



Scientific Electronic Archives

Special Edition 2025, v. 1, p. 1-4

DOI: <http://dx.doi.org/10.36560/18720252147>

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¹ Member of United Nations Academic Impact

Promoting the integral health of children through an interdisciplinary approach at school

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Sustainable Development Goals / ONU Health and Well-being

Abstract. The present paper reports on the experience extension project carried out in Rondonópolis, Mato Grosso. The initiative adopted an interdisciplinary approach and focuses on health promotion in Municipal Early Childhood Education Centers. The general objective was to conduct educational activities with children aged 4–5 years, while also engaging parents and educators. The project was structured around three main intervention axes: food and nutrition, vaccination coverage, and the rational use of medicines. Activities related to each axis were implemented simultaneously and included theatrical presentations, storytelling, games, workshops, and other interactive strategies. The experience demonstrated strong engagement from all target groups and proved enriching both for the community and for the participating students. These outcomes reinforce the role of university extension as an essential bridge between academic institutions and society.

Keywords: Child, Health, Health Education, Extension project.

Contextualization and goals

Comprehensive child health consists of the promotion of physical, psychological, and social well-being, encompassing multiple factors that impact healthy development (WHO, 2018). Children may be vulnerable to health damages due to the influence of several factors (da Silva et al., 2016). Inadequate conditions related to nutritional, pharmacological, and vaccination status can significantly compromise growth and quality of life during childhood.

In Brazil, public policies aimed at children highlight the need for intersectoral actions in the construction of comprehensive care (BRASIL, 2015). An emphasis on the integration between universities and communities is essential for overcoming inequalities and barriers, which often limit adherence to healthy practices. Through dialogic interaction, university extension represents a powerful strategy by increasing the academic

knowledge of undergraduates, master's students and professors closer to the demands of the population, simultaneously promoting the development of the community and the critical education of students (Peduzzi, 2016).

Thus, this paper reports the experience of an extension project taking place in municipal centers of early childhood education in the municipality, covering food and nutrition, rational use of medicines and vaccination coverage. This initiative dialogues with Sustainable Development Goal No. 3 of the UN 2030 Agenda, which seeks to ensure a healthy life and promote well-being for all at all ages, reaffirming the unique role of comprehensive care actions as part of the global commitment to health promotion.

Methodology

The study is characterized as an experience report of the university extension project developed in Rondonópolis-MT in the first semester of 2025. The project was developed by the Graduate Program in Biosciences and Health and is part of the Graduate Extension Program (PROEXT-PG).

Target Audience

Four- to five-year-old children enrolled in two Municipal Centers for Early Childhood Education, located in the region of the Parque Universitário neighborhood, participated in the project. Parents and educators were also included.

Planning

This phase of the project consisted of two meetings for each intervention axis, during which the themes were discussed, problematized, and collectively analyzed to determine the most appropriate course of action, guided by the instructors from each field. After defining the initial set of activities to be carried out, a survey of the necessary material and human resources was conducted. Additionally, agreements were established regarding the preparation of materials and rehearsal schedules, especially for activities with a more playful

Axes of Intervention

The actions were organized around three intervention axes:

Axis 1: Food and Nutrition

The activities developed under this axis were directed toward both children and their guardians. The sequence began with a theatrical performance featuring four characters, presenting a storyline in which the protagonist must choose a snack while being introduced to various food options. This was followed by a tactile and visual exploration of different foods, culminating in a gustatory experience through the preparation and tasting of a fruit salad. In the next stage, children planted vegetable seeds, and concepts related to obesity prevention were introduced through the promotion of physical activity. The axis concluded with an evaluation activity to assess learning retention among the children and the distribution of booklets with healthy recipes to encourage parental involvement.

Axis 2: Rational Use of Medicines

Given the complexity of the topic, the activities were designed to make the theme accessible to young children. Storytelling was used as the central technique, complemented by interactive moments in which children were invited to identify positive and negative situations involving medication use.

Axis 3: Vaccination Coverage

The primary goal of this axis was to reframe children's perceptions of vaccination by reducing

fear and fostering positive associations. This was achieved by presenting "Zé Gotinha" as a superhero and vaccines as sources of superpowers, thereby demystifying the immunization process and using predictability as a tool for acceptance. The intervention concluded with a strength-themed game designed to reinforce, in a simple and engaging way, the importance of vaccination.

