

Educational practices on Sexually Transmitted Infections in light of complex thinking

Práticas educativas sobre Infecções Sexualmente Transmissíveis à luz do pensamento complexo

Fernanda Karla Metelski¹, Bruna Coelho^{2,3}, Betina Hörner Schlindwein Meirelles², Fernando Miguel de Sousa², Carine Vendruscolo¹, Ana Lúcia Schaefer Ferreira de Mello²

DOI: 10.1590/2358-2898202514492901

ABSTRACT Intersectoral collaboration for health educational practices in the school environment is strengthened by the School Health Program. The objective of this study is to understand the development of educational practices on STI/HIV/AIDS carried out in schools from the perspective of the multidisciplinary health team, in light of complex thinking. This is a qualitative study that used constructivist grounded theory as an analysis method. Intensive interviews were carried out with 35 health professionals in two sample groups, audio-recorded, transcribed and analyzed, in three stages of coding: initial, focused and theoretical. The central category 'Revealing the development of educational practices in STI/HIV/AIDS within the school' emerges from nine subcategories that develop a dialogue with the work 'The seven necessary knowledge for future education'. The STI/HIV/AIDS theme is considered a priority and pertinent knowledge for educational practices, which requires considering the complexity of the human being to understand profound issues inherent to the human condition, and which breaks the paradigm of fragmentation of knowledge. Educational practices need to go beyond lecture models, be diverse and face challenges and uncertainties, avoiding blindness in knowledge, teaching, understanding and human ethics, and bringing together young people, teachers and professionals.

KEYWORDS Health education. HIV. Intersectoral collaboration. Health promotion. Nursing.

RESUMO A colaboração intersetorial para as práticas educativas em saúde no ambiente escolar é fortalecida pelo Programa Saúde na Escola. O objetivo deste estudo é compreender o desenvolvimento das práticas educativas sobre IST/HIV/aids realizadas nas escolas na perspectiva da equipe multiprofissional de saúde, à luz do pensamento complexo. Trata-se de um estudo qualitativo que utilizou a teoria fundamentada nos dados construtivista como método de análise. Foram realizadas entrevistas intensivas com 35 profissionais de saúde em dois grupos amostrais, audiogravadas, transcritas e analisadas, em três etapas de codificação: inicial, focalizada e teórica. A categoria central 'Revelando o desenvolvimento das práticas educativas em IST/HIV/aids no âmbito da escola' emerge de nove subcategorias que desenvolvem um diálogo com a obra 'Os sete saberes necessários à educação do futuro'. O tema IST/HIV/aids é considerado prioritário e um conhecimento pertinente para as práticas educativas, que requer considerar a complexidade do ser humano para compreender questões profundas, inerentes à condição humana, e que rompa com o paradigma da fragmentação dos saberes. As práticas educativas precisam superar os modelos de palestras, ser diversificadas e enfrentar os desafios e incertezas, evitando as cegueiras do conhecimento, ensinando compreensão e ética humanas, e aproximando jovens, professores e profissionais.

PALAVRAS-CHAVE Educação em saúde. HIV. Colaboração intersetorial. Promoção da saúde. Enfermagem

¹Universidade do Estado de Santa Catarina (Udesc) Oeste - Chapecó (SC), Brasil.
fernanda.metelski@gmail.com

²Universidade Federal de Santa Catarina (UFSC) - Florianópolis (SC), Brasil.

³Secretaria Municipal de Saúde de Florianópolis (SMS) - Florianópolis (SC), Brasil.



Introduction

Schools are spaces that promote the development of critical and political thinking, as they build values, beliefs, concepts and ways of seeing and facing the world. The integrated approach to health and education in the school context provides learning as it seeks the shared construction of knowledge through historical, personal and collective interventions¹. Schools are recognized as an appropriate context to influence the health of children and adolescents and to consolidate health promotion actions to address social vulnerabilities, as they are inserted in the context of life, which favors initiatives aimed at reducing health risks^{2,3}.

In the 1980s and 1990s, the World Health Organization launched the Health Promoting Schools initiative, influencing several countries⁴. In Brazil, the in School Health Program (PSE) is an intersectoral health and education policy that was established in 2007 and is an intersectoral meeting point between public schools and Primary Health Care (PHC). PHC promotes practices for the prevention, promotion, recovery and maintenance of the health of individuals and human groups, focusing on measures aimed at promoting health in schools⁵⁻⁷.

Intersectoral health and education policies aimed at children, adolescents, young people and adults in Brazilian public education are unified to seek this provision in a comprehensive manner, by promoting well-being and improving quality of life. To this end, they involve students and professionals who work in schools, strengthening them in terms of health, social and educational issues^{4,5}.

The PSE contributes to the comprehensive education of students through the development of actions of prevention, care and health, to address vulnerabilities. These, in turn, compromise the development of children and young people enrolled in public education institutions. With these features, the PSE is considered one of the most evident policies for children and adolescents in Brazil^{1,5,8}.

