Teacher training for health promotion in elementary school through a didactic manual

Antonia Janieiry Ribeiro da Silva Brito
Centro Universitário Christus, Fortaleza, CE, Brasil

Karla Angélica Silva do Nascimento
Centro Universitário Christus, Fortaleza, CE, Brasil

Abstract
The study aims to analyze the contributions of a didactic manual about the actions of prevention and health care in the initial training of teachers. The research was conducted in three phases: i) survey: application of the online questionnaire with students of the Pedagogy course and elaboration of the manual; ii) implementation of the manual through a hybrid minicourse; iii) description, data organization and analysis of the validation of the manual by the Pedagogy students. Participants' knowledge about health at school was minimal before they learned about the manual and experienced the activities in the minicourse. After the minicourse, the students recognized the importance of the study about health – body, oral and mental hygiene, and body practices. Despite this, most thought that the health theme should be dealt with only by specialists but understood that teachers and schools play an important role in health promotion. The results show that the manual broadened the students' knowledge and skills regarding health for its promotion at school. Therefore, the concern with the health theme must overcome the reductionist way it is seen and be incorporated into the curriculum of undergraduate students so that, in this way, the theme of Health in Education can be developed clearly and with propriety.

Keywords: Textbook. Manual. Health Promotion. Teacher Training.

Formação de professores para a promoção da saúde no Ensino Básico por meio de manual didático

Resumo
O estudo tem como objetivo analisar as contribuições de um manual didático acerca das ações de prevenção e cuidado com a saúde na formação inicial de professores. A pesquisa foi conduzida em três fases: i) levantamento: aplicação do questionário online com os alunos do curso de Pedagogia e elaboração do manual; ii) implementação do manual mediante minicurso híbrido; iii) descrição, organização dos dados e análise sobre a validação do manual pelos acadêmicos de Pedagogia. O conhecimento dos participantes acerca da saúde na escola era mínimo antes de conhecerem o manual e vivenciarem as atividades no minicurso. Após o minicurso, os alunos reconheceram a importância do estudo sobre saúde – higiene corporal, bucal, mental e práticas corporais. Apesar disso, a maioria
pensava que o tema saúde deveria ser tratado somente por especialistas, mas entendeu que os professores e as escolas desempenham um papel importante na promoção da saúde. Os resultados revelam que o manual utilizado ampliou o conhecimento e as habilidades dos alunos a respeito da saúde para sua promoção na escola. Portanto, a preocupação com o tema saúde deve superar a forma reductionista como é vista e ser incorporada no currículo dos estudantes de graduação para que, dessa forma, o tema Saúde na Educação possa ser desenvolvido de forma clara e com propriedade.


### 1 Introduction

Estimates of the prevalence of diseases caused by poor basic hygiene indicate that 1 in 3 children worldwide suffers from infections that could be cured with healthy habits (WHO, 2019). Seeking to mitigate such indicators, it is perceived that prevention and school intervention practices become essential to reduce the incidence of health problems that interfere with children's learning and development.

Given this fact, how can teachers help promote health at school? Before attempting to answer this question, verifying how knowledge and skills related to health and well-being are inserted in initial teacher training is essential. In recent research, it was identified that, of the 396 Pedagogy courses analyzed through the e-MEC system, 68% of the Pedagogy courses do not have in their curricular matrix or their pedagogical project mandatory or optional subjects related to Health (BRITO; BRAYNER; NASCIMENTO; 2022; NASCIMENTO; FIALHO, 2020). Despite not including the topic of health in the curriculum, it is necessary to clarify that this theme becomes essential for the human formation and the promotion, prevention, and health care, given its relevance to improving the quality of life of the school.

Bearing in mind that continuing professional development to raise teachers’ knowledge and skills regarding health promotion is essential, the work described here is based on the premise that by training teachers with the foundation of these competencies,
they will be more confident in addressing health issues and better able to contribute to health promotion at school.

