

Performance of nutritionists in the PNAE-CE: analysis of the report prepared by CECANE/UFC

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Abstract

This study deals with the work of nutritionists from the National School Feeding Program PNAE in the state of Ceará. It seeks to investigate the extent to which the activities carried out by nutritionists from the National School Meal Program, between 2018 and 2022, agreed with the Resolutions of the National Education Development Fund nº 06/2020 and the Federal Council of Nutritionists nº 465/2010, and Law no. 11,947/2009. This is a research with a qualitative approach, which proposes to carry out a documentary analysis of the monitoring and advisory reports for implementing entities prepared by the Collaborating Center for School Food and Nutrition at the Federal University of Ceará. The data indicate that municipal management must mobilize efforts for the legal execution of the program, with a view to correcting deficiencies, improving school meals, following the guidelines established in the legal provisions.

Keywords: School Feeding National Program. Nutritionists. School Feeding and Nutrition. Documental Analysis.

Atuação de nutricionistas no PNAE-CE: análise de relatórios elaborados pelo CECANE/UFC

Resumo

Este estudo trata da atuação de nutricionistas do Programa Nacional de Alimentação Escolar no estado do Ceará. O objetivo é investigar até que ponto as atividades desenvolvidas pelos nutricionistas do Programa Nacional de Alimentação Escolar, entre 2018 e 2022, pactuaram com as Resoluções do Fundo Nacional de Desenvolvimento da Educação nº 06/2020 e do Conselho Federal de Nutricionistas nº 465/2010, e a Lei nº. 11.947/2009. Trata-se de uma pesquisa com abordagem qualitativa, que propõe realizar uma análise documental dos relatórios de monitoramento e assessoria a entidades executoras, elaborados pelo Centro Colaborador em Alimentação e Nutrição do Escolar da Universidade Federal do Ceará. Os dados indicam que as gestões municipais devem mobilizar esforços para a execução legal do programa, tendo em vista corrigir deficiências, melhorando a alimentação escolar e seguindo as diretrizes estabelecidas nos dispositivos legais.

Palavras-chave: Programa Nacional de Alimentação Escolar. Nutricionistas. Educação Alimentar e Nutricional. Análise documental.

1 Introduction

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The partnership between the National Education Development Fund (FNDE) and Federal Higher Education Institutions (IFES) has been in place since 2006, leading to the creation of the Collaborating Centers for School Feeding and Nutrition (CECANES). The aim of this collaboration is to develop actions and projects of interest and need to the National School Feeding Program (PNAE), including monitoring, advisory and evaluation, and training of actors involved in the implementation of the program (FNDE, 2022).

Between 2018 and 2022, CECANE UFC produced 84 monitoring and advisory reports for PNAE implementing entities in Ceará. These reports are the result of the work carried out based on the annual demands that were made available via the FNDE's PNAE Monitora application. The definition of the executing entities resulted from the FNDE's evaluation of PNAE management. The delimitation of the study (2018-2022) is related to the period in which CECANE worked preparing monitoring and advisory reports for the municipalities of Ceará, which were made available for research.

CECANE UFC evaluates the PNAE in the municipalities of Ceará, prioritizing those with serious management problems. Given this reality, this study aims to investigate the problems affecting the achievement of the PNAE's objectives, particularly the provision of healthy and adequate food and, consequently, the promotion of food and nutritional security, as well as the development of EAN actions, which are so necessary in the context of the country's rapid nutritional transition, based on an analysis of the reports prepared by CECANE UFC, which were made available and are equivalent to the total number of municipalities monitored and advised in the period mentioned above.

Increased life expectancy and a reduction in the number of children per woman, important changes in the health and food consumption patterns of the Brazilian population are examples of the reality of the nutritional transition, as well as the intense reduction in malnutrition in children, micronutrient deficiencies and chronic malnutrition which are prevalent in vulnerable groups of the population, such as

indigenous people, quilombolas and children and women living in vulnerable areas. At the same time, Brazil is facing a significant increase in overweight and obesity in all age groups, and chronic diseases are the leading cause of death among adults. However, in order to tackle this scenario, there is an urgent need to expand intersectoral actions that have a positive impact on the various determinants of health and nutrition. The National Food and Nutrition Policy and the National Health Promotion Policy play an important role in promoting adequate and healthy eating (Brasil, 2014, p. 5).