At the international level, the sociocultural, economic and regional context and needs have been valued for assessing adolescent health, especially in developing countries. However, there are also weaknesses in the implementation of actions due to the lack of attention from authorities in some situations, as well as access to health, leisure and income generation, making it essential to analyze the results of the programs and their economic viability to end inequities⁹.

On the other hand, the preventive, welfare-based and informative model, with a focus on fragmented and individualized actions, is mixed with the PSE guidelines. Traditional educational actions, although widespread in health education, find in health promotion the recognition of the centrality of social determinants for the health-disease process, favoring social participation and comprehensive and sustainable responses to problems. Added to these aspects is the prerogative that research involving the PSE also needs to bring theory and practice closer together and strengthen principles such as comprehensiveness and intersectorality⁹.

In this sense, one of the concerns and focus of action of the PSE has been the promotion of the health of children and adolescents, based on the discussion and educational practices on sexual and reproductive health and prevention of Sexually Transmitted Infections (STIs)/HIV/AIDS⁷. The school environment represents an important educational space to address issues related to sexuality, as it enables the development of skills that enable conscious choices and reduces vulnerability related to STIs/HIV/AIDS¹⁰.

Although there is currently a slowdown in the growth of the youth population, adolescents and young people between the ages of 10 and 24 represent, on projection, 21.7% of the Brazilian population¹¹. They correspond to a population group that requires new models of health promotion, as they have a particularly healthy life cycle and suffer from issues related to habits and behaviors that, in certain

circumstances, make them vulnerable^{11,12}. In 2019, the National School Health Survey indicated that 35.4% of schoolchildren aged 13 to 17 had had sexual intercourse at some point, and of these, only 59.1% had one of the partners use a condom during the last sexual intercourse¹³.

In 1999, the United Nations Educational, Scientific and Cultural Organization (UNESCO) asked the philosopher Edgar Morin, born in France in 1921 and one of the greatest exponents of French culture in the 20th century, to organize a set of reflections that would serve as a basis for rethinking education in the 21st century, which gave rise to the work 'Seven complex lessons in education for the future', which was divided into seven subtitles: Detecting error and illusion; Principles of pertinent knowledge; Teaching the human condition; Earth identity; Confronting uncertainties; Understanding each other; and Ethics for the human genre¹⁴.

Morin published a series of works on complex thinking and proposed that complexity is the fabric of events and actions, interactions, feedbacks, determinations, and coincidences that constitute our phenomenal world. Thus, the complex human being admits order, disorder, ambiguity, and uncertainty, understanding that we are produced and we produce, we are the reflection of and we reflect society¹⁵.

Thus, in this study, we chose to relate the PSE to the theoretical assumptions of the work 'Seven complex lessons in education for the future', by Edgar Morin, which reviews current pedagogical practices. The author situates the importance of education in the totality of challenges and uncertainties when addressing fundamental themes for contemporary education, often ignored or made invisible in debates on education policy. This work is particularly dedicated to educators, but is accessible to all those interested in building a more humane, supportive future marked by the construction of knowledge, with repercussions on the paths that open up to all those who think, provide education and are concerned about the future of children and adolescents¹⁴.

Considering these assertions, we questioned how educational practices are developed in schools from the perspective of the multidisciplinary team and from the perspective of complex thinking. The objective of this study is to understand the development of educational practices on STI/HIV/AIDS carried out in schools from the perspective of the multidisciplinary health team, in light of complex thinking, present in the work of Edgar Morin.

Material and methods

This is a qualitative study that used Constructivist Grounded Theory (CGT) as a methodological framework. In CGT, data are created jointly by participants and researchers, through interaction, seeking to understand the meanings surrounding the phenomenon^{16,17}.

The study was conducted in a city considered a hub in the west of Santa Catarina, a state in the southern region of Brazil, which is a reference for more than 200 cities in terms of health and education, and a priority for the eradication of AIDS. The study explores the category 'Revealing the development of educational practices on STI/HIV/AIDS in schools', which is an offshoot of the research project entitled 'Best practices in managing care for people living with HIV/AIDS in the health care network of a city in the west of Santa Catarina'. To meet the objective of the present study, the hypothesis was that 'multidisciplinary teams develop educational practices, predominantly informative, on STI/HIV for school students, in partnership with teachers'.

The research participants totaled 35 people, 24 of whom were professionals and/or managers working in PHC, and 11 professionals from the Specialized Care Service, thus constituting two sample groups. The inclusion criteria were professionals who had been working for more than six months in the respective service and who were, at the time of data collection, developing some type of practice related to HIV/AIDS. The exclusion criteria

were professionals who were away from the service for any reason.

The intensive interviews were conducted individually between 2020 and 2021. In order to equip herself, the interviewer took a course on the theoretical-methodological framework of Grounded Theory. A semi-structured script was used in the interview, which was discussed between two researchers and tested with the first participant in the study. All interviews were audio-recorded, and the transcript was sent to each participant via email or WhatsApp, who validated and/or suggested minor changes.

