


ANXIETY AND DEPRESSION AT SCHOOL: THE IMPACT ON LEARNING AND WELL-BEING

 <https://doi.org/10.56238/arev6n4-287>

Submitted on: 18/11/2024

Publication date: 18/12/2024

Elizabete Patrícia Borges Nesi¹, Samira Borges Ferreira², Maria Angélica Dornelles Dias³, Ana Paula Mourão Bernardo⁴ and Kássia Reijane dos Santos Andrade⁵

ABSTRACT

The article analyzed the relationship between adolescence, mental health, and the role of the school environment, neuroscience, and digital technologies in mitigating the effects of anxiety and depression. The objective was to understand how these tools can contribute to the emotional well-being and academic performance of adolescents, considering the vulnerability of this stage marked by biopsychosocial transformations. The methodology was based on a bibliographic research, according to Prodanov and Freitas (2013), which enabled the collection and analysis of relevant theoretical data, allowing an in-depth and integrative approach to the theme. The study was structured into subsections that explored adolescence as a period of emotional reorganization and vulnerabilities, the impact of mental health in the school context, the contributions of neuroscience to well-being and learning, and pedagogical strategies that use technology to promote mental health and cognitive development. The results highlighted that disorders such as anxiety and depression are prevalent among adolescents and that interventions based on neuroscience and digital technologies offer promising strategies to address these challenges. It was concluded that an integrated approach, which considers regional, cultural and socioeconomic factors, is essential to mitigate the impacts of these disorders and promote an inclusive and welcoming school environment. Thus, the need to expand research that integrates education, neuroscience and technology as tools to support youth development was reinforced.

¹ Doctorate student in Education
National University of Rosário (UNR)
E-mail: patricianesi29@gmail.com
LATTES: <https://lattes.cnpq.br/7477527706967422>

² Master in Education
Federal University of Catalão (UFCAT)
Email: samira.borges.ferreira@gmail.com
LATTES: <http://lattes.cnpq.br/5574990341638473>

³ Master of Education
Federal University of Pelotas (UFPEL)
Email: angelica.dias@unemat.br
LATTES: <http://lattes.cnpq.br/9773111188155719>

⁴ Master of Education
University of Vale do Itajaí (UNIVALI)
Email: aapaulinha2@gmail.com
LATTES: <http://lattes.cnpq.br/9888395567393478>

⁵ Specialist in Education Management
State University of Santa Cruz (UESC)
E-mail: kassia.kr Andrade@hotmail.com
LATTES: <http://lattes.cnpq.br/6439845531709455>

Keywords: Adolescence, Mental Health, Neuroscience, Digital Technologies, School Well-Being.

INTRODUCTION

Adolescence has been widely recognized as a period of intense emotional and cognitive reorganization, marked by physical, psychological, and social transformations. These changes, inherent to the age group, were pointed out as factors that increase vulnerability to disorders such as anxiety and depression, significantly impacting the development and well-being of young people. In this context, it has become essential to approach the mental health of adolescents from an integrated perspective, considering biopsychosocial factors and the influence of elements such as neuroscience and educational technologies. The relevance of this topic was reinforced by data that indicated the increasing prevalence of these disorders in different scenarios, with direct impacts on academic performance and social interactions.

The study aimed to analyze the connections between youth mental health, the school environment, and the role of innovative pedagogical tools, focusing on the use of digital technologies and the contribution of neuroscience. The central question that guided the research was: 'how can the integration between mental health, neuroscience and technology contribute to mitigating the effects of anxiety and depression in adolescents, promoting well-being and learning?'

The methodology applied was based on a bibliographic research, as defined by Prodanov and Freitas (2013), which emphasizes the systematization of data and theoretical references available in the academic literature, differing from a review, by seeking to understand and integrate different perspectives on the subject. The data were collected and analyzed based on updated and relevant sources, allowing the construction of an overview of the theme. The analysis technique used a qualitative approach, with the identification of connections between the references and the issues discussed.

