

## Indigenous Food Security in Brazil and its Implications

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### Abstract

With the objective of discussing the implications of food security for indigenous people in Brazil, aiming to present a theoretical basis that contributes to the change of this inhospitable context, a descriptive study with a qualitative approach was carried out. The results show that solastalgia, emotional or existential suffering caused by a change in the environment, permeated the report of the interviewed indigenous people. Indigenous subsistence practices have undergone changes over the years, which have been attributed to several factors: destruction of the ecosystem, the search for better living conditions; education and health; conflicts in land demarcations, among others. These were categorized into the following analytical categories: Food security of indigenous people in the contemporary world; and Propositions of collaborative practices to value traditional foods. Finally, we conclude that the participants consider that the rescue of a diet based on traditional foods is important in an intervention that aims at the food security of the indigenous and they positively signal that studies on this topic are carried out, provided that cultural issues are respected.

**Keywords:** *Indigenous Food Security; Brazil; Social Inequality*

### Introduction

In Brazil, despite the existence of the National Food and Nutrition Security System, a Social inequality is a problem that affects a large part of the Brazilian population, with direct repercussions on food security. According to Law nº 11.346/2006 food and nutrition security is characterized as the right of everyone to regular and permanent access to quality food, in sufficient quantity, without compromising access to other essential needs [1].

Brazil currently has 305 officially recognized indigenous groups in its territory, in a panorama characterized more by gaps than by systematically recorded data on health, food and nutrition. In general, what is known is a precarious situation, in which there are difficulties with food production in a significant part of indigenous lands [2].

Indigenous subsistence practices have undergone transformations over the years, leading many tribes to a situation of eating disorders, in situations ranging from malnutrition, hypovitaminosis and anemia to obesity and related comorbidities [3]. The difficulties related to food production are mainly due to the drastic reduction of territories originally occupied by indigenous people, the delimitation of indigenous lands in already degraded areas, loss of vegetation cover and environmental pollution. There are cases of areas that, in the

past, were considered suitable for the cultivation of several species and today are unsuitable for planting any food, due to the constant reuse of soil and monoculture.

The problem of food production in indigenous areas has yet other aggravating factors, one of which is the presence of invaders and the illegal removal of natural resources, as done by loggers and mines. Resulting in a regrettable environmental degradation, in addition to intense conflicts, which in some cases, large areas are judicially compromised for decades, without it being possible to use them until they are officially demarcated. Sometimes, the return of the indigenous people happens when the areas have already been completely deforested and explored, which also means impoverished soils and compromised fauna and flowers [4].

This adverse scenario adds to the prejudice and devaluation of everything that characterizes indigenous ancestry, especially in regional contexts, where contact between indigenous and non-indigenous people is more intense [5]. Indigenous practices and knowledge are subordinated to Western knowledge and systematically devalued, in a process that gradually imposes new practices and values [6]. Often the official system has, through its representatives, a central role in this issue, which has been obeying an exogenous logic, with a complete cultural alienation [7]. In view of the above, this study aimed to discuss the implications of food security for indigenous people in Brazil in order to present a theoretical basis that contributes to the change of this inhospitable context.

### Methods

It is a descriptive proposal with a qualitative approach. Made from the script COREQ (Consolidated Criteria for Qualitative Research Reports) [8]. Given the COVID-19 pandemic context, social isolation measures require new data collection strategies, especially when participants are from risk groups, as is the case with indigenous people. Therefore, data collection was carried out through digital resources, which showed a high rate of acceptance by respondents, reducing costs and time.

Chosen by an intentional selection, the 25 interviewees were over 18 years old, self-declared indigenous, of origin "Pataxo hã hã hãe", "Pankararu", "Atikum", "Kaingang", and "Guarani", residents of villages located in five different states of Brazil.

Each survey was guided by an instrument composed of eight open questions about traditional foods, access and strategies to encourage the use of these foods. The collected data were systematized and analyzed following the theoretical precepts of Thematic Analysis. This type of analysis systematizes the data in units of meaning that form the categories, allowing the researcher, in rich detail, a broad understanding of ideas and common characteristics of the speeches of different subjects and the concatenation of common messages [9].

The study followed the norms and guidelines of the Resolution of the National Health Council and was approved by the National Research Ethics Committee (CONEP) in opinion number 4,279,173. All interviewees signed the Informed Consent Form.

### Results and Discussion

As a result of the study, it was possible to perceive that the nostalgia, a developing field of global health defined as the emotional or existential suffering caused by a change in the environment [10], permeated the report of the indigenous people interviewed, who attributed the changes that occurred in the traditional diet of the indigenous people to several factors: destruction of the ecosystem, the search for better conditions of life; access to education and health; conflicts in land demarcations, among others. Resulting in the acquisition of new eating habits and customs, often deleterious to health. Respondents were willing to participate in collaborative practices to value traditional foods and in studies on the subject, as long as ethnic and cultural aspects are respected. In order to better understand these data, they were systematized into three analytical categories described below.