The data were analyzed in three stages: initial, focused and theoretical coding¹⁶. For this purpose, the Atlas.ti software version 9[®] was used, which helped in organizing the data. Memos and diagrams were prepared throughout the study in order to assist in the data analysis process. Objective data saturation was verified through the closing technique¹⁸, which was obtained in interview number 16; however, data collection continued due to the main objective of the research project. The central category presented in this study emerges based on nine subcategories and 65 initial codes.

The delineation of the subcategories, as well as the search for a deep understanding of their meanings, uses the perspective of complex thinking as a philosophical reference, creating a dialogue with the work 'Seven complex lessons in education for the future'¹⁴, which is presented in the discussion. Each of the seven knowledges was organized with the help of the Microsoft Word[®] text editor, recording the main ideas and concepts. Finally, each subcategory was examined in light of each of the knowledges, verifying, recognizing and creating approximations between them.

The ethical aspects related to research involving human beings, as recommended in Resolutions No. 466/2012¹⁹ and No. 510/2016²⁰ of the National Health Council, were respected, and the research was approved under the

substantiated opinion No. 3,956,203/2020, by the Research Ethics Committee of the Federal University of Santa Catarina, with Certificate of Presentation of Ethical Appreciation (CAAE) No. 29839720.1.0000.0121. All participants signed the Free and Informed Consent Form, and confidentiality of identity and privacy were guaranteed through the assignment of codes with letters and numbers for the interviews.

Results

Of the 35 health professionals from the multidisciplinary teams who participated in the study, 24 work in PHC, aged between 25 and 57 years (M: 37.4; SD \pm 7.7), the majority of whom were female (n: 23; 95.8%), and nurses (n: 21; 87.5%). There was also participation of a nursing assistant (4.2%), a doctor (4.2%) and a dentist (4.2%). The professionals' training time was, on average, 13.4 years (SD \pm 6.6). Regarding education, specialization predominated (n: 12; 50%). The average time working in the current service was 8.7 years (SD \pm 6.4), and 16 (66.7%) nurses worked as service coordinators.

The second sample group consisted of 11 professionals working in the Specialized Care Service (SAE) for HIV/AIDS, with an average age of 43.2 years (SD \pm 8.9), with a predominance of females (n: 10; 90.9%). The multidisciplinary team that participated in the interviews was composed of: nurses (n: 3; 27.3%), two nursing assistants (18.2%), two nursing technicians (18.2%), one physician (9.1%), one social worker (9.1%), one pharmacist (9.1%), and one psychologist (9.1%). The average time since graduation was 17 years (SD \pm 9.0). Regarding education, three (27.3%) participants had a specialization. The average time working in the current service was 5.2 years (SD \pm 2.7).

The analysis of the data collected during the interviews is presented in *table 1*.

Table 1. Category and subcategories related to educational practices in STIs/HIV/AIDS

CENTRAL CATEGORY: Revealing the development of educational practices in STI/HIV/AIDS within the school
SUBCATEGORIES
1. Addressing the issue of STI/HIV/AIDS in educational practices at school
2. Reporting on the influences of the pandemic on educational practices
3. Considering the issue of STI/HIV/AIDS as a priority
4. Observing multidisciplinary participation in the School Health Program
5. Diversifying work methods with adolescents at school
6. Observing fears and vulnerabilities of adolescents in relation to infection by STI/HIV/AIDS
7. Respecting diversity among adolescents
8. Arousing the interest of adolescents in educational practices on STI/HIV/AIDS
9. Using strategies to guarantee access for adolescents to the Health Center

Source: Prepared by the author.

The topic of STI/HIV/AIDS is addressed in educational practices carried out in schools, especially those linked to the PSE, in addition to other topics such as teenage pregnancy and projects involving sexual and reproductive health and life planning; and young multipliers, as well as multidisciplinary projects for teacher training. Despite this, prevention and the different modes of contamination of STI/HIV still need to be worked on more in schools and universities, in addition to the need to obtain means to ensure the continuity of actions. The promotional practices that were carried out at that time by health professionals in schools were interfered with and interrupted due to the social distancing required during the Coronavirus Disease – 2019 (COVID-19) pandemic.

At school, [STI] is a topic that education always suggests. We approach this in the School Health Program or in some specific situation, and the school always asks us to develop issues related to teenage pregnancy, sexuality, HIV/AIDS and other sexually transmitted infections. (GA1P24).

The main target audience for educational practices were adolescents, as they are just beginning their sexual life, which justifies the importance of talking about promotion and prevention as early as possible. On the internet, adolescents look for other types of

information. Even if they search for information about prevention, there is no guarantee that they will access qualified information, and this does not meet the necessity to work on topics such as prevention and condom use. The topic of STI/HIV/AIDS was not considered a mandatory topic in the PSE, but it could be included in school curricula, as well as pregnancy and drugs, to be considered a priority before more adolescents are infected with STI/HIV.

