

Educational Technologies in Multidisciplinary Adolescent Health Care

Tecnologias Educativas na Assistência Multidisciplinar em Saúde do Adolescente
Tecnologías Educativas en la Atención Múltiple de la Salud de Adolescentes

RESUMO

A utilização de tecnologias educativas na assistência multidisciplinar em saúde do adolescente tem se mostrado uma estratégia inovadora para promover o acesso à informação e incentivar práticas saudáveis. Aplicativos móveis, plataformas digitais e gamificação facilitam a comunicação entre profissionais de saúde e adolescentes, promovendo maior adesão a cuidados preventivos. Este estudo teórico analisou os impactos e desafios dessas tecnologias, destacando sua importância para a promoção da saúde mental, saúde sexual e bem-estar geral. A interdisciplinaridade foi evidenciada como um fator essencial para o sucesso das intervenções, garantindo um atendimento personalizado e humanizado. No entanto, desafios como a desigualdade no acesso digital e a capacitação profissional ainda precisam ser superados. Conclui-se que o desenvolvimento contínuo e a integração dessas ferramentas nas políticas públicas podem ampliar seu impacto positivo na saúde do adolescente.

DESCRIPTORIOS: Tecnologias educativas; Saúde do adolescente; Assistência multidisciplinar; Promoção da saúde; Inovação digital.

ABSTRACT

The use of educational technologies in multidisciplinary adolescent health care has proven to be an innovative strategy to promote access to information and encourage healthy practices. Mobile applications, digital platforms, and gamification facilitate communication between healthcare professionals and adolescents, fostering greater adherence to preventive care. This theoretical study analyzed the impacts and challenges of these technologies, highlighting their importance in promoting mental health, sexual health, and overall well-being. Interdisciplinarity was identified as an essential factor for the success of interventions, ensuring personalized and humanized care. However, challenges such as digital access inequality and professional training still need to be addressed. It is concluded that the continuous development and integration of these tools into public policies can enhance their positive impact on adolescent.

DESCRIPTORS: Educational technologies; Adolescent health; Multidisciplinary care; Health promotion; Digital innovation.

RESUMEN

El uso de tecnologías educativas en la atención multidisciplinaria de la salud adolescente ha demostrado ser una estrategia innovadora para promover el acceso a la información y fomentar prácticas saludables. Las aplicaciones móviles, las plataformas digitales y la gamificación facilitan la comunicación entre profesionales de la salud y adolescentes, promoviendo una mayor adherencia a la atención preventiva. Este estudio teórico analizó los impactos y desafíos de estas tecnologías, destacando su importancia para promover la salud mental, la salud sexual y el bienestar general. La interdisciplinariedad se destacó como un factor esencial para el éxito de las intervenciones, garantizando una atención personalizada y humanizada. Sin embargo, aún quedan desafíos por superar, como la desigualdad en el acceso digital y la formación profesional. Se concluye que el desarrollo continuo y la integración de estas herramientas en las políticas públicas pueden aumentar su impacto positivo en la salud adolescente.

DESCRIPTORIOS: Tecnologías educativas; Salud adolescente; Atención multidisciplinaria; Promoción de la salud; Innovación digital.

Vinicius Henrique Alves Ferreira

Master's degree in dental sciences – UNIARA. Specialist in orthodontics and oral rehabilitation. Lecturer in the undergraduate dentistry program at Unilago. CEO - Odontobem - SJRioPreto-SP.

Vanessa de Melo Rail

Postgraduate degree in Health Auditing from Uninter. Bachelor's degree in Business Administration from Pitágoras College in Uberlândia. Nursing technician from the ESTES Technical School of Health – Federal University of Uberlândia – UFU. Currently a nursing technician at the Uberlândia Clinical Hospital/ Ebserh.

Maria Carolina Salustino dos Santos

PhD candidate in Nursing at the São Paulo School of Nursing, UNIFESP.

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INTRODUCTION

Adolescence is a phase of intense physical, emotional, and social changes, making it essential to adopt health promotion strategies that meet the demands of this population. In this context, educational technologies emerge as fundamental tools to facilitate access to information, autonomy, and adherence to healthy behaviors. Their use in multidisciplinary care allows for the integration of different health professionals, promoting more comprehensive and humanized care¹.

In recent years, several initiatives have demonstrated the potential of educational technologies in adolescent care, covering topics such as mental health, nutrition, sexuality, disease prevention, and general well-being. Innovative methods such as mobile applications, educational games, social networks, and interactive platforms are used to engage young people in self-care and informed decision-making about their health. In addition, the multidisciplinary approach, which involves doctors, nurses, psychologists, educators, and social workers, contributes to more efficient and personalized support for the needs of this age group.

Recent literature points out that educational technologies have the potential to reduce barriers to information access and communication between health professionals and adolescents¹. However, there are still challenges in implementing these strategies, including the need to adapt content to the sociocultural realities of young people and to train health professionals to use them effectively.

