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Identifier of Regional Food Presence (IRFP): A New Perspective to Evaluate Sustainable Menus

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Abstract: The menu offered in restaurants must meet different aspects of quality. Cultural elements are related to their acceptance and can contribute to the preservation of habits, sustainable agricultural systems, and the maintenance of biodiversity and sustainability, among other factors. In this context, this research proposes an instrument for classifying menus regarding the presence/absence of regional foods called the identifier of regional foods presence (IRFP) as a new perspective to evaluate sustainable menus. For this, lists of regional preparations and ingredients were prepared for each Brazilian region. Sequentially, we submitted the dishes/ingredients to a developed decision tree for the classification of foods into regional or national foods. The score, based on the presence/absence of regional foods, considered the components of a menu, with zero attributed to a lack of regional ingredients/dishes. For national dishes/ingredients, researchers attributed a minimum score equal to ten. One regional food gave a score of50 to the menu, and with more than one regional food, a daily menu scored 100. The final menu evaluation was based on the mean scores of the menus in each restaurant. Scores between 0–49.9 were considered inadequate; 50–74.9, adequate; and excellent between 75–100. The IRFP was applied to 111 menus with data collected from all the offered dishes. In total, the study evaluated data from 774 recipes from the menus of 37 restaurants located in the five Brazilian regions with a similar operating system. ANOVA was used to verify if there was a statistical difference between the mean score of each Brazilian region ($p < 0.05$). The average score obtained by the IRFP in menus from Brazilian community restaurants was 80.3 ± 30.9 (excellent), showing a significant difference between the Northeast and Southeast Regions, with a more significant presence of regional foods in the Northeast (87.7 ± 28.7). The use of the IRFP in menus was shown to be easy in its application, contributing to a stimulation of the use of regional items and, consequently, to the direct and indirect benefits generated for the food system and the local population.

Keywords: regional food; menu; sustainability; food system; restaurants

1. Introduction

Regional foods (RF) are characterized by foods typical of a culture and/or region [1]. As food is a fundamental part of the environment and culture, the relationship between natural edible resources and technological development has been evolving and affecting what we eat, how we obtain our food, and even how we prepare it [2]. Therefore, income, prices, individual preferences and beliefs, and cultural traditions, as well as geographical, environmental, social, and economic factors interact in a complex manner to shape dietary consumption patterns [3]. Understanding local food culture and consumption reflects a population's socioeconomic development and cultural transformation as well as its access to food materials [4]. Moreover, local eating patterns are essential information for

governments, local service providers, and communities. Additionally, studying these patterns across geographic space helps communities to understand their own food culture better, shaping several aspects of urban development, such as tourism marketing and place branding, and also potential health problems [4].

In general, regional food is attractive due to different factors. Even if a user does not always choose local products, the simple fact that there is an option for their consumption is essential for the customer to attend an establishment [5,6]. Even specialty-type restaurants that offer typical foods from another country or a different region can creatively include local ingredients as a way to attract their customers, in addition to this being a way to operate more sustainably. There is an attraction of customers to ethnic food that should be explored, in addition to it being an international orientation for healthy eating [7,8].

Worldwide, eating outside of the home is a reality in urban centers dictated by the current modus vivendi in which globalization and modernization have been changing feeding habits due to the lack of time to prepare meals at home [9,10]. Menus offered in restaurants should integrate some factors defined by the world trends concerning environment and food consumption related to nutritional, microbiological, and sensorial quality and cultural aspects. The integration of regional foods in menus can contribute to the preservation of the food culture, nutritional quality, pleasure, and sustainability [3,11–14]. In addition, regional foods in menus have an impact on consumers' perception of products and purchasing decisions and support the development of regional economies [15]. By monitoring the presence of regional foods in menus, restaurant owners and/or menu creators can stimulate the use of local ingredients and start a cycle of sustainable actions. If the demand for local food increases, consequently, production has to adapt to serve the market [12]. Nowadays, the observed scenario constitutes monocultures, aimed at serving a specific market, which modify the natural landscape of a region, creating environmental damage. The exhaustive cultivation of a single species impoverishes the soil and changes flora and fauna with impacts that are often permanent. The adequacy of food services in the search for sustainable paths guides trends in the first sector. The variety of cultivars, especially those that develop more easily under local conditions, requiring less soil wear and in harmony with the fauna, will undoubtedly result in medium and long term benefits for the entire local population [16].

