DOI: 10.1590/1413-812320222711.06552022EN

The Food Guide for The Brazilian Population: an analysis in the light of social theory

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Abstract *The Food Guide for the Brazilian Population (GAPB) is an official document that addresses principles and recommendations for an adequate and healthy diet, and it is configured as a support tool for food and nutrition education actions. This article aims to analyze the guide content, which is one of the main instruments of public policies related to food in Brazil, in the light of the concepts of social theory, especially theories of modernity, identity, and risks. In the detailed analysis of the guide content, we found that the document considered the cultural and biological food diversity of Brazilian regions. It is based on food not on nutrients, making illustrative recommendations easy to public understanding. It avoided food risks, considering the issue of acquiring adequate and healthy food. However, two risks were not addressed: the problem of processed and ultra-processed foods (PU); and the omission of warnings regarding transgenic foods (GMOs). Although the guide has been designed in an innovative way, stimulating time, attention, and companionship at the table, the GAPB needs revision.*

Key words *Food Guide, Health Status, Social Identification, Medical Sociology, Food security*

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Introduction

The act of eating has a structuring role in the organization of a human group; therefore, food must not be understood only as a consequence of biological or ecological phenomena, instead, it must be understood as a practice associated with multiple social representations. These allow us to understand the different social groups, their desires and beliefs, which are increasingly influenced by modernization and globalization[1]. At the same time, symbolic and identity issues and the population's daily eating practices can influence official government regulations and the creation of public policies. Thus, the technical opinion contained in a food guide can be considered a facilitator of the daily food choices and the recognition of the cultural identities of the Brazilian population.

The Brazilian reality is marked by a wide food diversity pattern, which, at the same time, is affected by the great social inequality of accessibility to resources and the lack of equity among the population. In this scenario, GAPB[2] is presented as an instrument that contains recommendations aimed at the general population and which has been designed based on the behavior of agents, their cultural and regional habits in the country. It is noteworthy that the food diet choice is not based only on institutionalized nutritional recommendations, as it permeates other instances of life, and its decisions are influenced by a myriad of options that depend on the environment and structural factors that have been historically dimensioned.

Modernity is a phenomenon used as an object of study in sociology. The development of modern social institutions and their spread on a world scale have created greater opportunities for human beings to enjoy a more secure and fulfilling existence than any kind of pre-modern system. But it also has a negative side, which has become very apparent, in which Giddens focuses the discussion on the themes of safety *versus* danger, and trust *versus* risk[3]. Trust is a means of interacting with abstract systems that empty everyday life of its traditional content, while building globalizing influences[4]. Risk, in turn, arises from industrialization and acquires a distinct character from other times. The concept of 'risk society' characterizes a second period of modernity, which, for Beck[5], means living in uncertain circumstances that have been created by the individuals themselves[5]. It is not like there are actually more risks than in other times, but people have become more sensitive to their existence in the circumstances of reflexivity, which represent the constant need to justify and reorder practices, in view of the current knowledge[6].

In modernity, there would have been an effect of breaking the link between food and nature, which disconnected eaters from their bio-cultural universe and, in parallel, there was a loosening of certain socializing relationships, inherent to food. Thus, associated with the industrialization process, food reaches the consumer "[...] without identity, without symbolic quality, without soul", that is, *desocialized*[1]. Consequently, the transformation of recipes by industrialization has brought to light a great distinction between what is real food and what is a food product. The generated controversies have undermined consumer's perception and have affected their confidence in the expert system and technology employed in current food processing. In this context, the generation of food risks is a result of modernization, and the basis of uncertainties is linked to the socio-technical aspects of institutions and their relationships[3,5].

