching of the foreseen goals<sup>17</sup>.

As stated, initiatives intended to affect the processes of production, sale, access, and consumption of food in an integrated way are within the scope of the PNSAN, where new approaches of prevention and control of obesity were created. From this perspective, the nutritional system is considered as a structuring factor of the conditions that favor excessive weight gain. The more effective initiatives for prevention and control of childhood obesity comes from inter-sectoral strategies because they combine initiatives that bring together health, education, school nutrition, and agriculture. Some initiatives foreseen in the PNSAN already integrate Health Ministry policies, which suggest that there are important connection interfaces among policies analyzed here.

EIPCO and PNAS, because they are based on SAN principles, can affect the interests of agri-

cultural and industrial sectors that sell seeds, materials, equipment, and pesticides as well as processed and ultra-processed foods. In this sense, regulatory initiatives that focus on these products, in addition to those aimed at advertising processed and ultra-processed food products, indicate the high level of interest disputes that also involve government sectors. The regulatory role of the State can be affected by different pressure mechanisms that are exerted by influential corporations in this scenario<sup>17</sup>.

Within the scope of the PNSAN, the PNAE and PAA are the programs that are directly related to the production, supply, and consumption of healthier foods in schools, which is a strategic area for childhood PAAS. The legislation that underscores the PNAE, in conjunction with the SAN, provided for the approximation between the food production coming from family agriculture and access to PAAS mediated by a government procurement policy that extends to other sectors.

By recommending that meals be prepared using fresh foods, PNAE focuses on increasing the value of healthy eating, from a nutritional as well as a social and cultural standpoint. Therefore, it is a program that affects different elements of childhood obesity by offering healthy food to schoolchildren and promoting EAN initiatives also provided for in its legislation.

Such initiatives are crucial in stimulating children and adolescents to change their consumption behaviors, but if the food available is not consistent with the information disseminated to the students it will hardly have any effect on their eating practices since the messaging will be contradictory. The food products that children can access have a powerful impact on the construction of values, an issue that is even more relevant when considering that children are exposed to other environments outside the school that stimulate unhealthy practices<sup>44</sup>.

Therefore, in addition to encouraging healthy eating through the dissemination and qualification of information, the policies analyzed here provide for initiatives that focus on other factors of childhood obesity that are equally important, such as access, availability of healthy food, and support towards the adoption of healthy practices. Despite the expansion of access to healthy food for schoolchildren, by the PNAE and the PAAS guidelines in effect since 2006, the challenge remains to regulate public and private schools, canteens and their environments. Most of them do not encourage healthy eating because they are commercial establishments with no commitment

to PAAS<sup>44</sup>, offering processed and ultra-processed products and, consequently, stimulating their consumption, as a recent study that analyzed the school food environment has shown<sup>45</sup>.

However, the adoption of measures that can transform school canteens into places that guarantee meals and healthy food choices has already been implemented by several states and municipalities in Brazil, with different degrees of success<sup>46-48</sup>. The regulations prohibit the sale of sweets, ultra-processed foods and beverages, fried foods and the advertising of unhealthy foods, and requires that fruits be made available<sup>46-48</sup>. In addition to regulating food supply and availability, restricting the advertising of processed and ultra-processed foods in schools is a challenge. Such actions directly affect the interests in dispute, especially those involving the private sector. Canteens, vendors, and the food industry profit from the sale of these products.

Regarding the factors related to household access to food, which directly affect the profile of children's food practices, conditional transfer programs such as the PBF can increase access to healthier foods for low-income individuals and contribute to improving conditions that today favor food and nutritional insecurity. A systematic review found a positive association between the participation of families in these programs in Brazil and the improvement of food and nutrition<sup>49</sup>. However, although PBF promotes food accessibility, it does not necessarily imply an improvement in the nutritional quality of food<sup>50</sup>, since greater purchasing power is not the only factor that favors healthy practices. Other conditions also interfere with the decision-making process around food, such as the supply, availability, convenience of preparation, time spent, the relative satiety of the food, the symbolic, cultural and psychosocial aspects of eating practices that affect different segments of the population independent of income and constitute the same obese inducing environment<sup>51</sup>. Therefore, the combination of different factors by means of inter-sectoral policies is crucial in making healthy eating practices universally available.

PBF conditions related to health care and school attendance can mean greater exposure to other public policies that offer PAAS and broaden access to health care and health promotion activities that integrate programs such as the PNAE and the PSE. To this end, it is essential that the conditions be considered as a mechanism for inducing the supply of services by governments, which enhances rights and not as a mechanism

for punishing beneficiaries. It is not a matter of setting requirements towards beneficiaries to ensure that established rights are guaranteed but to structure governments so that they comply with their legally established duties.

