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THE IMPACT OF SOCIAL NETWORKS AND DIGITAL CONTENT CONSUMPTION ON ADHD SYMPTOMS: BENEFIT OR HARM?

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Abstract: Introduction: Attention Deficit Hyperactivity Disorder (ADHD) is a neuropsychiatric condition characterized by symptoms such as inattention, impulsivity and hyperactivity, which can be exacerbated by the use of social networks and excessive consumption of digital content. This study aims to analyze how social networks and digital content consumption affect ADHD symptoms, highlighting their possible benefits and harms. Objectives: The main aim of this study is to explore the relationship between social media use and digital content consumption with ADHD symptoms. The research seeks to identify the positive and negative effects of these technologies on the behavior and cognition of diagnosed individuals, contributing to the formulation of guidelines that promote a balanced and healthy use of these platforms. Methodology: A Scoping Review was carried out, covering studies from the last five years, with an emphasis on peer-reviewed publications. The research included papers on the relationship between social networks, digital consumption and ADHD. The sources were extracted from academic databases such as EMBASE, PubMed, SciELO and others. Data analysis followed a systematic five-step approach, including formulating the research question, identifying and selecting the studies, extracting the data and synthesizing the results. Results: The results indicate that the impact of social networks and digital consumption on ADHD symptoms is multifaceted. Excessive use of digital technologies can intensify impulsivity and inattention, especially in children and adolescents. However, controlled use of digital tools, such as organization apps and educational platforms, can improve focus and time management. Social interaction mediated by technology can also reduce isolation and improve the emotional well-being of individuals with ADHD. Discussion: The discussion of the results points out that di-

gital consumption can have negative effects when excessive or misdirected, exacerbating cognitive and emotional difficulties. On the other hand, strategies that use technology in a structured and targeted way, such as the use of apps and positive reinforcement, have been shown to be effective in managing ADHD symptoms. Regulating digital consumption, especially through parental supervision, is essential to mitigate the negative impacts and maximize the benefits of these technologies. Conclusion: The relationship between social networks, digital consumption and ADHD is complex and depends on multiple factors, such as the type of content consumed, exposure time and family environment. Controlled and balanced use of technology can help manage ADHD symptoms, while excessive use can worsen symptoms. The implementation of educational interventions and digital health policies, coupled with the development of more longitudinal research, is essential to promote a healthier and more beneficial use of technologies by individuals with ADHD.

Keywords: Attention, Digital content, Impulsivity, Social networks, ADHD.

INTRODUCTION

In recent decades, social networks and the consumption of digital content have become an essential part of people's daily routines, directly influencing their behavior, cognition and social interactions. Technological advances and easy access to mobile devices have transformed the way people consume information, which can have significant impacts on mental health and cognitive functioning. Among the populations most susceptible to these effects are individuals diagnosed with Attention Deficit Hyperactivity Disorder (ADHD), a neurobiological condition characterized by inattention, impulsivity and hyperactivity. Studies suggest that constant exposure to digital stimuli can either aggrava-

te or mitigate the symptoms of this disorder, depending on the intensity, frequency and nature of the content consumed (Souza *et al.*, 2024).

The impact of social media on individuals with ADHD is a widely debated topic in scientific literature, as there is evidence that indicates both benefits and harms from the use of these platforms. Excessive consumption of digital content, especially that which requires rapid alternation of attention, can further compromise concentration and increase impulsivity, hindering the cognitive and emotional regulation of these individuals (Oliveira *et al.*, 2021). The constant need for immediate responses and high exposure to fragmented information can make it more challenging to control sustained attention, aggravating the symptoms characteristic of the disorder. In addition, compulsive use of social media has been associated with academic difficulties, reduced productivity in the professional environment and negative impacts on mental health, such as increased levels of anxiety, stress and low self-esteem (Maestri *et al.*, 2020).

On the other hand, some studies show that, when used in a controlled and strategic manner, social networks and other digital tools can bring significant benefits to individuals with ADHD. Technologies such as organization apps, interactive educational platforms and online support groups offer support in time management, maintaining focus and developing social skills, reducing the daily challenges faced by these people (Abrahão *et al.*, 2022). In addition, certain digital content formats, such as short videos and gamified materials, can be more appealing to individuals with ADHD, helping to improve information retention and learning (Lacerda *et al.*, 2023). These tools can serve as positive stimuli, promoting a more dynamic and motivating teaching experience, which facilitates academic and professional adaptation.