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The methodological framework proposed by Cellard (2012) was used to analyze the reports, considering that documentary research has some advantages. It is a data collection method that eliminates, at least in part, the possibility of any influence being exerted by the presence or intervention of the researcher on the interactions, events or behaviors being researched, eliminating the possibility of the subject's reaction to the measurement operation.

Considering that nutritionists are among the professionals who make up the school community (Brasil, 2012) and that their duties are essential for achieving the objectives of the National School Feeding Program (PNAE), this study is justified by the need to investigate the extent to which the activities carried out by these professionals in the PNAE-CE, between 2018 and 2022, in the North, Cariri, Sertão Central and Litoral Leste/Jaguaribe regions of the state of Ceará, were in line with the legislation (FNDE Resolutions No. 06/2020 and CFN No. 465/2010; and Law no. 11.947/2009).

In view of the above, the question arises: what do the reports indicate about the work of nutritionists in the monitored implementing entities, which represent 45.6% of the 184 municipalities in the state of Ceará? What Food and Nutrition Education actions were developed by these professionals, considering the concept and principles of EAN for public policies?

The following topics are presented: the PNAE as a public policy and the concept of Food and Nutrition Education; Law 11.947/2009 and FNDE Resolution 06/2020 and CFN Resolution 465/2010, which underpin the activities of nutritionists in the PNAE; the methodology adopted for the documentary analysis; the results and discussions; and finally, the conclusions.

2 Understanding the National School Feeding Program (PNAE)

According to Law No. 11.947/09, the National School Feeding Program (PNAE) is a public policy that aims to contribute to students' growth and biopsychosocial development, learning, school performance and the formation of healthy eating habits. This is achieved through Food and Nutrition Education (EAN) actions and the provision of meals that cover their nutritional needs during the school term (Brasil, 2009).

Public policies are seen as an intervention by the state in society, and can be considered as “processes and peaceful means of social control or adjustment by which the state leads members of society to adopt behaviors, ideas, relationships and practices compatible with the logic of the social system of which they are a part” (Pereira, 2001, p. 26).

Just like any other social policy, the school feeding policy does not happen on a regular basis, since it suffers interruptions, setbacks and advances, as explained in the discussion of its history at national level. It has welfare dimensions and is linked to the reproduction and accumulation of capital, but, as a concrete practice, it has a dialectical dimension, capable of producing improvements in the living conditions of the poor (Bezerra, 1996). This is also justified by the inclusion of health issues in education, linked only to the biomedical aspects of the human body and health (Moura; Leite, 2022).

Public policies related to food and nutrition security can be understood as the possibility of:

[...] the realization of everyone's right to regular and permanent access to quality food, in sufficient quantity, without compromising access to other essential needs, based on health-promoting dietary practices that respect cultural diversity and are environmentally, culturally, economically and socially sustainable (Brasil, 2006, Art. 3).

The concept of Food and Nutrition Education (EAN) adopted in this study is expressed in the Reference Framework for Food and Nutrition Education for Public Policies

(MARCO EAN). It is a concept developed in a situated way, considering the complexity of the subject.

It is a clear but complex and profound definition, which can only be properly understood when placed within a theoretical and legal framework that defines a broader food and nutrition policy, which has been outlined in Brazil since 2003. A precise definition that represents an understanding of the need to seek the indispensable methodological rigor that the application of the concept requires, thus avoiding falling into the trap of simplification; and to advance, in effect, in relation to the practices that have always marked EAN actions (Bezerra, 2018, p. 17).

From a legal standpoint, EAN is considered a fundamental strategy for encouraging healthy eating practices and lifestyles, in the context of the Human Right to Adequate Food and Food and Nutrition Security.

Therefore, EAN

[...] is a field of knowledge and practice that is continuous and permanent, transdisciplinary, intersectoral and multi-professional and which aims to promote the autonomous and voluntary practice of healthy eating habits. The practice of EAN should make use of problematizing and active educational approaches and resources that foster dialogue with individuals and population groups, considering all stages of the life course, stages of the food system and the interactions and meanings that make up eating behavior (Brasil, 2012, p. 23).