Based on these assumptions, we aimed at analyzing the guide content in the light of the concepts of social theory, especially theories of modernity, identity, and risks, in the context of public policies related to food and its institutional regulations in Brazil. Among these public policies, the Food Guide for the Brazilian Population (*Guia Alimentar para a População Brasileira* - GAPB)[2] was chosen for analysis, as its content reflects the theoretical and practical discussion on dietary recommendations considered appropriate for Brazilians. The first step was the identification of the content importance and its repercussion in the scientific community regarding the way in which it has been developed, as well as the categorization of foods by levels of processing. Next, social norms and practices related to food were analyzed, based on social theory approaches. In the third step, we discussed what is considered healthy food and its consequences. In the fourth and final step, the results were presented, based on the analyzes related to food risk and the discussions developed.

The Food Guide for the Brazilian Population

The GAPB is an official document that addresses the principles and recommendations of an adequate and healthy diet, constituting an instrument to support Food and Nutrition Ed-

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ucation (EAN) actions in the Brazilian Unified Health System (SUS) and in other sectors[2]. It constitutes one of the main strategies for the implementation of the guideline for the Promotion of Adequate and Healthy Food (PAAS), which is part of the National Food and Nutrition Policy (PNAN)[7] and contributes to the development of plans for the promotion and implementation of the Human Right to Adequate Food (DHAA)[2], as it is based on the concept of food and nutrition security (SAN)[8]. It guarantees regular and permanent access to quality food, in sufficient quantity, without compromising access to other essential needs, supported by food practices that promote health, respect for cultural diversity, and are environmentally, culturally, economically, and socially sustainable[4].

The first version of the GAPB, launched in 2006, presented official dietary guidelines for the Brazilian population, being considered a reference for individuals, professionals and health managers[9]. However, although it included more warnings about the risks than the current version, the current social transformations that have been experienced by society have caused new impacts on health and nutrition conditions, making it necessary to present new recommendations. The increase in chronic non-communicable diseases (NCDs) and the food centrality regarding global health are broad and fundamental trends that stand out for a better understanding of these transformations, as they have become part of the variables that put health at risk.

The second edition of the GAPB shows a differential that has been internationally recognized; the standards of adequacy and the recommendations that have been published are based on the regional and traditional cultures of the country. In addition, it has used food as a reference instead of just nutrients, since these are far from the daily perception of the population. For these reasons, the guide has been praised in the academic community, mainly for encouraging the population to consume "*real food*", in addition to the way in which it has been developed, especially in the matter of limiting the use of *ultra-processed foods* (UP). Renowned researchers from different areas of knowledge, such as Boyd Swinburn (New Zealand), Michael Pollan (United States, USA), Georgy Scrinis (Australia), Marion Nestlè (USA)[10], and Jean-Pierre Poulain (France) have demonstrated during interviews and lectures in Brazil their admiration for the GAPB.

While gaining notoriety, the GAPB has been the target of criticism and the cause of controversy. In September 2020, a technical note was issued by the Ministry of Agriculture and Livestock, requesting the Ministry of Health (MS) to carry out a review of the guide. The main arguments were related to the new food classification system, called *NOVA*, which divides foods according to their grade, type, and processing purpose[5]. A crucial concern of the GAPB was to differentiate food categories and their levels of processing, with the following terms being used by the MS: *in natura* or minimally processed foods; processed culinary ingredients; processed foods; and ultra-processed foods.

Since the end of the 20th century, research has been drawing attention to the social, economic, and cultural transformations that have taken place in the contemporary society and to the changes in the eating pattern of the world population, resulting from changes in the extent and purpose of industrial processing applied to preserve, extract, modify, or create new foods[11]. Some researchers have argued that it would be useless to recommend consumption based on food groups, such as the American guide based on food pyramid, as, in the same group, there are whole and breakfast cereals and, in this case, both have different systems of production/manufacturing, processing, conservation, and logistics. Consequently, foods may be classified in the same dietary group but have the potential to cause uneven long-term metabolic effects[12].

In practice, the differentiation of foods by degree of processing, both by lay people and experts, has been a bit confusing, even in the academic environment. One study, for example[12], detected a low assertiveness index for the classification of 30 foods among the four *NOVA* categories, with medians, before and after the completion of the enlightening mini course, being 13 and 23 correct answers, respectively. That is, it demonstrated that the participants in the sample, who were students and professors at a nutrition college, could not fully understand the classification.