While there is a burgeoning amount of literature showing the importance of offering regional foods to local development, the maintenance of culture and habits, and sustainability [2,3,13,14,17,18], relatively limited attention has been paid to the offer of regional food in restaurant menus in Brazil [14,18]. To fill this gap, this study aimed to propose an instrument to evaluate restaurants' menus based on the presence/absence of regional foods by analyzing data of nationwide Brazilian community restaurants. The potential significant contributions of this study are to allow restaurants to evaluate and plan their menus from a different point of view, focusing on culture preservation and sustainability. Additionally, this study sheds light on the social, economic, and cultural aspects of individuals' eating activities and experiences in each Brazilian region, which potentially could benefit decision-making in the restaurant business, tourism, and sustainable urban development.

2. Materials and Methods

This cross-sectional study, approved by the Ethics and Research Committee of the University of Brasília (CEPE # 03710), was conducted in two main stages: (i) development and (ii) application of the identifier of regional food presence (IRFP) instrument. In the second stage, the following steps were necessary to test the instrument: (a) selection and characterization of the restaurant sample and its menus; (b) data collection from the menus' dishes' recipes; (c) application of the IRFP on the menus; and (d) data analysis.

2.1. Development of the Instrument (IRFP)

To examine the diversity of each Brazilian regional food, the first step was to prepare a list of RF and dishes usually served for lunch in each Brazilian region by using recognized literature references [19,20] and the Brazilian Government material (Brazilian Regional Food) involved with the dissemination of RF [1].

We used the list of regional food for each Brazilian region [1,19,20] and applied the decision tree method (Figure 1) to classify the regional food or ingredients of each Brazilian region. The decision tree methodology is commonly used for establishing classification systems based on multiple covariates or for developing prediction algorithms for a target variable [21]. It has been widely used because it is easy, free of ambiguity, and robust even in the presence of missing values. The decision tree was used for the variable selection (the presence or not of regional food in a menu by a single binary target variable) [21].

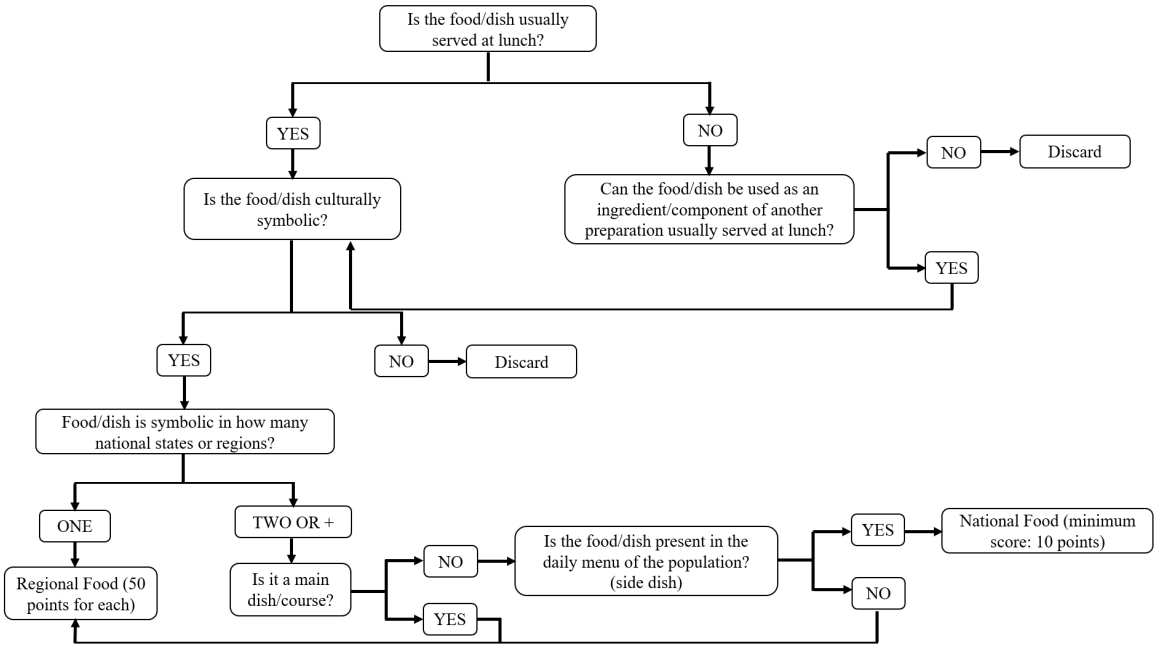

Figure 1. Flowchart with inclusion criteria of regional food/dishes in the identifier of regional food presence (IRFP) and their scores.

