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Original Article

Habilidades culinárias de cuidadores e consumo alimentar de crianças na primeira infância: análise em território de uma Unidade de Saúde da Família

Caregivers' confidence in their cooking skills and dietary consumption in early childhood: analysis in a territory of a Family Health Unit

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Metadata

RESUMO

As habilidades culinárias são aquelas necessárias para elaborar refeições, incluindo a seleção dos alimentos e sua oferta, reconhecidas como importantes para a qualidade da alimentação. O objetivo deste artigo foi investigar a associação entre as habilidades culinárias do responsável pelo preparo de refeições e o consumo alimentar de crianças de primeira infância. Este estudo transversal, realizado em Botucatu-SP com 51 participantes, aplicou, por telefone, o Índice de Habilidades Culinárias (IHC) e os marcadores de consumo do Sistema de Vigilância Alimentar e Nutricional (SISVAN), sendo realizadas análises comparativas entre estes e a situação dos cuidadores em relação ao escore de habilidades culinárias. Cerca de 51% dos responsáveis apresentaram baixa habilidade culinária. As crianças, com idade média de 28,9 meses, cujos cuidadores tinham IHC acima da mediana mostraram o dobro de consumo de legumes, enquanto o consumo de feijão foi inferior. Quase metade das crianças (49%) havia consumido alguma bebida adoçada no dia anterior; um terço (33,3%), macarrão instantâneo, salgadinhos de pacote ou biscoitos salgados; e 23,5%, biscoito recheado, doces ou guloseimas. Esses resultados destacam a necessidade de se promover hábitos alimentares saudáveis nos cuidadores de crianças em primeira infância, sejam elas tanto de escolha quanto de preparo dos alimentos, aumentando a confiança nas habilidades culinárias.

Palavras-chave: Alimentação infantil. Arte de cozinhar. Consumo alimentar. Atenção Primária à Saúde. Parentalidade.

ABSTRACT

Cooking skills encompass those necessary for meal preparation, from food selection to serving, and are recognized as crucial for the quality of nutrition. The objective of this paper was to investigate the association between the caregivers' confidence in their cooking skills and the dietary consumption of early childhood children. This cross-sectional study, conducted in Botucatu-SP with 51 participants, applied the Cooking Skills Index (CSI) and the Food and Nutrition Surveillance System (SISVAN) consumption markers by telephone. Comparative analyses were performed between these markers and the caregivers' coking skills scores. Approximately 51% of caregivers demonstrated low cooking skills. Children, with an average age of 28.9 months, whose caregivers had CSI scores above the median, showed twice the consumption of vegetables, while beans consumption was lower. Almost half of the children (49%) had consumed some sweetened beverage the day before, one-third (33.3%) consumed instant noodles, packaged snacks, or savory biscuits, and 23.5% consumed filled biscuits, sweets, or treats. These results emphasize the need to promote healthy eating habits among caregivers of early childhood children, both in food choices and preparation, thereby increasing confidence in culinary skills.

Keywords: Child Nutrition. Culinary Art. Dietary Consumption. Primary Health Care. Parenthood.

INTRODUCTION

A child's development and growth are based on the first years of life[1]. Food is an important part of this process and, in this regard, the food provided deserves special attention, since the child is not the one making the choices at this time. The way meals are prepared is among the aspects that affect the quality of children's food consumption. In this sense, the development of culinary skills in caregivers has been associated with an improvement in the quality of children's diets, and the reduction in the spread of these skills between generations is related to the greater consumption of ultra-processed products[2].

According to the Food Guide for the Brazilian Population, culinary skills are those that range from selecting food and ingredients; preparing; seasoning; cooking; and combining in the form of preparations/meals[3]. In this sense, considering the Brazilian reality and the theory of self-efficacy - which means the individual's own confidence in their performance in certain skills - the Culinary Skills Index (CSI) was developed. This index was constructed with questions aimed at individuals' behaviors, with response options on a unipolar scale, without the inclusion of negative numbers, being gradual concerning confidence[4].

A study of more than 3,000 Swiss adults found a positive association between cooking skills and diet quality among both men and women, with special emphasis on vegetable consumption, and among women, a negative association was also found between skills and consumption of some ultra-processed foods[5]. A cross-sectional study of parents or guardians of children aged between two and nine assessed the association between their cooking skills and the consumption of fresh/minimally processed foods by children during the COVID-19 pandemic and found that higher consumption of cooked vegetables and raw salads was associated with a higher level of parental cooking skills[6].