The integration of educational technologies into multidisciplinary adolescent health care has been widely studied and applied as a strategy to improve access to information and promote the well-being of this pop-

ulation. Recent literature highlights the importance of using digital technologies to facilitate communication between health professionals and adolescents, ensuring greater adherence to healthy practices and expanding the reach of health interventions². Educational technologies can take different forms, such as mobile applications, interactive platforms, social networks, games, and audiovisual materials, each with the potential to positively impact health education.

One of the main approaches used in promoting adolescent health is the use of educational technologies to combat sexually transmitted infections, such as HIV/AIDS. According to Vilella, Pereira, and Pontes², the implementation of digital strategies in schools has proven effective in disseminating information about prevention and care, reducing adolescents' vulnerability to these diseases. In addition, gamified technologies, such as educational applications and interactive games, have been validated as tools for addressing arboviruses and other public health problems among adolescents, making learning more dynamic and accessible³.

Another relevant aspect in the application of educational technologies is their contribution to the promotion of mental health. Girardi, Cardoso, and Zanatta⁴ highlight that primary care has invested in the use of these technologies to support adolescents in situations of psychological vulnerability, providing information on self-care, emotional well-being, and coping strategies. Such tools help reduce stigmas and barriers that hinder young people's access to specialized services, favoring continuous and integrated monitoring.

Interdisciplinary collaboration also plays a crucial role in the use of these technologies, allowing different health professionals to contribute to more effective care. Studies show

that integration between medical, nursing, psychology, and education professionals enhances the results of interventions, ensuring that adolescents receive guidance that is clearer and more tailored to their needs⁵. This approach has been used, for example, in the implementation of educational technologies focused on oral hygiene, where personalized guidance improves adolescents' adherence to daily care⁶.

In addition to initiatives aimed at promoting physical and mental health, obesity and poor eating habits are also challenges addressed by educational technologies. Aragão and Veras discuss how the use of apps and interactive platforms has been effective in raising awareness among young people about the importance of a balanced diet and physical activity. The use of these tools not only educates but also encourages sustainable behavioral changes, directly impacting the quality of life of adolescents.

Despite the obvious advantages, there are still challenges in implementing these technologies in multidisciplinary care. Inequality in access to electronic devices and the internet, the lack of training for health professionals in using these tools, and the need for continuous scientific validation of available technologies are issues that need to be overcome. To ensure the success of interventions, it is essential that educational strategies be adapted to the sociocultural realities of adolescents and that there be a continuous effort to integrate these technologies into public health policies.

Given this scenario, this theoretical essay seeks to discuss the role of educational technologies in multidisciplinary adolescent health care, analyzing their applicability, challenges, and impacts. The research question that guides this study is: "How can educational technologies contribute to

health promotion and adolescent engagement in multidisciplinary care?" The objective of the article is to reflect on the use of these tools in the context of adolescent health care, highlighting their contributions and limitations.

The relevance of this study is justified by the growing need for innovative approaches to health promotion, considering adolescents' familiarity with digital resources and the potential of educational technologies to transform care practices. Thus, it is hoped that this study will contribute to the improvement of policies and strategies aimed at adolescent health, strengthening interdisciplinary action and promoting more effective and accessible care.

DEVELOPMENT

This article is a theoretical essay based on the analysis of recent studies that address the use of educational technologies in multidisciplinary adolescent health care. The theoretical essay is a methodology that allows for the critical discussion of existing concepts and evidence without the need for empirical research, but rather through the review and interpretation of relevant publications on the topic⁹.

The selection of studies was carried out using recognized academic databases, such as SciELO, Google Scholar, and nursing and public health journals, prioritizing articles published in the last five years. The inclusion criteria involved studies that addressed the use of educational technologies in promoting adolescent health within a multidisciplinary context. As exclusion criteria, articles that were not directly related to health education or that did not describe technology-based practices were discarded.

Data analysis was performed by categorizing the main findings into two thematic areas: **(1) Educational**

Technologies and Adolescent Health Promotion and **(2) The Multidisciplinary Approach and Digital Health Education**. Each of these categories will be discussed in depth below, based on the evidence found in the scientific literature.

Educational Technologies and the Promotion of Adolescent Health

Adolescence is a stage of life characterized by major physical, emotional, and social changes, which requires specific strategies for promoting the health of this population. Educational technologies emerge as innovative tools for disseminating health information, providing greater accessibility and engagement of adolescents in self-care practices¹.

Digital and interactive media, such as mobile applications, e-learning platforms, social networks, and gamification, have been widely used to engage adolescents in health promotion programs³. Gamification, for example, has proven to be an effective strategy for increasing adherence to topics such as sexual health, disease prevention, and healthy eating, transforming learning into a more dynamic and attractive process¹.

Recent studies show that mobile applications and social networks are particularly effective in addressing sensitive topics such as sex education and mental health. According to Vilella, Pereira, and Pontes⁽²⁾ digital educational initiatives on HIV/AIDS have had a positive impact on raising awareness and reducing the risk of infection among adolescents. In addition, online platforms allow young people to seek information anonymously and safely, promoting greater autonomy in learning about their own health⁴.