In summary, policies<sup>13-15</sup> that increase the supply and access to PAAS, promote access to information through educational actions and regulate the environment or market activities based on legal instruments. However, some dilemmas about the regulatory role of the State can impede political processes and make it difficult or even impossible to do certain activities<sup>16,17</sup>. The regulatory state mode in Brazil, strengthened since the 1990s, has regulatory mechanisms with varying degrees of flexibility, especially in issues involving conflicts of interest, and is shaping different State intervention standards in public policies<sup>52</sup>.

The regulation seeks to define boundaries between society and the state and between government and the private sector to guarantee constitutional rights and maximize the public good. The regulation of health activities constitutes one of the essential functions of public health and aims to guarantee the quality of goods and services and protect the health of the population<sup>53</sup>. It does, however, mean that there is a high level of uncertainty and complexity considering the values and potential disputes of interests among those involved with public policies<sup>54</sup>.

## Final considerations

The set of mapped PAAS initiatives demonstrates the efforts undertaken by the Brazilian government in the construction of policies that converge around battling obesity, with the potential to affect several aspects of its conditioning factors. However, for their effective implementation, these measures require different degrees of political resources, as they also affect the interests in dispute in different ways.

The policies that have been analyzed have elements that trigger the political process and highlight disputes between sector interests - governmental and corporate - guided by the objectives of PAAS and private sectors that aim to increase the sale of raw materials and processed and ultra-processed foods. Therefore, such initiatives may cause tensions and affect the policy prescriptions themselves.

Governments are not homogeneous, and the evidence that some initiatives may lead to opposing outcomes demonstrate the interests in dis-

pute. Actions that advocate for the consumption of ultra-processed foods that should be avoided contrast with the difficulties of enforcing regulatory actions, especially those that bear on the advertising of these foods. Improving the nutritional composition of ultra-processed foods through agreements with industry may in the short term contribute to a reduction in the intake of fats, sugars, and salt. But, in the long term, they may stimulate their consumption.

There is potential in the inter-sectoral approach towards obesity in the PNSAN and in the initiatives adopted in school areas, especially in the public network through the PNAE. These

are strategic for the children's group given the school's responsibilities for the formation of habits and values. However, family agriculture-procurement challenges may indicate disputes of interest among school food suppliers, as well as possible difficulties for family farmers in marketing their products to schools and for them to become interested in this market, when compared to other private markets

Challenges remain for the implementation of regulatory strategies that are critical in promoting environments that stimulate and enable healthier food choices considering food guide recommendations.

### **Collaborations**

P Henriques, G O'Dwyer and L Burlandy participated in the design, interpretation of data, writing, critical review of the article and approval of the version to be published; PC Dias and RMS Barbosa participated in the data interpretation, writing and critical review of the article. L Burlandy participated in the critical review of the article and approval of the version to be published.