Another cross-sectional study, with 657 parent-child pairs from nine private schools in São Paulo, analyzed the influence of parents' confidence in their cooking skills on children's consumption of ultra-processed foods at dinner. An increase in parents' confidence in their cooking skills was associated with a decrease in the consumption of ultra-processed foods and led to the conclusion that confidence in cooking skills had the potential to protect children against the consumption of ultra-processed products[7].

Recognizing the importance of cooking skills for the quality of the diet of adults and older children, investigating this relationship in the early years of a child's life is very important for defining actions to promote healthy eating in this population. Thus, the aim of this article was to investigate the association between the cooking skills of the person responsible for preparing

meals and the food consumption of early childhood children living in the territory of a Family Health Strategy (FHS) health unit.

METHOD

Design and study population

This is a cross-sectional study with the same sample as a previous study that aimed to assess the food environment, food insecurity, and nutritional status of children under two years of age enrolled in a Family Health Unit, carried out between April 2020 and December 2021. Thus, the population studied here includes all children who were under two years of age at the time of the first investigation, enrolled in an ESF health unit located in a vulnerable area of the municipality of Botucatu, and with a guardian at home who were physically and mentally able to respond to a face-to-face interview carried out in the home.

As the data for this study was collected between September 2022 and February 2023, the population now being investigated comprises young children in early childhood - those who in English are called “toddlers”, a word that does not have an exact translation into Portuguese.

The territory where the population studied lives is a typical peripheral area of medium-sized cities in the Southeast, with an estimated population of just over 6,000 individuals and covering five neighborhoods, two of which are the most vulnerable and whose population is the largest user of the health unit. Botucatu is a municipality in the center-south of the state of São Paulo, with an estimated population of 145,155 in 2022 and a population density of 85.88 inhabitants/km²)[7]. In 2019, the Gross Domestic Product (GDP) was R$ 35,049.84 and the latest Human Development Index (HDI) data from 2010 is 0.800, higher than the national figure of 0.765[7].

Data collection and study variables

This study was conducted between September 2022 and February 2023, with the Brazilian Culinary Skills Index (CSI) being administered by telephone to those responsible for preparing the children's meals, which was the exposure variable of greatest interest.

The children's guardians answered how confident they felt to 1) sauté a meal; 2) bake a meal in the oven; 3) season meat using only natural spices; 4) follow a simple recipe; 5) make a homemade tomato sauce using only tomatoes and natural ingredients; 6) prepare a homemade soup; 7) cook beans in a pressure cooker; 8) grill meat; 9) prepare a simple homemade cake without using ready-made dough; 10) prepare lunch or dinner combining foods and ingredients from home without needing a recipe. The answers range from 0 to 3 points for the options not at

all confident, not very confident, confident, and very confident, respectively[4]. Based on the score generated, culinary skills were classified as low culinary skill (≤ 66.7 on the CSI), medium culinary skill (from 66.8 to 93.2 points on the CSI), and high culinary skill (≥ 93.3 points on the CSI)[4]. A dichotomous variable was also created with the score, indicating whether the person responsible was above or below the median score obtained in the study population.

In the same telephone interview, the questionnaire on food consumption markers from the previous day, established by the Food and Nutrition Surveillance System (SISVAN) for children under two years old[9], was applied. Although some of the children were a little over 24 months old at the time of the interview, this group of questions was chosen given the lack of specific markers for the age group of the children under study and the fact that these questions were more detailed than the markers proposed for the rest of the population (over two years old until old age).

Weight and height values were collected from the children's medical records, relating to the most recent medical appointment recorded in their records. These data were used to characterize the nutritional status of the children according to the Body Mass Index (BMI) z-score for their age on the day of the consultation, calculated using the Anthro® software. When assessing nutritional status - whether height for age, weight for age or BMI for age - the reference standard established by the World Health Organization (WHO) and used by SISVAN was taken into account: the "overweight" category is used when BMI/age assessments are greater than 2.0 z-scores; the "thin" category, when the z-score is less than -2.0 BMI/age; and the "short stature" category, when the z-score is less than -2.0 height/age[10,11].