The relationship between the consumption of digital content and ADHD, therefore, cannot be analyzed in a simplistic or generalized way, since various factors influence this dynamic. The impact of social networks and other technological platforms depends not only on the time of use, but also on the type of content consumed, the user's level of interaction and their individual characteristics, such as age, history of symptoms and self-regulation strategies (Júnior *et al.*, 2024). In addition, the role of the family environment and supervision in the use of these technologies is a fundamental aspect to be considered, since parental and educational mediation can help to minimize risks and enhance benefits.

According to Cheffer *et al.* (2023), given this scenario, further research into the effects of digital consumption on individuals with ADHD is essential in order to identify effective strategies for a more balanced and healthy use of these technologies. The aim of this study is to critically analyze the impact of social networks and digital content on ADHD symptoms, discussing their possible benefits and harms. The research aims to contribute to the development of guidelines and recommendations to help health professionals, educators and family members adopt more appropriate practices for using these tools.

Finally, understanding the influence of social networks and digital consumption on ADHD symptoms is essential for developing strategies that optimize their positive effects and minimize the potential damage. While an excess of quick stimuli can intensify inattention and impulsivity, the conscious and targeted use of technology can offer valuable resources for managing symptoms. Thus, establishing a balance between the use of these tools and other therapeutic approaches may be the key to improving the quality of life and academic and professional performance of individuals with ADHD.

METHODOLOGY

The Scoping Review was conducted between January 2025 and February 2025, focusing on the methodological analysis of the scientific evidence published on the impact of social networks and digital content consumption on the symptoms of Attention Deficit Hyperactivity Disorder (ADHD). This study model was chosen for its ability to synthesize and map the existing literature on the subject, allowing gaps and trends in scientific production to be identified. The review followed established protocols to ensure methodological rigor and transparency in the process of selecting and analyzing the studies, and was registered on an open access platform.

Inclusion criteria included publications from the last five years, available in full and in any language, with a preference for peer-reviewed journals that directly addressed the relationship between social networks, digital consumption and ADHD symptoms. In addition, gray literature, such as works found on open academic databases, was also considered. Duplicate studies, those that did not address the main objective of the research, as well as letters to the editor, editorial notes, projects, abstracts and information with a low level of evidence were excluded.

The review was structured into five main stages: (1) formulation of the research question, (2) identification of relevant studies, (3) selection of studies based on the pre-defined criteria, (4) extraction of data from the selected studies and (5) synthesis and analysis of the results.

In Stage One, the research question was formulated based on the PCC (Population, Concept and Context) mnemonic, ensuring clarity in the delimitation of the topic. The question defined was: "How does the use of social networks and the consumption of digital content influence the symptoms of ADHD, representing a benefit or a detriment for diagnosed individuals?"

In Stage Two, the descriptors and Booleans were defined by testing and re-testing in academic databases, using the following terms in English: (*ADHD OR ATTENTION DEFICIT HYPERACTIVITY DISORDER*) AND (*SOCIAL MEDIA OR DIGITAL CONTENT*) AND (*COGNITION OR IMPULSIVITY OR ATTENTION*). The searches were carried out in databases such as EMBASE, SCIENCE DIRECT, PubMed/Medline, Lilacs, Ibecs, Scielo, BDenf, Biblioteca Virtual em Saúde (BVS) and Biblioteca Regional de Medicina (BIREME).

In the Third Stage, a systematic methodology was applied to select the studies, which took place in four sub-stages: (1) Identification - a survey of relevant studies on academic databases; (2) Selection - initial screening by title and abstract to check adherence to the inclusion criteria; (3) Eligibility - detailed analysis of the inclusion and exclusion criteria by the reviewers; (4) Inclusion - final decision on which studies would be included in the review.

In the Fourth Stage, the selection of studies was conducted systematically, minimizing bias and allowing a careful evaluation of the available evidence on the relationship between social networks, digital consumption and ADHD symptoms. The extracted data was organized in a digital spreadsheet, ensuring a clear structure for analysis.

In Stage Five, the synthesis of the data was conducted by three reviewers, ensuring the accuracy of the findings. The results were presented using flowcharts and descriptive tables, detailing general information about the studies, including title, authors, year of publication, objectives, methods, population, sample and level of evidence. We also mapped the variables associated with the digital context and their influence on ADHD symptoms, making it easier to understand the benefits and harms related to the use of these technologies.

RESULTS

The analysis of the selected studies revealed that the impact of social networks and the consumption of digital content on the symptoms of Attention Deficit Hyperactivity Disorder (ADHD) is a complex and multifaceted phenomenon, influenced by various individual and contextual factors. Many studies indicate that excessive exposure to fast digital stimuli can intensify symptoms such as impulsivity, inattention and difficulties in emotional regulation, making cognitive control even more challenging for individuals with ADHD (Costa *et al.*, 2022). This effect is especially worrying among children and adolescents, whose brains are still developing and may be more vulnerable to patterns of hyperstimulation. In addition, the rapid alternation of information and the constant need for immediate interactions promoted by social networks can reinforce instant gratification-seeking behaviors, aggravating the challenges of concentration and persistence in tasks that require continuous effort.