The use of the *NOVA* classification in population studies on food, nutrition, and health has grown beyond the GAPB. In Brazil, it has already been used to assess household food purchase patterns and the relative prices of products; to verify the influence of the food environment and marketing on the consumption of UP products; to establish the impact of the EAN intervention, among other purposes. This classification has been recognized as a guideline for reports by supporting bodies responsible for enforcing public policies to protect food, such as the Pan

American Health Organization (PAHO)[13] and the United Nations Food and Agriculture Organization (FAO), in addition to being a model for other food guides in Latin America[14].

The *NOVA* classification, in addition to enabling the understanding and distinction of different industrial processes, allows the choice of food to consider cultural differences, food systems socially and environmentally sustainable, on the premise that food – from production to consumption – can impact culture, social life, and the environment[12].

Social standards, food practices, and healthy eating

Social norm refers to the set of conventions related to the structural composition of food decision-making, its conditions, and the context of its consumption. Dietary norm is defined by scientific discoveries and processes that weigh on technical prescribers regarding the quantity and quality of what they consider good food.

When Fischler[15] states that societies have complex and elaborate codes for food and the act of eating: Table manners, cuisines, rules about dishes, what to order first, what to order as a main dish, what to order as a dessert, how to behave, what combines or does not, what to drink[15]. Well, there are implicit rules and laws in all cultures regarding what someone should and should not eat. On the other hand, however, there is literature dealing with nutrition, with rules based on nutrients, calories, proteins, and vitamins. In all this profusion and diffusion of information, gastronomic discourses are confused with dietetic discourses[15]. For this author, when it comes to food, it is not just about nutrition – and how to obtain good health – it is necessary to eat observing the contribution of the two rules, that is, commensality and nutrition.

Therefore, social and dietary norms do not exclude each other, but influence each other; there are many variables between food norms and practices. In 1979, Fischler[15] called *gastro-anomie* the disruption of this norm-practice syntax due to the individualization of the act of eating, which would be a gap between norms and practices. The author states that people feel uncomfortable, full of fears and conflicts about what and how they should eat, and this makes some individuals choose to be submissive to a dogmatic authority or skepticism and/or tend to immobilization[15]. In other words, there are so many rules, so many friends and enemies of health, that the consumer becomes lost and distant from the traditional social norm, having difficulties to understand and adapt to the food currently considered healthy.

Uncertainties cause anxiety and a constant need for adaptation. They also cause the feeling of emptiness, a lack of personal meaning for individuals. In this regard, Giddens[3,4] has intensified studies on contemporary society, opening space to consider the *self* and the constant construction of *identity* as fundamental points, making the construction of self-identity a complex task, requiring the creation of new ways for the individual to deal with these perspectives. It is about everyday decision-making, a typical process of modernity[3], which is also characterized by globalization, the breaking down of barriers, which, on the one hand, makes norms standardized worldwide; and, on the other hand, that cultural peculiarities are known throughout the world. From the perspective of identity construction, even if feeling lost and confused, the subject needs to make choices in all areas of life, including food[3].

The problem that the modern individual faces, when having to position themselves in the face of different and changing norms, is the choice between keeping their lay knowledge or transferring this power to the knowledge of *experts*, or even mixing both. In the midst of these mismatches, individuals continue to be responsible for their day-to-day choices[4]. Then, they and/or social groups alter the material world and transform the conditions of their own actions based on their diverse knowledge of "being" in the world. The choices based on their knowledge are understood as a process of empowerment, which is available to the layperson in the form of reflexivity. When it comes to complex issues and/or situations in which they have difficulty translating into action, they must seek specialized information, that is, they need to resort to experts. This is how they move between expert and lay knowledge and make their own interpretations and choices. Thus, marked by reappropriation and empowerment, their decision-making remakes the reflexive project of identity construction[4].