A menu's score regarding its regionality considers six components of the menu. These are the main course (the protein dish offered, usually of animal origin and decisive for the selection of other items), garnish (menu item accompanying the main course, presenting as the primary ingredients vegetables, pasta, tubers, and cassava flour dishes), side dishes (dishes such as rice and beans, culturally consumed daily by the Brazilian population), salad, and dessert (fruit or sweets) [22,23]. Side dishes of rice and beans are considered national preparations as they are consumed nationwide (Figure 1) [20,22,24,25]. There are also other side dishes, and they can be prepared using rice or legumes as the main ingredient, or cassava flour or bread. Therefore, they were only identified as regional with the addition of regional ingredients (e.g., beans with pumpkin). Despite that, plain rice and beans (traditional dishes) received a minimum score equal to ten points to prize their use (Figure 1).

Considering that the presence of a single regional ingredient/dish is sufficient to characterize the regionalization of a menu, menus that presented an ingredient/regional dish obtained 50 points. Menus with two or more regional ingredients/dishes obtained 100 points, and the presence of national dishes, rice, and beans (without any regional ingredient/dish) received 10 points each day. It is essential to mention that we considered the maximum score received in each daily menu (10, 50, or 100). In this

sense, the evaluation of menus each day represented a low offer of regional food when the score was between 0 and 10; an adequate offer was 50; and an excellent offer was 100.

Because the focus of the work was buffet/self-service restaurants (the primary type of restaurant in Brazil for the middle- and low-income population), in which the menu varies daily, the evaluation criteria used the mean score of the evaluated days. Therefore, the daily score of their preparations regarding the presence of regional ingredients/dishes was used to calculate the mean and further classify menus from restaurants as regional or not. In this sense, restaurants were classified as inadequate, adequate, or excellent regarding the offer of RF. Inadequate menus presented mean scores <50, adequate menus presented mean scores from 50 to 74.9, and excellent menus presented mean scores ≥75. The classification adopted in the IRFP indicates the need (or not) to improve a RF offer considering most of the daily menus offered by a restaurant.

The cut-off point was defined by the presence of RF in all the evaluated menus from a restaurant in a given period resulting in average scores ranging from 50 points (100% of the daily menus with one regional dish/ingredient) to 100 points (100% of the daily menus with two or more regional dishes/ingredients). Therefore, a cut-off point ≥75 was defined as excellent, considering that to obtain this average the only possibility would be to have at least 75% of daily menus with 100 points or 50% of daily menus with 100 points and 50% with 50 points, which indicates excellent RF inclusion. In order to show the variability of regional foods in Brazil, we used the Wordcloud® tool [26] to highlight the most typical regional dishes, fruits, and vegetables in Brazil and each Brazilian region (Figure 2a–c).

(**a**)

Figure 2. *Cont.*

(**b**)

(**c**)

Figure 2. Variability of Brazilian regional food: dishes (**a**), fruits (**b**), and vegetables (**c**).

2.2. *Application of the IRFP*

2.2.1. Sample Selection (Restaurants and Menus)

Restaurant Selection

Researchers chose a type of restaurant present in all the five Brazilian regions, the community restaurant (CR), to evaluate the instrument based on different RF and ingredients for each region of Brazil. CRs belong to a Brazilian Government program to provide food for low-income people [22,27]. As inclusion criteria, CRs needed to serve lunch to the population and agree to participate in the study by signing the acknowledgment terms.

Considering the inclusion criteria, researchers considered 65 restaurants eligible to participate.. Therefore, a sampling plan was calculated based on a population (N) of 65 restaurants, a sampling error (e) of a daily meal, and a significance level of (α) 5% [28] using the SAS 9.1.3 program to be representative of Brazil. The final sample of restaurants after using this procedure was 37 restaurants from all of the five Brazilian regions. The number of restaurants was defined proportionally to the total number of restaurants in each region.

Menu (Sample Unity)

Menus served during lunch were considered as the sample unit of the research for IRFP validation. According to the Institute of Medicine [29], the evaluation of at least three consecutive days of food consumption is representative of the individual and/or group's diet, in the latter case considering meals for the community. Therefore, from the 37 restaurants that agreed to participate, researchers followed three consecutive days of their lunch menus. In total, researchers evaluated 111 menus.