Likewise, recognizing that in the early years of elementary school, students are in childhood, indicated as a decisive stage for the construction of behaviors and habits that will have repercussions in adulthood, the need to understand aspects capable of relating health and education in teacher training was observed. Moreover, given this information, the question-problem of this study arises: how can the didactic manual on prevention and health care actions contribute to the initial training of teachers?

Thus, the primary purpose of this article is to analyze the contributions of a didactic manual about preventive actions and health care in the initial training of teachers.

2 Methodology

This is a descriptive exploratory study with a qualitative approach of applied nature using research-action principles. In this sense, Franco (2012) clarifies that research action, with its structure within its generating principles, is eminently pedagogical research, within the perspective of being the pedagogical exercise, configured with an action that makes the educational practice more scientific, using ethical principles that visualize the continuous formation and emancipation of all subjects of the practice.

Initially, it was identified that the Pedagogy course of a public university in Fortaleza did not have the health theme in its curricular matrix nor the course menus during the period of this study. In the face of this absence, the intervention occurred with the proposal of elaborating a didactic manual about the importance of health in teacher education. For its implementation, a 20-hour hybrid minicourse was offered from November 29 to December 15, 2022, to 20 students from the Pedagogy course of this university. Of the 52 enrolled, only 16 were able to participate. It is believed that the reduced number is due to the school term since the end of the semester brings many activities to be performed by the students. Thus, the research was divided into three stages.
In the first stage, the 16 participants were asked to fill out an online questionnaire about their previous knowledge related to health in training and educational practice. Given the answers, the researcher designed and implemented a manual in the minicourse to aid the understanding of the following themes: Oral Health; Mental Health; Body Hygiene; Food and Nutrition Education, and Body Practices. The minicourse, with the intent of orienting the students about preventive actions and health promotion in Basic Education, was divided into two parts: 12 hours of face-to-face sessions developed in a computer lab of the selected university and 8 hours with asynchronous activities available in the Virtual Learning Environment (VLE), managed by Unichristus, through the Moodle platform. In addition, some digital educational resources were presented since the respondents informed that they support the development and study of the theme. The diagnosis was influential in planning the minicourse and preparing the manual because it made it possible to determine the basic and necessary themes for health promotion and prevention in education based on the Transversal Contemporary Themes (TCT).

Regarding the manual, entitled Manual of Health Care: Teacher Training in Basic Education, registered in EduCapes (http://educapes.capes.gov.br/handle/capes/720453), we sought to meet the pedagogical criteria of the TCT, with pedagogical strategies through activities, games, and games aimed at education professionals, involving health in the school context. Furthermore, it was possible to count on the participation of specialists in the areas of psychology, dentistry, physical education, nutrition, and nursing, who produced slides and videos available in the manual, with basic notions of health care in Basic Education. As a result, the manual was organized as follows:

a) Organization of the themes: based on the need to address important topics of the school community, as well as families and society, employing a general introduction, teaching strategies, and actions, suggestions for educational games, as well as learning more and interesting links;

b) Theoretical referential: a referential was used to base the results of the manual's elaboration.

c) Canva: a web application for formatting the manual;
d) Hyperlinks, videos, images, etc.;

e) Elaboration of educational games related to health at school.

Concerning the minicourse, its planning was developed based on the manual. The readings and activities were available in the VLE, whose schedule allowed the student to organize himself to accomplish them within the pre-established deadline. Besides, since the beginning, the participants knew about the need to do them and understood that they were part of the evaluation that was divided into 1) Challenge Question; 2) Forum; 3) Task, based on the content covered in the manual, in addition to the scheduled face-to-face activities.

In the next stage, the face-to-face meetings in the computer lab were developed, important moments to get to know the students better, present the study schedule, the tools used in the VLE, the manual proposal, and discuss the five proposed themes. All the students' participation, both in person and remotely, was fundamental to understanding how the manual and, consequently, the minicourse contributed to the training on the theme.

