




## PEDAGOGICAL WORKSHOPS ON HEALTHY EATING FOR PRESCHOOLERS DURING THE PANDEMIC

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### ABSTRACT

Obesity and poor nutrition are serious problems that must be studied and prevented from childhood. Children and young people spend most of their time at school, potentially receiving educational support in good nutritional practices. This study addressed the problem of obesity and poor nutrition through educational workshops and guided the nutritional behavior of children around 5 years old in preschool, their families, and school staff, to contribute to the acquisition of healthy eating habits from childhood. Family members participated through meetings at the school itself during the COVID-19 pandemic and participation in WhatsApp groups.

**Keywords:** Remote Activity. Educational Workshops. Nutrition in Early Childhood Education. COVID-19 Pandemic.

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## INTRODUCTION

### OBESITY

The school plays an important role in shaping individuals as critical citizens and active participants in their history. Within the school, children come into contact with society through culture, history, and educational ideology, and various factors influence their learning and interpersonal relationships (BRASIL, 2011; SILVA and FERREIRA, 2014).

Addressing issues related to nutrition during childhood is crucial, offering benefits such as the prevention of childhood obesity, and the promotion of public and individual health. According to Paes et al. (2015), it fosters metabolic changes in the body, aiding in cellular balance, body composition, metabolic activation, and the prevention of various diseases.

According to INEP data from the 2018 School Census, Brazil has 2,856,097 children in preschool, with 345,381 in part-time and full-time programs in urban areas, respectively, while 636,313 and 26,657 children are in part-time and full-time programs in rural areas, respectively. <Data available at: <http://portal.inep.gov.br/resultados-e-resumos>>.

It is inferred that obesity prevention through projects with children during childhood and adolescence improves health prognosis and combats obesity, as well as other related physical and mental health issues. Therefore, promoting and encouraging the acquisition of healthier habits from childhood is essential.

The objective was to develop educational activities in the classroom during remote learning in 2020, promoting periodic meetings with parents and school staff to recognize changes in their children's eating behavior.

### THEORETICAL FRAMEWORK

According to Faqueti (2019), Food and Nutrition Education (FNE) is a tool that promotes actions for children and young adolescents to acquire knowledge about proper eating habits. For adults, pregnant women, babies, postpartum women, and the elderly, FNE actions aim to improve health quality and are coordinated not only by nutritionists but also by professionals from other sectors, with the goal of prevention and guidance in Primary Health Care (PHC).

The work of Carvalho (2016) concluded that playing in preschool helps children respect rules, improve social interaction, and enhance their physical and cognitive skills, facilitating learning and the development of students as future citizens. Parents, in turn, recognize the importance of the school and its role in providing playful moments in their children's education.

Radaelli and Recine (2001) published a manual on nutrition for elementary school students, to be used as a lesson plan on food, containing practical activities related to good nutritional habits.

Bezerra (2018) produced a book on food and nutrition education for nutritionists, school professionals, and students to use in the educational context, focusing on the theory of good nutrition.

In the study by Santos and Folmer (2015) in Uruguaiana, Rio Grande do Sul, workshops were conducted with students from the 1st to the 5th grade of elementary school. The workshops addressed topics such as hygiene habits, healthy eating, and physical exercise through playful activities, cut-and-paste, videos, image exhibitions, and dialogues in 2012.

The authors observed that students learned about healthy habits, influencing health promotion and disease prevention.

## **METHODOLOGY**

The workshops were designed to provoke debates, discussions, knowledge, and actions related to good nutritional practices.

With the emergence of the COVID-19 pandemic, it was necessary to adapt the methodology. As a distance learning methodology applied by municipal schools, digital media such as WhatsApp were used to communicate with families and students.

For each class in Stage II, a WhatsApp group was created for parents or guardians, teachers, coordinators, and the principal. The researcher teacher participated in all groups to guide and support guardians and students regarding the Nutrition Project.

Recorded lessons were edited using programs, audio, and slides. Children responded to activities with photos, videos, audio, and participation/interaction in the group and tasks.

Feedback from students, often through their guardians, was always shared through "conversation circles" and interaction with teachers in the groups, with the researcher teacher sending videos so students could recognize their work and appreciate their peers' work.