Data on the characteristics of the parents - such as number of family members, schooling, skin color, work, number of pregnancies - and the infants - such as date of birth, route of birth, place of delivery and birth weight - came from the previous study (unpublished data).

Statistical analysis

Descriptive analyses of the variables under study were processed. Subsequently, comparative analyses were carried out between food consumption markers and the situation of caregivers concerning the cooking skills score (above and below the median score), considering statistically significant differences in prevalence whose confidence intervals did not overlap. All the analyses were carried out using the Statistical Package of Social Science for Windows (SPSS)® program, version 20.0.

Ethical aspects

The study was approved by the Ethics Committee of the Botucatu Medical School - UNESP (opinion n.º 4.794.551; CAAE n.º 48127121.8.0000.5411).

RESULTS

A total of 51 caregivers of 21 girls (41.2%) and 30 boys (58.8%) were interviewed, with the children's average age being 28.9 months, ranging from 15 to 41 months.. Most of the mothers didn't work outside (58.8%) and were brown (49.0%). 29.4% of the mothers interviewed didn't live with their partner and 66.7% had completed high school. Concerning birth, 80.4% of the infants were born with an adequate weight and 11.8% with a low weight, the vast majority being at term - which indicates children who were born at more than 37 weeks (86.3%) (Table 1).

Table 1 – Sociodemographic and birth characteristics of families and children (n=51). Botucatu, SP, Brazil, 2022-2023

(Continues)

Variables	N (%)
Number of family members	
2-4	35 (68.6)
5-7	14 (27.5)
>8	2 (3.9%)
Mothers in paid employment	
Yes	21 (41.2)
No	30 (58.8)
Fathers in paid employment	
Yes	35 (68.6)
No	1 (2.0)
Mother has no contact with the child's father	15 (29.4)
Maternal schooling (in years of passing school)	
≥12	10 (19.6)
9-11	34 (66.7)
≤8	7 (13.7)
Father's schooling (in years of passing school)	
≥12	4 (9.8)
9-11	27 (52.9)
≤8	4 (7.9)
The mother has no contact with the child's father	15 (29.4)
Child's age (months)	
<24	13 (25.5)
24-36	30 (58.8)
>36	8 (15.7)

(Conclusion)

Variables	N (%)
Mother's age (years)	
20-34	38 (74.5)
<20	6 (11.8)
>34	7 (13.7)
Father's age (years)	
20-34	27 (52.9)
<20	15 (29.4)
>34	9 (17.7)
Paternal skin color	
White	21 (41.2)
Brown	25 (49.0)
Black	5 (9.8)
The mother has no contact with the child's father	16 (3.4)
Primiparity	
Number of primiparous mothers	23 (45.1)
Number of non-primiparous mothers	28 (54.9)
Sex of infant	
Female	21 (41.2)
Male	30 (58.8)
Gestational age at birth (weeks)	
≤36	6 (11.8)
37-41	44 (86.3)
≥42	1 (2.0)
Birth weight	
Low weight (<2500 g)	6 (11.8)
Adequate weight (2500-3999 g)	41 (80.4)
Macrosomia (≥4000 g)	4 (7.8)
Place of birth	
UHS public hospital	43 (84.3)
Private hospital	8 (15.7)
Birth procedure	
Cesarean section	26 (51.0)
Vaginal	25 (49.0)

Source: table prepared by the authors

The average BMI/age z-score was 0.7 (±1.5). Table 2 shows the results of the assessment of the children's nutritional status according to height for age, weight for age, and BMI for age. The percentage of overweight children was 17.6%, 56.9% were eutrophic according to the BMI/age z-score and only one child was classified as thin, with 88.6% of the children classified as being of adequate height for age.

Table 2 – Classification of children's nutritional status (n=51). Botucatu, SP, 2022-2023

Assessment of current nutritional status	N (%)
Height for age	
Short stature for age	7 (13.8)
Adequate height for age	44 (88.6)
Weight for age	
Low weight for age	1 (2.0)
Adequate weight for age	47 (92.2)
High weight for age	3 (5.8)
BMI in relation to age	
Thinness	1 (2.0)
Eutrophy	41 (80.4)
Overweight	9 (17.6)

Source: table prepared by the authors

The average CSI score of those responsible for the child was 73.5 (±14.4), with a minimum score of 36.7 and a maximum of 100, with 51.0% of those responsible classified as having low skills, 35.3% as having average skills and 13.7% as having high cooking skills (data not shown in table).