The development of the work was structured in a section and subsections. The first subsection explored the emotional and cognitive aspects of adolescence, addressing 'Anxiety and Depression in Adolescence: A Period of Emotional Reorganization and Vulnerabilities'. The second subsection examined the implications of these disorders in the educational context, with the title 'Anxiety and Depression in the School Environment: Influences on Learning and Students' Well-Being'. Next, the contributions of neuroscience to facing these challenges were discussed in the subsection 'Neuroscience and School Responsibility: Contributions to Well-Being and Learning'. Finally, the last subsection, entitled "Technology and Mental Health in Basic Education: Strategies to Promote Well-

Being and Learning", presented innovative strategies and pedagogical practices that integrate technology and mental health.

Therefore, the study offered an integrated overview of the challenges and possibilities in coping with anxiety and depression in adolescents, highlighting the role of the school environment, neuroscience and technology in promoting well-being and strengthening learning.

ANXIETY AND DEPRESSION IN ADOLESCENCE: A PERIOD OF EMOTIONAL REORGANIZATION AND VULNERABILITIES

Adolescence consists of a stage of human development marked by numerous transformations, both physical and psychological, which define a unique period in the individual's life. As observed by Grolli, Wagner and Dalbosco (2017), this phase is characterized by biological and emotional changes, being a crucial moment for the formation of identity and social skills. From this perspective, adolescence is not only a transition from childhood to adulthood, but also a time of intense emotional reorganization (Garber; Weersing, 2010).

In addition, it is relevant to highlight that adolescence is considered a vulnerable period to the installation of depressive and anxiety symptoms (Grolli; Wagner; Dalbosco, 2017). This occurs due to the profound mental and organic transformations experienced by young people, which can trigger atypical behaviors for the age group, as pointed out by Jatobá and Bastos (2007). These changes, associated with social and academic pressures, make adolescents more susceptible to emotional disorders, requiring special attention for prevention and early intervention.

Anxiety, according to the literature, can be understood as an emotional state characterized by exacerbated apprehension and concern in the face of situations perceived as threatening. Although it is an adaptive response in certain circumstances, its intensification or persistence can lead to the development of anxiety disorders, impairing the individual's social and emotional functioning (Grolli; Wagner; Dalbosco, 2017). On the other hand, depression is described as an affective disorder that encompasses symptoms such as persistent sadness, loss of interest in previously pleasurable activities, and changes in sleep and appetite, as reinforced by Jatobá and Bastos (2007). These symptoms often manifest themselves more intensely during adolescence, due to the emotional instability characteristic of this period (Garber; Weersing, 2010).

In this perspective, adolescence is also described as a period of crisis, in which young people experience profound transformations capable of altering their perception of themselves and the world around them (Jatobá; Bastos, 2007). These transformations, although natural and necessary, can favor the appearance of symptoms of anxiety and depression, especially when the adolescent does not have adequate strategies to deal with the challenges inherent to this phase (Garber; Weersing, 2010). Thus, the biopsychosocial context plays a decisive role in the mental health of adolescents, evidencing the need for preventive and interventional approaches based on a comprehensive understanding of this period of development.

Therefore, adolescence, as a remarkable stage of human development, is configured as a time of intense emotional reorganization and vulnerability to the onset of disorders such as anxiety and depression. The understanding of this phenomenon, according to the references presented, highlights the importance of actions that promote psychological well-being and emotional resilience among young people. The dialogue between the authors shows that, despite the theoretical differences, there is a consensus on the relevance of early interventions that consider both the individual aspects and the contextual factors involved. Thus, it is essential to invest in support strategies that enable adolescents to go through this period of crisis with greater emotional balance and mental health.