At the same time, anxiety (which has been intensified and shown to be increasingly expressive in high modernity) is related to uncertainties and controversies around the relationship between the triad of food, health, and disease. Therefore, this section reflects on the current food scenario, analyzing the issue of food as a preventive pro-

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moter of diseases and a source of health risks.

Healthy is being treated here as a polysemic and questionable term. Any categorization of foods as healthy, or not, means a simplification of the complex relationships that involve a healthy diet. The structuring of a healthy diet pattern is complex, as it is determined by the amount consumed and the position of the product within the total diet, and not only by its composition[16]. Thus, there is a fragile boundary between the category of food that seems healthy and the one that presents risks. The consequent scientific controversies generated by such a perspective[17] are fundamental issues of scientific knowledge, accepted and discussed by the Sociology of Food.

Giddens[3,4] and Beck[5], in their contribution to consolidating the approach to food risks, show that both expert and lay knowledge are permeated by cultural assumptions. The ideology that there could be an objective indicator that would measure the danger of risk is the result of a particular cultural perception. In addition, the authors characterize the risks as arising from modernization and seek to show how the basis of uncertainty is linked to other aspects of the nature of institutions, such as relationships of trust[5].

Given this context, the GAPB aims to be a mediator of choices and a facilitator in food decision making. As an institutional regulation, the guide is able to favor/assist in choices, stimulating regional and local culture and habits, and is, therefore, considered an important instrument. It can be said that this is an advance in the consolidation of the food identities of the Brazilian population.

The dietary profile of the Brazilian population is analyzed according to three contemporary contextual factors: i) nutritional transition: Decrease in the prevalence of malnutrition and increase in overweight and obesity; ii) epidemiological transition: Increased mortality and morbidity, resulting from non-communicable chronic diseases, due to risk factors that are strongly associated with social determinants of health; iii) demographic transition: Increase in life expectancy, prospects for an increase in the number of elderly people and a decrease in fertility.

Contextual transitions are associated with changes in the health situation. Therefore, the health care model needs to follow the postulate of coherence that governs the health system, which considers the relationship between the population's needs and the system that is socially practiced[18]. Considering the aging of the population and the significant increase in non-communicable chronic diseases – such as diabetes mellitus, systemic arterial hypertension, cardiovascular diseases, and obesity – the health care model adopted by Brazil is characterized by an emphasis on health promotion and disease prevention.

In order to offer continuous and comprehensive care, the country has structured its system in health care networks with different levels of technological complexity. In this structuring, Primary Care assumes an important role as a center of communication and ordering and intends to be the open door to the system, the space for welcoming and creating bonds between users and health professionals. They constitute foundations for the concept of primary care, knowledge visibility, sociability, increased critical capacity, and support for self-care. In it, the GAPB is used as an instrument to facilitate food choices, either as a "guide" for practices that promote a healthy lifestyle and eating, or as a parameter for evaluating the population's food consumption by different health professionals.

Results of the analysis from the food risk point of view

The analysis was performed by carefully reading the guide, comparing it with the proposed theoretical framework. When performing this verification, we noticed that at least two information relevant to food risk were omitted in the second edition of the GAPB, which are: i) the problem of industrialized and/or ultra-processed foods (UP); and ii) the topic concerning transgenic foods (GMOs).

In one of its most important guidelines, the guide advises against the use of UP, which are products made from industrial formulations, they contain substances extracted from foods (oils, fats, starches) or derived from these foods (fats are hydrogenated, starches are modified), or are synthesized in laboratory (flavorings, dyes). UPs have chemical components, which are used by the industry to enhance flavor, preserve and maintain color, stabilize, emulsify, and sweeten foods.