'Oh, it's not a lack of information! Everyone has [that]!' But we have to keep repeating the same thing, we know that. And that's what information is. There's no point in thinking that people who have access to the internet have the information. They won't look for it. The information that young people are looking for is different. (GA2P1).

The multidisciplinary and interdisciplinary participation in the PSE found nurses and doctors as the professionals who worked most on the topic of STI/HIV/AIDS. The multidisciplinary team supporting the health teams, previously called the Family Health and Primary Care Expanded Center (NASF-AB), developed the topics according to their area of expertise. The professionals were concerned with being more effective in their practices with the young people, and to this end, they sought answers through dialogue with the

teachers. It was believed that the teacher was the one who had the easiest time approaching the adolescents, establishing the link with the health service and/or seeking the health professionals as a reference for solving the health demands of these young people.

And with the teacher, many times, this student found it easier to talk, to open up a conversation about sexuality and all these issues more involved with this topic. They sought out the teacher more. However, the teacher often did not have the appropriate knowledge and ended up secretly directing this student to the Health Center. (GA1P3).

The professionals diversified the methods used in educational practices. Initially, some professionals took a while to realize that lectures did not adequately arouse the interest of adolescents, and they realized that it was necessary to work with dynamics, competitions, conversation circles and debates, which proved to be more effective in encouraging the participation of young people. Furthermore, workshops and boxes for anonymous questioning promoted participation and increased the number of questions on various subjects. Another work mentioned was the groups with adolescents developed in the Health Center (HC). The professionals stated that it is necessary to reflect on different ways to work on promotion and prevention, and this effort, in many cases, resulted in a positive response from the adolescents.

We received feedback from the teenagers themselves looking for us at the Health Center because we made ourselves available. So, the students came to us: 'Ah! You're a nurse, the one who worked with us, so I wanted you to help me'. (GA1P3).

The fears and vulnerabilities of adolescents regarding STI/HIV infection are present in the professionals' statements for different reasons, such as the existence of many young people living with HIV. Although the school considers the topics of sexuality and STI/HIV/AIDS to

be difficult to work with, it is believed that it is necessary to develop more practices for sexual promotion, prevention and education, since young people fear an unwanted pregnancy, but are not afraid of contracting an STI and do not use condoms during sexual intercourse, as is recommended.

During educational practices at school, it was observed that when a condom was brought by health professionals, the girls were afraid to take it. Educational practices are poorly understood by some parents, and adolescents do not always receive guidance at home. The media also plays an important role in prevention, but rarely addresses topics such as STIs/HIV/AIDS, and when they do, it is necessary to be aware of the reliability of the information.

The actions we take at school are also really cool prevention actions, because this is a group of people who are just starting out in their sexual life. Teenagers, who are almost children now, often don't have this guidance at home. Their parents are afraid because of their age or lack of knowledge, [especially in] poorer populations... The only place children have is school, and sometimes, the teacher isn't always qualified to address this type of subject with the student. So, we get involved! The partnership that schools have with health is a really cool partnership, but it's been really behind lately, that is really, really critical! (GA1P19).

Respect for diversity and cultural issues towards adolescents was observed in professional attitudes, such as: talking about STIs/HIV/AIDS and condom use, separating boys and girls, to avoid embarrassment; observing and developing an attentive look, open and frank dialogue, which promotes self-confidence and empowerment in girls, without them feeling embarrassed in front of boys, and so that boys, in turn, understand the importance of respecting girls' opinions and decisions.

Another aspect to be considered is the connotations present in the speeches of professionals who carry out educational practices

with adolescents, which present religious indications or values that influence the way in which health education is carried out and the guidance that is offered.

With the girls, I really want to be able to have a conversation about female empowerment, like, you know, being able to tell them: 'Look, you don't know if you're going to marry your first boyfriend from school... Ahm, having sex with him for the first time at 12, 13 years old won't keep him with you forever'. Because I see that there are a lot of insecurities among girls at this age, they think: 'Oh, sometimes if I lose my virginity to him, he'll like me'. And that's not really the case! So, I usually have a separate conversation with the girls so I can have this very frank conversation, and so they don't feel embarrassed about hearing this in front of the boys. (GA1P23).

Adolescents had some knowledge about STIs/HIV/AIDS and, therefore, educational practices also need to focus on topics that spark their interest, such as changes in the body, contraceptive methods and using materials, such as penile prostheses, to demonstrate condom use.

Another important aspect is adolescents' access to primary care, which is one of the consequences of educational practices in schools. These young people need to be seen when they arrive at the HC, especially because the adolescent age group is usually an age gap for primary care. Initiatives such as providing a green card at school to direct the student to the nurse or psychologist help ensure that adolescents receive timely care whenever they feel the need.

