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## Family participation in school feeding programs to promote adequate and healthy eating

### *A participação das famílias nas ações de alimentação em escolas para a promoção da alimentação adequada e saudável*

#### Abstract

**Introduction:** Food and Nutrition Education resources and strategies in Brazilian public schools should support people, families, and communities to adopt eating practices that benefit the development of autonomy and the exercise of citizenship. **Objective:** To understand how schools and families, through their joint actions, can promote adequate and healthy eating. **Methods:** This is qualitative research carried out in two public elementary schools, which have included food programs and family participation in their Political-Pedagogical Project. Participant observation, field journals, semi-structured interviews, and focus groups with community members were used and analyzed using a triangulation of qualitative methods. For the interviews and focus groups, transcription, categorization, and thematic content analysis were carried out. **Results:** The thematic categories "Interaction between social actors" and "Participation of families in the school space" showed the possibilities of joint actions in the collective role of educators. The organization of the community into responsibility groups gave meaning to social participation, broke down the supposed lack of interest in food actions and made it possible for them to take part in the school's decision-making processes. The challenges are mutual distrust and the difficulty of promoting collective reflection to resolve conflicts and disputes. **Conclusions:** Establishing successful school-family partnerships puts children and adolescents at the center of the debate, alluding to everyone's collective role as educators, exploiting individual and collective characteristics for actions to promote adequate and healthy eating.

**Keywords:** Food and Nutrition Education. School meals. Health promotion in the school environment. Community participation.

#### Resumo

**Introdução:** Os instrumentos e estratégias de Educação Alimentar e Nutricional de escolas públicas brasileiras devem apoiar pessoas, famílias e comunidades a adotarem práticas alimentares que favoreçam o desenvolvimento da autonomia e do exercício da cidadania. **Objetivo:** Compreender como escolas e famílias, a partir de suas ações conjuntas, podem favorecer a promoção da alimentação adequada e saudável. **Métodos:** Pesquisa de natureza qualitativa, na modalidade de estudo de caso, realizada em duas escolas públicas de ensino fundamental, que incluíram no Projeto Político-Pedagógico ações de alimentação e a participação das famílias. Utilizaram-se observação participante, diário de campo, entrevistas semiestruturadas e grupos focais com os membros da comunidade, analisados por triangulação de métodos qualitativos. Para as entrevistas e grupos focais, foram feitas transcrição, categorização e análise temática de conteúdo. **Resultados:** As categorias temáticas "Interação entre os atores sociais" e "Participação das famílias no espaço escolar" mostraram as

possibilidades de ações conjuntas no papel coletivo de educadores. A organização da comunidade em grupos de responsabilidade conferiu sentido à participação social, rompeu com o suposto desinteresse pelas ações de alimentação e viabilizou a atuação nos processos decisórios da escola. Como desafios, têm-se a desconfiança recíproca e a dificuldade de promover reflexão coletiva para solucionar conflitos e disputas. **Conclusões:** O estabelecimento de parcerias bem-sucedidas entre escola e família coloca crianças e adolescentes no centro do debate, alusiva à função coletiva de todos como educadores, explorando características individuais e coletivas para as ações promotoras da alimentação adequada e saudável.

**Palavras-chave:** Educação Alimentar e Nutricional. Alimentação escolar. Promoção da Saúde no ambiente escolar. Participação comunitária.

## INTRODUCTION

The trajectory of Brazilian public policies and food and nutrition programs is related to the promotion of adequate and healthy food (PAAS).<sup>1</sup> The commitment is to promote actions aimed at health promotion and Food and Nutrition Security (SAN) that contribute to tackling the different forms of malnutrition, from malnutrition to overweight and obesity, and that ensure the human right to adequate and healthy food (DHAAS).<sup>2</sup>

Adequate and healthy nutrition (AAS) is one of the determinants and conditioning factors of health and an inherent right of all people.<sup>3</sup> Promoting it involves taking care of issues that permeate the entire food system, so that it is socially and environmentally sustainable.<sup>3-5</sup> In order to think about food in a comprehensive way and in conjunction with public health and SAN policies, it is appropriate to consider the dimensions that are part of it: the human right, the biological, the socio-cultural, the economic, and the environmental dimensions.<sup>6</sup>

In this regard, the tools and strategies of Food and Nutrition Education (EAN), as a field of knowledge and continuous and permanent, transdisciplinary, intersectoral, and multi-professional practice, should support people, families and communities to adopt health-promoting eating practices, benefiting the development of autonomy, self-care, and recognition of food as a social right and exercise of citizenship capable of ensuring the recognition of SAN and DHAAS.<sup>3,5</sup>

The National School Feeding Program (PNAE), understood as a health promotion strategy, uses PAAS as a guideline for all basic education schools in the Brazilian public and private networks, placing EAN among its priority actions.<sup>7</sup> As part of the teaching and learning process, EAN is part of the school curriculum across the board, with themes that encourage the development of healthy living practices, from the perspective of SAN, cutting across all areas of study.<sup>8</sup>

The inclusion of EAN among the Contemporary Cross-Cutting Themes (TCT) of the National Curriculum Common Base (BNCC) has consolidated the need to discuss food alongside themes that affect human life on a local, regional and global scale, based on social demands that have triggered the formulation of legal frameworks to support and attribute a higher degree of demand and feasibility.<sup>9,10</sup> School meals are seen as a structuring and articulating element, capable of encouraging dialog between the fields of Education and Food and Nutrition. EAN, as a cross-cutting themes, can help integrate feeding into school practices as food that values public schools and their subjects,<sup>11</sup> responding to the contemporary demands presented by society, adopting educational strategies directly related to people's daily lives.<sup>12</sup>