However, on page 51, the guide displays an image in the shape of a ladder, which serves as a visual appeal so that a portion of the daily food (equivalent to 1/3 of the day) can come from PUs. The use of images has unquestionable relevance for educational practices in teaching, and this visual resource is extensively used to carry out food and nutrition education (EAN). However, it is noteworthy that this illustration can lead the lay

reader to interpret it in a way contrary to the orientation, when this type of food was strongly discouraged for routine and daily use. In the guide, the ladder figure represents a positive point, but also establishes this duality.

Linked to this first observation and intensifying the concern, we found that the GAPB hides any and all warnings about the presence of GMOs, whether in *in natura* foods or in the ingredients of packaged foods, commonly consumed in Brazil. There is a quote on this subject on page 32, but it has no relevance. The population has not yet become aware of the potential risk of consuming transgenic foods. It is noteworthy that, in the words of Guivant[17], Brazil is among the countries that have presented responses that favor the consumption of GMOs, while the majority of respondents in Europe and Australia have stated that they reject them, even if they were foods that offered greater nutritional value. By carrying out studies focusing on issues involving technoscientific controversies, this author highlights the excessive use of pesticides and its relationship with the spread of transgenics in different social contexts.

The impact on food production with modified and resistant seeds may be even greater than imagined. Data from a survey carried out with more than 10,000 soy and corn producers between 1998 and 2011 indicate an increasing trend in the use of pesticides and agrochemicals. And this pattern of change in herbicide use over time is due to weed resistance to glyphosate[19]. Cortese *et al.*[20] evaluated food labels and found that approximately 64% of the entire variety of food products and/or ingredients contained therein, sold in supermarkets in southern Brazil, have potential GMOs in their composition[20].

The guide content follows principles that demonstrate the strong relationship between food and the social identity of a population, as shown by studies in the field of anthropology. In light of the epidemiological problem and the increasing rates of NCDs, the best strategy of social, environmental, regulatory, and medical interventions that a country can adopt, with a preventive purpose, is to encourage a healthy and balanced diet, with the consumption of real foods, an assignment that the guide fulfilled in its guideline[2].

Although there is this positive point, the guide's risk communication was weak, widening the gap between the perception of lay people and experts. Oliveira and Santos[21] suggest the development of further research for these discussions related to the social and human sciences and the founding concepts of the GAPB 2014 (dietary pattern, food practices, food tradition, culinary practices, commensality, and others), which are intrinsic to the development of programs and actions for the PAAS, within the guidelines of the PNAN[7].

The constant revision of knowledge threatens the renewal of trust in abstract systems by exposing gaps and limits in the expertise on which individuals depend[6]. Therefore, one of the biggest challenges, which must be overcome by the expert system, is to reach a rational parameter of lay people through the dissemination of the greatest amount of information by technicians[17]. Under this analysis, the exposed facts can be considered critical risks and are in line with what Giddens[3] calls an aggravating circumstance. This occurs when a set of risks, which is not perceived by experts, or is not communicated, since the limits of expert knowledge are not only problematized, but the very idea of expertise becomes complex and worsens.

Final considerations

The technical opinion contained in the GAPB can be considered a facilitator of daily food choices by providing tips on meal composition and rescuing important food standards. It is a strong instrument for reflecting on the population's cultural identities, as it rescues and respects the traditional knowledge of different Brazilian regions.

However, the existence of an official guideline in the form of a food guide does not necessarily mean that the population will eat as recommended. Despite the great responsibility that individuals have for their food choices, effective action is far from being a simple individual decision and, in many cases, it requires public policies and regulatory actions by the State to make food environments more conducive to overcoming the appointed obstacles[14].

There is the role of science in the arguments of the multiple actors involved; government agencies that rely on science to inform their regulatory decisions; the industry that invokes science to challenge state regulations and advice. The media publicize the knowledge produced in order to inform consumers, and these, in the midst of so much information, seem to be increasingly confused about what they should or should not eat[16]. There is a contradiction: On the one hand, the extraordinary expenses with

industrial technologies and advertising of specific products and brands; on the other hand, the total incompatibility of government budgets to invest, in the same proportion, in education and health promotion. Industries will always be on the attack, what works as a strategy to maintain their economic interests and, for this reason, they should be subject to another type of regulation, similar to what happened with the tobacco sector[14].