As soon as this teenager arrived at the Health Center, the receptionist was already aware of it, and she would call me [the nurse] or the psychologist, so that, together, at that time or at a scheduled time [the service could be carried out]. Generally, we would talk at that time because, perhaps, if we lost this teenager, if we asked him to return at another time, he would not come back. So, we

tried to see him when he arrived and clarify all his doubts. Many times, they were just doubts, or we would make some referral: 'Ah, introduction of the contraceptive method!'... we would also talk to the doctor, and the doctor would already be part of that conversation. (GA1P3).

Discussion

The themes of sexuality and sexual education in schools require discussions and implementation of devices, especially legal documents that recognize and value sexual and reproductive rights, the prevention of sexual abuse and unwanted pregnancy. In 2017, the theme of sexuality was limited to reproduction and STIs in the National Common Curricular Base²¹.

Within the scope of the PSE, although STI/HIV/AIDS was not initially identified as a priority topic, this study reveals that teachers and health professionals consider it as such and develop it. The education of the future requires including 'Relevant Knowledge' in school debates, by promoting knowledge capable of understanding global and fundamental issues, contextualizing partial and local knowledge, overcoming the fragmentation and simplification of a complex training process^{4,14}.

The PSE emphasizes the inclusion of health-related topics in political-pedagogical projects, such as nutrition, vision, hearing and body practices, which promote the protagonism of students, encourage self-care and arouse interest in their own health condition and risks¹. Among the actions developed by the PSE, there is a focus on meetings for matrix support, referrals, oral and eye health, and vaccination status. Added to this is the excess of work, the lack of continuous training and the lack of knowledge about the Policy²².

The topic of STIs/HIV/AIDS is considered a priority for health professionals who develop educational practices with adolescents in schools. However, the advent of the COVID-19 pandemic brought negative repercussions to these practices, due to the social

distancing that was necessary during that period. Therefore, it is necessary to consider that the human condition presents challenges that invite us to question our position in the world.

Life requires pertinent knowledge, which is neither mutilated nor mutilating, capable of situating an event in its complex context¹⁵. In the context under study, it is during adolescence that relationships and sexuality emerge, so knowledge about the prevention and transmission of STIs/HIV is pertinent. Furthermore, it is not the quantity of information that matters, but its quality and dynamism.

Working on topics related to STIs requires considering the complexity of human beings in order to understand deep issues that affect the results of an educational action. All human development is the result of fostering individual autonomy, community participation and a sense of belonging to the human species. Therefore, it is necessary to understand the unity of human beings in diversity¹⁴.

To 'Teach the Human Condition', it is necessary to understand that the human being is, at the same time, physical, biological, psychological, cultural, social and historical. This complex unity of human nature is completely fragmented in education, which divides knowledge into disciplines, making it impossible to learn what it means to 'be human'. It is necessary for each person to become aware and conscious of their complex identity and the identity common to all other humans¹⁴.

Furthermore, students need to be prepared for educational practices, and not just communicated with, through an interdisciplinary context, adding meaning and relationship with interests and the pedagogical moment¹. Interdisciplinarity seeks to relate the knowledge that the hyper-specialization of sciences has fragmented, resulting in separate thinking, which makes it difficult to establish a relationship between knowledge²³.

Complexity is based on a conception of the phenomenal world, in which subjects must be understood as unfinished beings, in permanent

construction, throughout their lives. These biological and cultural beings seek to broaden their thinking about the world and about life, breaking with the paradigm of the fragmentation of human, scientific and technological knowledge²⁴.

The PSE promotes the inclusion and action of the multidisciplinary health team in the school environment, bringing knowledge to young people and training teachers to work on topics such as STIs/HIV/AIDS. To this end, the methods of working with young people need to be diversified, providing space for the review of pedagogical practices and for open dialogue between young people, health professionals and teachers¹. In addition, the PSE can constitute an important space for training in health and education for multidisciplinary internships, enabling the development of innovative experiences with complex approaches directed at the community⁹. The integration between health and education professionals in training, analysis and construction of needs in search of resolution in the educational context allows the sharing of responsibilities in any topics proposed by the PSE, in which all knowledge is considered⁴.

The review of pedagogical practices is essential, as it is necessary to situate the importance of education in the totality of the challenges and uncertainties of recent times, addressing fundamental themes for contemporary education, often ignored or left aside from debates on educational policy¹⁴. Based on the review of current pedagogical practices, it is considered necessary to situate the importance of education in the totality of the challenges and uncertainties of today. Comprehensive education brings together the thoughts proposed in the theory of complexity, in which the reform of thought through education resonates²⁵.

The review of pedagogical practices and the diversification of teaching-learning methods can contribute to the construction of contextualized knowledge. Furthermore, it is necessary to consider the 'Blindness of Knowledge', that

is, education that transmits knowledge is blind to the knowledge of what is human, its devices, illnesses, difficulties, tendencies to error and illusion. To deconstruct this paradigm, it is necessary to introduce and develop studies in education on the cerebral, mental and cultural characteristics of human knowledge, its processes and modalities, and the psychological and cultural dispositions that lead to error or illusion¹⁴.