On the other hand, some research shows that the controlled and targeted use of digital tools can bring significant benefits to people with ADHD, especially when these technologies are used strategically. Specific apps and interactive platforms aimed at organization and productivity can help with time management, task structuring and the development of skills socio-emotional, contributing to the autonomy of these individuals (Barbosa *et al.*, 2020). In addition, gamification and the use of positive reinforcement in digital environments have been shown to be effective in improving motivation and focus, making learning more dynamic and engaging. In this way, technology can act as an ally in the process of adapting to and overcoming the difficulties associated with ADHD, as long as it is used with moderation and purpose.

Furthermore, the relationship between social networks and mental health in the context of ADHD is not homogeneous and depends on factors such as age, exposure time and type of content consumed. Recent research indicates that passive social media consumption, such as simple browsing without active interaction, is associated with higher levels of anxiety, inattention and low self-esteem in individuals with ADHD (Gonçalves *et al.*, 2021). This is because constant exposure to carefully selected content highlighting positive aspects of other people's lives can lead to harmful comparisons and feelings of inadequacy. On the other hand, when used actively and consciously, social networks can provide meaningful social interactions for those who face difficulties in face-to-face communication, helping to build interpersonal relationships and develop social skills (Pereira *et al.*, 2023).

Another relevant point identified in the studies analyzed is the influence of social media algorithms on the behavior of individuals with ADHD. Continuous exposure to highly stimulating and short-lived content can reinforce patterns of seeking immediate gratification, negatively impacting the ability to maintain attention on prolonged and demanding tasks (Silva *et al.*, 2024). This tendency can generate a vicious cycle of digital consumption, in which the individual finds it difficult to engage in activities that do not offer instant rewards, damaging academic, professional and social performance. In addition, the excess of digital stimuli can interfere with sleep patterns, aggravating symptoms such as fatigue, irritability and difficulty concentrating. Thus, understanding the role of algorithms in shaping the behavior of users with ADHD is essential for creating strategies to reduce the negative impacts of these platforms.

Studies also indicate that the way parents and guardians regulate the use of technology can play a fundamental role in minimizing the

negative impacts of digital consumption on children and adolescents with ADHD. Active supervision, setting screen time limits and guidance on the type of content consumed are practices that can reduce excessive exposure to harmful stimuli and promote healthier digital habits (Szymaski *et al.*, 2022). In addition, encouraging offline activities such as sports, reading and face-to-face interactions can help balance technology use and strengthen cognitive and social skills. Strategies such as creating structured routines and establishing periods without electronic devices, especially before bedtime, have been shown to be effective in improving sleep quality and emotional regulation in individuals with ADHD.

Finally, the findings of this review reinforce the need for a balance between the use of technology and alternative strategies for managing ADHD symptoms. Excessive and unregulated consumption can intensify cognitive and emotional difficulties, while planned and structured use can bring important benefits for the development and quality of life of these people (Pimentel *et al.*, 2022). Thus, understanding the mechanisms involved in this relationship is essential for developing effective interventions and policies for the responsible use of technology. Health professionals, educators and family members should work together to promote a more conscious and balanced approach to the use of social networks and digital content, ensuring that technology acts as an ally in the development and well-being of individuals with ADHD. As Silva point out *et al.* (2024), although excessive consumption of digital content can intensify the symptoms of ADHD, the conscious and targeted use of technology can become a valuable tool for organization, learning and social development.

DISCUSSION

The results of this review show that the impact of social networks and the consumption of digital content on the symptoms of Attention Deficit Hyperactivity Disorder (ADHD) varies significantly depending on the pattern of use, the length of exposure and the individual characteristics of the users. The literature points out that the excess of rapid stimuli, combined with the fragmented and interactive nature of social networks, can intensify symptoms such as inattention, impulsivity and difficulties in emotional regulation (Oliveira *et al.*, 2021). Digital hyperstimulation, characterized by constant notifications, short videos and dynamic content, reinforces instant gratification-seeking behaviours, making it harder to stay focused on prolonged activities. This effect is especially worrying for children and adolescents, whose neurological development is still in the process of formation, making them the most susceptible to unregulated and harmful patterns of use. Therefore, the need to set limits and promote a more conscious use of these technologies is essential in order to minimize their negative impacts.