Education professionals point out that the school is a privileged space for socialization and a time to eat meals, which is conducive to developing and promoting skills that are essential for forming healthy eating practices.<sup>13</sup> These can be enhanced by access to a favorable food environment and the positive influence of the community, of which family members are a part.<sup>14</sup> To this end, it is necessary to include learning strategies and activities that help them develop the ability to adapt and act as protagonists of their food choices.<sup>15</sup> In this scenario, understanding the concept of health literacy (HL) contributes to understanding how health education actions can influence and empower people in their self-care decisions, in order to meet the complex health demands of modern society.<sup>16</sup>

Families play an irreplaceable role in shaping eating practices, providing moments of eating together, and reinforcing the relationships between their members and their food culture.<sup>17</sup> Families and communities need to be understood as social groups with different characteristics, dynamics, forms of organization and needs. They may show different responses to the factors that affect them,<sup>2,18</sup> so that the social and economic barriers faced by part of the population<sup>17</sup> can hinder access to what would be their dietary choices. Considering the social function of schools and their interaction with society, they can provide food

environments that value the transmission of food culture and promote the development of culinary skills as an emancipation practice that promotes autonomy and self-care.<sup>3,5</sup>

Thus, the "space" resulting from the interface between families and schools has the potential to be explored in the construction of a food environment that promotes AAS, from the perspective of health promotion, justifying the purpose of the research, which was to understand how schools and families, through their joint actions, can benefit AAS.

## METHODS

This is a qualitative, cross-sectional, observational case study. The research was carried out between May and December 2019, in two public elementary schools in São Paulo, SP, identified as school A and school B, whose characteristics are shown in Chart 1. The educational units that had included food actions and the participation of families in their Political-Pedagogical Project (PPP) were indicated by the Coordenadoria de Alimentação Escolar (Codae)/Secretaria Municipal de Educação (School Feeding Coordination Office (Codae)/Municipal Department of Education), as well as authorization for them to take part in the study.

**Chart 1.** Characterization of the municipal elementary schools participating in the research. São Paulo-SP, 2022.

Features	School A		School B		
West	Area		East 1		
Number of vacancies	570 <sup>1</sup>		839 <sup>1</sup>		
Shifts	Morning	FUND2	FUND1 and 2		
	Afternoon	FUND1	FUND1 and 2		
Food management at school	Outsourced <sup>2</sup>		Mixed <sup>3</sup>		
Menu changes	Not flexible		Flexible		
Meal distribution system	Ready meal		Ready meal		
Meal times		Morning	Afternoon	Morning	Afternoon
	Snack	Break	Break	Admission	Break
	Lunch/ Dinner	Departure	Last class	Break	Departure
Monitoring of the teacher at main mealtimes	FUND1	Mandatory		Optional	
	FUND2	Not Attended		Optional	
Consumption of snacks brought from home	Not very present		Very present		

Key: FUND1: elementary school 1; FUND2: elementary school 2; <sup>1</sup>number of vacancies in 2019; <sup>2</sup>outsourced food management: contracted company in charge of the labor, purchase, and administration of food supplies; <sup>3</sup>Mixed food management: contracted company in charge of the labor and administration of food inputs purchased by the city government's School Feeding Coordination.

In order to understand and reflect on the contexts related to feeding in school and family environments, 51 semi-structured individual interviews and 11 focus groups (GF) were carried out with actors involved in the care of children and adolescents in these spaces. Chart 2 shows the number of interviews and focus groups (E-GF) carried out per group of social actors from schools and families, and the profile of these participants. The number of interviews with the groups of key actors in the schools varied according to the particularities of school management and dynamics. Non-probabilistic convenience sampling was used, so that the people selected had the relevant information;<sup>19</sup> inclusion took place until content saturation was reached.<sup>20</sup>

**Chart 2.** Groups of social actors participating in the interviews and focus groups at schools A and B, school managers and Codae managers. São Paulo-SP, 2022.

Group of participating social actors	School	Type of participation	Number of participants by teaching cycle			Time at school / position (years)
			FUND1	FUND2	FUND1-2	
Teachers	A	Interview	5*	5*	1	3 - 19
	B	Interview	3**	4**	0	3 - 16
Students	A	GF	2(7-10) <sup>a</sup>	1(9) <sup>b</sup>	0	N. A
	B	GF	2(5-10) <sup>c</sup>	1(9) <sup>d</sup>	0	N. A
Family members	A	GF	1(9) <sup>e</sup>	1(5) <sup>f</sup>	0	N. A
		Interview	3	3	0	N. A
	B	GF	-	-	2(3-4) <sup>g</sup>	N. A
School managers	A	Interview	-	-	4	0.6 - 10
	B	Interview	-	-	4	5 - 38
Codae managers	N. A.	Interview	-	-	2	3 - 4
	A	Interview	-	-	1	5
	B	Interview	-	-	1	11
Nutritionists schools	A	Interview	-	-	1	1.5 - 0.9
	B	Interview	-	-	1	0.9
Cooks	A	Interview	-	-	2	0.7 - 1
	B	Interview	-	-	1	2.5
ATE	A	Interview	-	-	5	0.4 - 19
AVE	A	Interview	-	-	1	2
Secretary	A	Interview	-	-	1	5
Cleaning	A	Interview	-	-	2	0.4 - 4.3
	B	Interview	-	-	1	5.5

Key: FUND1: elementary school 1; FUND2: elementary school 2; GF: focus group. ATE: Technical Educational Assistant; AVE: School Life Assistant. Area of expertise of participating teachers: \*Generalist (FUND1), history, geography, mathematics, natural sciences. \*\*Generalist (FUND1), mathematics, natural sciences. N.A.: not applicable; -: not carried out; <sup>a</sup>: 2 GFs were carried out, one with 7 and the other with 10 students; <sup>b</sup>: 1 GF was carried out with 9 students; <sup>c</sup>: 2 GFs were carried out, one with 5 and the other with 10 students; <sup>d</sup>: 1 GF was carried out with 9 students; <sup>e</sup>: 1 GF was carried

out with 9 family members; <sup>f</sup>: 1 GF was carried out with 5 family members; <sup>g</sup>: 2 GFs were carried out, one with 3 and the other with 4 family members.