Consent forms were delivered to guardians in printed format for students' participation in the Nutrition Project.

Alongside these research processes, pre-scheduled meetings were held with teachers and school staff to inform and train them about the project to be developed. The Nutrition Project was always on the agenda of team meetings held via Google Meet.

The workshops had a pre-established theme, but the order in which these themes were developed depended on the students' responses to the proposed activities, as the research was action research. A total of 76 participants were involved (the number fluctuated based on survey responses, as some information was often missing, and the researcher sometimes could not collect all data due to the pandemic situation). The participants were from four classes: two full-time (Stage II – A and B) and two part-time (Stage II – C and D).

## WORKSHOPS

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participants were from four classes: two full-time (Stage II – A and B) and two part-time (Stage II – C and D).

## WORKSHOP: FOOD GUESSING GAME

Situation: The Nutrition Project was reintroduced to remote groups via WhatsApp.

The researcher teacher created videos with images from in-person classes held earlier in the year and reviewed the students' food knowledge, as well as images from in-person classes. On this day, a video and slide were posted inviting families to participate in the continuation of the project.

Action Plan: For the second lesson (the first lesson on 13/07 during the pandemic), the researcher teacher worked with students on "guessing" foods and suggested that the children create some riddles for their peers in Stage II. They could propose these through drawings, audio, or videos.

General Objective: To work on students' food knowledge.

Dates of this workshop: July 13.

Theme: Fruits, vegetables, and legumes.

Specific Objectives: According to the BNCC experience fields:

- Allow interaction among children;
- Communicate feelings in some way to individuals and groups;
- Appreciate and value customs from various cultural manifestations in their context and others';
- Create diverse ways of expressing feelings, sensations, and emotions through movements, gestures, sounds, looks, and mimicry in games, play, and artistic activities;
- Speak correctly and comprehensibly;
- Participate in problem-solving situations;
- Encourage the consumption of natural foods;
- Expand knowledge about fruits, vegetables, and legumes;
- Understand that these foods provide nutrients for the human body;
- Introduce a preference for consuming natural foods.

Program Content: Food and nutrition; Children's literature; Language.

Experience Fields: "The self, the other, and us," "Listening, Speaking, Thinking, and Imagination," and "Traces, Sounds, Colors, and Shapes."

Techniques: Presentation of slides and videos; Reading the books "Vegetables? No!: Learning About Nutrition" by Claire Llewellyn and Mike Gordon and "Guess

if You Can" by Eva Furnari.

Proposal: Play with creating riddles about fruits, vegetables, or legumes for peers to guess.

The researcher ensured that the riddles circulated among the four Stage II classes, allowing everyone to learn about their peers' work.

Materials: Computer and smartphone with internet access.

Human Resources: Stage 2 teachers, researcher teachers, and parents or guardians.

Evaluation: Participation through student interaction; understanding of the riddle; oral expression ability.

## WORKSHOP: FOOD GUESSING GAME

The researcher teacher proposed, through a video, the reading of the poem "The Portuguese Gardener (Mr. Júlio)" from the book "My Grandfather's House" by Ricardo Azevedo. For this, the researcher's teacher presented the author's biography and other works in only one classroom in person and needed to reintroduce it during the pandemic and show it to other classes. This required adapting the in-person lesson. As a complement to this lesson, it was suggested that children listen to the story "The Great Radish" by Tatiana Belinky and create a parody of the story using another fruit, vegetable, or legume as the theme.

Action Plan: The third lesson was to revisit the previous lesson and allow students to identify the fruits, vegetables, and legumes mentioned in the poem. Examples include orange trees, jaboticaba trees, peach trees, and sugar apples. As a proposal, the children had to recognize the care and sensations involved in handling nature. The teacher recited the poem and presented it through slides and videos. The work of the gardener was also discussed.

To expand vocabulary and food knowledge, the teacher introduced the book "The Great Radish" and suggested that students gain a deeper understanding of the tuber group. This allowed them to appropriate specific and technical vocabulary.

There was also a proposal for students to share with their peers in the groups the foods they had learned about.