Data collection and analysis

The data collection instruments included interviews with parents to determine the socioeconomic and cultural profile prior to the implementation of the activities, participant observation during the execution of the proposed actions, and interactive learning assessments conducted with the children. The analysis followed a qualitative approach, with ongoing and process-oriented evaluation, allowing adjustments to be made throughout the interventions.

To compose the quantitative data, anthropometric measurements were taken and the parameters recommended by the WHO were applied in order to assess nutritional status. Weight was recorded in kilograms (kg), and height was measured twice, with the average calculated in centimeters (cm). For the analysis, children up to 5 years old were evaluated using growth charts based on the following indicators: weight-for-age, height-for-age, weight-for-height, and BMI-for-age. Children older than 5 years were assessed using the growth charts, which include the indicators weight-for-age, height-for-age, and BMI-for-age (BRASIL,2007). The evaluation of nutritional status was conducted using the AnthroPlus software (WHO, 2009).

Results and Discussion

To date, the three proposed activities have been completed at one of the Municipal Centers for Early Childhood Education. The project involved approximately 40 children and their parents or guardians, as well as 12 teachers from the school. It is important to note that a formal evaluation of the observations recorded by the extension team has not yet been conducted, nor has the stage of reflecting on the most appropriate way to replicate the activities at the next institution.

The the project received positive receptivity from the school's coordination team and faculty, who provided space and support for the development of the activities and demonstrated the importance of cooperation between the school staff and the project team. The children, despite their young age, showed understanding of the topics addressed and participated actively. This engagement was likely influenced by the playful nature of the interventions and the use of visual and interactive materials such as stickers and hands-on resources.

These results are consistent with findings that highlight the effectiveness of educational strategies grounded in creative and appealing activities, which enhance learning and contribute to

the internalization of healthy habits from early childhood (Esteves et al., 2025)

A relevant limitation identified during the implementation of the thematic activities was the difficulty in maintaining direct contact with parents and guardians. Due to the families' demanding routines, communication was largely limited to informative videos and the distribution of educational booklets, without opportunities for more substantial in-person engagement. This constraint compromised the evaluation of the effectiveness of the activities within the family context, as it was not possible to verify concrete changes in daily habits.

A total of 32 children participated in the anthropometric assessments that resulted in the classification of their nutritional status. The feedback provided to parents or guardians varied according to the child's condition: children with an adequate nutritional status received a letter to take home that included their measurements and information indicating that they were within the appropriate range according to the growth curves. In contrast, when alterations were identified, parents or guardians were invited to attend an in-person feedback session.

During the meeting, five parents or guardians were present, corresponding to the children who showed alterations in nutritional status. The parents or guardians of children who were overweight or obese received guidance on healthy eating and regular physical activity. For those whose children were underweight and/or short for their age, the guidance focused on strategies to increase the caloric and nutritional density of meals. In such cases, a referral to the corresponding Family Health Unit was issued, reporting the child's nutritional status.

Finally, it is important to highlight that all activities were based on current scientific literature, ensuring both theoretical and methodological rigor. The initial experience suggests that, despite limitations, integrating playfulness with the school and health contexts can foster meaningful learning among children and contribute to strengthening health practices in the educational environment.

Final Considerations

The actions carried out thus far have shown that a playful approach was capable of stimulating interest and enhancing children's understanding of the topics addressed, even at an early age. The positive reception from the school staff created a welcoming environment that facilitated the implementation of the activities and contributed to the students' active participation. This initial experience reveals that the school setting can serve as a fertile ground for health education practices that resonate with children's everyday realities.

On the other hand, some limitations were observed, particularly regarding the engagement of parents and guardians, whose participation was limited to receiving printed and digital materials, without closer interaction. This circumstance

reduced the possibility of assessing concrete changes in family habits.

The continuation of the project at another Early Childhood Education Center will provide an opportunity to rethink strategies for greater community involvement and to conduct a more structured evaluation of the results, thereby consolidating the lessons learned and improving the reach of the activities.

Acknowledgments

To the Municipal Education Department of Rondonópolis-MT, for authorizing this extension project. To CAPES for funding. To PROEX/UFR for extension scholarships and to SECR/UFR for support in translation.

Ethical and Peer Review Principles

The authors confirm that this publication has been peer-reviewed by expert committees from a participating institution in the United Nations Academic Impact (UNAI).

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