The Food and Nutrition Education Reference Framework for Public Policies (MARCO EAN) is a document built on collective participation. Various social actors were involved in the process of building this document: citizens, professionals, managers, representatives of civil society, teachers and academics, all dedicated to the subject and who believe that Food and Nutrition Education contributes to the Human Right to Adequate Food and to building a healthier country. The purpose of MARCO EAN is to qualify the actions of government sectors and civil society, with the aim of promoting educational actions in food and nutrition in Brazil (Brasil, 2012).

The aim of MARCO EAN is to:

[...] promote a common field of reflection and guidance for practice, in the set of Food and Nutrition Education initiatives that originate mainly in public action, and that includes the various sectors linked to the process of production, distribution,

supply and consumption of food. Thus, the Reference Framework aims to support the different government sectors in their EAN actions so that, within their contexts, mandates and scope, they can achieve the maximum possible results. In this sense, EAN integrated with broader development strategies can contribute to improving the population's quality of life (Brasil, 2012, p. 15).

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According to MARCO EAN and FNDE Resolution no. 06/2020, the practice of EAN has nine principles for its actions: 1- Environmental, social and economic sustainability; 2 - Approaching the food system as a whole; 3 - Valuing local food culture and respecting the diversity of opinions and perspectives, considering the legitimacy of knowledge of different kinds; 4 - Food and eating as references and valuing cooking as an emancipatory practice; 5 - Promotion of self-care and autonomy; 6 - Education as a permanent process that generates autonomy and the active and informed participation of subjects; 7 - Diversity in practice scenarios; 8 - Intersectorality; 9 - Planning, evaluation and monitoring of actions. (Brasil, 2012).

Chapter III, specifically Art. 14 of FNDE Resolution No. 06/2020, which deals with Food and Nutrition Education (EAN) actions within the scope of the PNAE, states that it is the responsibility of the Department of Education, the City Hall and the Federal School, within the scope of their respective administrative jurisdictions, through the coordinated action of education professionals and the technical manager and other nutritionists, the inclusion of EAN in the teaching and learning process, which runs across the school curriculum, addressing the issue of food and nutrition and the development of practices and skills that promote healthy lifestyles, from the perspective of food and nutrition security. This is in addition to the normative documents for basic education, which included EAN as a cross-curricular theme, although they did not specify the teaching subjects (Moura; Leite; Bezerra, 2022).

It states that, in terms of curricular transversality and transdisciplinarity (Paragraph 2 of the respective Resolution), EAN actions can make use of different knowledge and themes related to food, in the fields of culture, history, geography, among others, so that food and eating can be specific learning content and also a resource for learning different themes. Thus, EAN actions should use food, school meals and/or the school garden as a

teaching tool, where appropriate. Paragraph 4 states that food and nutrition education activities must be planned, implemented and documented.

Among the actors responsible for consolidating the provisions of Law No. 11.947/09, widely known as the PNAE law, is the professional nutritionist, who has technical responsibility for school meals in the states, the Federal District, municipalities and federal schools. According to Art. 3 of CFN Resolution No. 465/2010, it is the responsibility of the nutritionist, linked to the executing entity, within the scope of the National School Feeding Program (PNAE), to carry out the following mandatory activities: diagnosing and monitoring nutritional status; identifying individuals with specific nutritional needs; planning, preparing, monitoring and evaluating the school feeding menu; proposing and carrying out food and nutrition education actions for the school community; preparing technical sheets for the preparations that make up the school menu; planning, guiding and supervising food selection, purchase, storage, production and distribution activities; planning, coordinating and supervising the application of acceptability tests; interacting with family farmers and rural family entrepreneurs and their organizations; taking part in the bidding process and direct purchases from family farmers; guiding and supervising activities to sanitize the institution's environments, food transport vehicles, equipment and utensils; drawing up and implementing the Good Practices Manual; drawing up the Annual Work Plan for the School Feeding Programme; and advising the School Feeding Council on the technical implementation of the National School Feeding Programme (CFN, 2010).