In this article, we considered the questions in the interview scripts relating to communication between school and family about food; the students' receptiveness to what is said about feeding at school; the participation of the school community in its food actions, and the influences that food can have between home-school and school-home. All the interviews were audio-recorded and transcribed.

In order to understand the dynamics and interaction of the community in their actions related to food in the school environment, participant observation<sup>21,22</sup> was carried out in the school's living spaces, with occasional informal conversations with some of these actors. Impressions were recorded in a field diary<sup>21,23</sup> (DC) and compared with the data from the E-GF analysis in the process of triangulating qualitative methods.<sup>24</sup> This made it possible to create a series of information possibilities in order to triangulate perspectives and obtain more information about reality,<sup>22</sup> which will be presented hereinafter.

Thematic content analysis was used to analyze the E-GF, so that the theme was considered as a unit of meaning based on the text analyzed.<sup>25</sup> The transcribed material was organized to make up a database, inserted into the NVivo10 *software* (QSR International Pty Ltd. Version 10, 2012). The analysis process took place in three successive stages: pre-analysis, exploration of the material and treatment of the results and interpretation.<sup>25</sup> The analysis macrocategories were defined *a priori*, in accordance with the research purposes; and the categories and subcategories, *a posteriori*, to the extent that the meaning indicated the meanings for the proposed analytical purposes.<sup>22</sup>

The project was approved by the Ethics Committee of the School of Public Health of the Universidade de São Paulo, under opinion number 2.728.220/2019.

## RESULTS

In order to understand how the actions of the school community, which includes the participation of families, can favor PAAS, the macro category "Favoring PAAS through the interaction of social actors" was divided into two categories - Interaction between social actors and family participation in the school space - and their respective subcategories (Chart 3), presented below.

**Chart 3.** Category and subcategories identified from interviews with social actors from the participating schools. São Paulo-SP, 2022.

Category	Subcategory
INTERACTION BETWEEN SOCIAL ACTORS	Cafeteria
	School garden
	Nutritionists
	Other educators
FAMILY PARTICIPATION IN THE SCHOOL ENVIRONMENT	Speaking spaces
	Developments in EAN actions
	Time availability
	Established relationships
	Consolidating discussions

- INTERACTION BETWEEN SOCIAL ACTORS

This category expresses the way in which the interaction between school and family can favor AAS-promoting actions. To this end, they were organized into subcategories: cafeteria; school garden;

nutritionists; other educators. Chart 4 highlights some of the discourses of the groups of social actors to represent it, which will be shown below.

**Chart 4.** Excerpts from interviews with school community actors taken from the category "Interaction between social actors".  
São Paulo-SP, 2022.

Subcategory	Excerpts from social actors in the school community
Cafeteria	When the student sees the teacher eating, experimenting, they experiment too, [...] when you sit down with the student, they have a different experience, a different reality. (Readapted teacher, school A)
School garden	[...] This pedagogical rapprochement between the municipality's nutritionist and that of the [contracted] company came about because of the PANC project that has become very strong at the school, which is the school's food project. (Manager, school B)
	With the vegetable garden we start to think a lot more, we start to take action with the cooks to rethought their work, how they are included. (Manager, school B) [...] We have good communication with the supervising nutritionist, because she took part in the whole PANC project with us. [...] She learned everything from us [...]. Before, we were terrified when she came, but today we're closer. (Cook at school B) In these movements of interaction with the school, I often like to go to the kitchen [...]. And she [the cook] was also a teacher, so this experience of sharing the kitchen has always been very important to me. [...] We live in a society that lacks community [...]. [...] Nowadays our relationship [with the supervising nutritionist] is great, it is a friendship and partnership [...]. The path is now shorter [...]. The relationship with the cooks is one of trust. [...] when they felt involved in the project [...] it's not enough just to have the vegetable garden, it goes through the person who makes it and then the person who appreciates it and receives it, the child. (GF-families FUND2 school B)
	As I used to be from the countryside, our crops are totally different from theirs [the vegetable garden project]. [...] If I had a little space for myself, a schedule, I'd definitely be there [in the garden project activities]. (Cleaning, school A) I'd like to adopt this vegetable garden, I love planting. [...] Interacting with the child's food [...] My job keeps me busy with the bureaucracy, so I end up not taking part in many of the things that happen at school. (Secretary, school A)
Nutritionists	The relationship [with the schools] is more distant, it's more like a visit to the unit and then if we need any information, any problems, we end up messaging each other. (Nutritionist hired, school A) E3: [...] I don't remember what she [the nutritionist] said, because it was a long time ago, I was in fourth or fifth grade. E2: I think it would be nice if she could go into the classrooms and ask, you know? (GF-Students FUND2, school A) 2EF4: She [the nutritionist] held a presentation and said that we need to eat well. 2EF8: The nutritionist doesn't participate at mealtimes. (GF-Students FUND2, school B) [...] it makes me think how much these secretariats [pedagogical and school meals] need to be together in the discussion, [...] How is this nutritionist discussing in the pedagogical group, which is what happens here. [...] (Manager, school B) [...] Because it's in the training space that people are able to stop and think about what they're doing and listen to what the other person is doing [...] there's this possibility of exchange to glimpse other practices [...]. I believe in this: in reflection and training as a transformation of practices. [...] De-constructing these practices and beliefs is very difficult for both teachers and nutritionists, who aren't even educators. [...] it's a huge challenge!" (Codae manager) [...] Have the teachers here heard of the food guide? They'll talk about the [food] pyramid. [...] I think this is a need to hold ongoing training for teachers on food, [...] on food programs, public policies, food safety [...] We open up the courses to teachers who are interested, [...] because sometimes they're the same. (Codae Manager)