2.2.2. Data Collection from the Menus' Dishes' Recipes

Researchers spent time following the preparation of each dish that was part of a menu and collecting all data from the dishes' recipes to analyze each daily menu from each CR. Recipe data were collected by observing the production and weighing all the ingredients [30,31]. This step was necessary to guarantee the evaluation of regional ingredients in all of the preparations. A total of 774 recipes were developed for the evaluation of the 111 menus from all the 37 CRs. Table 1 presents the distribution of the number of recipes according to the menu components. Some daily menus presented more than one option of dishes for the same component (side dish, garnish, and salad). Side dishes 1 and 2 were the national preparations in Brazil, rice and beans, respectively. Some restaurants presented a third side dish, as described in the methodology section.

Table 1. Distribution of the evaluated dishes according to menu components.

Menu Components	Dishes (n)	%
Side dishes 1	111	14.3
Side dishes 2	110	14.2
Side dishes 3	43	5.5
Main course	112	14.5
Garnish	110	14.2
Dessert	89	11.5
Salad	129	16.7
Drink	70	9.0
Total	774	100.0

2.2.3. Application of the IRFP on the Brazilian Community Restaurant Menus

The application of the IRFP occurred with the 111 menus, with their 774 offered dishes. Therefore, we verified whether the menu components and the ingredients listed in the recipe of each dish were

present in the IRFP list. We gave scores according to the methodology—firstly the preparation, then the menus. Scores for each restaurant were given to the menus for the three days for all the served dishes.

2.3. Statistical Analysis

The results obtained with the application of the IRFP were analyzed using measures of central tendency and sample dispersion. The analysis of variances (ANOVA) of the value of each instrument was used to verify whether there was a statistical difference between the means of each region with a 95% confidence interval using SPSS® (version 17.0).

3. Results and Discussion

A regional menu, as well as another product or service labeled as regional, promotes not only the producer or provider but also their territory, forming its overall identity. "Regional labeling" is a way of building the regional identity, promotion, and visibility of regions as well as a way to promote their economic, cultural, and social development [15]. From the data systematization for all foods/dishes (Figure 1), it was possible to develop the Brazilian IRFP to classify menus regarding their offer of RF. This allows restaurants to evaluate and plan their menus, focusing on culture preservation and the development of local food systems (Table 2 and Tables S1–S5). As Brazil is a continent-wide country with a complex and peculiar eating profile [32], regional dishes and ingredients are an intrinsic part of regional identity [14]. Additionally, Brazilian eating habits have been influenced by indigenous, African, and European cultures, in different geographic regions according to the influence of one or more of these ethnic groups (Tables S1–S5). It is essential to highlight that the culinary structure and diversity of all the regions are not only affected by the influence of the local food culture but also by socioe-conomic transformations and globalization that lead to the diffusion of various cooking regionalisms [4].

Table 2. The number of regional foods (dishes, fruits, and vegetables) per Brazilian region needed to be included for a menu's classification as regional.

Brazilian Regions	Dishes (n)	Fruits (n)	Vegetables (n)	%
Southeast	73	40	29	27.5
Northeast	74	47	21	27.5
South	45	16	16	14.9
North	30	40	23	18.0
Midwest	18	33	11	12.0
Total (n = 516)	240	176	100	100

The total number of possible dishes, fruits, and vegetables reflects the diversity of Brazilian cuisine. Figure 2a–c shows the variability of regional foods in Brazil, and the most frequent products in the five regions are highlighted. As expected, the most common dishes in the Brazilian regions were rice and beans (Figure 2a), confirming our classification of these as national dishes. It is essential to mention that our figures are in Brazilian-Portuguese because the study is about regional foods. However, the translation to English is in the supplementary file. Cassava and corn flours were also present in the Brazilian regions. "Feijoada" and "Baião-de-dois" were also present in most regions. It is worth mentioning that the main ingredient of "feijoada" is black beans, and in "Baião-de-dois" the main ingredients are rice and beans, showing the importance of rice and beans in Brazilian menus.