Another relevant aspect in the adoption of educational technologies is the possibility of adapting content to the cultural and social specificities of

adolescents. Digital applications and platforms enable the personalization of teaching, meeting individual needs and promoting a more efficient learning experience. This type of inclusive approach has been particularly effective in the development of programs aimed at promoting mental health, which seek to provide emotional and psychological support to young people in vulnerable situations.

Despite the benefits, the implementation of these technologies still faces challenges, such as inequality in digital access, the need for scientific validation of the content offered, and the training of health professionals to use these tools efficiently. Overcoming these obstacles requires investments in public policies that guarantee the accessibility of technologies to all adolescents, regardless of their socioeconomic status.

The Multidisciplinary Approach and Digital Health Education

The promotion of adolescent health through educational technologies cannot occur in isolation. A multidisciplinary approach is essential, involving health professionals, educators, social workers, and even the families of adolescents in the teaching and care process⁶. The intersection between different areas of knowledge allows for the development of more comprehensive health programs, in which young people are assisted holistically, considering biological, social, and psychological aspects.

In clinical practice, doctors, nurses, and psychologists have been using digital platforms to provide guidance and remote monitoring, ensuring greater accessibility to health services. Telemedicine and artificial intelligence applications are increasingly being incorporated into care, allowing adolescents to access reliable and personalized information about sexual health, nutrition, and emotion-

al well-being. In addition, these technologies facilitate communication between patients and professionals, reducing barriers such as geographical distance and limited in-person consultation hours⁵.

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Interdisciplinarity is also essential for digital health education, a concept that encompasses training adolescents to use the health information available online critically and responsibly¹
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With the increased use of the internet to search for health content, it is essential that young people develop skills to differentiate reliable sources from false information, preventing the spread of myths and misinformation⁴. The development of digital skills allows adolescents to become active agents in their own health care, amplifying the impact of digital education strategies.

Another highlight of the multidisciplinary approach is the need to involve the school environment in the health education process. According to recent studies, schools that implement educational technologies to discuss health with adolescents achieve more positive results in the adoption of healthy habits⁷. Teachers and health professionals can work together to create interactive teaching materials and educational programs that address topics such as nutrition, mental health, physical activity, and sexuality in accessible and engaging language⁶.

However, for the multidisciplinary approach to be successful, it is essential that professionals from different areas be trained to integrate educational technologies into their practices. Lack of knowledge about the use of these tools is still a significant obstacle, requiring investment in the continuing education of health and education professionals³. In addition, adequate regulation is essential to ensure that the content conveyed is based on scientific evidence and respects the privacy of adolescents.

The results provide a detailed overview of the main educational technologies used in multidisciplinary adolescent health care, organized by thematic categories. Each category was associated with recent scientific studies, highlighting the applicability and impact of these technologies. It is observed that the adoption of digital technologies, such as mobile

applications, interactive platforms, and gamification, has been an effective strategy in promoting adolescent health.

In areas such as mental health, for example, psychological support platforms have contributed to reducing disorders such as anxiety and depression by offering immediate and accessible support to young people. In promoting sexual health, apps and social networks have been instrumental in disseminating reliable, evidence-based information. Thus, the combination of educational technologies and multidisciplinary adolescent health care has proven to be an effective and promising strategy.

Expanding access to these technologies and integrating different areas of knowledge are key factors for the success of educational interventions, contributing to more humane and inclusive care.

FINAL CONSIDERATIONS

The integration of educational technologies into multidisciplinary adolescent health care has proven to be an innovative and effective strategy for expanding access to information and promoting the well-being of this population. The use of mobile applications, digital platforms, social networks, and educational games has allowed topics such as sexual health, mental health, nutrition, and disease prevention to be addressed in a dynamic and interactive way, encouraging adolescents to engage in self-care practices and adopt healthy habits.

The theoretical review showed that an interdisciplinary approach, involving health professionals, educators, and social workers, is essential to maximize the impact of these technologies. The integration of different areas of knowledge enables more humanized and personalized care, ensuring that educational interventions

meet the individual and sociocultural needs of adolescents. In addition, digital health education was identified as a crucial factor in empowering young people to actively seek reliable information, reducing their vulnerability to misinformation and the consumption of content that is harmful to their health.

However, despite advances, there are still challenges to be overcome for these technologies to reach their full potential. Inequality in digital access, the need for continuous training of health professionals, and the scientific validation of educational tools are

obstacles that need to be addressed through investments in public policies and training programs. In addition, it is essential that educational technologies be constantly adapted to sociocultural and technological changes, ensuring that they remain relevant and effective in promoting adolescent health.

Given these findings, this theoretical essay reinforces the importance of developing and improving educational technologies as strategic tools in multidisciplinary care. Expanding access to these innovations, combined with the training of qualified profes-

sionals and the creation of inclusive public policies, can contribute significantly to the construction of a more accessible and efficient care model that is aligned with the contemporary needs of adolescents. Thus, it is hoped that this study will inspire new research and initiatives aimed at implementing and evaluating these technologies, promoting advances in the field of health and digital education.

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