Also according to the Federal Nutrition Council, Art. 4 of Resolution 465/2010 sets out the complementary activities of the PNAE nutritionist, including: coordination, supervision and execution of permanent education actions in food and nutrition for the school community; participation in the technical evaluation process of food suppliers; participation in the technical evaluation of the process of acquiring utensils and equipment, cleaning and disinfection products, as well as in the hiring of service providers that directly interfere in the execution of the National School Feeding Program (PNAE); participation in the recruitment, selection and training of personnel who work directly in the execution of the PNAE; participation in multidisciplinary teams aimed at planning, implementing,

controlling and executing policies, programs, courses, research and events in the area of school feeding; contributing to the drafting and revision of regulatory standards specific to the area of food and nutrition; collaborating in the training of professionals in the area of food and nutrition, supervising trainees and participating in improvement, qualification and training programs; communicating to those legally responsible and, if necessary, to the competent authority, in cases where there are conditions in the PNAE that prevent good professional practice or that are harmful to the health and life of the community; training and coordinating the actions of the teams of supervisors of the units of the Executing Entity related to the PNAE (CFN Resolution no. 465/2010).

The Resolution of the Federal Council of Nutritionists - CFN No. 465/2010 also establishes the minimum numerical reference parameters within the scope of the PNAE, i.e. the number of nutritionists per number of students enrolled in the network of the executing entity and the recommended weekly workload. The resolution defines two types of role for nutritionists in the program: Technical Responsible - RT and Technical Staff - QT (coordinates, supervises and assumes joint responsibility for the program with the RT). The resolution also sets out the 13 mandatory duties and 9 complementary duties of nutritionists linked to the Executing Entities (EEx) within the scope of the PAE.

3 Methodology

This qualitative research aims to carry out a documentary analysis of the reports produced by CECANE/UFC, in line with Cellard (2012). It is believed that the document is a precious source for any researcher in the Social Sciences, and eliminates, at least in part, the possibility of any influence being exerted by the presence or intervention of the researcher on the set of interactions, events or behaviors being researched, eliminating the possibility of the subject's reaction to the measurement operation (Gauthier, 1984).

As a precautionary rule in the work of documentary analysis, it should be noted that:

Although some of the characteristics of documentary analysis make it possible to use the document to advantage on certain levels, it must be admitted that its use also raises some questions. While document analysis does eliminate some of the hardly measurable influence of the researcher on the subject, it is no less true that the document is an instrument that the researcher has no control over. Here, the information circulates in a one-way street; the document, although chatty, remains deaf, and the researcher cannot demand additional details from it (Cellard, 2012, p. 295-296).

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That said, it is a warning of the pitfalls and obstacles present in the day-to-day work of researchers who use documents as primary sources to think about important aspects that permeate the contemporary social structure. Understanding these points is a prerequisite for an adequate analysis of the documents.

We considered the context in which the documents were produced, the identification of the author or authors, the authenticity and reliability of the text or the quality of the information transmitted, as well as the nature, key concepts and logic of the text (Cellard, 2012). The choice, collection and analysis of the monitoring and advisory reports to the PNAE-CE implementing entities were phases of the method used in this study, as were the characterization, coding, recording, categorization and critical analysis procedures. The aim was to gain an in-depth understanding of the contents in order to uncover the meanings contained therein.

These reports are primary sources from products developed by CECANE UFC. They were organized into nine file folders and made available for this research in a CECANE UFC room, used for meetings and research, located in the Center for Regional Studies and Research (NUPER), a building attached to the Faculty of Education of the Federal University of Ceará (FACED UFC). Each folder contains a description of the numbers of the Decentralized Execution Terms (TED), the dates of the documents and descriptions of the contents. For example, Folder File 1 is described as follows: 2016/2017 Final Report of Products and Training of Counselors, Nutritionists and Pedagogues. Of the nine folders, three are annexes, folders 3.1, 3.2 and 3.3 being annexes to folder three, containing monitoring reports for 2018.