## References

1. Brasil. Ministério da Saúde (MS). Portaria nº 710, de 10 de junho de 1999. *Diário Oficial da União* 1999; 11 jun.
2. World Health Organization (WHO). *Plan of action for the prevention of obesity in children and adolescents*. Washington: WHO; 2014. [53rd Directing Council. 66th session of the regional committee of WHO for the Americas].
3. World Health Organization (WHO). *Report of the commission on ending childhood obesity*. Washington: WHO; 2016.
4. Instituto Brasileiro de Geografia e Estatística (IBGE). *Pesquisa de Orçamentos Familiares 2008-2009: antropometria e estado nutricional de crianças, adolescentes e adultos no Brasil*. Rio de Janeiro: IBGE; 2010.
5. Mello LC, Caramaschi S. Estresse e bullying em crianças em condição de sobrepeso e obesidade. In: Valle TGM, Melchiori LE, organizadores. *Saúde e desenvolvimento humano*. São Paulo: Cultura Acadêmica; 2010. p. 113-129.
6. Wanderley EM, Ferreira VA. Obesidade: uma perspectiva plural. *Cien Saude Colet* 2010; 15(1):185-194.
7. Swinburn B, Kraak V, Rutter H, Vandevijvere S, Lobstein T, Sacks G, Gomes F, Marsh T, Magnusson R. Strengthening of accountability systems to create healthy food environments and reduce global obesity. *Lancet* 2015; 385(9986):2534-2545.
8. Pan American Health Organization (PAHO). World Health Organization (WHO). *Ultra-processed food and drink products in Latin America: Trends, impact on obesity, policy implications. Noncommunicable Diseases and Mental Health*. Washington: PAHO; 2015.
9. Martins APB, Levy RB, Claro RM, Moubarac JC, Monteiro CA. Participação crescente de produtos ultraprocessados na dieta brasileira (1987-2009). *Rev Saude Publ* 2013; 47(4):656-665.
10. Louzada MLC, Baraldi LG, Steele EM, Martins APB, Canella DS, Claude-Moubarac JL, Bertazzi R, Cannon G, Afshin A, Imamura F, Mozaffarian D, Monteiro CA. Consumption of ultra-processed foods and obesity in Brazilian adolescents and adults. *Prev Med* 2015; 81:9-15.
11. Instituto Brasileiro de Geografia e Estatística (IBGE). *Pesquisa Nacional de Saúde*. Rio de Janeiro: IBGE; 2015.
12. Lobstein T, Jackson-Leach R, Moodie ML, Hall KD, Gortmaker SL, Swinburn BA, James WPT, Wang Y, McPherson K. Child and adolescent obesity: part of a bigger picture. *Lancet* 2015; 385(9986):2510-2520.
13. Brasil. Ministério da Saúde (MS). Portaria nº 2.446, de 11 de novembro de 2014. *Diário Oficial da União* 2014; 12 nov.
14. Brasil. Presidência da República. Decreto nº 7.272, de 25 de agosto de 2010. Regulamenta a Lei nº 11.346, de 15 de setembro de 2006, que cria o Sistema Nacional de Segurança Alimentar e Nutricional e institui a Política Nacional de Segurança Alimentar e Nutricional. *Diário Oficial da União* 2010; 26 ago.
15. Brasil. Ministério da Saúde (MS). *Política Nacional de Alimentação e Nutrição*. Brasília: MS; 2012.
16. Henriques P, Dias PC, Burlandy L. A regulamentação da propaganda de alimentos no Brasil: convergências e conflitos de interesses. *Cad Saude Publ* 2014; 30(6):1219-1228.
17. Burlandy L, Prado V, Gomes FS, Castro IRR, Dias PC, Henriques P, Carvalho CMP Castro Júnior, PCP. Políticas de promoção da saúde e potenciais conflitos de interesses que envolvem o setor privado comercial. *Cien Saude Colet* 2016; 21(6):1809-1818.
18. Frey K. Políticas públicas: um debate conceitual e reflexões referentes à prática da análise de políticas públicas no Brasil. *Plan Polit Publ* 2000; 21:211-259.
19. Potvin L. On the nature of programs: health promotion programs as action. *Cien Saude Colet* 2004; 9(3):731-738.
20. Freeman R, Maybin J. Documents, practices and policy. *Evidence Policy* 2011; 7(2):155-170.
21. Griggs S, Howarth D. Discourse and practice: using the power of well-being. *Evid Policy* 2011; 7(2):213-226.
22. Brasil. Ministério da Saúde (MS). Portaria nº 424, de 19 de março de 2013. *Diário Oficial da União* 2013; 15 abr.
23. Brasil. Ministério da Saúde (MS). Secretaria de Atenção à Saúde. Departamento de Atenção Básica. *Marco de referência da vigilância alimentar e nutricional na atenção básica*. Brasília: MS; 2015.
24. Brasil. Ministério da Saúde (MS). *Política Nacional de Atenção Básica*. Brasília: MS; 2012.
25. Brasil. Ministério da Saúde (MS). Portaria nº 1920 de 05 de setembro de 2013. *Diário Oficial da União* 2013; 06 set.
26. Brasil. Ministério da Saúde (MS). Ministério da Educação (MEC). Decreto nº 6.286, de 5 de dezembro de 2007. *Diário Oficial da União* 2007; 06 dez.
27. Brasil. Ministério da Saúde (MS). Ministério da Educação (MEC). Portaria Interministerial n.º 1.010, de 08 de maio de 2006. *Diário Oficial da União* 2006; 09 mai.
28. Brasil. Ministério do Desenvolvimento Social e Combate à Fome (MDS). *Marco de referência de educação alimentar e nutricional para as políticas públicas*. Brasília: MDS, Secretaria Nacional de Segurança Alimentar e Nutricional; 2012.
29. Brasil. Ministério da Saúde (MS). Departamento de Atenção Básica. *Dez passos para uma alimentação saudável: guia alimentar para crianças menores de dois anos: um guia para o profissional da saúde na atenção básica*. 2ª ed. Brasília: MS; 2010.
30. Brasil. Ministério da Saúde (MS). *Guia alimentar para a população brasileira*. 2ª ed. Brasília: MS; 2014.
31. Brasil. Ministério da Saúde (MS). Departamento de Atenção Básica. *Alimentos regionais brasileiros*. 2ª ed. Brasília: MS; 2015.
32. Brasil. Presidência da República. Lei nº 11.265, de 3 de janeiro de 2006. *Diário Oficial da União* 2006; 4 jan.
33. Agência Nacional de Vigilância Sanitária (Anvisa). Resolução RDC nº 360, de 23 de dezembro de 2003. *Diário Oficial da União* 2003; 24 dez.
34. Instituto de Defesa do Consumidor (IDEC). *Rótulo mais fácil*. Revista nº 208. Set/out 2016.
35. Brasil. Ministério da Saúde (MS). Portaria nº 3.092, de 4 de dezembro de 2007. *Diário Oficial da União* 2006; 04 dez.
36. Brasil. Presidência da República. Decreto 7.775, de 04 de julho de 2012. *Diário Oficial da União* 2012; 05 jul.
37. Brasil. Lei 11.947, de 16 de junho de 2009. *Diário Oficial da União* 2009; 17 jun.