Given this, the data generated in the minicourse were organized to be confronted from the triangulation (field diary, photographic record, audio, and online questionnaire), concomitance, and additional information. For Minayo (2008), triangulation requires even the combination of multiple research strategies capable of apprehending the qualitative dimensions of the object, ensuring the representativeness and the diversity of positions of the students who form the research universe.

In the third and last stage, the transcripts of the audios were made, and the observations contained in the field diary were structured, as well as the evaluation of the activities made available in the VLE of the minicourse; that is, all the data that included facts and events presented during the minicourse and, consequently, in the use of the manual, were organized. In possession of this material, several readings were performed to constitute an overview of the data and then analyze the elements of the research.

Through the transcripts, Bardin's method of content analysis (2011) was sought, which was verbally transcribed (by audio, observations, notes, and online questionnaire).
The diagnosis was made through the absence of disciplines related to education and health amid the pandemic. Thus, the need arose to work on the issue of health in education in the school context.

After a brief content analysis, four categories resulted: 1) Definition of health at school; 2) Challenges in the implementation and consolidation of health in education; 3) Health in education X daily academic reality; and 4) Health at school X teaching practice. Based on these categories, the collected data are discussed and presented in the following subsections in the next item.

3 Results and Discussion

Before presenting an in-depth analysis of the participants’ answers, it is interesting to briefly describe the profile of the 16 students, starting with their semester, age, and opinion about the importance of health throughout life. Notably, all questions in this first part of the instrument were mandatory, and no participant refused to answer them.

Graph 3. Pedagogy students’ period

As seen in graph 3, the 16 participants belonged to different semesters; three were in their first semester, eight were in their second semester, and the rest, 5 participants, were each in their third, fourth, fifth, sixth, and seventh semesters, respectively.
Regarding age, most of them (10) were between 18 and 23 years old, and when compared to the period they were in, selected by them in the online questionnaire, it was observed that they were students from the 2nd to the 4th semester. Next, four students were between 24 and 29 years old, and two were between 36 and 41 years old.

As for the "Importance of health throughout life," see Graph 5, the 16 participants answered that they care about having a healthy diet and healthy hygiene habits. About the regular practice of physical activities and exercises, 11 answered yes, that they have this habit, and five answered that they do not exercise. When asked about leisure time, 15 said they did, and only one said they did not include it in their daily routine. Finally, when asked if they considered themselves to be healthy individuals, 12 said yes, but four said they did not consider themselves to be healthy individuals.

Graph 5. Importance of health throughout life
It is noteworthy that the excerpts selected for transcription refer to the most elucidative speeches for the understanding of the thematic categories emerging from the content analysis because the dubious and not very expressive answers of each category were suppressed for not contributing to the reading comprehension or even enabling an elucidation or deepening of the debate.

a) **Category 1 - Definition of health at school**

The school plays a crucial role in forming individuals and contributing to their social, emotional, and cultural development. Thus, it becomes an opportune space for health promotion practices aimed at discussing the students’ individual and common needs.

Although health is fundamental to human development, there is a lack of knowledge and/or distance in relation to its promotion to the school's dynamics and a lack of its definition and purposes. Before the minicourse, the students pointed out a very limited definition of health, as they did not know. Here are some answers given:

I don't understand much, but the basics that I know is that it is an important topic to be worked on in the classroom through everyday life (A1).

I believe that it is looking to teach students the basics about diseases, pregnancy, precautions, vaccines, and sexual abuse... (A2).
Health at school involves personal hygiene care in the school environment (A4).

Actions that bring benefits to health at school (A12).

According to Casemiro, Fonseca, and Secco (2014), school health as a public policy involves municipal and national initiatives. There are intervention and reflection actions associated with the implementation of health promotion strategies in schools and other topics, such as nutrition, weight control, oral health, eye care, prevention and control of dengue fever, prevention of alcohol, tobacco, and other drugs use, and sexual and reproductive health.