Among the Brazilian regions, buriti, araça, and jabuticaba were the leading regional fruits (Figure 2b), which can be used at lunch mainly as dessert and juices. Sometimes, fruits were also included in salads and salty dishes. Corn, cassava, and sweet potato were the primary vegetables mentioned as regional (Figure 2c) in the Brazilian regions, and their consumption also occurred in regional dishes that were cooked, baked, or fried, or as flour. Figure 2a–c highlights the high amount of regional options that we have in Brazil, mainly due to the extension of the Brazilian territory.

The extension of the country to different climates and soils reflects on the variety of RF. The Southeast and Northeast present the highest percentages of RF mainly because colonization began in these areas.

Figure 3 shows the menus' scores by region. There was a significant difference between the Northeast and Southeast Regions ($p \leq 0.05$). There was a more significant presence of RF in the Northeast (87.7-excellent), with 83.3% of the menus presenting two or more regional ingredients or preparations and only three daily menus (10.0%) without a RF offer. In the Southeast, 77.1% of the menus presented two or more regional ingredients or preparations, and only 4.2% did not present RF, and the final score was 86.9—excellent. The Midwest Region presented the lowest mean regarding the offer of RF (Figure 3).

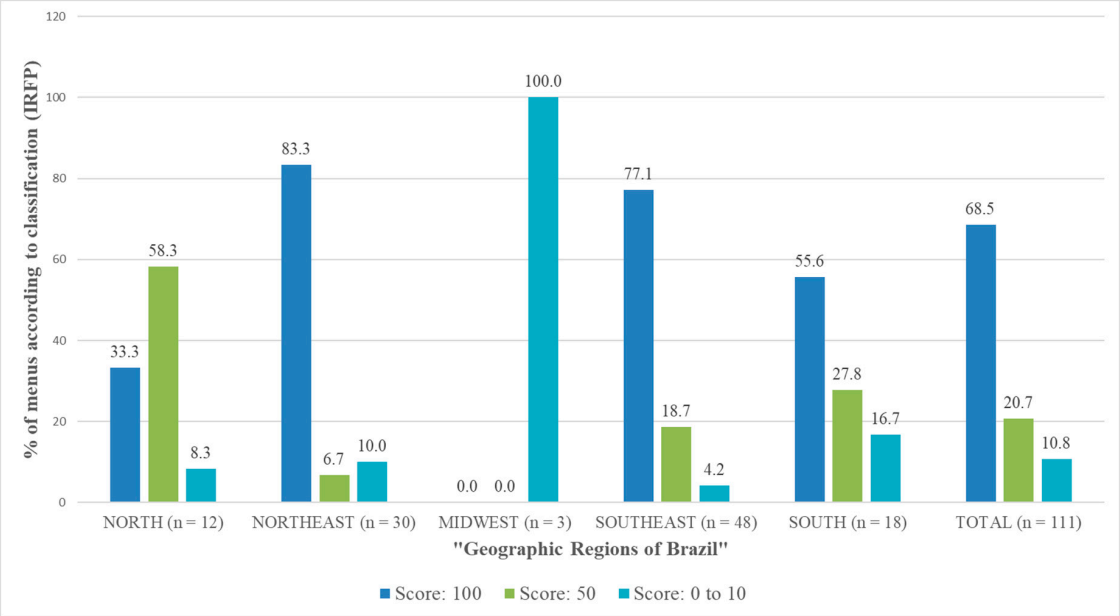

Figure 3. Menu score by the Brazilian regions according to the identifier of regional food presence.

From a total of 516 regional foods (dishes, fruits, and vegetables) from the lists, menus showed 233 different RF (45.2%), in the form of 100 dishes (41.7%) and 133 ingredients (48.2%). This analysis shows that there are more possibilities to offer RF as CRs included not even half of the items from the regional lists.

Most of the menus among Brazilian CRs showed adequate results in the IRFP classification (80.3 ± 30.9) (Table 3) regarding the offer of regional foods/dishes. Of those which had regional ingredients/dishes, 20.7% (n = 23) had one regional ingredient/dish and most of the menus (68.5%; n = 76) had at least two regional ingredients/dishes and were classified as excellent. Only 10.8% (n = 12) of the menus did not have regional items, but 100% offered rice and beans, classified as national foods.

Table 3. Average score and standard deviation (SD) from the IRFP Brazilian community restaurants per geographic Brazilian region.