**Chart 4.** Excerpts from interviews with school community actors taken from the category "Interaction between social actors". São Paulo-SP, 2022(Continues).

Subcategory	Excerpts from social actors in the school community
Other actor-educators	<p>[...] The actions that take place here needs to be discussed in a wider scope, we need the involvement of all the staff, who are all educators. [...] I think it's a difficulty we have, that we still haven't managed to articulate this. [...] there's no point for us teachers to define certain actions and the rest of the school community not taking part in this process of making choices.(PROF FUND2 school A)</p> <p>[...] There is a history saying "it takes a village to raise a child", right? [Nigerian proverb]. You need a whole society thinking about the child, an integral education. [...] We need a social structure that is more welcoming than what we have today in São Paulo. [...] Children are smart, receptive, we have to challenge them. [...] The family that has more money has more opportunities and if we can't do that, how are we going to solve the problem of reducing inequalities if this logic is so imperative? (PROF FUND1 school B)</p>

Key: PROF FUND1: elementary school teacher 1; PROF FUND2: elementary school teacher 2; GF-FamiliarFUND1: elementary school family focus group 1; GF-FamiliarFUND2: elementary school family focus group 2; CHAS: garden, food and sustainability committee.

### Cafeteria

The DC's notes and categorized speeches showed that, in the cafeteria, the students sat in affinity groups and next to the teachers, when they could sit at the table for the main meal. The act of eating the same food was an important incentive for students to try new foods, as well as fostering relationships of commensality and bonding, with opportunities to talk about personal matters, practices also observed with the technical education assistants (ATEs) and cleaning staff. With the managers, they signaled their tastes and food preferences to try to modify the menu served; with the cooks, the interaction was to encourage them to try the food served and control the repetition of certain preparations or foods.

### School garden

Although the scope in each school was different, the results of the E-GF and DC showed that the garden provided interaction between students, family members, teachers, cooks and nutritionists, making it possible to reflect on themes of the school daily life, organization of the school management of meals in the municipality, appreciation and approximation of the work of the cooks, in addition to those related to the dimensions of feeding, such as value systems (commensality, mindful eating, and interest in tasting new foods) and environmental systems (food waste, sustainability, and food systems).

The conception and inclusion of the vegetable garden project in the schools' PPP influenced the involvement and interaction of different groups in the community. School B maintained the development of permanent activities in the PANC (unconventional food plants) garden, with actions integrated with the kitchen that included the weekly composting of leftover vegetables and fruit from the food served and the introduction of PANCs into the menu. This project encouraged frequent socializing and interaction between the participants. In school A, the design of the vegetable garden project was linked to the responsibility of one teacher, which led to its discontinuity and restricted progress in actions and community interaction.

One possibility that could have been better explored with the vegetable garden was the inclusion of actors who were not primarily involved in the educational processes, but were interested in sharing their personal experiences, as pointed out in the interviews with the cleaning staff, secretariat and ATEs.

## **Nutritionists**

The thematic analyses and notes of the DC showed that the participation of the supervising nutritionists with the activities of EAN was restricted to the request of the school managers, ability to reconcile all the duties of the position related to the high number of supervised schools, with semiannual visits, justifying the occasional interaction with the students, based on informative communication. Although the contracted nutritionists were in the schools two or three times a week, they were not seen as pedagogical partners; their work was restricted to managing the menu, supplies, human resources and sanitary controls of school meals.

In the scope of school feeding management, as an opportunity to transform practices, the EAN directors advised that the work of nutritionists should be carried out based on listening to the reality and needs of each territory, to the detriment of the use of ready informative materials, often de-contextualized from the local reality and the formation of groups for the reflection of different experiences in schools. The analysis of the interviews also showed that there was a need to promote coordination between educators and nutritionists, so that food could be thought about and discussed beyond the meals served and from the perspective and knowledge of the different specialists who are members of the community, broadening the possibilities for EAN in these environments.

## **Other educators**

The participation of the different groups of actors in the school community as educators was pointed out as essential to articulate their food and nutrition actions. The need for everyone to be permanently involved in the training, discussion and action spaces was emphasized, so that the actions would be effective, coherent and continuous.

In this context, the suggestion of training in EAN should be extended to teachers, as an opportunity to break with their beliefs, overcome the difficulty of working with other dimensions of nourishment, in addition to the biological one traditionally explored, and update themselves with the main regulations in the field of nourishment and nutrition could expand and reorient the possibilities of work.

- FAMILY PARTICIPATION IN THE SCHOOL ENVIRONMENT

The category "Family participation in the school environment" refers to the way in which families can participate in and contribute to AAS-promoting activities in the school environment. It was subdivided into: speaking spaces; developments of EAN actions; time availability; relationships established; consolidation of discussions. Chart 5 highlights some excerpts of speech from the corresponding E-GFs.

