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PET-Recebe: health education in the teaching of parasitology

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Resumo: *Health education is important for building knowledge and modifying behaviors in the school population, as well as contributing to a humanized and ethical academic formation. The PET-Parasitology Group conducts health education activities for high school and elementary students, aiming to fill gaps in the understanding of parasitology teaching. Through theoretical-practical workshops, students were instructed on the biology of parasites, their infections, transmission, prophylaxis, diagnosis, and treatment. The students reported popular knowledge that was addressed scientifically, revealing understanding of the topic and its preventions. The use of effective tools and teaching laboratory infrastructure are crucial for the success of health education actions, highlighting their importance in parasitology teaching and academic formation.*

Palavras-chave: *Science teaching. Schoolchildren. Biology. Parasites. Zoology*

Área Temática: *Educação, Saúde.*

PET-Recebe: educação em saúde no ensino de parasitologia

Abstract: *Educação em saúde é importante para construir conhecimento e modificar comportamentos na população escolar, além de contribuir para formação acadêmica humanizada e ética. O Grupo PET-Parasitologia conduz atividades de educação em saúde para alunos do ensino médio e fundamental, visando preencher lacunas na compreensão do ensino em parasitologia. Por meio de oficinas teórico-práticas, os escolares foram instruídos sobre biologia dos parasitos, suas infecções, transmissão, profilaxia, diagnóstico e tratamento. Os escolares reportaram conhecimento popular que foi trabalhado com o científico, revelaram entendimento sobre o tema e suas prevenções. A utilização de ferramentas eficazes e infraestrutura de laboratório de ensino são cruciais para o sucesso das ações de educação em saúde, destacando sua importância no ensino da parasitologia e na formação acadêmica.*

Keywords: *Ensino de ciências. Escolar. Biologia. Parasitoses. Zoologia.*

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PET-Receive: Educación para la Salud en la Enseñanza de Parasitología

Resumen: *La educación en salud es importante para la construcción de conocimientos y modificación de conductas en la población escolar, además de contribuir a la formación académica humanizada y ética. El Grupo PET-Parasitología realiza actividades de educación en salud para estudiantes de secundaria y primaria, con el objetivo de llenar vacíos en la comprensión de la enseñanza de la parasitología. A través de talleres teórico-prácticos, los estudiantes fueron instruidos sobre la biología de los parásitos, sus infecciones, transmisión, profilaxis, diagnóstico y tratamiento. Los estudiantes relataron saberes populares que fueron trabajados con conocimientos científicos, revelando una comprensión del tema y sus prevenciones. El uso de herramientas efectivas y la infraestructura de laboratorios docentes son cruciales para el éxito de las acciones de educación en salud, destacando su importancia en la enseñanza de la parasitología y la formación académica.*

Palabras clave: *Enseñanza de las ciencias. Escuela. Biología. Parásitos. Zoología.*

INTRODUCTION

According to the World Health Organization, about one-third of the world's population is infected with a parasite of public health importance. Parasitic infections are classified as neglected diseases because they predominantly affect populations with low visibility and political and economic voice, who live without access to health services, education, and insufficient or scarce availability of clean water and sanitation (Teixeira, 2020; Ca *et al*., 2024). Moreover, they are infections with a limited pharmacological arsenal for control and treatment; thus also neglected by funding agencies and by the pharmaceutical and biomedical industries in research and development of new therapeutic alternatives and diagnostic tests (Gyorkos *et al*., 2023; Ca *et al.*, 2024).

Parasitic infections are caused by heterogeneous groups of protozoan or helminth parasites and represent worldwide public health problems, especially in developing countries and among the poorest populations due to high prevalence, incidence, morbidity, and mortality (Teixeira *et al.*, 2020; Gyorkos *et al.*, 2023). Among the main parasites, helminths stand out: *Ascaris lumbricoides, Trichuris trichiura, Necator americanus, Ancylostoma duodenale,* and S*chistosoma mansoni*, and protozoa: *Giardia duodenalis, Entamoeba histolytica, Trypanosoma cruzi, Leishmania sp., Plasmodium sp* and *Trichomonas vaginalis.*

In addition to diagnosis and treatment, health education is a tool of great impact for reducing the incidence and prevalence, leading to reduced economic spending on treatment, hospitalizations, more invasive medical procedures, absenteeism from school, work, and leisure activities, and even emotional disorders and retirements (Ca *et al*., 2024; Vasconcelos; Silva-Vasconcelos,2021). Health education plays an important role due to its ability to build knowledge and modify behaviors in the population; contribute to a humanized academic formation and social and ethical values, and in the continued education of healthcare and education professionals (Tavares, Rodrigues 2017; Corrêa *et al*., 2020).