General Objective: To develop eating habits (care and quality of food).

Dates of this workshop: July 17.

Theme: Natural foods.

Specific Objectives: According to the BNCC experience fields:

- Interact with other children and adults;
- Communicate feelings in some way to individuals and groups;
- Respect diversity and live harmoniously with differences;
- Demonstrate care for oneself, others, and spaces;
- Create and retell oral texts in collective writing situations with the teacher as scribe;
- Understand the various uses of textual genres in their social context;
- Interact and perceive the use of various text carriers in their social context;
- Report relevant facts about their birth, development, family, or community;
- Observe, describe, and record natural phenomena such as sunlight, wind, rain, temperature, climate changes, relief, and landscape;
- Analyze transformations resulting from human action in various forms (objects, places, climate, and landscapes);
- Create strategies for investigating nature and its preservation;
- Encourage the consumption of natural or minimally processed foods;
- Encourage students to diversify food groups.

Program Content: Discussion and text comprehension; Healthy eating.

Experience Fields: "Spaces, Times, Quantities, Relationships, and Transformations," "Listening, Speaking, Thinking, and Imagination," and "The self, the other, and us."

Techniques: Presentation of slides and videos; Recitation of the poem by the teacher; Complementary reading of the book "Dona Maricota's Basket" by Tatiana Belinky as a complementary biography.

A memory game and puzzle of fruits, vegetables, and legumes were delivered along with the school material kit prepared by the Stage II teachers as a complementary activity for the children to complete. The technique of story retelling was also used.

Materials: Computer or smartphone with internet access and children's literature books.

Human Resources: Stage 2 teachers, researcher teachers, and parents or guardians.

Evaluation: Student understanding of the literary genre worked on, as well as the ability to identify the foods present in the text and expand their prior knowledge.

Observe the completion of proposed activities, expansion of food vocabulary, and the ability to distinguish food groups.



## WORKSHOP: COLORED DUCK

Situation: Initially, a video was made available by the researcher of the work done by the children in the previous lesson and images of the trees from the students' homes that they posted as encouragement and gratitude for their collaboration in the project. Then, a video with activity instructions for the week was posted, proposing the use of fruits, vegetables, and legumes to create a work of art that would later be tasted by the student and their family, with cultural expansion through the history of artists: Giuseppe Arcimboldo and Vik Muniz, who used food in their productions.

Action Plan: Create colorful dishes with the foods worked on in previous lessons and present them in the students' daily lives. Posting the images in the group. For this, the researcher's teacher introduced the artists using videos about their biographies and contextualized them. However, the "works of art" could not be made with unhealthy foods.

General Objective: To develop practices of healthy eating.

Dates of this workshop: July 22.

Theme: Diversified eating, rich in nutrients.

Specific Objectives: According to the BNCC experience fields:

- Interact with other children;
- Act independently in proposed activities and games;
- Demonstrate care for oneself, others, and spaces;
- Participate in the creation of stories, poems, rhymes, songs, video scripts, or performances;
- Record experiences with drawings;
- Create plots and logical sequences for play, contextualizing make-believe;
- Use different movements autonomously in artistic productions;
- Use resources and techniques autonomously when producing artistic works;
- Explore relationships of weight, size, quantity, and volume of some two-dimensional and/or three-dimensional forms and objects;
- Participate in problem-solving situations;
- Encourage the child's interaction with food.

Program Content: Music: Uncle Ari's Garden, access

link: <https://www.youtube.com/watch?v=imbamz5DGBU>;

BNCC Experience Fields: "The self, the other, and us," "Body, Gestures, and Movements," "Listening, Speaking, Thinking, and Imagination," and "Traces, Sounds, Colors, and Shapes";

Food and nutrition; Art and Education; Interdisciplinarity.



Techniques: Presentation of slides and videos; Music; Expository lessons; Conversation circles.

Materials: Computer and smartphone with internet access.

Human Resources: Stage 2 teachers, researcher teachers, and parents or guardians.

Evaluation: Participation and interaction, creativity, involvement, and enthusiasm of students in the activity.