Given this, in the statements after the minicourse, the participants defined health at school as a way to promote this theme, with the valorization of a life education model and the development of skills for self-care.

Health at school is the relationship between health and education. Promoting a link between family, school, and society. Health should be studied since early childhood education, whether in the psychological, physical, body, nutritional, or even hygiene-related areas (A1).

It’s self-knowledge, self-care, and responsibility (A2).

It’s very important to take issues to the schools so that all students know how to take care of their health and those of their family members, and it is always good to teach about physical and mental care to improve the student's performance (A4).

It’s the integration of healthy practices that are indispensable in the life of a human being, practices that should be reinforced in the school environment and the individual's life (A12).

In an attempt to understand the school health experience, the speeches reveal the importance of health promotion and care at school. It also promotes a link between family and community, contemplating from kindergarten to high school, whether in psychology, body, nutrition, or oral health.

According to Carter (2014), it becomes vital to propose health-related issues in the school environment so that everyone involved knows how to care for their health, improving their performance and the community's health around the school.
It is inferred that, after the minicourse, the participants could talk about health at school with more propriety. Moreover, they realized the need to introduce health in education, to be a two-way street between teachers, health agents, students, and family, so that, in this way, the necessary knowledge is passed on, minimizing possible diseases and ensuring prevention and health care.

Health at school is an important theme to be highlighted in the Pedagogy course because it is related to the formation of the individual. Casemiro, Fonseca, and Secco (2014) emphasize that it is not only about the health professionals' performance; training should be spread in all segments, not running away from the teacher's performance.

Integrating healthy practices in the family, school, and community environments is essential in the individual's life, aiming at promotion and prevention. According to Dantas, Rezende, and Pedrosa (2009), health encompasses a broad area of knowledge that ranges from simple care to a certain complexity that requires an intervention by the school body to help children and adolescents in their development.

It is noticeable, in the statements, that the subjects of health and education are complementary, especially when it comes to making students aware of various healthy habits, from good nutrition, brushing, body practice, and hygiene, to their mental health.

b) Category 2 - Challenges in implementing and consolidating health in education

Implementing the theme of health in education in the school pedagogical plan becomes challenging because they seem to be two areas of knowledge that are distant from each other in society. It makes it seem that there are no means for pedagogical actions to collaborate with health and that the teaching practice cannot streamline them. On the other hand, through initial or continued teacher training, it is possible to establish this link and bring education and health closer together in the school context.

In this sense, before the minicourse, the participants pointed out that the lack of resources is aggravating to implementing health promotion actions in schools.
Lack of training and knowledge about (A1).

The lack of interest regarding the proposed topic (A13).

For the students, a point worth mentioning is the financial resources to be used for investments focused on training actions for education professionals involving promoting and preventing health in education. According to Quiroga (2022), education professionals lack knowledge about health in the school environment.

Right after the minicourse, when asked about the challenges in implementing and consolidating health in education, the answers were as follows:

Besides the lack of public policies and government funding, good preparation of teachers and academics on knowledge concerning health (A1).

The separation between the fields of knowledge in society, as if education can't work together with other areas, for example, with health, as if there were no means for the actions that collaborate with health to be streamlined in the enchanting way (A13).

The use of pedagogical practices focused on health in the school environment also requires interest from the school manager to welcome and insert proposed actions for implementing issues related to education and health in the school environment, as well as the continued training of teachers.

c) Category 3 - Health in education X everyday academic reality

The academic reality focused on health, and education is far from becoming a daily practice, considering the few institutions contemplating this theme in their curricular matrix. About this, before the minicourse, the students' answers show that.

It has not yet been relevant in this area since I've had no chair and no project focused on the topic (A4).
It's applied through awareness-raising actions while mental and emotional health, diseases, disorders, and so on (A7).

In courses, articles, lectures, and video classes on YouTube (A9).

In my opinion, it's applied in a minor way in the simple washing of hands (A11).