Chart 5. Excerpts from interviews with actors in the school community taken from the category "Family participation in the school". São Paulo-SP, 2022.

Subcategory	Excerpts from social actors in the school community
Speaking spaces	<p>We had meetings, but their autonomy is immature, there were always problems regarding lunch, that they want juice [...]. There was a group that made a parody about lunch [...] It was a joke, but it was a claim. We'd explain, look, there's a nutritionist [...]. Often they demand things but they [students] don't have much idea. (PROF FUND2 school A)</p> <p>We talk, it ends up being the information from the beginning [of the school year]: don't bring snacks, don't bring candy [...], the school's meal is healthy, it's balanced., the school's meal is healthy, it's balanced. [...] We've tried to do [actions with families], but we haven't managed to get it off the ground. Maybe it could be on Saturdays, on family day. [...] This dialog with the family... just the agreement, but no dialog.(PROF FUND1 school A) [...] This whole conversation [about feeding] continues every year, there isn't just one year, just one moment, just one teacher. The fact that the [conversation] circle is made with different teachers makes it possible to have different views, ways of talking and arguments on the subject.(Manager,school B)</p> <p>There are families who already have this [an interest in healthy eating] as a habit at home, as well as others who have never heard of it and then it generates a whole conversation [...] "oh, what about a vegetarian diet, is that a possibility, does it make a difference, but will I get all the vitamins I need?" All of this was part of the reflection and we concluded that we may not be vegetarians, but we can think about a meat-free day campaign, which already makes a difference to my health and the health of the planet. (Manager,school B)</p>
Developments in EAN actions	<p>[...] Because sometimes people get confused [ ...] and think that it's the school's duty to educate the child, and the school was made to educate the child. Education comes from home and so does food. If they start eating well at home, it's up to their child to choose what they want to and what they like at school. (GF-families FUND2 school A)</p> <p>[...] there's a super-radical group of parents who say you shouldn't be allowed to bring anything [to eat at school]. The idea is that each teacher can talk to the children about the feeding they bring from home, but I think that's still too little. [...] How do you get out of that place of the things you like to a diet that you <i>feel the need for</i>. When we explain to the children [...]: if you don't want to, that's fine, but the city government purpose is to provide everyone with one substantial dish a day, that changes everything! [...] the children start to accept lunch better. (Manager,school B) (italics added)</p> <p>[...] We have a seventh grader who is obese, but her family is doing everything they can. It's hard for her to lose weight! She's on a diet, poor thing, she tries hard, but the whole family is really fat. [...] We have a serious problem [...] she's very chubby and she's already getting that apron belly, [...] she's really young, but she's big. I don't know how to go up to her and say that she's overweight without offending her. (PROF FUND2 school A)</p> <p>Some [parents] say: "oh, but my kid insists, my kid wants me to send a snack, a cookie" and then we insist on the other side. [...] the amount of inappropriate snacks has already decreased a lot, we've seen a change in attitudes, but it still exists [...]. We work in different ways, <i>based on what comes in, depending on what comes in from the families as well</i>.(Manager,school B) (italics added)</p>
Time availability	<p>I confess that I don't participate much because of the time. But I try to do a bit more, because the activities are usually on Saturdays. [...] For the school to have more projects[...] suddenly the <i>community getting together with the school</i> might make something work. (GF-familiesFUND1 school A) (italics added)</p> <p>We had a snack here at school on Family Day, but not everyone comes. [...] The family, even directly, we can't reach. [...] doing work that they could take home, involving the family with the school, but this is complicated today with the structure we have,[ ...] things needs to be aligned.(PROF FUND1 school A)</p>

**Chart 5.** Excerpts from interviews with actors in the school community taken from the category "Family participation in the school". São Paulo-SP, 2022. (Continues).

<p><b>Established relationships</b></p>	<p>The experience we've been able to build with CHAS is an example of <i>shared knowledge</i>[...] It's difficult to achieve results like the one we've achieved, which has little methodology, is a bit <i>intuitive</i>, with a lot of <i>persistence</i>, especially from a nucleus that exists, which is very consistent. [...] (GF-families school B) (Italics added)                  In school B I am called by the parents. [...] This part of the meal... it is the parents who call me to participate in the activities they do in the garden, in workshops. [...] they were the ones who introduced the PANCs. (Nutritionist Codae school B)</p>
<p><b>Consolidating discussions</b></p>	<p>[...] What remains of the cultural festivals, how is this internalized? [...] From the problem situation to how I solve it, where I go. If that comes into my daily life, it comes into my speech, into my actions [...]. It comes in some of the school's materials [...]; in the teachers' plans [...]. (Manager,school B)                  [...] If the mother isn't together with the school in this story, the importance of being together, [...] "why do mothers still send food?" Because we haven't yet managed to do such a strong job with the community, it takes a long time, because it's about eating habits, food stories [...]. It's not so easy to change, nor is it easy to change the school's perspective. [...] This is all linked to culture [...] if you're talking about school meals, you can't just talk about eating [...] it's a learning process that gives the discussion a different quality. (School manager B)                  There are some families who are here all the time, who look after the vegetable garden, who have super communication with the school. I think we could think about doing some events, even expanding the reach to other families. (FUND1 school B)                  The teachers built a big mind map with gastronomy at the center [...] And the map was incredible, because it went from scarcity to hunger, from the affection matter to the nutrition matter [...]. Religiosity came up, as did culture, affection and public policies. All of this permeating the study and gaining strength because of the trajectory of the group [CHAS]. (Manager,school B)                  [...] how this practice can feed public policy, because public policies are not ready, they come from practices. I think it's important what happened here at school B to be able to think about this public policy. This is something that is under construction, in the school itself, in the competent bodies that look at this and say, "well, there are things you can think of differently." (Manager,school B)                  - [...] My main motivation for school meals is my son, this school environment. I'm taking part in the group [CHAS and the School Feeding Council], in the community. And together with school meals, I try to get volunteers together [...] to build the equipment we use.                  - There's someone [a student's mother] who is a <i>designer</i> and she played a key role in systematizing this Chart [a mental map of gastronomy and feeding] that she made. Needs arise and there are talents to be found. (GF-family school B)</p>