In the absence of a safe vaccine and effective public policies, currently drug therapy is the main method employed in controlling parasitic infections; however, it alone could not prevent reinfection without the population living in constant risk modifying their personal and collective behavior. Additionally, health education is a low-cost strategy capable of achieving lasting results through the strengthening of knowledge and empowerment in seeking

diagnosis and healthcare assistance, correct adherence to antiparasitic treatment, and preventive measures (Tavares, Rodrigues 2017; Falkenberg *et al*., 2014; Cavalcanti *et al*., 2019; Silva *et al*., 2023).

The inclusion of teaching, research, and extension activities during academic-professional training in healthcare significantly contributes to a humanized and ethical formation. Through health education, using innovative teaching strategies and technologies, prevention and control measures of parasitic infections reach the population and, in turn, contribute to professional development. In this scenario, the Tutorial Education Program (PET) aims to promote activities in higher education institutions that include research, teaching, and extension (Brasil, 2006). Through the guidance of a Tutor, PET encourages the completion of extracurricular and interdisciplinary activities that complement academic-professional formation.

Within the social core, the school emerges as a space for socio-educational formation capable of contributing to the individual's development through knowledge from various spheres in an integrated manner (Tapia-gutiérrez, 2017). Despite parasitic infections being part of the school curriculum, the scarcity of discussion on the topic limits the students' knowledge, who are unaware of important information, including parasite life cycles, transmission, signs and symptoms, diagnosis, treatment, and prevention (Vasconcelos; Silva-Vasconcelos; 2021).

The PET Parasitology of the Federal University of Pernambuco (UFPE), through teaching, research, and extension, works on building knowledge in strategies aimed at promoting health through socio-educational activities. Among the activities carried out, we highlight those developed in the school environment, including discussions, games, panels, posters, leaflets, workshops, and practical classes. Thus, the present study aimed to conduct health education activities with high school and elementary students and report the experience of academic members of the PET-Parasitology Group in the teaching-learning process.

OBJECTIVES

The present study aimed to conduct health education activities with high school and elementary students and report the experience of academic members of the PET-Parasitology Group in the teaching-learning process.

METHODOLOGY

Study design, period and target audience of PET-Recebe actions

This is a descriptive, exploratory, and observational research action through teaching and learning in health education with interdisciplinary activities integrated into teaching, research, and extension, along with an experience report from academic members of the PET-Parasitology Group. According to Mussi *et al*. (2021), the experience report allows for the description of experiences lived with the aim of contributing to the construction and reshaping of scientific and popular knowledge, as well as understanding reflections from academics. Furthermore, research action is not only formed by action, practice, or participation, but it also involves the challenge of

acquiring and/or expanding knowledge, contributing to discussions and reflections on everyday problems of different social groups. There are common principles underlying research of this nature, but the methodological approach does not follow a rigid pattern and is quite flexible. In this context, the study design employed here did not require approval from a research ethics committee involving human subjects, considering that it did not involve any collection of biological material, primary data, or the use of structured questionnaires for the collection of individual or collective data.

The project entitled "PET-Recebe" was carried out during the 2023 academic semesters in the Parasitology Laboratories of the Academic Area of Tropical Medicine at UFPE. The target audience was elementary and high school students from public schools in the Metropolitan Region of Recife and Zona da Mata in Pernambuco. The actions were carried out through spontaneous demand from schools and invitations through social media posts offering the Group's service to schedule visits for students.

Training of PET-Parasitology group members

The PET-Parasitology group consists of undergraduate students (n = 18) from the Biomedical Sciences, Nursing, Pharmacy, and Nutrition programs. It is known that undergraduates are in the process of academic-professional and social formation; thus, it was necessary to guide and train them before putting them into practice. The group is constantly accompanied in the teaching-learning process in the areas of Parasitology and related disciplines, as well as in guidance and practices in pedagogical strategies for the transmission and construction of knowledge in health and education actions. Weekly seminars are held, study groups are formed, educational material is created for interventions, dialogues are held to discuss articles, in addition to administrative and management activities.

