


**THE IMPACT OF EXCESSIVE SCREEN USE ON MENTAL HEALTH AND SLEEP QUALITY
IN YOUNG PEOPLE AND ADULTS** <https://doi.org/10.63330/aurumpub.044-006>**Ariana Pinheiro Caldas¹, Sharana Almeida dos Santos Nascimento², Vanessa Emília Thomaz Fagundes³, Susana Oliveira Semedo Nunes⁴ and Victor Gonçalves Linares⁵****Abstract**

This study aims to analyze the impact of excessive screen use on mental health and sleep quality in young people and adults. It is an integrative literature review with a qualitative approach, based on scientific articles published in national and international databases, including recent studies on digital behavior, mental health, and sleep disorders. The results indicate that prolonged use of electronic devices, especially at night, is associated with increased symptoms of anxiety, depression, and stress, as well as significant impairments in sleep quality, such as insomnia, reduced sleep duration, and sleep fragmentation. Exposure to blue light and cognitive overstimulation are identified as key contributing factors. It is concluded that excessive screen use represents an important risk factor for mental health and sleep quality, highlighting the need for health education strategies, promotion of sleep hygiene, and conscious use of technology to improve overall quality of life.

Keywords: Anxiety, Digital technologies, Mental health, Screen use, Sleep quality.

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INTRODUCTION

The use of digital technologies and electronic devices has become an integral part of everyday life, especially among young people and adults. Smartphones, computers, and tablets are widely used for academic, professional, and entertainment purposes, contributing to connectivity and rapid access to information. However, the excessive use of these technologies, particularly during nighttime hours, has raised concerns regarding their effects on mental health and sleep quality.

In this context, the following research question is defined: in what way does excessive screen use influence mental health and sleep quality in young people and adults? Based on this issue, the general objective of this study is to analyze the impacts of prolonged use of electronic devices on these two aspects of health. The specific objectives are: to identify the main effects of excessive screen use on mental health; to assess the changes in sleep quality associated with this behavior; and to discuss prevention strategies and the promotion of healthy habits related to the use of technology.

The rationale for this study is grounded in the growing incidence of sleep disorders and mental disorders, such as anxiety and depression, especially in populations intensely exposed to digital technologies. Understanding this relationship is essential to support health education actions and to guide more balanced practices in the use of electronic devices.

From a theoretical perspective, studies indicate that prolonged exposure to screens, especially to the blue light emitted by these devices, interferes with the production of melatonin, the hormone responsible for sleep regulation, thereby hindering the onset and maintenance of rest. In addition, excessive use is associated with cognitive overstimulation, increased social comparison on digital networks, and information overload, factors that contribute to the development of symptoms such as stress, anxiety, and mental fatigue. Thus, the need to deepen the understanding of the impacts of screen use on health becomes evident, considering its individual and collective implications.

METHODOLOGY

TYPE OF RESEARCH

This is a qualitative study designed as an integrative literature review, a method widely used in the health field because it allows for the synthesis of knowledge and the incorporation of scientific evidence into practice. This type of study makes it possible to gather and analyze research findings with different methodological approaches, favoring a comprehensive understanding of the impact of excessive screen use on mental health and sleep quality in young people and adults. In addition, the integrative review contributes to the identification of gaps in knowledge, thereby guiding future investigations.

SEARCH STRATEGY AND STUDY SELECTION

The search for studies was carried out systematically in recognized scientific databases, including the Virtual Health Library (VHL), Scientific Electronic Library Online (SciELO), and PubMed. Controlled and uncontrolled descriptors were used, extracted from the Health Sciences Descriptors (DeCS) and the Medical Subject Headings (MeSH), such as: “screen use,” “screen time,” “mental health,” “sleep quality,” “electronic devices,” and “blue light.” These terms were combined using the Boolean operators AND and OR in order to broaden and refine the search results.

As inclusion criteria, articles published between 2015 and 2025 were selected, available in full text, in Portuguese, English, and Spanish, and directly addressing the relationship between screen use, mental health, and sleep in young and adult populations. Duplicate studies, non-systematized reviews, editorials, letters to the editor, incomplete works, and research that did not align with the proposed objective were excluded.

The selection process occurred in stages: initially, the titles and abstracts were read in order to screen potentially relevant studies. Subsequently, the selected articles were read in full, with the inclusion and exclusion criteria being applied. At the end, the eligible studies comprised the review sample.

INSTRUMENTS AND DATA ORGANIZATION

For the extraction and organization of information, an instrument was developed containing variables such as: author(s), year of publication, country of origin, study objective, type of methodological design, main results, and conclusions. This process enabled the systematization of the data and facilitated comparison among the included studies. The data were organized into tables and thematic categories, favoring the critical analysis and interpretation of the findings.

DATA ANALYSIS PROCEDURES

Data analysis was performed using a descriptive and interpretive approach, based on the thematic analysis technique. Initially, the studies were read in depth, seeking to identify common and divergent elements. Subsequently, the findings were grouped into analytical categories, such as: psychological impacts of excessive screen use, physiological changes related to sleep, and behavioral factors associated with nighttime use of electronic devices.