Thus, it is necessary to 'Teach Understanding', since this is both the means and the end of human communication. Considering the importance of education for understanding, at all educational levels and at all ages, the development of understanding requires a reform of mentalities. Mutual understanding between human beings is vital for human relations to free themselves from their barbaric state of incomprehension.

In this study, professionals observed that young people are often afraid of unwanted pregnancy, but are not afraid of contracting an STI/HIV, which makes it a challenge to make them understand the vulnerable situations they put themselves in when they consent to unprotected sex. This situation encourages reflection and questioning about the way in which the issue is valued and the possibilities of reviewing this logic.

Science has enabled many certainties to be acquired, but at the same time, it reveals that it is necessary to 'Face Uncertainties'. Education must encompass the teaching of uncertainties that originate from the multiple facets of science, teaching principles of strategy that allow us to face the unforeseen, the unexpected and modify its development through information acquired over time²⁶.

Education can be facilitated or hindered based on the values of health educators. Education takes place amid social relationships, actions, values and how people deal with each other²⁷. Furthermore, it is necessary to consider that these relationships go beyond the school environment and health services, as they can be mediated by the media, especially

digital media today, and which can provide incorrect information.

The difficulty in understanding the world lies in the difficulty of thinking, which has atrophied, rather than developed, the ability to contextualize and think about the globality of the 'Earthly Identity', the relationship between the whole and the parts, its multidimensionality and complexity. This requires a reform of thought and the understanding of a more complex notion of development in the planetary era, involving the intellectual, affective and moral dimensions, and the wisdom of living together. Education is at the heart of this issue because it enables the mind to open up to receive the new¹⁴.

Respect for diversity among adolescents promotes rapprochement and sincere dialogue, developing self-confidence and respect for different opinions and decisions among young people, which affect their own lives. Thus, it is necessary to learn and teach the 'Ethics of Human Gender', which brings the concept that education should lead to 'anthropoethics', taking into account the ternary nature of the human condition, which is to be, at the same time, an individual/society/species. All truly human development must include the joint expansion of individual autonomy, community participation and the awareness of belonging to the human species¹⁴, which is essential when the aim is to educate for the prevention of STIs/HIV/AIDS.

Among the expected developments with educational practices in schools are the desire to awaken young people's interest in self-care, such as protected sexual relations when they are sexually active, and to create strategies that facilitate their access to HC whenever they need care or information. The successful initiative called Adolescent Friendly Health Services has been supported by the World Health Organization, and aims to ensure that health services welcome adolescents appropriately, offer actions according to the needs of this public and develop shared work between the health space and the school space⁸.

Schools become privileged places for health promotion, due to their potential to develop autonomous and critical individuals, with the ability to reflect on social problems and propose changes. This strengthens the confrontation of vulnerabilities in the health field, which can compromise school development^{4,26}. In this context, health professionals play a catalytic role in the development of structural changes, as they have the opportunity to participate in reforms and innovations to promote the health of children and adolescents².

The challenge for the education of the future is to prepare everyone for a change in thinking, structuring teaching so that the educator's dialogic approach is closer to the student, and that together they promote emancipatory education, allowing reflection on differentiated and future-oriented education. Thus, the need for new reflections and models for the education of the future is highlighted, linked to the process of knowledge construction and teaching in schools¹⁴.

Facing uncertainty must be included, as well as teaching about earthly identity, its complexity and the need for a reform in thinking that is capable of integrating, uniting and reconnecting. In order for diversity to be respected, it is necessary to teach the ethics of the human genre, as it allows us to understand that we are, at the same time, an individual, a society and a species, which presupposes joint development.

Final considerations

Educational practices on STI/HIV/AIDS in schools, from the perspective of the multidisciplinary team and from the perspective of complex thinking, are developed through the inclusion and prioritization of the STI/HIV/AIDS theme in the PSE, both in work with adolescents and in teacher training. This theme can be considered timeless and relevant to adolescence, and, at the same time, intrinsic to the human condition in multiple dimensions:

physical, biological, psychological, cultural, social and historical.

Professionals recognize the importance of this topic and express their concern; however, they encounter some obstacles to developing these practices, especially in relation to the approach with adolescents, due to the diversity of their age and cultural tendencies, and the need for diversified methodologies. Support from teachers emerges as an efficient strategy for this approach. However, there is a tendency among some professionals to use 'lectures', even though the lack of effectiveness of such a methodology has long been discussed, especially with young people. This requires overcoming knowledge blindness and urgently reviewing the way in which educational practices in STIs/HIV/AIDS are developed.

It is imperative to change practices and work with methods that allow interaction and dialogue, consider adolescents' fears and vulnerabilities, and respect human diversity and ethics. Practices need to address cultural issues that sometimes distance young people from the people who could provide them with the most information, such as parents and teachers, who also lack training. Adolescents' connections and access to health services, whenever they want or need them, must also be strengthened.