The folders contain a variety of documents, both in terms of information layout and content: Decentralized Execution Terms (TED), training reports for Councillors, Nutritionists and Pedagogues; monitoring and advisory reports to PNAE Executing Entities; projects to develop regional workshops to survey demand for school meals and family farming production, implement school gardens and workshops to prepare herbal salt; Work Plans; among others.

The corpus of documents is very dense, rich in detail and standardized, with information ordered by specific topics. Information on the role of nutritionists in the PNAE-CE is one of the topics in the reports, an aspect that favors the analysis of the documents based on the proposed objectives.

The aforementioned reports are official and reliable documents (CELLARD, 2012), of a technical nature, prepared by PNAE Monitor Agents via the PNAE Monitora application, developed by the FNDE. These agents visited and/or carried out remote activities in 84 implementing entities between 2018 and 2022. The reports were approved by the CECANE UFC Management Coordinator and/or Vice-Coordinator. The PNAE Monitor Agents are professionals registered with their respective professional councils, mainly Nutritionists, Administrators and/or Accountants, hired by CECANE UFC to develop the respective product. All the activities carried out by the Center are monitored and supervised by the National Education Development Fund (FNDE).

After being identified, the reports were analyzed together due to their unique structure and systematization, verifying the adequacy of the nutritionists' practices in relation to what is provided for in Law No. 11,947/09, in FNDE Resolutions No. 06/2020 and CFN No. 465, and in the EAN Framework. These are 10 monitoring reports to the Executing Entities (EEx) for 2018, 20 reports for 2019, 20 reports for 2020, 17 reports for 2021 and 17 reports for 2022, totaling 84 reports.

The key concepts or terms that recur frequently in the reports include National School Feeding Program (PNAE), School Feeding Council (CAE), Nutritionist in Charge (RT), Executing Entity (EEx), food, food, numerical reference parameters, Technical Preparation Sheets (FTPs), Good Practices Manual and family farming.

The reports have the following logical structure: period of visit by PNAE Monitor Agents; date of the program's financial year; identification of the Agents responsible for the visits to the municipalities; general data identifying the municipalities; financial resources; objectives and motivations that triggered the CECANE UFC visits to the Executing Entities (EEx); description of the activities carried out; reports of meetings with the School Feeding Councils, with the Nutritionists in Charge; documentary verification with findings and guidelines, containing data inherent in the bidding processes, contracts, public calls, invoices and PNAE executions in the municipalities; information from visits by PNAE Monitor Agents; and, finally, conclusions, referrals and signatures.

4 Results and Discussion

The following were analyzed 1) diagnosis and monitoring of the nutritional status of the students served by the PNAE; 2) planning, coordination and supervision of the application of Acceptability Tests; 3) drafting and implementation of the Good Practices Manual (MBP); 4) drafting and implementation of the Annual Work Plan; 5) drafting and implementation of the Standard Operating Procedures (POP); 6) situational diagnosis of the municipalities in Ceará, indicating the number of nutritionists per Executing Entity; 7) actions to identify students with special dietary needs so that they could receive adequate assistance from the PNAE; 8) preparation of menus with information on the type of meal, the name of the preparation, the ingredients that make it up and its consistency, as well as nutritional information on energy, macronutrients, priority micronutrients and the nutritionist's signature; 9) preparation and application of menus prioritizing organic and/or agro-ecological foods; 10) the participation of nutritionists in multidisciplinary teams aimed at planning, implementing, monitoring and executing public policies, programs, courses, research and events in the area of food; 11) maintaining the purchase of food from family farms; 12) supplying food kits to students' families during the pandemic, consisting mainly of fresh or minimally processed foods; 13) adjusting the time and the appropriate food for each type of meal, and respecting food culture; 14) preparation of menus with industrialized

trans fats, ultra-processed foods and the addition of sugar, honey and sweeteners in culinary preparations and beverages for children up to three years old; 15) evaluation of the percentage of leftovers and leftover food; 16) calculation of the school feeding adherence index; 17) participation of nutritionists in the recruitment and selection of food handlers/merchants; and 18) carrying out EAN actions.