38. Brasil. Câmara Interministerial de Segurança Alimentar e Nutricional (CAISAN). *Plano Nacional de Segurança Alimentar e Nutricional: 2016/2019*. Brasília: CAISAN; 2016.
39. Brasil. Câmara Interministerial de Segurança Alimentar e Nutricional (CAISAN). *Estratégia Intersetorial de Prevenção e Controle da Obesidade: recomendações para estados e municípios*. Brasília: CAISAN; 2014.
40. Brasil. Presidência da República. Decreto nº 8553 de 04 de novembro de 2015. *Diário Oficial da União* 2015; 4 nov.
41. Dutra RCA. Consumo alimentar infantil: quando a criança é convertida em sujeito. *Soc. Estado*. 2015; 30(2):451-469.
42. Brasil. Ministério da Saúde (MS). *Plano de ações estratégicas para o enfrentamento das doenças crônicas não transmissíveis (DCNT) no Brasil 2011-2022*. Brasília: MS; 2011.
43. Martins APB. *Redução de sódio em alimentos: uma análise dos acordos voluntários no Brasil*. São Paulo: Instituto Brasileiro de Defesa do Consumidor (Idec); 2014. (Cadernos Idec – Série Alimentos. Vol. 2.)
44. Porto EBS, Schmitz BAS, Recine E, Rodrigues MLCF. School canteens in the Federal District, Brazil and the promotion of healthy eating. *Rev Nutr* 2015; 28(1):29-41.
45. Azeredo CM, Rezende LFM, Canella DS, Claro RM, Peres MFT, Luiz OC, Franca Junior I, Kinra S, Hawke-sworth S, Levy RB. Food environments in schools and in the immediate vicinity are associated with unhealthy food consumption among Brazilian adolescents. *Prev Med* 2016; 88:73-79.
46. Gabriel CG, Ricardo GD, Ostermann RM, Corso ACT, Assis MAA, Di Pietro PF, Vasconcelos FAG. Regulação da comercialização de alimentos no ambiente escolar: análise dos dispositivos legais brasileiros que buscam a alimentação saudável. *Rev Inst Adolfo Lutz* 2012; 71(1):11-20.
47. Brasil. Ministério da Saúde (MS). *Experiências estaduais e municipais de regulamentação da comercialização de alimentos em escolas do Brasil: identificação e sistematização do processo de construção e dispositivos legais adotados*. Brasília: MS; 2007.
48. Distrito Federal. Decreto nº 36.900/2015. Regulamenta a Lei nº 5.146, de 19 de agosto de 2013, que estabelece diretrizes para a promoção de alimentação adequada e saudável nas escolas da rede de ensino do Distrito Federal. *Diário Oficial do Estado* 2015; 24 nov.
49. Martins APB, Canella DS, Baraldi LG, Monteiro CA. Transferência de renda no Brasil e desfechos nutricionais: revisão sistemática. *Rev Saude Publ* 2013; 47(6):1159-1171.
50. Cotta RMM, Machado JC. Programa Bolsa Família e segurança alimentar e nutricional no Brasil: revisão crítica da literatura. *Rev Panam Salud Publ* 2013; 33(1):54-60.
51. Lignani JB, Sichieri R, Burlandy L, Salles Costa R. Changes in food consumption among the Programa Bolsa Família participant families in Brazil. *Public Health Nutrition* 2010; 14(5):785-792.
52. Lucena R. A tensão entre regulação e descentralização na vigilância sanitária: uma questão de estado. *Tempus Actas de Saúde Coletiva* 2012; 6(4):143-154.
53. Buss PM. Saúde pública hoje. In: Hortale VA, Moreira COF, Bodstein RCA, Ramos CL, organizadores. *Pesquisa em saúde coletiva: fronteiras, objetos e métodos*. Rio de Janeiro: Fiocruz; 2010. p. 33-55.
54. Gamarra TPN, Porto MFS. Regulação em Saúde e epistemologia política: contribuições da ciência pós-normal para enfrentar as incertezas. *O&S* 2015; 22(74):405-422.

---

Article submitted 26/05/2016

Approved 04/01/2017

Final version submitted 06/01/2017