## WORKSHOP: HAND AND FOOD HYGIENE

Situation: The researcher teacher revisited the hand hygiene lesson conducted before the pandemic for only one class (Stage IIB) with the help of UNESP nutrition course interns and, together with an intern from the Nutrition Project, created a theater performance recorded at home to guide children in understanding the importance of hand and food hygiene, especially during the pandemic.

Action Plan: The teacher-directed and created a theater performance featuring a character, a 5-year-old child (played by the intern). This character did not know the correct way to wash hands or clean food, and at school, with his teacher, he learned, just as the students were learning with the teacher through remote lessons. The video showed the intern performing the hygiene correctly. Based on the video, children were asked to use the paints provided in the school material kit to create finger paintings. After painting, their fingers would be "dirty," and they had to wash their hands correctly, and then share their execution and understanding of the activity in the group via audio, video, or photo.

General Objective: To learn how to wash hands correctly.

Dates of this workshop: August 4.

Theme: Nutritional care and hygiene.

Specific Objectives: According to the BNCC:

- Develop hygiene habits from childhood;
- Understand that there are toxic substances children should not come into contact with;
- Develop awareness of self-care and care for others;
- Reflect on hygiene habits for health prevention and promotion;
- Develop awareness and care for the environment;
- Learn to wash hands and clean food correctly.
- Appreciate and value customs and various cultural manifestations in their context and others';

- Act independently in proposed activities and games;
- Demonstrate care for oneself, others, and spaces;
- Act independently in caring for one's body;
- Participate in the creation of stories, poems, rhymes, songs, video scripts, or performances;
- Record experiences with drawings;
- Create plots and logical sequences for play, contextualizing make-believe;
- Retell stories and events experienced, respecting the temporal sequence of events;
- Speak correctly and comprehensibly;
- Appreciate and participate in different artistic manifestations, such as theater, music, dance, circus, cinema, etc.;
- Identify and name various colors in their productions and daily life;
- Use different movements autonomously in artistic productions;
- Use resources and techniques autonomously when producing artistic works;
- Create strategies for investigating nature and its preservation;
- Raise family awareness that food is part of the family, cultural, social, and environmental context.

Program Content: Food and nutrition, hygiene techniques and care, Environmental, and nutritional education.

Experience Fields: "Spaces, Times, Quantities, Relationships, and Transformations," "Traces, Sounds, Colors, and Shapes," "Listening, Speaking, Thinking, and Imagination," "Body, Gestures, and Movements," and "The self, the other, and us."

Techniques: Dramatization (theater), videos, audio.

Materials: Food, paints, and paper.

Human Resources: Stage II teachers, students, interns, and guardians.

Evaluation: Verify the importance and understanding of children regarding hand and food hygiene habits.

The products obtained from the workshops were through feedback from students via drawings and tasks that related to each activity proposed by the researcher and the teacher responsible for the Nutrition Project in partnership with the other teachers of each Stage II class, with sharing in the group of each participating class.

## RESULTS

### FOOD GUESSING

The workshop on food guessing had the following results: the students created their riddles and presented their work to their classmates using photos, audio, or video.

The teacher produced a feedback video and, for the first time, there was effective participation in the groups with interaction between the students. The children had the opportunity to express their creativity, for example: “It’s an orange but it’s not a fruit”, “It’s hard as a twig, but when you cook it becomes soft and the rabbit likes it hard. Which one is it?” (Carrot).

They also dared to talk about fruits that are not so popular, for example: “It’s brown, round, have little hairs, and when you cut it, it’s green inside with black spots”. (Kiwi).

Another way of riddles was in the form of oral expression, in this sense, it is very important for the child in this type of exercise: “I’m dark green on the outside, I’m light green on the inside and I have a brown seed”. (Avocado).

It is interesting to note that several students discovered and began to use multimedia resources in the creation of guessing games. This demonstrated progress in understanding these types of tools available at the time.

Continuing the class, the researcher proposed a challenge to the students: the children and their guardians would choose a fruit, vegetable, or legume that they had never seen or tasted, try it, and tell their classmates about their discoveries in the group.

As a model, the teacher recorded a video of herself trying pomegranate, something new to the teacher herself at the time.