Stages of the methodological path of educational action
Teaching-learning method and strategy in health education

All activities were conducted in a group discussion format, as it is a method in collective consonance that involves the development of dialogue spaces, where participants express themselves and, above all, listen to one another. Thus, we foster autonomy through problematization, knowledge exchange and reflection using the theory of meaningful learning. The methodological approach is in line with studies by Melo *et al.* (2016) and Farinha *et al.* (2019), which report on collective participation in strengthening and inseparability of teaching, research, and extension.

Preparation of teaching material and workshops

All teaching materials and methodological strategies were planned, discussed, and developed under the supervision of the Tutor by the PET-Parasitology students. The group created banners, audiovisual materials in

slides for theoretical and practical presentations, laminated samples of parasites (cysts, trophozoites, eggs, larvae, adult worms), and leaflets and booklets for distribution during the activities.

Initially, all students were welcomed in the discipline auditorium for a formal presentation of group members and the objectives of the activities. After that, there was a direct argumentation on the importance of human parasitology, its ecological relationship, what parasites and parasitic diseases are, and their impacts on public health and the health-disease process. This was the first moment for the group to briefly assess the level of knowledge and to seek security, confidence, and approach with the students. After this moment, the students were divided into smaller groups (10 ± 4 students/group) for different laboratories to start the educational interventions. The health education actions were organized and implemented in the form of workshops, aiming for greater interaction and theoretical-practical activities; the following workshops were conducted:

Workshop I: An eye on the blade: Uncovering the morphology of helminths and protozoa

With the assistance of banners, projectors, and leaflets, a brief theoretical content was taught covering the taxonomy and morphological aspects, life cycle, habits, and habitats of the helminths *A. lumbricoides, T. trichiura, N. americanus, A. duodenale,* and *S. mansoni*, as well as the protozoa *G. duodenalis, E. histolytica, T. cruzi, Leishmania sp*., and *Plasmodium sp.* The workshop took place in the Microscopy Laboratory. Using microscopes and magnifying glasses, parasite specimens were displayed for visualization and study of their morphological structures. Additionally, anatomical pieces with macroscopic lesions were exhibited, as well as entomological boxes containing biological vectors of the parasites. Furthermore, basic notions of microscopy and laboratory biosafety practices were conducted during this workshop.

Workshop II: Water belly: Understanding schistosomiasis and snail vectors

The workshop took place in the Experimental Schistosomiasis and Molluscary. Initially, a discussion circle was opened to assess the students' previous knowledge and thoroughly explore their understanding of schistosomiasis. Following this discussion, the evolutionary stages of *S. mansoni* were showcased in vitro, along with samples on slides (couples, male and female adult worms, egg, and cercaria) and hepatic, splenic, and intestinal tissues with granulomatous lesions. This material was important for correlating and exploring the signs, symptoms, and pathological process of schistosomiasis. In addition to the in vitro samples, modeling clay was used to create parasite stages for a better understanding of the morphology and physiology of the worm's internal organs and structures. The students observed the execution of parasitological techniques for the detection of *S. mansoni* eggs in fecal material using the spontaneous sedimentation and Kato-Katz techniques.

In the molluscary, the embryonic and morphological phases and characteristics, feeding, reproduction, and maintenance in the research laboratory of *Biomphalaria glabrata* were explored, in addition to conducting practical activities in the population control of snails as a measure to reduce *S. mansoni* infection.

Workshop III: Trichomoniasis: Strategies for preventing sexually transmitted infection

During the event, we set up a booth with banners, panels, posters, and leaflets, as well as a microscope with samples of the protozoan *T. vaginalis*. The objective was to study the morphological aspects, life cycle, transmission, epidemiology, signs, symptoms, pathogenesis, prevention, and treatment of male and female trichomoniasis. In partnership with the State Health Department of Pernambuco, male and female condoms and intimate lubricating gel were made available. We held discussions on female sexual empowerment and sexual education, prevention measures for infection control, and raised awareness of the importance of correct and consistent condom use and routine screenings.

RESULTS AND DISCUSSION

Between March and November 2023, the PET-Recebe Project hosted 5 public schools, 3 from the Metropolitan Region of Recife and 2 from the Zona da Mata region of Pernambuco, reaching 280 students aged between 13 and 19 years old. The activities take place through thematic workshops that are both informative and interactive, covering the main helminths and protozoa with importance in human epidemiology. The theme involving parasitic infectious agents and parasitic diseases is usually presented to students in the Biology discipline and is integrated into the matrix of the National Curricular Parameters (PCN) and the National Common Curricular Base (BNCC).