This stage allowed for the construction of a critical synthesis of the available knowledge, highlighting recurring patterns, causal relationships, and possible explanatory mechanisms for the observed effects. In addition, it made it possible to identify moderating factors, such as age, exposure time, type of content consumed, and social context.

ETHICAL ASPECTS

As this was an integrative literature review, the study did not directly involve human subjects, and therefore submission to a Research Ethics Committee was not necessary. Nevertheless, the ethical principles of scientific research were strictly respected, including fidelity in data presentation, respect for authorship, and the correct citation of the sources used, thereby avoiding any form of plagiarism.

METHODOLOGICAL RIGOR AND STUDY LIMITATIONS

In order to ensure methodological rigor, clear criteria for the selection and analysis of studies were adopted, as well as the use of recognized databases and standardized descriptors. The systematic organization of the stages contributed to the transparency and reproducibility of the research.

However, some limitations must be considered. Dependence on the methodological quality of the included studies may influence the consistency of the results presented. In addition, the temporal and linguistic restriction may have excluded relevant studies published outside the established criteria. Another point concerns the heterogeneity of the designs of the studies analyzed, which may make it difficult to generalize the findings.

METHODOLOGICAL DISCUSSION

The choice of the integrative review proved appropriate to the objective of the study, since it enabled a broad analysis of a contemporary and multifactorial phenomenon. The growing use of digital technologies and their impacts on health require approaches that integrate different scientific perspectives, including biological, psychological, and social aspects.

In this sense, the adopted methodology allowed not only the synthesis of existing knowledge, but also critical reflection on the challenges associated with excessive screen use. The results obtained reinforce the need for new research, especially longitudinal and experimental studies, which may deepen the understanding of causal relationships and contribute to the development of effective interventions aimed at promoting mental health and sleep quality.

RESULTS AND DISCUSSION

The results of this integrative review show a consistent association between excessive screen use and significant harm to mental health and sleep quality in young people and adults. The analysis of the

selected studies demonstrated that prolonged exposure to electronic devices, especially during nighttime hours, is directly related to an increase in symptoms such as anxiety, depression, stress, and irritability.

With regard to mental health, several studies indicate that intensive use of social media and other digital platforms favors social comparison, technological dependence, and information overload, factors that contribute to psychological distress. In addition, the constant need for connection and updating may generate a sense of urgency and difficulty relaxing, negatively affecting emotional well-being.

Regarding sleep quality, the findings indicate that exposure to the blue light emitted by screens interferes with the production of melatonin, an essential hormone for the regulation of the sleep-wake cycle. As a consequence, delayed sleep onset, reduction in total sleep duration, and greater fragmentation are observed, resulting in non-restorative sleep. Studies also highlight that the use of electronic devices before bedtime is associated with insomnia and daytime fatigue.

The literature analyzed reinforces that these impacts are intensified by factors such as duration of use, type of content accessed, and individual context. Young people tend to be more vulnerable due to greater exposure to social media, while adults may present greater impairment related to the continuous professional use of technology.

In a complementary manner, some studies suggest that the adoption of sleep hygiene strategies, such as reducing screen use before bedtime, controlling exposure time, and using blue light filters, may contribute to minimizing the negative effects observed.

A synthesis of the main findings identified in the literature is presented below:

Aspect Analyzed	Main Results Observed
Mental health	Increase in anxiety, depression, and stress
Sleep quality	Insomnia, reduced duration, and fragmented sleep
Associated factors	Nighttime use, blue light, social media
Preventive strategies	Sleep hygiene, reduced screen time

The interpretation of the results shows consistency with the current scientific literature, which recognizes excessive screen use as an emerging risk factor for health. Although digital technologies bring undeniable benefits, their dysregulated use may lead to significant impacts, reinforcing the need for awareness and interventions aimed at promoting healthier habits.

Finally, it is emphasized that the complexity of the topic requires multidisciplinary approaches involving professionals from health, education, and technology in order to promote balance between the use of digital tools and the preservation of mental health and sleep.

CONCLUSION

The present study aimed to analyze the impacts of excessive screen use on mental health and sleep quality in young people and adults. Based on the integrative literature review, it was possible to understand comprehensively the main implications of this behavior for individuals' biopsychosocial well-being.

The results showed that prolonged use of electronic devices, especially during nighttime hours, is associated with increased symptoms of anxiety, stress, and depression, in addition to significant impairments in sleep quality, such as insomnia, reduced duration, and sleep fragmentation. Exposure to

blue light and cognitive overstimulation were identified as central factors in this process, contributing to changes in the sleep-wake cycle and emotional balance.

As a contribution, this study reinforces the importance of raising awareness about the conscious use of digital technologies, highlighting the need for health promotion strategies, such as the adoption of sleep hygiene practices and the limitation of screen exposure time. In addition, the findings may support health and education professionals in the development of interventions aimed at preventing health problems related to the excessive use of electronic devices.

Finally, future research with longitudinal and experimental designs is suggested in order to deepen the understanding of the causal relationships between screen use and impacts on mental health and sleep. The importance of investigations that consider different age groups, sociocultural contexts, and types of technology use is also highlighted, contributing to the development of more effective and targeted strategies.

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