Table 3 shows the degree of confidence in each of the items assessed by the CSI. Sautéing food, cooking beans in a pressure cooker, and preparing lunch or dinner by combining food and ingredients from home without the need for a recipe were the items in which caregivers showed the most confidence, with only 2.0 to 4.0% of caregivers reporting that they had little or no confidence in doing so. On the other hand, making a homemade tomato sauce, using only tomatoes and natural ingredients, was the item with the least confidence, with 23.5% of the participants' answers falling into the “not at all confident” or “not very confident” categories.

Table 3 – Degree of confidence of the items evaluated in the CSI of the children's caregivers (n=51). Botucatu, SP, 2022-2023

Assessed items	Confidence in culinary skills			
	Not at all confident N (%)	Low on confidence N (%)	Confident N (%)	Very confident N (%)
Sautéing food	0 (0.0)	1 (2.0)	35 (68.6)	15 (29.4)
Baking in the oven	3 (5.9)	2 (3.9)	32 (62.7)	14 (27.5)
Seasoning meat using only natural spices	2 (3.9)	3 (5.9)	33 (64.7)	13 (25.5)
Following a simple recipe	0 (0.0)	4 (7.8)	30 (58.8)	17 (33.3)
Making a homemade tomato sauce with only tomatoes and natural ingredients	3 (5.9)	9 (17.6)	26 (51.0)	13 (25.5)
Prepare a homemade soup	3 (5.9)	3 (5.9)	28 (54.9)	17 (33.3)
Cooking beans in a pressure cooker	1 (2.0)	1 (2.0)	29 (56.9)	20 (39.2)
Grilling meat	1 (2.0)	3 (5.9)	29 (56.9)	18 (35.3)
Prepare a simple homemade cake without using ready-made dough	1 (2.0)	3 (5.9)	30 (58.8)	17 (33.3)
Prepare lunch or dinner by combining foods and ingredients from home without needing a recipe	0 (0.0)	2 (3.9)	29 (56.9)	20 (39.2)

Source: table prepared by the authors

Table 4 shows the data for the food consumption markers from the previous day, considering the caregiver above or below the CSI median. The majority had not drunk milk from the breast the previous day (74.5%), and had eaten fruit (94.1%) and salty food (96.1%). Almost half of the children (49%) had consumed a sweetened drink; a third (33.3%), instant noodles, packet snacks, or salty cookies; and 23.5%, filled cookies, sweets, or candies. There were statistically significant differences for two markers: vegetables and beans. The frequency of children who consumed vegetables the previous day was higher (double) in the group whose guardians had CSI above the median. The opposite result was observed for bean consumption, which was lower among children in this group. The differences in the other markers were more discreet and did not reach statistical significance.

Table 4 – Food consumption markers of the previous day of early childhood children considering the guardian above or below the CSI median (n=51). Botucatu, SP, Brazil, 2022-2023

(Continues)

Food markers previous day	Total N (%)	Below the CSI median % (95%CI)	Above CSI median % (95%CI)
Did the child have breast milk yesterday?			
Yes	13 (25.5)	23.1 (7.7 – 38.5)	28.0 (12.0 – 44.0)
No	38 (74.5)	76.9 (61.5 – 92.3)	72.0 (56.0 – 88.0)
Did your child eat whole, chopped, or mashed fruit yesterday?			
Yes	48 (94.1)	96.2 (88.5-100.0)	92.0 (80.0-100.0)
No	3 (5.9)	3.8 (0.0-11.5)	8.0 (0.0-20.0)
Did your child eat salty food yesterday (from a pot, porridge, or soup)?			
Yes	49 (96.1)	96.2 (88.5-100.0)	96.0 (88.0-100.0)
No	2 (3.9)	3.8 (0-11.5)	4.0 (0-12.0)
Milk other than breast milk			
Yes	25 (49.0)	42.3 (23.1-65.5)	56.0 (36.0-76.0)
No	26 (51.0)	57.7 (38.5-76.9)	44.0 (24.0-64.0)
Porridge with milk			
Yes	3 (5.9)	7.7 (0-19.2)	4.0 (0-12.0)
No	48 (94.1)	92.3 (80.8-100)	96.0 (88.0-100.0)
Yogurt			
Yes	30 (58.8)	61.5 (42.3-80.2)	56.0 (36.0-76.0)
No	21 (41,2)	38.5 (19.2-57.7)	44.0 (24.0-64.0)
Vegetables (do not consider those used as seasonings, or potatoes, cassava, yams, and yams)			
Yes	29 (56.9)	38.5 (19.2-57.7)	76.0 (60.0-92.0)
No	22 (43.1)	61.5 (42.3-80.8)	24.0 (8.0-40.0)
Orange vegetable or fruit (pumpkin, carrot, papaya, mango) or dark green leaves			
Yes	31 (60.8)	57.7 (38.5-76.8)	64.0 (44.0-80.0)
No	20 (39.2)	42.3 (23.2-61.5)	36.0 (20.0-56.0)