The selection of them is in line with the studies by Farias *et al*. (2023) and Pinheiro *et al.* (2020), as they are etiological agents responsible for significant endemic infections in Brazil, are part of the high school and elementary school curriculum, and are frequently addressed in the National High School Exam (ENEM). According to Pinheiro *et al*. (2020), texts and figures associated with parasitology questions have been widely used in ENEM exams as an attempt to contextualize and illustrate the content. Additionally, a large portion of ENEM questions present texts and/or figures containing social and scientific information, i.e., information experienced by specific groups of people or vulnerable groups, or information retrieved from scientific research. In this context, the PET-Parasitology Group valued both popular and scientific knowledge and explored interdisciplinary teaching of parasitology, addressing epidemiological scenarios, new therapeutic resources, diagnosis, social vulnerability, and social, political, and economic contextualization, an approach that favors teaching according to the findings of Farias *et al.* (2023).

In the school environment, Corrêa *et al.* (2020), Silva *et al.* (2023), and Farias *et al.* (2023) report the need for health education activities as strategies to build knowledge for the prevention of infections and in seeking health care, including for diagnosis and treatment, and that this theme should be included in textbooks. Additionally, preventive practice acquired through educational processes enables individuals to change their behavior to promote their health, including handling, storing, and preparing food, water consumption behavior, and personal hygiene (Tavares; Rodrigues, 2017).

The concept of extension in health education is a dialogic interaction between the University and social sectors and layers through a relationship marked by direct, open, free, and unoppressed dialogue, by the exchange of knowledge, overcoming the discourse of academic hegemony replaced by the idea of alliances with social movements, sectors, and organizations. The methodological approach of the activities developed here is in line with the studies of Santana *et al.* (2021) and Rédua and Kato (2020); since all teaching-learning activities were carried out based on the theory of meaningful learning to offer students an active view and position of what they experience in communities, family ties, conventional classes, and reading in textbooks. Additionally, we sought to stimulate their practical involvement; reducing the passivity and one-directional teaching they are accustomed to in the school environment, in line with the studies of (Tapia-gutiérrez, 2017).

Throughout the initial approach when we asked what helminths are, what protozoa are, and what the differences between them. The general response was: "roundworms," "worms," "parasites". The answers bring important reflections in the popular context that parasitic infections are solely worm infestations and are associated with the figure of *A. lumbricoides*. Not surprisingly, since ascaridiasis is the most prevalent helminth infection among the school-age population and highly prevalent in the Northeast region of Brazil, where the study was conducted. Our findings and reflections corroborate with the studies of Silva *et al*. (2023) and Júnior *et al*. (2020). No student was able to define protozoa and their difference from helminths. We believe this may be because they are microscopic unicellular parasites and little explored in the popular context. In some groups, "amoeba" was mentioned as a protozoan, referring to the species of Entamoeba and its trophozoite form.

The main symptoms of parasitic infections reported by the students were "stomach ache," "diarrhea," "soft stool," "swollen heart," "enlarged heart," "skin wounds and sometimes in the mouth," "itchy buttocks," "blood in stool," and "iron deficiency." Overall, we observed that the majority of students presented popular concepts or were unfamiliar with some of the parasites discussed. These responses strongly demonstrate the relationship between parasitology and popular knowledge, as well as some knowledge transmitted in the family and school environment. On the other hand, the students actively participated in the expository activities about parasitic infections, asking questions, clarifying their doubts, and sharing experiences.

Regarding the interdisciplinary aspect of parasitology, none of the students reported the importance of parasitology for human public health. According to Farias *et al*. (2023), in their analysis of parasitic disease concepts in textbooks (PNLD 2018-2020), they report the predominance of sanitarianism as the guiding principle in health education, with misinformation and content solely focused on describing etiological agents, zoonotic cycles, and disease symptoms, while ignoring the development of content on the processes and conditioning factors involved in the health-disease context. In parasitology textbooks, parasitism and parasitic diseases are almost always addressed in sections of chapters related to physiology or zoology, ignoring the environmental importance of parasites; in other words, there is no ecological view of parasitology and its interaction with other sciences. In the teaching-learning process, more important than mere memorization is to stimulate situations that

allow for an integrated understanding with social and political reality. In this regard, non-formal education spaces have contributed to this process. We believe in the importance of schools/teachers conducting interdisciplinary activities in parasitology education, which simultaneously involve the biological cycle, pathogenesis, epidemiology, symptoms, and prophylaxis, as well as the scientific names of etiological agents and infections.

