

## Health mission: education and prevention for a healthier childhood

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### ***Sustainable Development Goals / ONU***

Health and Well-being

**Abstract.** The purpose of this paper was to describe university outreach actions addressing genetic and rare diseases, intestinal parasitoses, and vector-borne diseases. The health education activities were carried out from April to September 2025 in an early childhood education school located in Rondonópolis (MT). The actions involved children aged 4–5 years, their parents, and school educators, using interdisciplinary approaches. The activities resulted in high engagement, involving approximately 40 children, 12 educators, and 20 family members. A total of 24 fecal samples were collected, and the findings supported the development of educational actions and the provision of feedback to families. The outreach activities proved effective in promoting child health while strengthening collaborative networks among universities, schools, and local communities. These results indicate progress in family empowerment processes and highlight the role of children as active agents in transforming health practices within their family and community contexts.

**Keywords:** Child Health, Health Education, Disease Prevention, Community Outreach.

### **Contextualization and goals**

Childhood is a critical period for human development and requires special attention due to children's vulnerability to various health conditions (Andrade et al., 2013). The promotion of child health is fundamental not only for preventing childhood diseases but also for establishing solid foundations for lifelong well-being (Lourenço, Santos and Carmo, 2014; Costa et al., 2019).

In Brazil, preschool children face challenges related to infectious diseases, including intestinal parasitosis and vector-borne diseases, which can affect their well-being and school performance (Luz et al., 2017). Moreover, the recognition and appropriate referral of genetic and rare diseases still represent challenges for health services, making

intersectoral collaboration between schools and health professionals essential (Macêdo, 2016).

The school environment is a privileged space for health education, as it allows interaction between children, educators, and family members, creating a link between the community and preventive practices (Bragagnollo et al., 2019; Martins et al., 2019). University extension plays a fundamental role in this context, providing opportunities for mutual learning and for intervention in social realities (FORPROEX, 2012; Costa, 2020).

Thus, the purpose of this paper was to describe university outreach actions covering genetic and rare diseases, intestinal parasitosis, and vector-borne diseases. The initiative seeks to

sensitize children, guardians, and educators to the importance of prevention, using playful and interactive methodologies to facilitate learning and encourage the adoption of healthy habits.

## Methodology

The interdisciplinary health education actions were carried out from April to September 2025 in an early childhood education school located in Rondonópolis (MT), involving children aged 4–5 years, their parents, and school educators. These actions were part of the extension project “Integral Children’s Health: an Interdisciplinary Approach at School”, developed under the postgraduate university extension program PROEXT-PG/CAPEs and linked to the Graduate Program in Biosciences and Health at Federal University of Rondonópolis (PPGBioS/UFR). The team included PPGBioS faculty and students, along with undergraduate medical students.

The actions were structured around three health-related axes: genetic and rare diseases, intestinal parasitosis and vector-borne diseases. For the implementation of the activities, the following approaches were used:

- ✓ Interactive Workshops: These activities were developed using playful strategies to address genetic and rare diseases, intestinal parasitosis, and vector-borne diseases, focused on children.
- ✓ Conversation Circles with Guardians: Meetings were organized with guardians to provide guidance and promote the active participation of families.
- ✓ Training Educators: Teachers and staff have received training to act as knowledge multipliers.
- ✓ Performing parasitological examination of feces: Guidelines for parents and guardians for collection and subsequent discussion of test results.
- ✓ Evaluations and feedback: Evaluations of the activities developed were carried out, and feedback and adjustment strategies were collected as necessary.

The data collection instruments include pre- and post-activity feedback questionnaires, participation records, and laboratory analyses of stool samples.

## Results and Discussion

The health education actions carried out resulted in high participation, involving

approximately 40 children, 12 educators, and 20 family members from a municipal early childhood education school located in an area of social vulnerability in the municipality.

The activities on genetic and rare diseases enabled the children to understand, in a playful and accessible manner, the reasons for individual differences, emphasizing that genetic variations make each person unique. Through games and interactive stories, they learned to respect and value these differences, promoting a positive view of diversity. This approach aligns with educational strategies that integrate health promotion and social inclusion (Macêdo, 2016).

With respect to vector-borne diseases, the workshops highlighted that the municipality is an endemic area for such conditions, reinforcing children’s prior knowledge about dengue, particularly regarding the elimination of mosquito breeding sites. However, they also introduced discussions about leishmaniasis, a topic that was new for most participants. Visual representations and dramatizations were used to illustrate transmission and prevention, expanding the children’s preventive repertoire and encouraging community-based health practices (Luz et al., 2017).

Regarding the parasitological examination of feces, the age group of 4–5 years is particularly susceptible to intestinal parasitosis due to frequent contact with contaminated soil and the ongoing development of hygienic habits, as documented in regional studies (Bragagnollo et al., 2019). In our project, a total of 24 samples were collected, and the results supported the development of educational actions with the children and educators. The results were also delivered to parents or guardians, along with guidance on the need for appropriate treatment for these parasitic infections.

## Final Considerations

The extension activities demonstrated effectiveness in promoting child health through interdisciplinary strategies, concurrently strengthening collaborative networks among universities, schools, and local communities. The partial findings indicate an expansion of family empowerment processes and highlight the role of children as active agents in transforming health practices within their family and community contexts.

In addition to the positive impacts observed in the school environment, the extension experience contributed to the academic training of both postgraduate and undergraduate students, enabling a deeper understanding of the social determinants

of health and encouraging interdisciplinary practice aligned with the principles of integrality and equity in child health care.

The next steps involve expanding the activities to a second school and completing the report with comprehensive quantitative analyses, thereby enhancing the project's contribution to public health policies aimed at improving health promotion within the school environment.

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### 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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