Region	Northeast	Southeast	North	South	Midwest	Total
Average score	87.7	86.9	63.3	71.1	10.0	73.2
SD	28.7	25.2	28.7	34.8	0.0	36.5
Classification	Excellent	Excellent	Adequate	Adequate	Inadequate	Adequate

In Brazilian community restaurants, we confirmed the offer of RF. The Brazilian Government Community Restaurant Program, in its origin, stimulates the supply of RF to contribute to consumers'

health, to improve cultural food habits, and to benefit the community around restaurants by strengthening agriculture and developing the local food system [33]. Local food systems create possibilities, such as people's inclusion, innovation, and participation as well as local sustainability [34].

The appreciation of regional habits in the Brazilian Northeast Region was also recognized in a survey conducted with school menus with similar objectives [19]. The authors identified a variation of between 38% and 86.5% in menus with at least one regional preparation in a five-day menu. In the Northeast Region, at least one regional preparation was presented in 84% of menus. Similar to our findings, the authors found the offer of 84% of RF in school restaurants in the Southeast Region [19]. The North Region (38.0%), however, did not show the same commitment to spreading regional eating practices among the school community [19].

The differences between the types of food services can justify the encountered differences in the menus of public schools and community restaurants. Both types of service focus on individuals, but these services depend on budgets for the purchase of food and governmental procedures that may interfere with the use of RF.

Figure 4 presents the distribution of RF related to a menu's components. Garnishes, followed by salads, provided the highest percentages of RF offer (40.2%, n = 45; 39.2%; n = 44, respectively). Beverages (16%; n = 19) and side dish 1 (1.8%; n = 2) presented the lowest offering percentages. It is essential to mention that Figure 4 presented the percentage of regional ingredients added to side dishes 1 and 2, as these components are national dishes. If, for example, a regional vegetable was added to the rice, the instrument would count this addition to the recipe as regional.

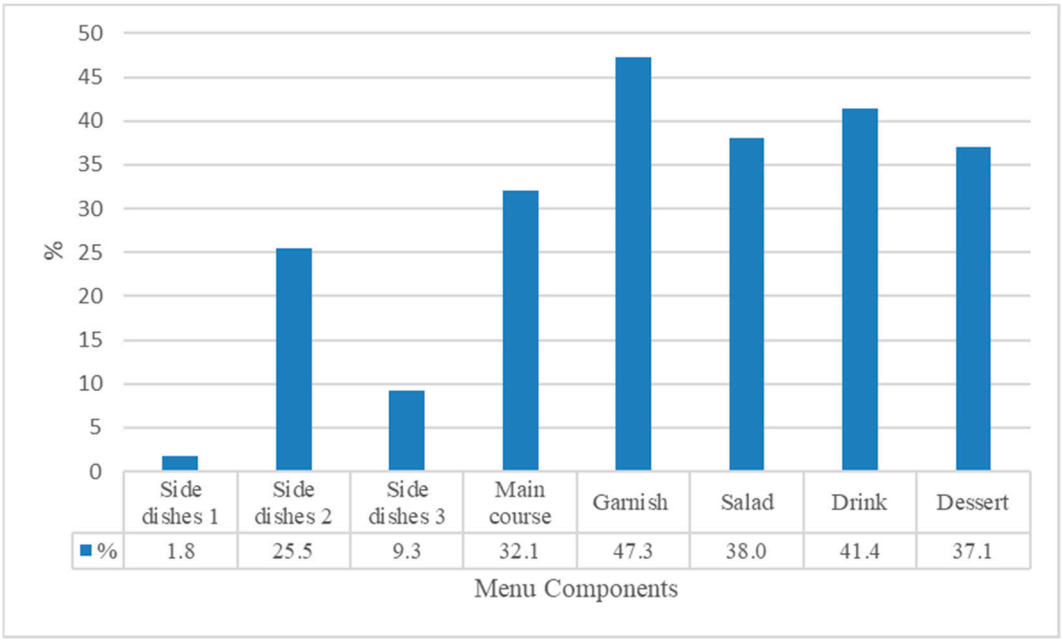

Figure 4. Percentage of menu components that are regional preparations and/or are composed of regional ingredients. SD1: side dish 1 (preparation with rice as a base ingredient); SD2: side dish 2 (preparation with beans as a base ingredient); SD3: side dish 3 (flour or bread); MC: main course; G: garnish; S: salad; D: dessert (sweets or fruits); B: drink (natural juice or artificial juice).