#### Indigenous food security in the contemporary world

Currently, the social phenomenon of migration of indigenous people towards urban centers throughout Latin America is observed, this phenomenon is related to a complex network of determinants. Among these, the loss of indigenous territories, destruction of the environ-

ment and climate change stand out, which, in addition to causing massive displacements of indigenous people, compromise and threaten their survival. It is important to consider that groups moving to urban areas face different environmental risks than those experienced before migrating. Furthermore, changes in the physical and cultural environment can alter individuals' habitual patterns of life in general, making the displaced population particularly vulnerable to the risks of becoming ill in their new environment [13].

In line with this epidemiological and demographic transition, the indigenous people incorporate several customs, including those related to food, which is no longer based on traditional foods and becomes less healthy. These changes in the food and nutritional patterns of indigenous people lead to nutritional profiles in which food deficiencies, excesses and inadequacies coexist [3].

The interviewees in this study unanimously related the development of morbidities such as: diabetes, obesity, hypertension and other diseases related to poor diet. According to them, "white food", although more practical and tasty, is also more harmful.

"...When our indigenous population did not have so much contact with the white food culture, they did not suffer from so many health problems, after all, their food came mainly from what was planted by themselves" (E1).

"...Traditional foods have many essential nutrients and even anti-inflammatory and antioxidant properties, but in addition, there are also cultural issues involved in the process of obtaining, preparing and consuming this food that are also good for health" (E4).

"Traditional foods are not industrialized, therefore, they are foods without preservatives or dyes, which have not lost their nutritional value, contributing adequately to the diet of those who consume them. Avoiding the development of obesity, diabetes mellitus, cardiovascular diseases, among many others..." (E4).

The testimonies corroborate current studies that show important changes in traditional eating practices, towards the westernization of food. In nutritional terms, these changes translate into an impoverishment of the diet, with an increase in the consumption of fats and sugars and a reduction in food diversity and its content of vitamins and minerals. Concomitantly with such transformations, the nutritional profile of these populations often includes, at sometimes alarming levels, both deficiency disorders, malnutrition and anemia, such as overweight and obesity [14].

Brazil, being a continental country, has significant regional differences, the general population that lives distributed throughout the country, has ways of life with very different realities, a fact that extends to the indigenous population ranging from isolated groups to those residing in urban areas. Therefore, the food is also varied according to the region and situation.

Generally, indigenous peoples dedicate much of their time to activities related to food. This is because in certain tribes it is necessary to produce food: raising animals (usually chickens and pigs), carrying out hunting and fishing expeditions, collecting fruits in the bush and growing their own food in family farming. The Furthermore, in some cases it is also necessary to build the tools necessary to carry out these tasks, such as: utensils, traps, canoes, baskets, bows and arrows, among others.

Despite the variation of foods according to the region, traditional foods are considered important for the indigenous people, who attribute, in addition to health benefits, cultural, economic, nutritional values and even the preservation of the ecosystem. Regarding the production of these foods, a key aspect was mentioned by the interviewees, which was the political aspect, since the production of these foods strengthens the guarantee of the right of possession to indigenous land, which has been constantly threatened.

"...Traditional foods are organic with greater nutritional support and guarantee the livelihood of the community. In addition to cultural preservation, strengthening family farming, crop rotation and increasing the supply and diversity of food" (E1).

"There are countless benefits found in the traditional foods of indigenous peoples, among them we can mention: organic foods, without the use of pesticides, without chemical processing, but the greatest benefit is precisely the possibility of obtaining it, which in most cases does not require financial resources, it is enough to guarantee the right to land and the use of the planet's natural resources" (E7).

There are several reasons to know the nutritional profile of a population, the first is because people who have nutritional problems are more vulnerable to other health problems. The nutritional profile of a population reflects its living conditions. Thus, when high levels of morbidity are recorded or where sanitation conditions are inadequate, nutritional problems occur more frequently. And the indigenous, precisely because they have been undergoing very important changes in their way of life, which represent situations of extreme social gravity, are particularly vulnerable to the occurrence of nutritional problems [15].

### Propositions of collaborative practices for valuing traditional foods

Faced with three propositions about the use of traditional foods, the participants presented several positive points. The propositions were: a) to incorporate knowledge about traditional foods in health interventions with a view to making knowledge about health more attractive to indigenous people; b) carry out health interventions focusing on traditional foods, so that practices [re]connect people to traditional food systems are seen as a health resource; c) in addition to supporting people in the production of traditional foods and/or making it easier to access them. This is related to the idea of solastalgia, since the impact of environmental degradation (and the violence linked to it) on indigenous communities cannot be separated from 'traditions' and current experiences, that is.