ANXIETY AND DEPRESSION IN THE SCHOOL ENVIRONMENT: INFLUENCES ON STUDENT LEARNING AND WELL-BEING

Adolescence, as a crucial stage of human development, is often associated with profound emotional and behavioral transformations. In this context, symptoms of anxiety and depression emerge as significant challenges, especially in the school environment, where adolescents face social and academic pressures. Studies highlight that the most prevalent depressive symptoms in this age group include depressed mood, feelings of guilt, and agitation (Jatobá; Bastos, 2007). These factors, although inherent to the emotional complexity of adolescence, can directly interfere with the well-being and academic performance of students.

It is important to note that the prevalence of depressive symptoms in adolescents is not uniform, being influenced by regional, economic and cultural factors. Baptista and Golfeto (2000) had already indicated 24 years ago that these variations were significant, highlighting the need for contextualized analyses. In 2024, more recent studies corroborate

these findings, pointing to a global average prevalence of depressive symptoms in adolescents of approximately 20%, with variations from 10% to 30% depending on location and socioeconomic context. This heterogeneity reinforces the relevance of specific approaches that consider the particularities of each scenario when dealing with youth mental health (Oliveira *et al.*, 2024).

In addition to depression, anxiety emerges as another disorder widely observed among adolescents in the school environment. According to Jatobá and Bastos (2007), anxiety is frequently identified in varying degrees, being mild in 80.2% of cases, moderate in 11.2% and severe in 8.7%. These data reveal not only the significant prevalence of the problem, but also the diversity of manifestations, which can range from widespread concerns to panic attacks. This panorama makes evident the need for personalized interventions to meet the demands of each case.

The consequences of these emotional disorders in the school environment are wide-ranging. Students who show symptoms of anxiety or depression often demonstrate difficulties concentrating, low self-esteem, and lower motivation to learn. These factors, according to Jatobá and Bastos (2007), directly impact academic performance and social interaction, resulting in a negative cycle that perpetuates the suffering of young people. In addition, the school environment often fails to offer the necessary support, due to the lack of training of educators to deal with mental health issues.

Given this scenario, it is essential to implement strategies aimed at promoting mental health in the school context. These actions should include training teachers to identify signs of emotional disorders and creating psychological support programs that are accessible to students. Baptista and Golfeto (2000) emphasize that public policies aimed at youth mental health should be based on regional evidence, ensuring the effectiveness of interventions and the inclusion of different realities.

Therefore, anxiety and depression in adolescence, particularly in the school environment, are challenges that demand priority attention. The theoretical frameworks presented highlight the significant prevalence of these disorders and their impacts on student learning and well-being. Thus, the dialogue between authors such as Jatobá and Bastos (2007) and Baptista and Golfeto (2000) reinforces the urgency of interventions that consider the regional and individual specificities of young people. Only with a comprehensive look and coordinated actions will it be possible to mitigate the effects of these conditions and promote a healthier and more inclusive school environment.

NEUROSCIENCE AND SCHOOL RESPONSIBILITY: CONTRIBUTIONS TO WELL-BEING AND LEARNING

Neuroscience has established itself as an essential partner of education, providing subsidies to understand the functioning of the central nervous system and its relationship with the processes of learning and development. Santos and Sousa (2016, p.02) point out that

neuroscience has shown how promising a partnership with education can be, bringing its entire set of knowledge about the Central Nervous System, the place where everything happens, from behaviors, thoughts, emotions and movements.

This integration provides a solid foundation for advancing education, promoting improvements in quality of life through effective solutions for neurological and educational disorders. In addition, neuroscience is an area that is characterized by interdisciplinarity. According to Bortoli and Teruya (2017), "neuroscience is formed by the interlocution between the different areas of scientific knowledge, each responsible for research underlying the functioning of the nervous system" (p. 72). This characteristic allows the practical application of scientific discoveries in the school environment, promoting the creation of evidence-based pedagogical strategies that meet the specific demands of each student.