In the students' speeches, it can be noticed that knowledge about health at school is intrinsic to life experiences, i.e., if the individual knows that he/she should wash hands, then this information can be passed on to others. However, promoting health is not only that, according to Batistella (2007, p. 28), "health is a construct that has the marks of its time. It reflects the economic, social and cultural context of a time and place" and, therefore, it must be studied and understood in different sectors, including the school.

After the minicourse, the answers were as follows:

With this minicourse, I understood that this theme is important and needs more time to deepen (A4).

The readings we did, and the manual brought information about health that I didn't have; mental health is very important now (A7).

It applies a lot, especially to the issue of how our children are impacted because of the pandemic we are going through (A9).

It helps in learning and relationships, enhancing knowledge (A11).

Comparing the answers before and after the minicourse, it seems that some resources (lives, videos, podcasts) address health-related experiences in an extracurricular way. Although the autonomy to seek these tools is valid, it is necessary to include these themes in the curricula of the Pedagogy courses, considering that the actions aim at a more solid construction related to health in the school environment, due to the essentiality of healthy habits practices in the individual's life, besides that they impact the academic community with this educational policy.

According to Menezes et al. (2020), Pereira, Melo, and Nascimento (2021), the teaching practice involving discussions about healthcare should also understand self-care; that is, it is important to be well in order to be with their students. By understanding this
process, the patient develops the practice of self-care activities with students, teaching them how to manage and deal with challenging situations.

d) Category 4 - Health at school X teaching practice

In the current Brazilian context, there is a need to address issues related to health at school through teacher training, providing a greater interest in the subject through pedagogical strategies and digital educational resources, and showing playful and better didactic ways to improve student learning.

Before the minicourse, the participants had the following opinions:

- In the course, there are no disciplines or projects about health (A1).
- Unfortunately, no training is offered on the topic (A11).
- Formally we don't have health-related subjects directly (A15).

It is observed that, after the minicourse, through the participants' answers about the importance of studying the health theme in the Pedagogy course for a manual, as well as through the organization of the minicourse, it was observed that the theme helped to better understand the health promotion actions in the school context.

The minicourse provided a greater interest in the theme because I could see the importance and the need to study health. The manual brought the theory and practice through pedagogical strategies and digital resources. It was a great learning experience! (A1).

Now I will be able to expand my field of action by seeking to add together strategies that allow me to work in both areas and thus unite them in the best way to build knowledge and transform knowledge (A11).

It opened my eyes to the fact that health goes beyond just washing hands; the psychological is also part of it. We could have more classes on how to deal with mental health in the classrooms (A15).
As Casemiro, Fonseca, and Secco (2014) state, on the other hand, schools need to adopt actions throughout their structure and partnerships between the community and the health sector. This implies teacher training for understanding health improvement for individual behavior change and public sector competencies on population health and organizational and community change. Regarding the manual, students reported that the resource:

The manual has many tips for developing with the students at school. Even reading and deepening our knowledge brings elements such as body, oral and mental hygiene, etc. (A1).

It has several ludic forms that will be used in the school environment showing the best didactics to pass on in the classroom to the students (A11).

It contributes positively. However, education must improve its knowledge concerning health (A15).

After the minicourse, the students were asked which themes they considered important to be worked on at school. Furthermore, according to graph 6, those involved in this research were unanimous, identifying three main themes: nutritional and food education, oral hygiene, and physical activity. Besides these, 15 pointed out habits, body hygiene, and 10, sexual orientation.

**Graph 6. Important health themes in the school context**

Source: Autor-generated material (2022)
Favoring the discussion of these issues makes the school strengthen its ability to be a healthy environment for living and learning, as it promotes school/community outreach projects, health promotion programs for staff, nutrition programs, opportunities for physical education and recreation, counseling and social support programs, mental health promotion (BRANDENBURG et al., 2020), implementation of practices that respect well-being, as well as personal achievements.