Among the positive points, the participants unanimously point out that these proposals can promote: the resumption of the consumption of traditional foods, the improvement of access to food, the integration between traditional and conventional medicine; self-care, the preservation of culture and even the strengthening of efforts in the struggle for the demarcation of indigenous lands.

"There is a transition from indigenous tribes to cities and traditional foods are being left aside, with industrialized foods being more valued" (E7).

"...This can encourage the tribe to preserve its culture, through production, because there will also be a sense of belonging" (E6).

"Aware of the importance of traditional foods, the 'relatives' will be able to spread the information among their families and to the others in the community where they are inserted, influencing so that they can mobilize together for the cultivation of these foods" (E4).

Of the three propositions presented, the most appreciated was the last one: support in the production of traditional foods and/or to facilitate their access. This is because, as the participants know about the difficulty of obtaining resources to buy inputs, receiving support can be fundamental, and can even generate jobs in the tribe and improve health conditions. Respondents emphasize that the third intervention, while encouraging the community to preserve its culture, facilitates access to food and conveys a sense of belonging, which can make consumption more attractive. Finally, they claim that this intervention, in addition to being objective, combines practice with knowledge, whether in terms of agricultural techniques or family farming.

"I like the third option better, because many tribes will not be able to buy inputs to start producing. But with help, it can generate work and health for the village and surrounding communities" (E2).

"The third proposition is the one that most attracts me because it combines knowledge with production practice and this can be a way to improve and facilitate access to food" (E3).

"I liked the approach more in relation to support in food production, because it seems more complete, it addresses the importance of inserting the community in a practical and objective way, it facilitates access to food. And finally, it strengthens our struggles for land and can even give us advice on agricultural techniques" (E7).

Despite all the motivation of the participants in relation to the propositions, some concerns also permeated their testimonies. Mainly with regard to interference with indigenous tribes, possible conflicts of interest, and frustration over lack of resources to implement the planned interventions.

“A great interference from the white man, it may not be seen with good eyes if it is in excess” (E1).

“Possible conflicts of interest, if not democratic, since some indigenous people no longer have a suitable place to cultivate, then it will not help to have the knowledge” (E2).

“Only collaborative practices that respect the ethnic and cultural aspects of the community are well received by the population” (E9).

In view of the above, a critical reflection on the propositions that are intended to be developed in indigenous communities is necessary, as there are many histories in which the tribes felt used after some intervention in which there was no return. In this sense, the adequacy of the return is also important because it needs to make sense for the tribe. An example experienced in our professional practice was when a group of researchers returned to the tribe months after the intervention and data collection had taken place, with a published article that was given to the tribe leader as a thank you. In this case, associated with inadequacy, cultural issues were not considered, because the published article, as important as it was, did not have the same meaning for the researchers and for the indigenous people who participated in the study.

In relation to actions aimed at indigenous people, the literature shows a long list of projects and intervention programs, ranging from the distribution of food baskets to the production and marketing of various extractive, agricultural and handicraft products. However, it is important to remember that each governmental or non-governmental initiative brings with it an ideological position, explicit or not. And this even interferes with the name of the intervention, and may interfere with its development. For example, the concept of sustainability has several dimensions: ecological, social and economic, which allow different interpretations and understandings, sometimes not even making sense for the indigenous, as it is outside their reality [16].

According to Barreto [17], the development and success of interventions depend on the observation of essential elements in their design, such as the behavior and lifestyle of individuals and social groups, information alone is not enough. The choice of a particular intervention must be governed by the identified problem, available resources, social actors involved, political and institutional support, technical and operational feasibility and especially community adherence, among others.

Finally, propositions of actions for indigenous tribes include understanding the dimension of cultural diversity and the involvement of several primordial spheres for indigenous people, it is essential to participate and consider traditional knowledge and practices that welcome and respond to the needs of the tribe.

### Conclusion

At the conclusion of this study, we identified that due to historical, social and cultural factors related to the diet of indigenous people, the data indicate that the participants of this study associate the emergence of pathologies with the consumption of non-traditional foods, they value the food coming from the cultivation itself; recognize that traditional foods are rich in some nutrients and medicinal properties. Therefore, they consider that the rescue of a diet based on traditional foods is important in an intervention that aims at the food security of the indigenous and they positively signal that studies on this topic are carried out.

Brazil is a country with a large territorial and population dimension, with an important ethnic diversity. And the main sources of data on indigenous food and nutrition correspond to surveys carried out in several specific communities. These surveys are mostly case studies, that is, studies carried out with one or a few communities, usually over short periods of time. And studies like this do not represent a considerable amount of the indigenous population of a country. Still, despite differences that can be found, a common basis can be observed, a certain similarity between some indigenous tribes on certain aspects, food security being one of them.

This study did not intend to exhaust the subject, only to awaken a critical reflection and motivate future researchers, thus, it is important to carry out new studies, with different methodological approaches and greater representation of the population, which will allow a deeper understanding of the theme and consequent qualification of an action aimed at indigenous people.

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