(Continuation)

Food markers previous day	Total N (%)	Below the CSI median	Above CSI median
		% (95%CI)	% (95%CI)
Leafy vegetables (lettuce, chard, cabbage)			
Yes	39 (76.5)	26.9 (11.5-46.2)	16.0 (4.0-32.0)
No	11 (21.5)	73.1 (53.8-88.5)	80.0 (64.0-92.0)
Don't know	1 (2.0)	-	4.0 (0.0-12.0)
Meat (beef, chicken, fish, pork, offal, other) or egg			
Yes	43 (84.3)	80.8 (65.4-92.3)	88.0 (72.0-100.0)
No	8 (15.7)	19.2 (7.7-34.6)	12.0 (0-28.0)
Liver			
Yes	1.0 (2.0)	3.8 (0-11.5)	0.0 (0.0-0.0)
No	50 (98.0)	96.2 (88.5-100.0)	100.0 (100-100)
Beans			
Yes	42 (82.4)	96.2 (88.5-100.0)	68.0 (16.0-52.0)
No	9 (17.6)	3.8 (0-11.5)	32.0 (48.0-84.0)
Rice, potatoes, yams, cassava, flour or noodles (other than instant)			
Yes	49 (96.1)	96.2 (88.5-100.0)	95.0 (88.0-100.0)
No	2 (3.9)	3.8 (0- 11.5)	4.0 (0-12.0)
Hamburger and/or sausages (ham, mortadella, salami, sausage)			
Yes	11 (21.5)	15.4 (3.8-30.0)	28.0 (12.0-48.0)
No	39 (76.5)	80.8 (65.4-96.2)	72.0 (52.0-88.0)
Doesn't know	1 (2.0)	3.8 (0.0-11.5)	-
Sweetened beverages (soda, boxed juice, powdered juice, boxed coconut water, guarana/ginger syrups, fruit juice with added sugar)			
Yes	25 (49.0)	53.8 (34.6-73.1)	44.0 (24.0-64.0)
No	26 (51.0)	46.2 (26.9-65.4)	56.0 (36.0-76.0)
Instant noodles, packet snacks, or salty cookies			
Yes	17 (33.3)	30.8 (15.4-50.0)	36.0 (20.0-56.0)
No	34 (66.7)	69.2 (50.0-84.6)	64.0 (44.0-80.0)

(conclusion)

Food markers from the previous day	Total N (%)	Below the CSI median	Above CSI median
		% (95%CI)	% (95%CI)
Stuffed cookies, sweets, or treats (candies, lollipops, chewing gum, caramel, jelly)			
Yes	12 (23.5)	19.2 (7.7-34.6)	28.0 (12.0-44.0)
No	39 (76.5)	80.8 (65.4-92.3)	72.0 (56.0-88.0)

Source: table prepared by the authors

DISCUSSION

Most of the caregivers of young children cared for by a Family Health Strategy health unit in a peripheral area of a city in the interior of the state of São Paulo are not very confident in their culinary skills, a situation which is potentially adverse to adequate nutrition and, consequently, to the health of these children. The negative picture is confirmed by the results relating to consumption markers, as unhealthy consumption markers were very frequent. Consumption of ultra-processed foods such as sweetened drinks; instant noodles, packet snacks or salty cookies; and filled cookies, sweets, or candies the day before was present in a considerable percentage of the population studied (49.0%, 33.3%, and 23.5%, respectively). The high percentage of short stature for age (13.8%) and overweight (17.6%), when compared to data representative of the Brazilian population[12], shows that this is indeed a population with a significant burden of nutritional problems.