Key: PROF FUND1: elementary school teacher 1; PROF FUND2: elementary school teacher 2; GF-FamiliarFUND1: elementary school family focus group 1; GF-FamiliarFUND2: elementary school family focus group 2; CHAS: garden, food and sustainability committee; PANC: unconventional food plants.

**Speaking spaces**

At school A, the DC records showed that the spaces for students and their families to speak up were limited to collective bodies or meetings, such as the school council, student assemblies and parents' meetings. According to the reports, only one family member said he was a member of the council, as he had been invited by the school staff, but did not actually take part. In the meetings, the demands involved the daily routine of the school meals served: the composition of the menu, food tastes and preferences, restrictions on the repetition of certain preparations. According to one teacher, they were immature, indicating the difficulty of collectively exploring the different meanings that can be attributed to feeding.

According to the DC's notes and the E-GF's narratives, the pedagogical meetings and festive events were essential for interaction with parents, who took on the position of spectators, listening to the reports given by the management team and teachers or watching the presentations of the activities and projects developed. With regard to feeding, at the beginning of the year they were given guidelines on how to eat at school, the quality of the meals served, recognition of the DHAAS and restrictions on sending snacks. The teachers admitted the limitation of meetings as a promising space to talk about issues other than pedagogical ones, the difficulty of creating a way for the community to reflect on issues of interest to them and that initiatives could also come from family members.

The organization of school B into responsibility groups has encouraged the effective participation of parents in different spaces, such as the vegetable garden. The conversation circles and the vegetable garden, food and sustainability committee (CHAS), in particular, fostered the exchange of knowledge and experiences on everyday food issues experienced by the students and their families. The example of vegetarian food cited in one of the interviews helped them to recognize other eating habits and cultures, involving everyone in the learning process so that they could make more assertive decisions about food in their life contexts and bringing those who were distant closer together.

### **Developments in EAN actions**

As seen in the E-GFs, the attribution of responsibility for food care to families, excluding the participation of the school by some parents, signaled a low level of synergy in the development of collaborative actions between schools and families.

The statement made by one of the managers that school meals *"were based on the need and the guarantee of having a plate of food on the day"* was based on a welfare argument, placing it in a dissident context, between those who needed "a plate of food" or not. This speech signaled that there was a limitation on the part of the school management in seeing the potential of school meals in shaping healthy eating habits and practices. From the DC records and interviews, the actions involved some structural changes, such as adjusting meal times to be closer to social time and reorganizing the flow of students leaving, which had not yet happened at school B. In A, they were enough to ensure greater acceptance of the meals served and low consumption of ultra-processed products and sweetened drinks, especially among FUND1 students.

At the same time, there were educators interviewed who saw a way to address food-related issues, such as sending snacks, in order to act on the daily demands that came to the schools.

### **Time availability**

The availability of time and reconciliation with work schedules to take part in the activities was a difficulty pointed out by the E-GFs of both schools. When the activities made it possible for family members to participate actively, as seen in school B, they made a greater effort to be present than when they acted as spectators.

### **Established relationships**

The participation of families in school B was part of their trajectory in the elaboration of the pedagogical project of social education that aimed to transform reality through the institution of a culture of responsible participation referenced in Escola da Ponte.<sup>26</sup> Social participation, critical reflection based on issues of interest to the community and the development of emancipation autonomy were prioritized.

The relationships of trust and partnership, which are fundamental to shared knowledge between family and school and which were observed in this school, made it possible for some issues of interest to the community to be discussed directly between parents and teachers who were members of the committees.

This removed the obligation for managers to analyze and authorize all the issues raised, as shown by the E-GF and DC. The members of CHAS, created through the initiative of parents, had the autonomy to define themes of discussion and actions that culminated in the inclusion of feeding in the PPP, conversation circles and tutorials, favoring collective reflection beyond the meals served by the school, exploring themes related to its social, political, economic, environmental and cultural scopes.

The school, as a space for socializing with activities that encouraged shared knowledge, awakened in the family members the feeling of belonging to the school community. According to the reports, the work of the parents in the different commissions, especially CHAS, had repercussions on concrete actions inside and outside the school, such as the foundation of a non-profit association, with assumptions of solidarity economy, responsible consumption and equal rights for the commercialization of organic and agroecological products, from family farming, traditional communities and agrarian reform, which operated in the same neighborhood as the school.

### **Consolidating discussions**

The diversity and urgency of the themes that the schools proposed to discuss with the students, coming from the daily demands, such as interpersonal relationships, violence and sexuality, placed other themes, such as feeding, as secondary, according to E-GF and DC. The example of the cultural festival of school B, which proposed to discuss gastronomy broadly, and the reflections that took place from the collective construction were not enough to influence or transform some food practices, such as the consumption of processed and ultra-processed products in the students' snacks, seen in the participant observation.