The workshops were designed for the study of parasitology in a dynamic, objective manner, and by linking previous knowledge with scientific knowledge. The workshops were designed for the study of parasitology in a dynamic, objective manner, and by linking prior knowledge with scientific knowledge. According to Farias *et al.* (2023), there are several factors to be considered in the teaching-learning process, including infrastructure, lack of laboratories, activity time, teaching materials, and ongoing teacher training. In parasitology education, these elements are important, as it presents complex and abstract content that requires more didactics and the use of new methodologies and resources that many schools do not have.

In the workshop *"An eye on the blade: Uncovering the morphology of helminths and protozoa"* it was the first contact that students had with microscopes, magnifying glasses, and the visualization of different stages of helminths and protozoa, as well as anatomical specimens with lesions from parasitic diseases and medically important vector arthropods. The use of these resources was highly positive; as it encouraged and stimulated the investigative process of the students, who showed interest and verbalized it, correlating the theoretical activity and the printed material on the banners with what they were actually visualizing. Thus, creativity and critical thinking were awakened, facilitating the morphological study of the structures and the popularization of parasitology education.

The Ottawa Charter (1986) defines health promotion as the process of community participation in improving its quality of life and health, including greater control over the process. In this context, the PET-Receive project has committed itself to building knowledge through awareness-raising activities, promoting health education for the school population. Additionally, this population can pass on the information to schoolmates, family members, and the community.

During the workshop "*Water Belly: Understanding schistosomiasis and snail vectors"* students observed the biological cycle and morphological aspects of *S. mansoni* and the handling of vector snail colonies (Fig. 1 A). On this occasion, we highlighted that climatic and economic changes can explain changes in epidemiological scenarios and the introduction of parasites into new geographical areas. In this context, we exemplified cases of urban acute schistosomiasis in coastal regions of the state of Pernambuco and the Metropolitan Region of Recife. In contextualizing the infection's epidemiology, some students reported stories of relatives, friends, and/or neighbors who developed water belly or died. This is not surprising, as Pernambuco is the state with the highest prevalence in mortality and hospitalization due to schistosomiasis (Brito *et al.*, 2023).

We highlight the marginalization of the infection concerning those affected and the information contained in textbooks. Textbooks and news reports always depict figures of rural and/or impoverished populations to highlight those affected by parasitic infections, including schistosomiasis. However, the accelerated process of urbanization,

industrialization of agriculture, and the reduction in job opportunities and quality of life have contributed to the expansion of the epidemiological scenario to metropolitan regions in various states of Brazil (Brito *et al*., 2023).

During the opportunity, the students learned about how the maintenance of the *S. mansoni* strain and *B. glabrata* snail colonies, intermediate host (Fig. 1 A and B), is carried out. The students observed in vivo specimens of the worms and macroscopic lesions in hepatic, splenic, and intestinal tissues in laboratory guinea pigs. Specimens of the developmental stages of adult worms (couples, male and female), eggs, and cercariae were displayed (Fig. 1 C - banner display).

For better understanding of morphology and the life cycle, we used biscuit models, panels, and pamphlets (Fig. 1 E - model of *S. mansoni* developmental stages). According to Zierer (2017) and Gomes et al. (2021), the use of didactic models aids in the comprehension of complex biological cycles and parasites in different evolutionary stages, as these concepts can be challenging for students to grasp and visualize mentally. Therefore, the use of didactic models as an auxiliary tool in the teaching-learning process is extremely beneficial, as it facilitates learning and the representation of concepts.

The students were instructed on the importance of performing parasitological fecal diagnosis before undergoing pharmacological treatment. During the activity, we addressed the pre-analytical, analytical, and post-analytical phases of the exams, from sample collection to processing and result interpretation. Finally, the students observed and performed diagnostic techniques such as spontaneous sedimentation and Kato-Katz, including with positive biological material for later visualization of eggs using a microscope (Fig. 1 D).

Trichomoniasis, only parasitic infection primarily transmitted sexually, was chosen as the theme after discussion among members of the PET-Parasitology Group. The choice is due to adolescence being a stage of growth and development, accompanied by significant behavioral, hormonal, physical, psychological, and social changes. At this stage of life, individuals engage in behaviors for which they are not prepared, including initiating sexual activity early and without guidance. A scenario that contributes to making them vulnerable to exposure to Sexually Transmitted Infections (STIs) and unplanned pregnancy - situations that can compromise health and social life; as highlighted by Pereira, Klein, and Mayer (2019), Carmo *et al.* (2020), and Sá and Santana (2022).