Between 2018 and 2022, of the 84 municipalities monitored, 48 did not carry out the diagnosis and monitoring of the nutritional status of the students served by the PNAE, as provided for in item I of Art. 3 of FNDE Resolution no. 465/2010, which corresponds to 57.1% of the municipalities. In addition, 45 municipalities (53.5%) did not plan, coordinate or supervise the application of Acceptability Tests, in accordance with the head of Article 20 of FNDE Resolution 06/2020. In 55 municipalities (59.5%), the Manual of Good Practices (MBP) was not drawn up and implemented, and in 18 (21.4%) the Annual Work Plan was not drawn up, contrary to the provisions of Article 3, item XI of CFN Resolution no. 465/2010. In addition, 31 municipalities (36.9%) had not drawn up and/or implemented Standard Operating Procedures (SOPs) in each school unit, as required by item 4.11.4 of Collegiate Board Resolution (RDC) no. 216 of the National Health Surveillance Agency (ANVISA).

As for the situational diagnosis of the municipalities in Ceará, which indicates whether the number of nutritionists was adequate or inadequate, the following data is available: in 2018, of the ten municipalities monitored, all had an insufficient number of nutritionists in charge; in 2020, of the 13 municipalities monitored, 12 had an insufficient number of nutritionists in charge, which corresponds to 96.1% of the total; and in 2021, of the 26 municipalities monitored, 25 did not have an adequate number of nutritionists in charge, also representing 96.1% of the total. The survey of this data indicates that the municipal administrations did not comply with Article 10 of CFN Resolution 465/2010 and its replacements, which establish the obligation of the EEx to provide sufficient and adequate working conditions for professional nutritionists, including compliance with the recommended numerical parameters of nutritionists per school.

In 2018, of the 10 municipalities monitored, seven (70%) did not develop actions to identify students with special dietary needs so that they could receive adequate care in the PNAE, as provided for in Item II of Article 3 of CFN Resolution No. 465/2010 and Paragraph 1 of Article 17 of FNDE Resolution No. 06/2020. In addition, six municipalities (60%) did not submit menus with information on the type of meal, the name of the preparation, the ingredients that make it up and its consistency, as well as nutritional information on energy, macronutrients, priority micronutrients and not even the signature of a nutritionist, which shows that they did not comply with Paragraph 6 of Article 17 of FNDE Resolution 06/2020.

In the 2019 reports, of the 20 municipalities monitored, only 5 (25%) prepared school menus prioritizing organic and/or agroecological foods, as determined by Article 23 of FNDE Resolution 06/2020. In only 11 municipalities (55%) did nutritionists participate in multidisciplinary teams aimed at planning, implementing, controlling and executing public policies, programs, courses, research and events in the area of food, in accordance with item V of Article 4 of CFN Resolution no. 465/2010.

Between 2020 and 2021, the peak of the COVID-19 pandemic, of the 37 municipalities monitored, 29 (78.3%) did not provide food kits for students' families, consisting mainly of fresh or minimally processed foods, and there was no supply of fresh fruit and vegetables, as provided for in Article 4 of FNDE Resolution No. 02/2020. In 11 municipalities (29.7%), the purchase of food from family farms was not maintained; in 25 (67.5%) of the part-time schools, menus were not prepared with fresh fruit on two days a week and vegetables on at least three days a week. In addition, in 11 municipalities (40.5%) with full-time schools, the menus were not prepared with fresh fruit on four days a week and vegetables on at least five days a week, as determined by Items I and II of Paragraph 1 of FNDE Resolution 06/2020. In 24 municipalities (64.8%), school menus included industrialized trans fats, ultra-processed foods and the addition of sugar, honey and sweeteners in culinary preparations and drinks for children up to three years old. In addition, in 34 municipalities (91.8%), the percentage of leftover food was not assessed, in order to avoid waste, as required by the head of FNDE Resolution 06/2020.