These results showed that, as part of a work under permanent construction, the articulation of feeding in the different living spaces and pedagogical devices can be pointed out as fundamental to foster the discussion of the different dimensions of nourishment, important for the development of the autonomy of the members of the school community in making their appropriate food choices in their different life contexts. To this end, the inherent interests of the different age groups, cultures, living conditions of the families, the reports and DC were indicated as elements that needed to be better understood and articulated in order to expand and advance the EAN actions in the process of (re)construction of the community's food practices.

According to the reports, there was also recognition of the community's commitment to think about EAN actions at school, incorporating different knowledge and challenges in a collaborative work, related to parental attributions, competencies inherent to life experiences and professional training and the exercise of citizenship, such as the participation of the School Feeding Council (CAE) of the municipality, enhancing and amplifying the possibilities of EAN approaches. In addition, as part of a work under permanent construction, the challenge of arousing the interest of participation of families little involved and mediating the different interests and disputes of the community was pointed out. The different educational devices and spaces of speech can be suggested as essential to discuss the dimensions of nourishment, which are important for the formation of critical citizens, with autonomy and self-care for their health.

## **DISCUSSION**

The possibilities for joint actions between school and families were aligned with the collective role of educators, allowing the individual and collective characteristics of the community to be explored. The mention of the Nigerian proverb that "it takes a village to raise child" applies to the idea of establishing structured and successful partnerships between school and family, placing children and adolescents at the

center of the discussion.<sup>27</sup> The collective construction of work themes on food and nutrition in schools are richer experiences the more participatory they are<sup>28</sup> and are aligned with the framework of Freire's popular education.<sup>29</sup>

In this regard, the schools' EAN actions were directed to students in the school meals served, in pedagogical activities that explore EAN as TCT and those that involve the social participation of families, such as vegetable gardens, festive events and other spaces or moments capable of instigating the food and nutrition themes according to the demands of each territory.

The interactions of the social actors in the cafeteria valued the relationships of commensality and strengthening of bonds between the students and other social actors present at mealtimes, important for the expansion of the palate, and reinforced the recognition of feeding as a right and social practice in Brazilian public schools, in line with the guidelines of the PNAE.

For the school garden projects and activities, the results indicated that the construction of a permanent project that involved all school years favored the interaction of the community in a collaborative and integrated work, consolidating learning based on horizontal relationships, with respect and appreciation of the knowledge of those involved,<sup>30</sup> which are fundamental to strengthen EAN actions in schools. These projects were in line with Codae's proposal to value the vegetable garden and cooking as strategies for broadening students' palates through direct contact with food and understanding food beyond the formation of healthy eating practices. Because it is a space for shared experience and the production of self-care,<sup>30</sup> it enabled community members to have less ethnocentric attitudes, distancing themselves from the discourse that social participation occurs in defense of the private interests of families, their beliefs and educational ideals of collective spaces for discussion and education.<sup>31</sup>

The opportunity was identified for students and their families to carry out the practical experience with food in the construction of food knowledge, strengthening participation and reflection on themes that permeated social, environmental and economic sustainability and the food system, reaffirming it as an important strategy for PAAS in schools. From this perspective, a study that aimed to understand the role of SL, family and sociodemographic variables in the diet of adolescents found that the higher the SL of adolescent students, the higher the consumption of fruits and vegetables and the lower the consumption of sweets and soft drinks, highlighting it as a sign of appropriate habits and behaviors. In addition, there is a positive correlation between parents' LS and their children's healthy food intake.<sup>32</sup>

The creation of spaces that encourage interaction between groups in the school community, especially the pedagogical team and nutritionists, as health professionals who work in the school environment, was also pointed out as favoring reflection and continuity of EAN activities, highlighting the exercise of intersectorality as essential and challenging for their professional practice.<sup>28</sup> Even though Codae's training was aimed at nutritionists who worked with the PNAE, the proposal to extend it to educators could broaden and strengthen the inclusion of EAN as a TCT in schools. The incorporation of teachers from different fields of activity and other school professionals enables an interdisciplinary and useful approach to the subject of food and nutrition,<sup>28</sup> and expands the possibilities of their inclusion with students, since there was an understanding that EAN was restricted to nutritionists.

The narratives related to the participation of students and their families in the different spaces of speech indicated some practices of passive participation and non-participation<sup>33</sup> with undemocratic characteristics in terms of the criteria for choosing family representatives on the councils by appointment, rather than by election by the community. A narrow view of the roles that family members could play, a lack of enthusiasm because they are a minority and because of their position may have contributed to the low level of participation,<sup>31</sup> which was reflected in the time made available for activities with schools.

Even if the students' statements about feeding were judged as immature, they could be provoked to collectively discuss themes beyond the meals served, exploring the different dimensions of nourishment, which are important for their understanding and appropriation in the formation of eating practices and the development of the protagonism of self-care with their own food, as proposed in emancipation education.<sup>34</sup>

In a study that analyzed the participation of families in public schools in different contexts, the need for the school to break with the stereotyped justifications regarding the participation of students and their families in the school councils was evidenced, including them, in fact, in discussions of interest to the community, asserting their reflections and positions, as a result of the diversity of personal and professional experiences.<sup>29</sup> The insufficiency of the training of the teachers was also pointed out, to relate to families in order to understand, question, assist and encourage their participation without blaming them; with the possibility of making them believe in their protagonism in the school community.<sup>31</sup>

In addition, the difficulty and need for part of social actors, especially managers, teachers and nutritionists, to break with conceptions that are materialized in the actions of schools – such as resistance to changing the main meal time to one that is closer to the social scene, a welfare approach to school meals and a strictly biologicist conception of nourishment, aimed at caring for the body, losing weight and controlling obesity - open up space to rethought how to do EAN in schools. The results confirm that discussions must start from the demands of each territory in order to explore its needs and potentials and that they depend on the power struggles of the actors involved, who use democratic or authoritarian strategies to mediate relations and reinforce the role of the school as a promising space to promote interaction and dialog with families.