The behaviors adopted by family members and educators reflect and are reflections of often limited or mistaken understandings of a society that, in many cases, still deals with the issues of sexuality, sex, STI/HIV/AIDS based on taboos, prejudice and discrimination, issues that urgently need to be understood. This lack of understanding can lead to a lack of concern for self-care and care for others, and the failure to adopt preventive measures for safe sex, and therefore, uncertainties about educational practices need to be addressed.

The challenge for the future, but also for the present, requires a change in thinking and reflections on new models that go beyond the specific insertions and interactions between professionals, educators and young people,

also encompassing the family and its life context, going beyond the classroom spaces.

Collaborators

Metelski FK (0000-0001-7833-0438)*, Coelho B (0000-0003-4834-3312)* and Meirelles BHS (0000-0003-1940-1608)* contributed equally to the conception and design of the work; acquisition, analysis, and interpretation of data for the work; preparation of the work

and critical revision for important intellectual content; and final approval of the version to be published. Sousa FM (0000-0001-6761-5526)* contributed to the conception and design of the work; acquisition, analysis, and interpretation of data for the work; and final approval of the version to be published. Vendruscolo C (0000-0002-5163-4789)* and Mello ALSF (0000-0001-9591-7361)* contributed equally to the preparation of the work; critical review for important intellectual content; and final approval of the version to be published. ■

References

1. Ministério da Saúde (BR). Caderno do gestor do PSE [Internet]. Brasília, DF: Ministério da Saúde; 2015 [acesso em 2024 jan 31]. Disponível em: https://bvsms.saude.gov.br/bvs/publicacoes/caderno_gestor_pse.pdf
2. Jourdan D, Gray NJ, Barry MM, et al. Supporting every school to become a foundation for healthy lives. *Lancet Child Adolesc Health*. 2021;5(4):295-303. DOI: [https://doi.org/10.1016/S2352-4642\(20\)30316-3](https://doi.org/10.1016/S2352-4642(20)30316-3)
3. Bastos PO, Cavalcante ASP, Pereira WMG, et al. Health promoting school interventions in latin america: a systematic review protocol on the dimensions of the RE-AIM Framework. *Int J Environ Res Public Health*. 2020;17(15):5558. DOI: <https://doi.org/10.3390/ijerph17155558>
4. Medeiros ER, Feijão AR, Pinto ESG, et al. Professional qualification in the School Health Program from the perspective of Complexity Theory. *Esc Anna Nery*. 2019;23(3):e20190035. DOI: <https://doi.org/10.1590/2177-9465-EAN-2019-0035>
5. Presidência da República (BR). Decreto nº 6.286, de 5 de dezembro de 2007. Institui o Programa Saúde na Escola – PSE, e dá outras providências [Internet]. Diário Oficial da União, Brasília, DF. 2007 dez 6 [acesso em 2024 jan 31]; Edição 234; Seção 1:2-3. Disponível em: https://www.planalto.gov.br/ccivil_03/_ato2007-2010/2007/decreto/d6286.htm
6. Ministério da Saúde (BR). Portaria nº 2.436, de 21 de setembro de 2017. Aprova a Política Nacional de Atenção Básica, estabelecendo a revisão de diretrizes para a organização da Atenção Básica, no âmbito do Sistema Único de Saúde (SUS) [Internet]. Diário Oficial da União, Brasília, DF. 22 set 2017 [acesso em 2024 jan 31]; Edição 183; Seção 1:68-75. Disponível em: https://bvsms.saude.gov.br/bvs/saudelegis/gm/2017/prt2436_22_09_2017.html
7. Ministério da Saúde (BR). Caderno do gestor do PSE [Internet]. Brasília, DF: Ministério da Saúde; 2022 [acesso em 2024 jan 31]. Disponível em: <https://aps.saude.gov.br/biblioteca/visualizar/MjEyMA==>
8. Silva AA, Gubert FA, Barbosa Filho VC, et al. Health promotion actions in the School Health Pro-

*Orcid (Open Researcher and Contributor ID).