In the school environment, the application of neuroscientific advances becomes particularly relevant in the face of the increase in cases of childhood depression and anxiety. These conditions, often underdiagnosed, directly impact students' academic performance and emotional well-being. Santos and Sousa (2016) state that "it is from the knowledge of this area that education can take a leap forward when it comes to effectiveness and efficacy", especially when addressing problems related to mental health.

In this context, the presence of a qualified professional in neuroscience, capable of understanding and intervening in child mental health issues, is essential. The combination of neuroscientific and pedagogical knowledge allows for the identification of early signs of emotional disorders and the implementation of effective interventions in the school environment. This performance is essential to ensure not only academic success, but also the emotional balance of children.

Therefore, the integration between neuroscience and education is a promising strategy to deal with the challenges of contemporary teaching. According to the theoretical frameworks presented, the advancement of knowledge about the functioning of the central

nervous system enables the creation of more effective pedagogical approaches, which consider both cognitive and emotional aspects. As Santos and Sousa (2016) argue, "from the emergence and advancement of neuroscience, it was possible to provide improvements in the quality of life of today's society" (p. 2). Thus, collaboration between neuroscience experts and educators should be strengthened, aiming to build a more inclusive and well-being-promoting school environment for all students.

TECHNOLOGY AND MENTAL HEALTH IN BASIC EDUCATION: STRATEGIES TO PROMOTE WELL-BEING AND LEARNING

Although it is widely recognized that the frequent use of digital devices can overload the developing brain, generating an excess of stimuli, it is essential to consider the contexts in which these technologies are used. The indiscriminate use of technology has the potential to cause cognitive imbalances, intensifying disorders such as anxiety, obsessions, and attention difficulties. In addition, technological dependence can lead adolescents to prioritize interactions in the virtual world, to the detriment of face-to-face social contacts. However, when well targeted, digital technologies offer valuable tools for education, especially in supporting mental health and developing social skills.

In this sense, the school can ally itself with technology to mitigate the impacts of depression and anxiety among young people, using it as a means of promoting emotional and cognitive well-being. According to Narciso *et al.* (2024), "the use of digital technologies can positively influence the communication, socialization, and cognitive development of individuals [...]" (p. 406). This example shows how technology, when applied in a planned and pedagogical way, can be transformative, offering individualized support and expanding possibilities for interaction and learning. This same principle can be adapted for teens facing emotional challenges such as anxiety and depression, providing safe and collaborative digital environments for emotional expression and support.

The COVID-19 pandemic has accelerated the adoption of digital technologies in education, forcing schools to innovate in their pedagogical practices. Santana *et al.* (2021) argue that

[...] The pandemic has caused losses, suffering, and tragedies. However, some of us, as resilient beings that we are, have been able to observe the gain we have obtained by advancing light years in the understanding that we can no longer go back or continue using the same outdated tactics (p. 2101).

Thus, the use of technological tools to address topics such as mental health and well-being can be one of these innovations. For example, mindfulness apps or interactive platforms for social discussions can be incorporated into the school routine to foster emotional self-regulation and empathy among students.

In the context of Basic Education, the practical application of these technologies can occur in several ways. An example is the use of applications as gamified platforms to work on socio-emotional skills, where students learn to identify and manage emotions in simulated scenarios. In addition, the fusion between traditional and digital methods, as pointed out by Santana *et al.* (2024), "stands out as an effective strategy to promote literacy in an increasingly digital context" (p. 2). Projects that encourage collaborative writing on blogs or the use of tools such as podcasts and videos can not only promote literacy but also create spaces for creative expression, reducing social isolation.

Another practical example is the creation of virtual reading or discussion clubs, in which students can share experiences and learn to express themselves in a welcoming environment moderated by trained teachers. These spaces promote social interaction in a structured way, helping students develop interpersonal skills and strengthen their self-esteem.