The average found in the CSI (73.5) is lower than, but close to, the average found in a study carried out with parents of children aged six to nine at a private school in São Paulo (78.8), previously cited[7], suggesting that cooking skills are inadequate among parents or guardians of all socioeconomic levels. Traditionally, the preparation and provision of meals have been the main responsibility of women, with mothers and grandmothers being the group to pass on cooking skills to others[13,14,3,7]. The inclusion of women in the labor market, coupled with the difficulty of changing gender roles, may be the main cause of the loss of cooking skills, related both to the weakening of the transmission of cooking skills between generations and to the devaluation of home cooking[15].

It is worth noting that in the population studied here, there is a high percentage of caregivers who are mothers, without a partner, of black and brown skin color, and without a higher level of education. Therefore, a more vulnerable population may be subject to food racism. This concept

refers to the gap between the production of healthy food and its consumption by the black population, especially women with low levels of education[16,17].

It is also worth mentioning that, in average terms, the CSI among the population studied is not very different from that reported by a study of more than 900 Australian adults (79.5)[18]. The variation in CSI scores was also quite high in a study carried out online during the COVID-19 pandemic with parents of Brazilian children aged two to nine (23.3-100)[6]. Thus, the loss of culinary culture seems to be a global problem. However, both the study in São Paulo and the Australian study did not present the results for the three skill levels, limiting the possibility of comparison with the present analysis.

Regarding food consumption itself, the consumption of sweetened beverages the day before (49.0%) by almost half of the children is not surprising, as it is in an intermediate value to that revealed by a publication with national data related to SISVAN in 2020, in which 29% of children between six and 23 months and 63% of those between two and four years old had made this consumption[17]. The same is true of the consumption of instant noodles, packet snacks, or salty cookies: 33.3% of the children surveyed in this study; 21% of children under two years old, and 48% of children between two and four years old surveyed by SISVAN[19] consumed them.

This comparison with national data reinforces the fact that, even though this study deals with a sample from a single territory in a medium-sized municipality in the interior of São Paulo, the food consumption assessed by the markers is similar to the national survey, which also points to an increase in the consumption of ultra-processed foods over time[19]. In this sense, the results of the most recent Family Budget Survey (FBS) show an increase in the relative share of ultra-processed foods in the total calories determined by household food purchases[20]. These findings reinforce the need for interventions focused on young children, given that consumption of these foods has been linked to adverse health outcomes in both childhood and adulthood[21,22,23]. The only result in which consumption was better compared to national data was the consumption of filled cookies, sweets, or candies (23.5%), which was slightly lower in the population studied here, given that national data shows consumption of 25% and 59% among children under two years old and among children aged two to four years old, respectively[19].

In terms of healthy consumption markers, the consumption of food sources of vitamin A on the previous day (60.8%) is similar to that found in the national survey among children under two years old (62%). Bean consumption (82.4) was slightly lower than the national data (86%) and fruit consumption (94.1%) was higher (80%), compared to children between two and four years old[17].

Concerning nutritional status, the prevalence of short stature and overweight for age in the population in this study was close to that obtained in a national survey with data on children using public primary care units: 12.8% short stature among children under two years old and 13.8%

between two and four years old in the national study compared to 13.8% in this study; 15.5% and 16.8% overweight among children under two and between two and four years old, respectively[19]. This result reinforces the fact that the study's sample, although referring to the territory of a single health unit, is not very different from the population that attends Brazilian public health units.

However, there are differences when comparing the population in our study with data representative of the entire population. Among children under the age of five, data from the 2019 National Study of Food and Nutrition in Children revealed a prevalence of low height for age of 7.0%; of thinness, 3.0%; and overweight, 10%[24]. The more negative nutritional situation in the population studied than in the population as a whole confirms their vulnerability.

There was a statistically significant difference of great magnitude in the prevalence of children who consumed vegetables the previous day, greater among those whose caregivers were above the CSI median, a result that supports the hypothesis raised in this study of a positive relationship between caregivers' cooking skills and children's consumption of healthy foods. This result is in line with that reported by a Canadian study, with 28 parents of 40 children, which assessed how parents' perceptions of fish and seafood consumption influence the frequency of this consumption in Canadian children and found that parents' confidence in cooking was positively associated with children's intake of fish and seafood[25].