- gram in Ceará: nursing contributions. *Rev Bras Enferm.* 2021;74(1):e20190769. DOI: <https://doi.org/10.1590/0034-7167-2019-0769>
9. Lopes IE, Nogueira JAD, Rocha DG. Eixos de ação do Programa Saúde na Escola e Promoção da Saúde: revisão integrativa. *Saúde debate.* 2018;42(118):773-89. DOI: <https://doi.org/10.1590/0103-1104201811819>
 10. Petry S, Padilha MI, Kuhnen AE, et al. Knowledge of nursing student on the prevention of sexually transmitted infections. *Rev Bras Enferm.* 2019;72(5):1145-52. DOI: <https://doi.org/10.1590/0034-7167-2017-0801>
 11. Instituto Brasileiro de Geografia e Estatística. Projeções da população. Projeções da População do Brasil e Unidades da Federação por sexo e idade: 2010-2060. 2022 [Internet]. Rio de Janeiro: IBGE. [acesso em 2024 jan 29]. Disponível em: <https://www.ibge.gov.br/estatisticas/sociais/populacao/9109-projecao-da-populacao.html?=&t=resultados>
 12. Ministério da Saúde (BR), Secretaria de Atenção à Saúde, Departamento de Ações Programáticas e Estratégicas. Proteger e cuidar da saúde de adolescentes na atenção básica [Internet]. 2. ed. Brasília, DF: Ministério da Saúde; 2018 [acesso em 2024 jan 31]. Disponível em: https://bvsm.s.saude.gov.br/bvs/publicacoes/proteger_cuidar_adolescentes_atencao_basica_2ed.pdf
 13. Instituto Brasileiro de Geografia e Estatística. PeNSE - Pesquisa Nacional de Saúde do Escolar [Internet]. Rio de Janeiro: IBGE; 2019 [acesso em 2024 jan 29]. Disponível em: <https://www.ibge.gov.br/estatisticas/sociais/saude/9134-pesquisa-nacional-de-saude-do-escolar.html?edicao=17050&t=downloads>
 14. Morin E. Os sete saberes necessários à educação do futuro. 2. ed. São Paulo: Cortez; UNESCO; 2011.
 15. Morin E. Ensinar a viver: manifesto para mudar a educação. Porto Alegre: Sulina; 2015.
 16. Charmaz K. A construção da teoria fundamentada: guia prático para análise qualitativa. Traduzido por Joice Elias Costa. Porto Alegre: Artmed; 2009.
 17. Metelski FK, Santos JLG, Cechinel-Peiter C, et al. Constructivist Grounded Theory: characteristics and operational aspects for nursing research. *Rev Esc Enferm USP.* 2021;55:e03776. DOI: <https://doi.org/10.1590/S1980-220X2020051103776>
 18. Fontanella BJB, Luchesi BM, Saidel MGB, et al. Amostragem em pesquisas qualitativas: proposta de procedimentos para constatar saturação teórica. *Cad Saúde Pública.* 2011;27(2):389-94. DOI: <https://doi.org/10.1590/S0102-311X2011000200020>
 19. Conselho Nacional de Saúde (BR). Resolução nº 466, de 12 de dezembro de 2012. Aprova as diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. *Diário Oficial da União, Brasília, DF.* 2013 jun 13; Seção 1:59.
 20. Conselho Nacional de Saúde (BR). Resolução nº 510, de 7 de abril de 2016. Dispõe sobre as normas aplicáveis a pesquisas em Ciências Humanas e Sociais cujos procedimentos metodológicos envolvam a utilização de dados diretamente obtidos com os participantes ou de informações identificáveis ou que possam acarretar riscos maiores do que os existentes na vida cotidiana, na forma definida nesta Resolução. *Diário Oficial da União, Brasília, DF.* 2016 maio 24; Seção 1:44.
 21. Barbosa LU, Viçosa CSCL, Folmer V. A educação sexual nos documentos das políticas de educação e suas ressignificações. *Rev Eletr Acervo Saúde.* 2019;11(10):e772. DOI: <https://doi.org/10.25248/reas.e772.2019>
 22. Baroni JG, Silva CCB. Percepção de profissionais da saúde e da educação sobre o Programa Saúde na Escola. *Saúde debate.* 2022;46(esp3):103-15. DOI: <https://doi.org/10.1590/0103-11042022E307>
 23. Alves EA, Bianchi C. O pensamento complexo de Edgar Morin e a religião dos saberes. *Pont Virg.* 2021;(29):80-96. DOI: <https://doi.org/10.23925/1982-4807.2021i29p80-96>
 24. Cabral EFL, Carneiro KB, Carneiro TKG. O pensamento Complexo de Edgar Morin e suas contribuições ao campo da educação: uma análise da prática

- desenvolvida na Escola da Ponte à luz da Teoria da Complexidade. *Olhares Trilhas*. 2021;23(3):1128-42. DOI: <https://doi.org/10.14393/OT2021v23.n.3.60816>
25. Ribeiro DCR, Moreira WW. Edgar Morin e a educação integral: subsídios para essa associação. *Rev Bras Polít Adm Educ*. 2020;3(36):970-89. DOI: <https://doi.org/10.21573/vol36n32020.104868>
26. Ribeiro V, Cândido VC. Contribuições de Edgar Morin para uma educação transdisciplinar em saúde. *Poliética. Rev Ética e Filosof Polít*. 2021;9(2):265-87. DOI: <https://doi.org/10.23925/politica.v9i2.56851>
27. Souza AP, Milani DRC, Ribeiro PRM. A educação sexual e o papel do educador: reflexões a partir de um contexto social em transformação. *Dialogia*. 2020;34:95-106. DOI: <https://doi.org/10.5585/Dialogia.N34.16635>

Received on 02/14/2024

Approved on 09/26/2024

Conflict of interests: non-existent

Financial support: UNIEDU/FUMDES Postgraduate Program.

PROEX CAPES

Editor in charge: Ingrid D'avilla Freire Pereira