The children enthusiastically accepted the challenge and recorded their experiences in audio, video, or drawings. One of the students, together with her grandmother, posted a video trying cauliflower, watercress, and kiwi, reporting that she loved the watercress and kiwi, but did not like the cauliflower because it tasted like onion, according to the student's comment. This student had difficulty with her diet at school.

Another student tried pumpkin and reported how it went in the group, as well as other children who tried blueberries and corn, for example.

Parents also reported how their children experienced the foods they were unfamiliar with. Example: A mother reported that her son helped his grandfather during the corn harvest, and then tasted it. Something he had never done before.

Figure 1 shows the work produced by the students.

Figure 1: Workshop: Food fortune telling.



## GARDENER'S POEM

The Gardener's Poem workshop had the following results: The children completed the activities provided with the kit, such as the puzzle, taking pictures, and naming the foods present in the game. This helped them to learn writing, reading and the alphabet related to fruits, vegetables, and legumes, which is important for this age group. Figure 2 shows the students' production.

Along with this activity, an illustrative record of the proposed poem was made, with the addition of the student's repertoire, such as orchards, and fruits (acerola, lemongrass). The children showed photos, and images of their backyard, with vegetable gardens, and trees (jabuticaba tree, pink lemon, among others).

The students developed retellings of the story "The Big Radish" using various creative techniques, such as puppets, stuffed animals, and audiovisual resources in which the mother drew and the child told the story orally. In this activity, they also tried to diversify the tuber for the retelling, showing the beginning of an understanding of food groups.

**Figure 2: Activity on Retelling the Story: “The Big Radish” by Tatiana Belinky.**



## COLORFUL DISHES

The workshop on Colorful Plates had the following results: students sent decorative plates in artistic shapes of their meals, mixing creativity with vegetables and fruits, such as tangerines to make the mouth, ears, and nose, for example.

The students shared their meal routines (Figure 3), awakening the pleasure of eating with quality and richness in the menu and diet. There were comments and interactions between them in the aforementioned images posted, bringing better integration among the students.



The children told their classmates about the process of creating the videos and their works of art (food). Some students represented their facial expressions. Others used ideas from their classmates to enrich the colors of their plates. Parents were enthusiastic and also participated in the proposal, making their plates and sending them to the group. Some students recorded videos explaining to their classmates how they made their works of art. Some students gave names to their artistic productions. To conclude the report, the students shared the moment when they savored their colorful plates.

**Figure 3:** Workshop on colored plates.



## HAND HYGIENE

The workshop on hand and food hygiene had the following results: The children learned a little more about natural foods since we used the following foods to create the play: Pear, American lettuce, green beans, arugula, nectarine, avocado, cassava, tangerine, sweet potato, peppers of all colors (green, red, yam, radish and green apple).