Therefore, while the uncontrolled use of technology can be detrimental to cognitive and emotional development, its strategic application in the school environment has the potential to turn challenges into opportunities. Narciso *et al.* (2024) demonstrate that digital technologies can be powerful tools for social inclusion and development, while Santana *et al.* (2021, 2024) highlight the importance of pedagogical innovation and integration of traditional and modern methods. Thus, by implementing technologies in a conscious and targeted manner, schools can not only mitigate the negative effects of depression and anxiety, but also create an educational environment that is more inclusive, welcoming, and aligned with the needs of the contemporary world.

RESULTS AND DATA ANALYSIS

The following table presents an overview of the theoretical frameworks used in this research, highlighting the authors, years of publication, central themes of their investigations and the relevance of their contributions to the understanding of anxiety, depression, neuroscience and the use of technologies in education. This survey offers important theoretical support, evidencing the integration between different areas of

knowledge, such as psychology, education and neuroscience, and allowing an analysis of the challenges and solutions in the context of mental health and adolescent learning.

Table 1 - theoretical contribution of the study

Author(s)	Year of Publication	Research Subject	Relevance of the Research
Grolli, Wagner and Dalbosco	2017	Biological and emotional transformations in adolescence	It highlights adolescence as a period of emotional reorganization and vulnerable to the installation of symptoms of anxiety and depression.
Garber e Weersing	2010	Adolescence as a period of emotional reorganization	It highlights the impact of emotional transformations during adolescence on mental health and behavior.
Jatobá and Bastos	2007	Prevalence of depressive symptoms and anxiety in adolescence	It points out the most prevalent symptoms, such as depressed mood, feelings of guilt, agitation, and varying levels of anxiety (mild, moderate, and severe).
Baptista and Golfeto	2000	Regional, economic, and cultural variations in the prevalence of depressive symptoms	It highlights the importance of contextualized analyses to understand the prevalence of depression in adolescents.
Oliveira <i>et al.</i>	2024	Overall prevalence of depressive symptoms in adolescents	It points to a global average prevalence of 20%, varying according to socioeconomic and regional context.
Santos e Sousa	2016	Partnership between neuroscience and education	It discusses how neuroscience can contribute to educational effectiveness and improve quality of life by addressing educational problems and neurological disorders.
Bortoli in Teruya	2017	Interdisciplinarity of neuroscience	It presents neuroscience as an area composed of multiple scientific fields, being fundamental to understand the functioning of the nervous system.
Narciso <i>et al.</i>	2024	Use of digital technologies to support communication and cognitive development	It shows how digital technologies can positively influence social and cognitive skills, especially in special needs contexts, such as autism.
Santana <i>et al.</i>	2021	Impacts of the COVID-19 pandemic on the adoption of educational technologies	It argues that the pandemic has accelerated the use of technologies in education, bringing significant innovations to pedagogical practices.
Santana <i>et al.</i>	2024	Pedagogical strategies that integrate traditional methods and digital technologies	It emphasizes the fusion between traditional and digital methods as effective in promoting literacy and skills in the contemporary context.