According to Rocha et al. (2011), and Veras, Ferreira, and Lourinho (2020), school health is an interdisciplinary and intersectoral proposal of broad relevance that aims to develop individual and collective skills actively and proactively to build life and health project in order to achieve a healthy quality of life. This way of doing health implies awareness, participation, spontaneity, cooperation, and values, that is, improving the human being's physical, mental, and social skills.

4 Conclusion

On the path taken in this research, we sought to develop a manual to support teacher-mediated activities in a learning experience with pedagogical strategies for health promotion. For this, it was necessary to analyze the theoretical referential and determine the starting point.

Thus, it is resumed here that the main objective of this research was to analyze the contributions of a textbook about the actions of prevention and health care in the initial training of teachers. It was possible to understand, during the research, that it is essential that teachers are aware of the importance of combining education and health because these, in turn, can guide the pedagogical practices of health prevention at school. Thus, it is necessary that, since the initial training and during permanent updating movements at work, teachers are aware that this theme needs to be contemplated.

Through the questionnaires (initial and final), it was observed that it is vital to promote the initial training of teachers with the theme of education and health at school since formative weaknesses must be minimized through constant improvement.
The implementation of the didactic manual has become fundamental to promote actions aimed at health care in school, being a tool used as a pedagogical strategy to contribute to health promotion in the school environment, especially in the initial training of teachers, because its content is educational and interactive, whose approach includes topics related to food and nutrition education, oral health, mental health, body hygiene, body practices, and digital educational resources.

The knowledge related to health at school is little treated in the selected university's Pedagogy course; therefore, such topic must be included in teacher training. The participants' speeches show that, before studying the subject through the textbook, they dealt with health through their own experience, resulting in information lacking veracity and coherence in many cases. Consequently, academics may find it challenging to make the fundamental connections between health and education, so they recognize this importance in their future role as teachers and health promoters in the school. Thus, teachers must understand how health and education are linked, enabling them to acquire the knowledge and skills to be effective health promoters and actively engage in this role.

In addition to continuing professional development, including critical public health skills in initial teacher education courses can contribute to meeting these expectations.

Although this research is limited in representativeness, it is assumed that those who participated in the research at both times (face-to-face and distance) were indeed more interested in health; therefore, the results obtained highlight the need for even greater changes in existing curricula.

Therefore, the concern with the health theme must overcome the reductionist way it is seen and be incorporated into the undergraduate students' curriculum so that, in this way, the Health in Education theme can be worked on clearly and with propriety.

References


DANTAS, Vera Lúcia de Azevedo; REZENDE, Regiane; PEDROSA, José Ivo dos Santos. Integração das Políticas de Saúde e Educação. In: Saúde e Educação: uma
relação possível e necessária. Brasília: Ministério da Educação (Salto para o Futuro), 2009.


**Antonia Janieiry Ribeiro da Silva Brito**, ORCID: http://orcid.org/0000-0002-6186-1782
Contribuição de autoria: escrita, recolhimento e análise dos dados.
Authorship contribution: writing, data collection, and analysis.
Lattes: http://lattes.cnpq.br/0208437413233150.
E-mail: janieiry2002@yahoo.com.br

**Karla Angélica Silva do Nascimento**, ORCID: http://orcid.org/0000-0001-6103-2397
Programa de Pós-Graduação, Centro Universitário Christus
Doutora em Educação Brasileira. Professora dos cursos a distância e presenciais, de modo respectivo, nos níveis de graduação e pós-graduação do Centro Universitário Christus - Unichristus. Professora do Mestrado Profissional em Ensino na Saúde e Tecnologias Educacionais – MESTed
Contribuição de autoria: orientação e supervisão do artigo.
Lattes: http://lattes.cnpq.br/5267121220942302
E-mail: cooread01@unichristus.edu.br

**Responsible Publisher**: Cristine Brandenburg

**Ad-hoc expert**: Cecilia Rosa Lacerda and Francione Charapa Alves

**How to cite this article (ABNT)**:

Received on January 27, 2023.
Accepted on March 19, 2023.
Published on april 23, 2023.