In the 2022 reports, the main aspects identified were the lack of definition of the appropriate time and food for each type of meal and disrespect for food culture. In 10 municipalities (62.5%), the stipulation in Paragraph 4 of Article 17 of FNDE Resolution 06/2020 was not respected. Of the 17 monitored, only 7 (41.1%) had the school feeding adherence index calculated, to check the percentage of students consuming school meals in relation to the total number of students present, as set out in the PNAE Acceptability Test Manual. In 10 municipalities (62.5%), nutritionists reported that they did not take part in recruitment and selection, particularly of food handlers/waiters, in accordance with item IV of Article 4 of CFN Resolution no. 465/2010. In relation to food culture, this is disregarded in the basic education curriculum, which focuses only on nutrients, the human body and the digestive system (Moura; Bezerra; Leite, 2021).

Regarding Food and Nutrition Education (EAN) practices, it was observed that in 2018, in the 10 municipalities monitored (100%), EAN actions were not developed on an ongoing and permanent basis, a number that decreased in 2019 (7 municipalities: 35%) and 2020 (3 municipalities: 15%), but which increased again in 2021 and 2022 (7 municipalities: 41.1%). In 2018, 7 municipalities (70%); in 2019, 7 municipalities (35%); in 2020, 1 municipality (5%); in 2021, 5 municipalities (29.4%); and in 2022, 4 municipalities (23.5%) did not develop planned EAN actions in conjunction with school management and pedagogical coordination, as determined by Paragraph 1 of Article 14 of FNDE Resolution 06/2020. EAN actions were not planned in conjunction with school management and pedagogical coordination in 2018 (2 municipalities: 20%), 2019 and 2020 (3 municipalities: 15%), and in 2020 and 2021 (5 municipalities: 29.4%). Finally, EAN actions were not cross-disciplinary, intersectoral or multi-professional, i.e. they were not planned in conjunction with other professionals in the education network in 2018 (2 municipalities: 20%), 2019 (7 municipalities: 35%), 2020 (4 municipalities: 20%), 2021 (7 municipalities: 41.1%) and 2022 (4 municipalities: 25.5%).

It is important to note that the National Education Development Fund (FNDE), via the Collaborating Center for School Feeding and Nutrition at the Federal University of Ceará (CECANE/UFC), has contributed to monitoring and advising the Executing Entities

(EEx), since the evaluation, in addition to detecting existing problems, presents, based on the legislation, what the EEx of the PNAE in Ceará should do to overcome them.

5 Conclusions

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The main objective of this research was to investigate the extent to which the activities carried out by nutritionists working in the PNAE in the state of Ceará between 2018 and 2022 in the North, Cariri, Sertão Central and Litoral Leste/Jaguaribe regions complied with the legislation (FNDE Resolutions No. 06/2020 and CFN No. 465/2010; and Law No. 11,947/2009).

The study pointed to deficiencies in the diagnosis and monitoring of the nutritional status of the students served by the PNAE; in the planning, coordination and supervision of the application of Acceptability Tests; in the preparation and implementation of the Good Practices Manual, the Annual Work Plan and the Standard Operating Procedures; in the number of nutritionists per Executing Entity; the actions taken to identify students with special dietary needs so that they could receive adequate assistance from the PNAE; the preparation of menus with information on the type of meal, the name of the preparation, the ingredients that make it up, the consistency and nutritional information on energy, macronutrients and priority micronutrients, as well as the signature of the nutritionist; and the preparation and application of menus prioritizing organic and/or agro-ecological foods.

Mistakes were identified regarding the participation of nutritionists in multidisciplinary teams aimed at planning, implementing, monitoring and executing public policies, programs, courses, research and events in the area of food; maintaining the purchase of food from family farms; providing food kits for students' families during the pandemic, consisting mainly of fresh or minimally processed foods; adjusting the time and the appropriate food for each type of meal and respecting food culture.

There were also errors in the preparation of menus, with industrialized trans fats, ultra-processed foods and the addition of sugar, honey and sweeteners in culinary preparations and drinks for children up to three years old; in the evaluation of the

percentage of leftovers and leftover food; in the calculation of the school feeding adherence index; in the participation of nutritionists in the recruitment and selection of food handlers/merchants; and in the implementation of EAN actions.

The data indicates that municipal administrations must mobilize efforts to legally implement the PNAE, with a view to correcting deficiencies and improving school meals in accordance with the guidelines established in the legal provisions. However, an in-depth study is needed to identify the causes of these problems and propose solutions to improve the program in municipalities with management problems.

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