Beans (side dish, SD2) have great cultural significance for the Brazilian population, and this dish is essential in community menus [22,24,25,35]. The regionalization attributed to its participation in the analyzed menus showed relevance, particularly in the North and Northeast Regions. Regional vegetables were added to beans (North: 61.5%; n = 8 and Northeast: 60.0%; n = 18), a common habit in these Brazilian regions.

Regarding garnishes, the high percentage of regional preparations was justified by the inclusion of vegetables such as pumpkin (9.8%; n = 11); dishes with cassava flour (16.1%; n = 18), such as "virados" and "feijão tropeiro" (supplementary file) from the Southeast Region; and preparations with corn (6.2%; n = 7), such as "angu" (Southeast), "cuscuz paulista" (Southeast), and "polenta" (South) [20].

Cassava flour was the staple food of the natives who inhabited Brazil. During the colonization period, cassava flour was part of the Portuguese diet, recognized as "war flour" because cassava was easy to plant, adapted to the entire territory, and presented low perishability. Until today, it is part of the Brazilian menu, mainly in the North (15.4%; n = 2) and Northeast (20.0%; n = 6) Regions [36], which was confirmed in the analyzed community menus. In these Brazilian regions, even on the days when "farofas" and "pirões" (cassava flour-based dishes) were present, cassava flour 8was offered freely to consumers as another side dish.

It is important to note that the CRs located in the Southeast Region also presented a reasonable frequency of garnishes with cassava flour (18.8%; n = 9), probably due to the migration process of the Northeasterners to the Southeast [37]. The use of corn-based products ("angu", "cuscus", "polenta", and "quirera") was restricted to restaurants located in the Southeast (6.3%; n = 3) and South (22.2%; n = 4). Corn is considered, in the Southeast Region, the vegetable version of pork, due to its versatility in use and pleasant taste. In the South, individuals who traveled through the region previously consumed "polenta" and "quirera", which are now incorporated into local habits [20].

One of the factors that can interfere with the supply of regional items as a garnish is the abundant supply of pasta in the menus. Workers in Brazil widely consume pasta, considered one of the favorite dishes of this group [35]. Pasta is one of the main foods that contribute to the energy supply for the low-income Brazilian population [35,38] due to the influence of Italian colonization in Brazil [39].

Salads, as well as desserts and drinks, are an excellent opportunity to offer RF, such as fruits and vegetables produced locally, as seen in Figure 4. However, for drinks and desserts, the presence of regional products was less common. Regarding the menus that offered desserts (n = 89), there was a greater supply of fruits (63.0%; n = 56) than of sweets 33.7% (n = 30). The fresh fruit offer as a dessert has advantages for customers because, besides having more opportunities to have RF, it can prevent and assist in the treatment of diseases [25,40–42].

In the analyzed menus, beverages were included in 63.1% (n = 70) of the menus. Natural juices, a source of RF, were less frequent (41.4%; n = 29) than artificial beverages. Different from our findings, a study in Brazil showed that artificial juices were offered in 80% of the meals in menus from the Brazilian Workers' Food Program [35].

In general, the assessment of the IRFP confirms the use of regional items in the analyzed trivial menus. However, it is necessary to encourage greater use of RF in restaurants as a possible strategy to stimulate the supply of fruits and vegetables as an alternative to modify the global epidemiological scenario and boost local sustainability [12,43]. The list of items of Brazilian food culture was facilitated by a movement of the Federal Government that understands the valorization of local products as one of the essential keys for public health. Both the Brazilian Food Guide [44] and the publication of Regional Brazilian Foods [1] provide this guidance and list many regional foods and preparations that should be integrated into Brazilians' dietary routines. Even though other countries do not have similar publications, there is a worldwide trend, guided by the World Health Organization (WHO), as mentioned, for local products to be consumed more regularly [7]. Restaurants aimed at communities, therefore, can benefit from the development of this list by experts in the area or by individual initiatives.

Eating habits are in continuous evolution, as they are part of a people's culture. Considering the movements of migration and immigration, and globalization, the use of new ingredients/dishes can influence populations' eating habits. Besides, they can be integrated into a population's diet due to economic interests that are not beneficial to the environment. For example, interest in the international commercialization of soy imposes its large-scale production on Brazilian territories, contributing to the extinction of several local products and their inclusion in the population's menu. Therefore, the use of

an instrument to assess the regionalization of menus must be continuously updated, understanding these changes in population development and growth, but critically, to value local products.