Therefore, greater efforts are needed to think about the system as a whole, about who makes the decisions and who makes the laws. There are political decisions on food that are defined by national and municipal governments, civil society, funders, companies, and international agencies, which affect the global system, the environment and food systems, and which affect individuals, leading them to obesity and malnutrition[22]. A current version of the ambitious multidisciplinary work on planetary health advocates that researchers from working groups and committees responsible for official disclosures on how to eat should study nutrition in its cultural context and reinforces that the recommendations should not attack local culture[23].

According to Giddens[4], regardless of the specific place of action of individuals, they directly contribute to social influences that have global consequences and implications[4]. This statement explains how individual identities influence the collective sphere and the consequent interpenetration of the local and the global. Therefore, the self-construction and identity issues are done in a reflexive way, people know what and why they are doing it, even if it is limited to certain options. Furthermore, given the inseparable reflexive condition of this author's approach, which affects everyday choices, it is natural that new ways of eating become plural and need to be analyzed under new perspectives. It is important to remember that social structures are neither inviolable nor permanent but have an evolutionary form.

Scientific evidence supports that some aspects of GMOs can be worthwhile, and others can be harmful. Questions should be asked about ethical reasons, unfair distribution, and non-transparent marketing, or unequal and undemocratic control of seed supply. Consumers must be informed of how foods can affect health and the environment and need to be critical of why this data is not being reported on the labeling of processed foods. With all this science in constant evolution, it becomes difficult to reach a more consistent opinion about the use and risks of consuming transgenic foods, and, in the scope of choices, all individuals can choose the evidence that makes the most sense, that is, they are exposed to the influences and dynamism of the modern world. However, when the individual needs to take responsibility for a hidden risk, without proper awareness and knowledge, this becomes serious.

There is an urgent need to create legitimate spaces for public debate on the risks of GMOs and other technologies, which must be complemented with one-way, more transparent and open information systems, so that the correct information reaches consumers and helps them make choices and decision making[24]. Thus, it is necessary to work so that all food, which may offer risks, contains warnings, information, and publicity, and the GAPB must comply with all these policies that affect the human being and the planet, it needs to protect and reinforce the culture and the food system based on *in natura* or minimally processed foods and, therefore, could not have omitted two important risks.

GAPB supports its commitment to promoting healthy eating habits by encouraging people to expand their autonomy in choices and in the production of eating practices (empowerment). The guide seeks to engage practices that are scientifically based and provide self-care and debate between civil society, health professionals and managers, respecting differences, dialogue, and subjectivities. When approaching contemporary commensality, with an emphasis on urban food changes that have occurred in the context of globalization, the guide focuses on the deterritorialization of food production and food-related services and their impact on eating behavior, in addition to valuing the social and food culture aspects[25]. Still, other authors suggest the development of other research for these discussions in the light of the social and human sciences and the guide's founding concepts[21].

The ways of eating are structuring of social organization, influencing sociability and pleasure when eating[1,15,23]. The guide innovated by considering and valuing commensality and the way one eats, understanding that characteristics such as time, attention, and company at the table are crucial for a healthy eating and health. Regarding the participatory work process adopted in the formulation, a great advantage has been attributed to it due to the shared character and the broad debate. However, we recognize GAPB's challenge to reach people and contribute to the promotion of health with equity and integrality, considering

that Brazil has an extensive territorial occupation and approximately 212 million inhabitants, with large regional, social, and ethnic differences.

Collaborations

C Ambrosi worked on content analysis, study of social theorists, design, formatting, references and final writing. M Grisotti guided the research, methodology and made the final review.

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Article submitted 15/12/2021
Approved 29/06/2022
Final version submitted 01/07/2022

Chief editors: Romeu Gomes, Antônio Augusto Moura da Silva