Vegetables were also the food group associated with caregivers' cooking skills in a study with just over 500 parents of Brazilian children, which also found an association with vegetable consumption, which was not found here[6]. An intervention aimed at increasing the cooking skills of parents/caregivers of young children could be included in the set of actions of health units aimed at promoting children's health. It would be up to future studies to test its repercussions on the quality of children's diets, particularly vegetable consumption.

However, the potential of an intervention in cooking skills to reduce the consumption of ultra-processed foods seems lower, according to this study. The hypothesis that caregivers with better cooking skills would act as protectors against the consumption of ultra-processed foods (in this case, represented by the markers sweetened beverages; instant noodles; packaged snacks or salty cookies; stuffed cookies; and sweets or candies) was not confirmed. This result is contrary to that reported in a Brazilian study carried out with parents of children aged six to nine from private schools in São Paulo[7]. This difference could be explained by the difference between the ages of the children and/or between the socio-economic classifications of the population, given that this is a more vulnerable population and socio-economic classification is related to diet quality, with a worse situation for those in more vulnerable socio-economic conditions[26,27], i.e. the socio-economic situation may outweigh culinary skills. However, more studies are needed, especially in Brazil, where the nutritional transition is a vigorous process.

The Brazilian Ministry of Health recommends, in the Matrix for the Organization of Food and Nutrition Care in Primary Health Care, practices to be developed by health professionals among children, such as the use of SISVAN food consumption markers, used here; interventions based on the local food reality and culture; family involvement in activities and guidance on adequate and healthy food; deconstruction of the idea of "food for children", related to mostly ultra-processed foods; and food and nutrition education actions, such as culinary workshops[28]. Health units are the right place for such actions and health professionals, not just nutritionists, should promote them. One example is the creation of community gardens in their own space, which can function not only as a source of fresh and healthy food but also as a tool for nutritional and environmental education, involving families in practical and educational activities. These initiatives strengthen the bond between the clinic and the community; encourage healthy eating habits; promote food autonomy; and contribute to strengthening the sense of belonging to the territory[28,29].

Another result that deserves close attention concerns the consumption of beans, which was less frequent among children whose caregivers were in the CSI group above the median. Specifically concerning preparing beans in a pressure cooker, in the population studied, this was one of the items with the greatest confidence (96.0%), a result that is similar to that found by Martins *et al*. (2020)[7] (95.6%). Thus, in the population studied, practically all those responsible could prepare it and offer it to the child, and consumption was therefore dependent on other factors. One possible reason for this result could be the cultural changes that have led to a mistaken discrediting of beans as a healthy and basic food in the Brazilian diet[30]. There is also another possible explanation: among caregivers with CSI above the median, the proportion of people with more schooling (>12 years) was higher. In the literature, some studies have consistently shown that, in Brazil, in recent decades, bean consumption has been falling, with the intensity of this fall increasing as socioeconomic status rises[20,30,31,32], also under the influence of women's greater participation in the labor market and the expansion of access to ready-to-eat products.

Understanding the lower prevalence of bean consumption the previous day among children with parents above the CSI median, compared to those whose parents were below this value, is a challenge that we are unable to solve due to the limited data available. In future research, we suggest including a qualitative component that gives a voice to caregivers so that they can talk about the reasons for their choices in feeding their children.

It is important to consider some of the limitations of this study, such as the small sample size, which was based on just one health unit. However, it is worth noting the similarity between the socio-economic profile, food consumption, and nutritional status of the participants and national data on children using Primary Health Care; and the similarities between the results

obtained and previous studies on cooking skills that used the same instrument, which contributes to proving the validity of the research.

CONCLUSION

Young children in early childhood, assisted by a health unit located in a peripheral region of a city in the interior of São Paulo, had a higher consumption of vegetables the previous day when their caregivers had a CSI above the median, and the opposite was observed in relation to the consumption of beans. Slightly more than half of the caregivers were classified as having low cooking skills, creating an adverse scenario for these children's adequate nutrition, reinforced by the consumption of ultra-processed foods the day before by a significant portion of the sample.

The possible impacts of this scenario become even more worrying given the high percentage of short stature for age and overweight compared to data representative of the Brazilian population. These findings point to the need for actions to promote adequate and healthy nutrition for early childhood children, with special emphasis on children in vulnerable areas, aimed especially at their caregivers, with such actions focusing on the choice and supply of food; and the preparation of meals, increasing the confidence of such caregivers in this preparation.

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