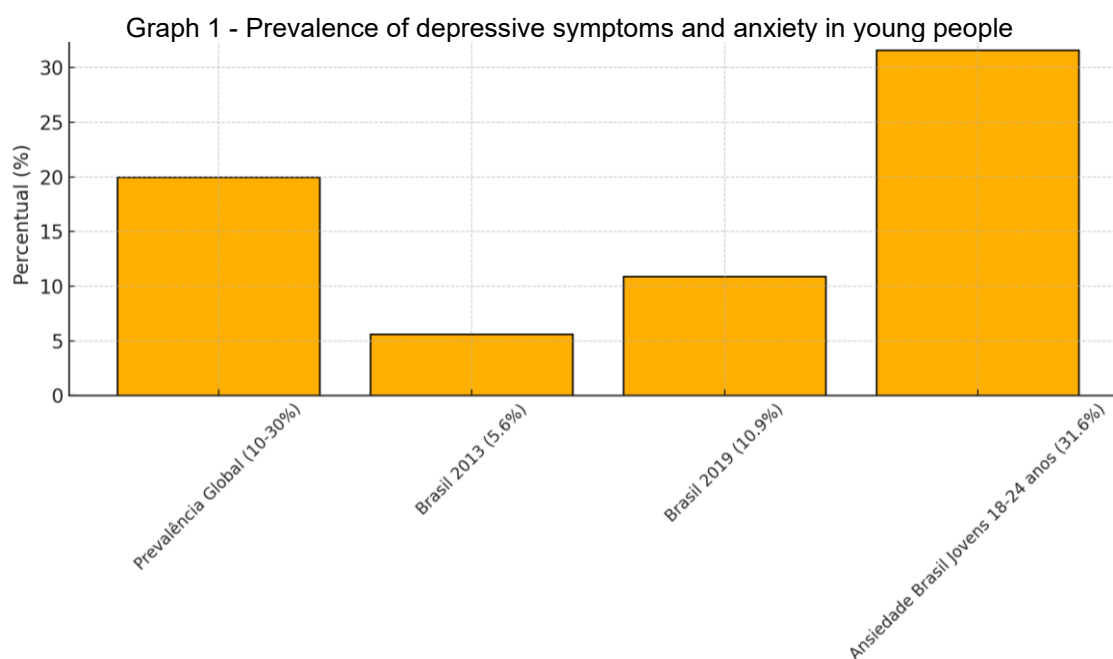
Source: authorship.

THE MAIN CONCLUSIONS OF THE STUDY

The results of this study highlight adolescence as a critical period of emotional and cognitive vulnerability, especially in relation to anxiety and depression. It was possible to observe that, as pointed out by Jatobá and Bastos (2007), symptoms such as depressed

mood, feelings of guilt and agitation are highly prevalent among adolescents. In addition, anxiety appears in different degrees, being predominant in mild levels (80.2%), but also present in moderate (11.2%) and severe (8.7%) degrees according to 2007 data. These data corroborate the idea that biopsychosocial factors play a significant role in the mental health of young people, as discussed by Baptista and Golfeto (2000) and Oliveira *et al.* (2024), which highlight the influence of regional, economic, and cultural factors on the prevalence of these disorders.

More recent studies corroborate these findings, pointing to a global average prevalence of depressive symptoms in adolescents of approximately 20%, with variations of 10% to 30% depending on the location and socioeconomic context. This heterogeneity reinforces the relevance of specific approaches that consider the particularities of each scenario when dealing with youth mental health. In Brazil, data from the National Health Survey indicate that the prevalence of depressive symptoms among young adults almost doubled between 2013 and 2019, from 5.6% to 10.9%, with women being the most affected in both periods (Oliveira *et al.*, 2024). In addition, a national survey pointed out that 31.6% of the young population, between 18 and 24 years old, was diagnosed with anxiety, being the highest prevalence among all age groups in the country (CNN Brasil, 2023).



Source: authorship.

The graph represents data on the prevalence of depressive symptoms and anxiety in young people, highlighting the global average and Brazil-specific data, including the years

2013 and 2019 and the prevalence of anxiety in the 18-24 age group. The graph illustrates the significant variations between the global and national contexts.

THE SIGNIFICANCE OF THESE FINDINGS

These findings underline the need for an educational approach that goes beyond academic teaching, integrating strategies to promote mental health in the school environment. Neuroscience, according to Santos and Sousa (2016), emerges as a crucial ally in this process, offering subsidies for interventions based on the functioning of the central nervous system. On the other hand, the conscious use of technologies, as proposed by Narciso *et al.* (2024), presents itself as a promising tool to create digital environments that favor communication and socialization, mitigating the effects of anxiety and depression among adolescents. These findings reinforce the relevance of integrated educational interventions, which consider both the emotional and cognitive aspects of youth development.