Initially, students demonstrated shyness regarding the topic of STIs. We believe that the theme is poorly addressed in schools and in the family nucleus, corroborating studies by Spindola *et al.*, (2021). This shyness may be related to the visualization of banners with the anatomy of the male and female reproductive system, images with vaginal and penile lesions resulting from trichomoniasis, a counter with informative leaflets about other STIs, penile and vaginal condoms, and intimate lubricating gel (Fig. 1 F and G). The activity began with discussions about the concepts of STIs and STDs (Sexually Transmitted Diseases), and we observed that some students were able to differentiate between the terms. When questioned about trichomoniasis, it became evident from their speech that the students were unaware of the disease and its etiological agent. No student knew that trichomoniasis is an infection caused by protozoa; they stated it was a viral or bacterial infection. The cycle of *T. vaginalis*, methods of prevention, transmission, signs and symptoms, diagnosis, and treatments were addressed.

Figure 1: A - Snail colonies vectors. B - strain of *Schistosoma mansoni;* C - Banner with evolutionary stages of adult worms, eggs, and cercariae of *S. mansoni* and hepatosplenic and intestinal injuries; D - Parasitological techniques by spontaneous sedimentation; E - Biscuit model of evolutionary stages and biological cycle of *S. mansoni*; F - Counter with information leaflets on trichomoniasis and penile and vaginal condoms and intimate lubricating gel; G: Banner with illustration of the anatomy of the female genitourinary system and injuries resulting from trichomoniasis; H - Schoolboy viewing *Trichomionas vaginalis* trophozoite with the aid of a microscope and in the background a banner image with an illustration of the anatomy of the male genitourinary system and lesions resulting from trichomoniasis.

Source**:** Compiled by the authors, 2024.

Trichomoniasis is the most prevalent non-viral STI in the world. Students were surprised to learn that the infection can cause male and female infertility, miscarriage, premature birth, and cervical and prostate cancer. In the workshop, students visualized trophozoites on panels and microscopes (Fig. 1 H). Initially, we observed that STIs were treated as something unlikely to affect them, and that during the workshop there was interest in the topic and individual and collective responsibility in the prevention and treatment of STIs, including trichomoniasis.

Students were surprised to learn about the high prevalence and incidence of the infection in the younger population, the mode of transmission, and did not recognize males as asymptomatic carriers and considered

"vectors of infection," with females being more prevalent and having more severe clinical outcomes. According to Carmo *et al.* (2020), Spindola *et al.* (2021), and Sá and Santana (2022), this scenario is concerning as it reveals the fragility and the need for sexual education and health programs for students, and that school is an important place for the formation of this knowledge.

We discussed the correct and consistent use of condoms (male and/or female), the importance of seeking early diagnosis at any sign or symptom, and emphasized the importance of treatment for both sexual partners. With the support of the State Department of Health of PE, throughout all actions carried out in 2023, approximately 1800 male condoms and 100 female condoms, 2500 sachets of lubricating gel, 300 leaflets on trichomoniasis, and another 750 on HIV and viral hepatitis were distributed. Certainly, this distributed material will contribute to decision-making in preventing the transmission of trichomoniasis and other STI.

CONCLUSIONS

Health Education is essential for disseminating information related to improving quality of life and preventing parasitic infections, serving as a pedagogical tool in health promotion and in expanding information and communication mechanisms, as envisaged by the National Humanization Policy in the Unified Health System - HumanizaSUS.

The extension project represents an important space for the dissemination and popularization of scientific knowledge in health education in the field of parasitology and for the production of research and teaching practices. The PET-Recebe project has shown to contribute to the teaching of parasitology for students through activities that allow the use of different pedagogical materials that provide a relationship between theory and practice, facilitating a more participatory, reflective, and critical teaching-learning process. The workshops were applied dynamically and developed with the participation of the students. The use of teaching and research laboratory equipment facilitated the teaching-learning process and contributed to the successful implementation of the workshops. This study contributed to teaching, research, and extension activities for undergraduate students in the PET-Parasitology Group. On this occasion, Parasitology was explored in an interdisciplinary way, and the PET members experienced experiences beyond the classroom, books, or scientific articles. According to Mussi et al. (2021), the experience report allows the description of real situations that will contribute to the construction and remodeling of scientific and popular knowledge. In it, the researcher must understand and interpret not only the theme addressed but also the social interfaces of the scenario and report their experience in a general and clear way; considering the subjectivity of the individual in the historical and social context.

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