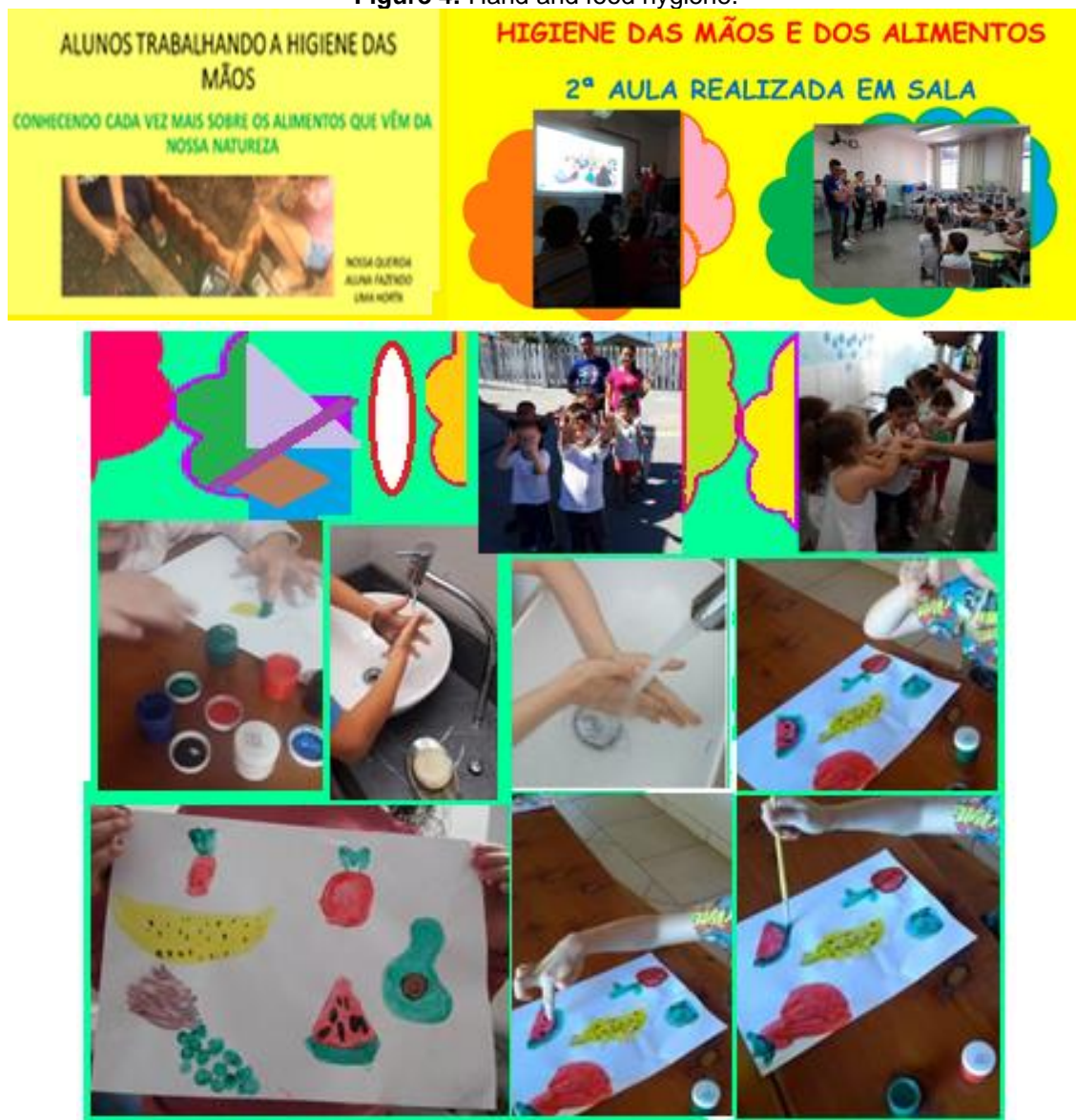
We also took the opportunity to encourage them about the importance of children not handling chemical and toxic products. In the records sent, they reported the natural foods that they drew in different environments, said they enjoyed using the paints, showed foods found in their homes, and recorded videos on how they should take care of vegetables and fruits.

The children reproduced the play showing the “in nature” foods that they had and that were good for their health. They were always willing and felt welcomed knowing that their classmates would watch. The children also brought new foods, such as cabbage, mango, and strawberry, and how to wash them correctly. Hands. Using soap, scrubbing hands well, and not wasting water.

Interesting are the words of some students at these moments: "It's a good idea to put soap on your arms too", "Now I'm going to wash my hands to eat oranges because I love oranges because they protect against the flu and have a lot of vitamin D". These words

show that the children have learned that they have someone who will listen to them and that it is important to pass on some messages to the groups and their classmates. Knowing that they will be heard brings motivation to the teaching-learning process.

**Figure 4:** Hand and food hygiene.



## FINAL CONSIDERATIONS

The classes reached the families and there was feedback from the children and families as well. We were able to interact and involve the school team. The topic was discussed in team meetings and individual meetings between parents and teachers.

One of the positive and differentiating aspects of the project is that all children had access to the work of all Stage II classes and the researcher was able to share the feedback among the families of all classes.

This expanded the topic, encouraged reflection, and created the project in partnership, which is essential for its effective functioning.





It is important to note that those responsible who were unable to carry out the proposals with the children were able to participate indirectly in the topic and were able to share the work developed with their children.

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