On the other hand, the potential of digital tools to help manage ADHD symptoms cannot be ignored. Recent research indicates that the structured and strategic use of digital applications and platforms can significantly contribute to the organization, focus and motivation of these individuals (Júnior *et al.*, 2024). Productivity apps, digital reminders and gamification-based methodologies have been identified as promising resources for stimulating learning and facilitating the social adaptation of people with ADHD. In addition, interactive digital environments that offer positive reinforcement can help improve emotional self-regulation and persistence in challenging tasks. This demonstrates that, when used with purpose and planning, digital tools can be allies in the development of essential skills for the daily lives of individuals with ADHD.

The issue of algorithms and personalization of content is also worth highlighting, as it directly influences the patterns of use of social networks by individuals with ADHD. Studies indicate that these people tend to be more susceptible to the persuasive design of digital platforms, which reinforce patterns of immediate gratification and reduce the capacity for self-control and attentional regulation (Barbosa *et al.*, 2020). The functioning of algorithms, which prioritize highly stimulating and short-lived content, can make it even more difficult to maintain attention in activities that require greater cognitive effort. This phenomenon may explain why many users report difficulties in stopping using social networks, even when they realize their negative impacts on academic and professional performance and social interactions. In addition, excessive consumption of digital content can lead to secondary problems such as sleep disorders, anxiety and emotional difficulties, making it essential to develop strategies to regulate this consumption in a healthier way.

Another relevant factor discussed in the literature is the role of the family environment in regulating digital consumption, especially in the case of children and adolescents with ADHD. Active parental supervision, associated with the definition of clear rules on screen time and the type of content consumed, has been identified as an effective strategy in mitigating the adverse effects of social networks (Costa *et al.*, 2022). Studies suggest that implementing structured routines, including periods without electronic devices, can improve attention regulation and reduce impulsive behavior. In addition, educators and health professionals play a key role in guiding families on the responsible use of technology, helping to create a balanced environment that favors the cognitive and emotional development of children and adolescents with ADHD. Encouraging offline activities, such as sports,

reading and face-to-face interactions, is also essential for promoting a healthier lifestyle that is less dependent on digital stimuli.

Although the findings of this review point to the risks and benefits of digital consumption in individuals with ADHD, it is essential to consider the need for more longitudinal studies that assess the long-term effects of this exposure. Much of the available research focuses on short-term analyses, which makes it difficult to understand the consequences of prolonged use of social networks and digital content in this population (Cheffer *et al.*, 2023). In addition, the variability of results between different studies suggests that factors such as age, level of ADHD severity and sociocultural context can significantly influence how technology impacts these individuals. Future research should explore more robust methodological approaches, including controlled and long-term studies, to further analyze the mechanisms underlying the relationship between ADHD and digital consumption.

Given these considerations, it can be concluded that the relationship between social networks, digital consumption and ADHD is complex and multifactorial, requiring a balance between the use of these technologies and other forms of intervention. Strategies that combine digital approaches with behavioral, educational and therapeutic techniques can maximize the benefits and minimize the negative impacts of digital consumption on individuals with ADHD (Souza *et al.*, 2024). Thus, it is recommended that educational and digital health policies be developed to help this population use technology in a more productive and healthy way. In addition, awareness of the risks of excessive use and the promotion of more balanced digital practices should be encouraged through educational campaigns and actions aimed at parents, educators and health professionals. (2024), although excessive consumption of digital content can intensify the

symptoms of ADHD, when used consciously and in a targeted manner, technology can become a valuable tool for organization, learning and social development.

CONCLUSION

Analysis of the impact of social networks and digital content consumption on ADHD symptoms reveals a complex and multifaceted relationship, with both benefits and detriments. Although excessive use of digital platforms can aggravate symptoms such as inattention and impulsivity, controlled and targeted use of digital tools has the potential to help manage symptoms, such as increased organization and motivation. The key lies in the balance and conscious use of these technologies, both by individuals and their guardians.

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It is crucial to consider that factors such as age, type of content consumed and the family environment directly influence the results of digital consumption in people with ADHD. Interventions that promote the responsible use of social networks and apps, such as parental supervision and setting clear limits on screen time, can reduce the negative impacts and maximize the benefits. In addition, education about the healthy use of these technologies can be key to mitigating adverse effects and promoting the well-being of this population.

Finally, there is a clear need for more longitudinal studies and diverse methodological approaches to deepen our understanding of the long-term effects of digital consumption on ADHD. Only with more research will it be possible to create more effective interventions and more appropriate digital health policies, ensuring that technologies are used in a beneficial way for those living with the disorder.

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