HOW THESE FINDINGS RELATE TO WHAT OTHERS HAVE DONE

These results dialogue directly with previous studies, such as that of Garber and Weersing (2010), which describe adolescence as a period of emotional reorganization. In addition, the analysis corroborates the view of Santana *et al.* (2021), which highlight the importance of innovative pedagogical practices, driven by technological advancement during the COVID-19 pandemic. The connections established between the theoretical frameworks indicate a consensus on the importance of addressing mental health in the educational context, although different authors emphasize various aspects, such as the role of digital strategies (Santana *et al.*, 2024) or neuroscience-based interventions (Bortoli; Teruya, 2017).

LIMITATIONS OF FINDINGS

Despite their relevance, the findings presented face limitations. First, according to Baptista and Golfeto (2000), the analysis of youth mental health is influenced by regional, economic and cultural factors, which vary significantly and may limit the generalization of the results. In addition, Narciso *et al.* (2024) highlight that the impact of the use of digital technologies can vary depending on the level of accessibility and mediation offered by educators, suggesting the need for greater control over contextual variables. Another

limitation lies in the dependence on cross-sectional studies, which offer only a snapshot view, making more comprehensive longitudinal analyses difficult.

AN EXPLANATION FOR SURPRISING, UNEXPECTED OR INCONCLUSIVE RESULTS

Among the surprising results, the high prevalence of mild anxiety among adolescents stands out, which contrasts with the lower incidence of severe degrees (Jatobá; Bastos, 2007). One possible explanation, based on Narciso *et al.* (2024), is that digital technologies, while often seen as a source of stress, can also offer tools that help young people manage moderate levels of anxiety, such as mindfulness apps and educational games. Still, these findings reinforce the complexity of the interactions between mental health and technology, requiring further studies to identify the mediating and moderating factors.

SUGGESTIONS FOR FURTHER RESEARCH

Given the panorama outlined, it is suggested that future research deepen the longitudinal analysis of the impacts of anxiety and depression on academic performance and socialization of adolescents. In addition, studies can focus on the development and evaluation of specific programs that integrate digital technologies with neuroscience-based practices, as proposed by Santos and Sousa (2016). Another promising field would be to investigate how different cultural and socioeconomic contexts affect the effectiveness of these interventions, expanding on the work of Baptista and Golfeto (2000) and Oliveira *et al.* (2024). Finally, it is necessary to explore in more detail the impacts of the excessive use of technologies on youth mental health, considering the gaps identified by Narciso *et al.* (2024), to balance its benefits and risks in the educational environment.

CONCLUSION

This article achieved its objective of exploring the relationship between adolescence, mental health, and the contributions of tools such as neuroscience and technology in coping with disorders such as anxiety and depression. The analysis showed that adolescence, as a period of emotional reorganization and vulnerability, requires integrated approaches that contemplate both the cognitive and emotional aspects of youth development. The conscious and targeted use of digital technologies and advances in neuroscience were highlighted as significant allies in promoting well-being and learning in the school environment.

In addition, the results reaffirmed the importance of considering regional, economic, and cultural factors in the analysis of the prevalence of depressive and anxious symptoms, evidencing the need for contextualized interventions. The integration of innovative pedagogical practices, mediated by digital technologies, proved to be an effective strategy to mitigate the impacts of these disorders, while promoting the development of socio-emotional skills in young people.

Finally, the relevance of expanding research on the topics addressed is reinforced, especially in relation to the impact of biopsychosocial and cultural factors on the mental health of adolescents, as well as the effectiveness of interventions that integrate neuroscience and technology. Thus, it is encouraged that new studies deepen these issues, contributing to the creation of even more effective and inclusive strategies that meet the demands of contemporary youth in a scenario of rapid social and educational transformations.