This article reveals a possible methodology to be adopted. It brings an evaluation of menus that reflects the appreciation of regional food. Scoring is simple, accessible, and viable in any reality. For this tool to be used in restaurants' menus in other countries, adjustments are necessary for the development of regional food lists. The form of classification, the score, and the cut-off points would continue to be the same as described in this study. The use of the instrument can help restaurants to improve their menu, stimulating the consumption and valorization of local foods as well as improving local sustainability. Further studies are necessary to include the evaluation of the presence of regional food using technological tools. This will facilitate menu planning inside a software. By creating regional lists of dishes and ingredients and inserting them in a software, menus can be scored and suggestions of substitutions for ingredients or dishes in the menu by regional ones can be presented.

4. Conclusions

Specific eating habits have an essential role in the traditional habits of many cultures. Regional foods constitute an important part of the culture, history, identity, heritage, and local economy of a region or country. They are the key elements for the dietary patterns and sustainability of each country. They are commonly perceived as foods that have been consumed locally for a long time. In addition, the methods of preparation of such foods have been passed between generations [45]. The ingredients and the ways of preparing regional foods impact the economic, social, and environmental aspects of sustainability, as restaurants tend to use products purchased from local markets and from local producers and employ local people.

This research provides data from the regional food and ingredients used in the Brazilian territory by region, allowing further studies focused on Brazilian regional foods. The menus' evaluation based on regionalism needs to be adequate according to the Brazilian Dietary Guidelines, which recommends the consumption of culinary preparations based on local foods [39]. Characterized by simplicity and versatility, the IRFP allows the identification of the presence of regional food/dishes that represent the symbolism of food as an identifying code, using a list of regional foods that needs to be prepared in each regional context for application in other countries. The presence or absence of regional food/dishes have repercussions that go beyond meeting food preferences. This involves sustainability issues, through motivating local agriculture and the use of natural resources, as well as guaranteeing the feeling of belonging, which is essential for communities to act with convergence in order to obtain results in different aspects of the social sphere.

The adequacy of the food services industry in the search for sustainable paths will guide trends in the first sector, starting a cycle of sustainable actions. The IRFP can be adapted to any country. The country or region needs to assemble its list of dishes/ingredients and start to evaluate the regional offerings of restaurant menus. The composition of the list of regional Brazilian foods was facilitated by publications from the Brazilian Federal Government that value the consumption of traditional foods as one of the essential keys to public health. Even though other countries do not have similar publications, there is a worldwide trend, guided by the World Health Organization (WHO), as mentioned, for local products to be consumed more regularly (FAO and WHO, 2019).

Scores and classifications will follow the same criteria described in this study. Evaluation encompasses knowing the recipes of the menu and not only the names listed on the menu. The development of a score was a way to assess regionality in menus. In this sense, restaurants should apply the decision tree to evaluate their menus regarding regional foods.

Restaurants aimed at communities can benefit from the development of these lists by experts in the area, or by individual initiatives. These lists need constant updating as the food of a population is not static. Therefore, even if the application of the instrument is one more activity in the exhaustive routine of food and beverage service managers, the advantages are considerable. Additionally, there are possibilities for using technological tools to facilitate this evaluation, such as the development of

software that, by introducing the menu items and regional lists, identifies regional foods, and scores the menus. Another possibility is integrating suggestions for the substitution of ingredients and/or preparations in the same software.

Our findings showed that nationwide the menus offered by CRs to low-income Brazilians are excellent, and the offer of regional foods with the bests results was in the Northeast Brazilian Region. Due to our results we expect: (i) the development of options on menus with more attractive fruits and vegetables; (ii) the replacement of high-fat and sugar-based dishes for healthier ones; and (iv) the disclosure of regional/local foods, including certification for restaurants that are involved in this policy of encouraging a healthy meal [46] as an alternative to improve the population's health.

Supplementary Materials: The following are available online at http://www.mdpi.com/2071-1050/12/10/3992/s1, Table S1: Regional foods (dishes, fruits and vegetables) from the Brazilian Southeast region, Table S2: Regional foods (dishes, fruits and vegetables) from the Brazilian Northeast region, Table S3: Regional foods (dishes, fruits and vegetables) from the Brazilian South region, Table S4: Regional foods (dishes, fruits and vegetables) from the Brazilian North region, Table S5: Regional foods (dishes, fruits and vegetables) from the Brazilian Midwest region.

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