Based on listening to each territory and aligned with the principles of the EAN Reference Framework for Public Policies,<sup>3</sup> Codae invested in training based on reflection on EAN practices that detached itself from traditional education, with an informational matrix based on the nutritional value of feeding, distinguishing food as healthy and unhealthy. From the perspective of disease prevention, the results of these actions were aimed at reducing the incidence and prevalence of diseases in the population. However, they did not include popular knowledge, limiting the essence of educational processes,<sup>35</sup> transforming subjects into objects of intervention. The encouragement of reflective capacity to choose, decide, transform, analyze and disagree encourages actions that are close to the reality of the school community, providing reflection on everyday situations, aiming at alternative solutions and practices.<sup>3,36</sup>

Thus, the proposal for communication and interaction between schools and families can be rethought to include them in debates of different kinds, with collective and horizontal reflections on issues of common interest. It's important to think that families can contribute to the construction of knowledge, i.e. the school doesn't need to present all the agendas ready; sharing knowledge and collective construction tends to strengthen community relations.

In this regard, the results regarding the organization of the community into responsibility groups can include families who are still distant and/or have not seen the possibilities of contributing so that the different demands that come to the schools are discussed and articulated. If, on the one hand, some parents did not recognize the school's role in caring for food, on the other hand, their heterogeneity, attributions and coexistence revealed their power to work together with the school. Although the assumptions of the Escola da Ponte facilitated social participation, there were representatives willing to speak up regarding the school life, breaking the supposed lack of interest and incompetence of families in participating in reflections and actions.<sup>31</sup>

To discuss the main influences, barriers, and opportunities in developing successful partnerships between low-income families and schools in culturally heterogeneous school communities, one study

indicated that in order to involve other parents in their activities, it is necessary to admit that family members offer valuable knowledge in their children's education.<sup>27</sup> Their participation requires respect for different cultures, acceptance, and appreciation so that their impressions and expressions contribute to the construction of the school's actions,<sup>27,31</sup> whether they are related to food or any other theme of interest to them. However, it requires rethinking the organization and functioning of the school and the power relations established, in order to create a new professional teaching culture.<sup>31</sup> The interrelationship between theory and practice opens space for critical, emancipation reflection, as an "ethical-political praxis", aiming to articulate the meanings attributed to the daily practices historically and socially constructed and legitimized in the face of the different interests and conceptions in dispute that are fundamental to meaningful experiences.<sup>36</sup>

Studies that focused on understanding the scope of EAN activities developed in Brazilian schools, following the precepts of health education, with a participatory approach, pointed out that the development of the school community's sense of belonging, valuing their experiences, indicated the empowerment of family members as a fundamental strategy for the implementation of mechanisms of enforceability, protection and promotion of the DHAAS, interacting with other individuals and generating critical thinking in relation to reality.<sup>28,37</sup> The potentialities of the actions developed by CHAS resulted in the strengthening of the subjects and the family social group, which moved from passivity to activity, due to the desire to be free and to be happy, as a fundamental purpose of health promotion.<sup>36</sup>

Raising families' awareness to participate in decision-making processes has emerged as a central dimension of democratic school management, breaking with participatory staging, rituals, processes, and formally democratic methods.<sup>33</sup> Achieving community participation in the process of formulating public policies involves stages ranging from access to information to the transfer of power, in which communities have the "last word" on important decisions that will affect their well-being.<sup>38</sup> In this movement, EAN, based on the precepts of health education, can strengthen and encourage political and citizen participation in the management of strategic politicization actions. It is capable of transforming the lives of children, adolescents, and adults based on the idea of self-care and caring for others, in family and community settings.<sup>37</sup>

With regard to parental challenges, the results showed the need to break with the rhetorical discourse that family members were not interested in their children's meals. The interest in school meals and EAN actions motivated parents to dedicate their time and take part in the activities, as well as recognizing the importance of acting as members of civil society with public facilities such as the CAE. In view of the breadth and complexity involved in food, health and education, valuing the experiences of subjects and communities allows social participation in political and decision-making processes to be understood as an achievement, and not a concession.<sup>37</sup> Even if in different instances, for participation to be effective, it is necessary that the interested parties have knowledge and skills, understand the process, clearly understand what can be achieved, and the social and political ability to navigate bureaucracy while promoting their agenda.<sup>38</sup>

## CONCLUSION

The interface between school and family for PAAS moves towards developing collaborative work, exploiting the potential of the different groups in the community. Social participation opened up space for the development of horizontal, reflective relationships that were aligned with local reality and, for this reason, remained under permanent construction.

The structured and permanent definition of a specific committee that included families to think about food together with EAN actions, and which took the form of different practical experiences, can be seen as a relevant outcome for PAAS in primary schools.

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**Contributors**

Ribeiro RMM participation in the study design; collection, analysis, and interpretation of data; writing of the study; final review and approval of the manuscript for submission. Lins JD e Moreira ICF participation in data collection and analysis; final review and approval of the manuscript for submission. Bógus CM participation in the study design; data interpretation; final review and approval of the manuscript for submission.

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