REFERENCES

1. Baptista, M. N., & Golfeto, J. F. (2000). Variações regionais, econômicas e culturais na prevalência de sintomas depressivos. Disponível em: <https://repositorio.usp.br/item/001135378>. Acesso em: 06 dez. 2024.
2. Bortoli, M. J., & Teruya, T. T. (2017). Neurociência e Educação: os percalços e possibilidades de um caminho em construção. *Imagens da Educação*, 7(1), 70-72. Disponível em: <https://acrobat.adobe.com/id/urn:aaid:sc:EU:83d9b923-91bd-416e-a3d2-6a7827dafffd>. Acesso em: 06 dez. 2024.
3. Garber, J., & Weersing, V. R. (2010). Comorbidity of anxiety and depression in youth: Implications for treatment and prevention. *Clinical Psychology: Science and Practice*, 17, 293-306. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/21499544/>. Acesso em: 06 dez. 2024.
4. Grolli, V., Wagner, M. F., & Dalbosco, S. N. P. (2017). Sintomas depressivos e de ansiedade em adolescentes do Ensino Médio. *Revista de Psicologia IMED*, 9(1), 87-103. Disponível em: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S2175-50272017000100007. <https://doi.org/10.18256/2175-5027.2017.v9i1.2123>. Acesso em: 06 dez. 2024.
5. Jatobá, J. D. V. N., & Bastos, O. (2007). Depressão e ansiedade em adolescentes de escolas públicas e privadas. *Jornal Brasileiro de Psiquiatria*, 56(3), 293-297. <https://doi.org/10.1590/S0047-20852007000300003>. Acesso em: 06 dez. 2024.
6. Narciso, R., Oliveira, F. C. N. de, Alves, D. de L., Duarte, E. D., Maia, M. A. dos S., & Rezende, G. U. de M. (2024). Inclusão escolar: desafios e perspectivas para uma educação mais equitativa. *Revista Ibero-Americana de Humanidades, Ciências e Educação*, 10(8), 713–728. <https://doi.org/10.51891/rease.v10i8.15074>. Acesso em: 06 dez. 2024.
7. Oliveira, B. L. C. A. de, Soares, F. A., Aquino, P. de S., Pinheiro, P. N. da C., Alves, G. S., & Pinheiro, A. K. B. (2019). Prevalência de sintomas depressivos entre adultos jovens no Brasil: resultados da Pesquisa Nacional de Saúde 2013 e 2019. *Revista Brasileira de Epidemiologia*. Disponível em: <https://www.scielo.br/rbepid>. Acesso em: 06 dez. 2024.
8. Prodanov, C. C., & Freitas, E. C. (2013). Metodologia do trabalho científico: métodos e técnicas da pesquisa e do trabalho acadêmico. Novo Hamburgo, RS: Feevale.
9. Santana, A. C. de A., Pinto, E. A., Meireles, M. L. B., Oliveira, M. de, Munhoz, R. F., & Guerra, R. S. (2021). Educação & TDIC's: democratização, inclusão digital e o exercício pleno da cidadania. *Revista Ibero-Americana de Humanidades, Ciências e Educação*, 7(10), 2084–2106. <https://doi.org/10.51891/rease.v7i10.2748>. Acesso em: 06 dez. 2024.

10. Santana, A. A., Diaz, C., & Munhoz, R. (2024). A importância da tradição epistolar para o letramento na Educação Básica. *Revista LaborHistórico*, 10(2), e62158. <https://doi.org/10.24206/lh.v10i2.62158>. Acesso em: 02 dez. 2024.
11. Santos, C. P., & Sousa, K. Q. (2016). A Neuroeducação e suas contribuições às práticas pedagógicas contemporâneas. *Encontro Internacional de Formação de Professores e Fórum Permanente de Inovação Educacional*, 9(1). Disponível em: <https://acrobat.adobe.com/id/urn:aaid:sc:EU:6588855d-69d7-46de-8cbf-45c9d68ce834>. Acesso em: 06 dez. 2024.