

**USE OF SCREENS AND THE IMPACTS ON ADOLESCENT HEALTH: EXPERIENCE OF AN EDUCATIONAL ACTIVITY****USO DE PANTALLAS Y LOS IMPACTOS EN LA SALUD DE LOS ADOLESCENTES: EXPERIENCIA DE UNA ACTIVIDAD EDUCATIVA****USO DE TELAS E OS IMPACTOS NA SAÚDE DOS ADOLESCENTES: EXPERIÊNCIA DE UMA ATIVIDADE EDUCATIVA**<sup>1</sup>Jéssica Renata Bastos Depianti<sup>2</sup>Laerte Bruno dos Santos<sup>3</sup>Myllena Miguel dos Santos da Silva<sup>4</sup>Thaís Guilherme Pereira Pinheiro Pimentel<sup>5</sup>Renata de Moura Bubadué<sup>6</sup>Rosana Silva Rosa

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**Submission:** 05-02-2025**Approval:** 01-09-2025**ABSTRACT**

**Objective:** To describe the experience of an educational activity with adolescents on excessive screen use and its impacts on physical and mental health. **Method:** This is an experience report of an activity conducted with adolescents from a public school located in the southern zone of Rio de Janeiro. The activity took place in September 2023, and was mediated through art, based on the question: What are the impacts of excessive screen use on adolescents' physical and mental health? The data were organized into thematic categories based on the artistic productions. **Results:** Adolescents highlighted problems such as headaches, visual disturbances, insomnia, erectile dysfunction, sedentary behavior, obesity, and stress as consequences of screen use on their physical health. They also reported effects on mental health, including antisocial behavior, self-harm, depression, and suicidal ideation. Regarding strategies to minimize these effects, they described the need for interventions promoting healthier habits, such as engaging in outdoor physical activities, conscious use of devices, seeking help from healthcare professionals, and increased parental supervision. **Conclusion:** The educational activity with adolescents addressed the negative impacts of excessive screen use on their physical and mental health. Through art, they were able to reflect on screen exposure time and the content consumed, seeking strategies to reduce usage time and seek support from healthcare professionals.

**Keywords:** Adolescent Health; Attitude to Computers; Smartphone; Television; Health Education.

**RESUMEN**

**Objetivo:** Describir la experiencia de una actividad educativa con adolescentes sobre el uso excesivo de pantallas y sus impactos en la salud física y mental. **Método:** Se trata de un relato de experiencia de una actividad realizada con adolescentes de una escuela pública ubicada en la zona sur de la ciudad de Río de Janeiro. La actividad tuvo lugar en septiembre de 2023 y fue mediada a través del arte, a partir de la pregunta: ¿Cuáles son los impactos del uso excesivo de pantallas en la salud física y mental de los adolescentes? Los datos fueron organizados en ejes temáticos a partir de las producciones artísticas. **Resultados:** Los adolescentes destacaron problemas como dolores de cabeza, trastornos visuales, insomnio, disfunción eréctil, sedentarismo, obesidad y estrés como ejemplos de los efectos del uso de pantallas en su salud física. También informaron efectos en la salud mental, como comportamientos antisociales, autolesiones, depresión e ideación suicida. En cuanto a las estrategias para minimizar estos efectos en su salud, describieron la necesidad de intervenciones que promuevan hábitos más saludables, como la práctica de actividades físicas al aire libre, el uso consciente de dispositivos, la búsqueda de ayuda de profesionales de la salud y una mayor supervisión parental. **Conclusión:** La actividad educativa con adolescentes abordó los impactos negativos del uso excesivo de pantallas en la salud física y mental de los adolescentes. A través del arte, pudieron reflexionar sobre el tiempo de exposición a las pantallas y el contenido consumido, buscando estrategias para reducir el tiempo de uso y buscar apoyo de profesionales de la salud.

**Palabras clave:** Salud del Adolescente; Actitud Frente a las Computadoras; Teléfono Inteligente; Televisión; Educación en Salud.

**RESUMO**

**Objetivo:** Descrever a experiência de uma atividade educativa com adolescentes sobre o uso excessivo de telas e os impactos na saúde física e mental. **Método:** Relato de experiência de uma atividade realizada com adolescentes de uma escola estadual localizada na zona sul da cidade do Rio de Janeiro. A atividade ocorreu no mês de setembro de 2023, mediada pela arte, a partir da questão: quais os impactos do uso excessivo de telas na saúde física e mental dos adolescentes? Os dados foram organizados em eixos temáticos a partir das produções artísticas. **Resultados:** Os adolescentes destacaram problemas como dores de cabeça, distúrbios visuais, insônia, disfunção erétil, sedentarismo, obesidade e estresse como exemplos do uso das telas na sua saúde física. Também relataram efeitos na saúde mental, como comportamentos antissociais, automutilação, depressão e ideação suicida. Quanto as estratégias para minimizar os efeitos em sua saúde, descrevem a necessidade de intervenções que promovam hábitos mais saudáveis, como a prática de atividades físicas ao ar livre, o uso consciente de dispositivos e buscar ajuda dos profissionais de saúde e maior fiscalização parental. **Conclusão:** A atividade educativa com adolescentes abordou os impactos negativos do uso excessivo de telas na saúde física e mental dos adolescentes. Por meio da arte, puderam refletir sobre o tempo de exposição às telas e o conteúdo consumido, buscando estratégias para reduzir o tempo de uso e a busca de profissionais de saúde.

**Palavras-chave:** Saúde do Adolescente; Atitude Frente aos Computadores; Smartphone; Televisão; Educação em Saúde.



## INTRODUCTION

Technological advancement culminated in the emergence of the internet, which simplified tasks and enabled communication between people even when far apart. While its use has facilitated activities such as shopping, gaming, and entertainment, it has become increasingly integrated into everyday life, increasing individuals' dependence on electronic devices<sup>(1,2)</sup>.

While the use of these resources has positive applications, such as in education, with remote classes and accommodating a larger number of students, it is important to reflect on their excessive use, especially among children and young people. Prolonged screen time can have negative consequences for physical and mental health, such as sleep disorders, obesity, anxiety, depression, and difficulties in social interactions, such as isolation<sup>(3,4)</sup>. Additionally, there are risks associated with personal data collection and use, which can compromise users' privacy, affect their behavior, and shape their consumption patterns<sup>(5)</sup>.

In 2021, a study conducted by the Regional Center for Studies for the Development of Society revealed that 93% of Brazilian children and adolescents, aged 9 to 17, used internet-connected devices. This accounted for a 4% increase compared to 2019, when the percentage was 89%. Cell phones are the most widely used device, present in 98.9% of homes in the country with internet access<sup>(5,6,7)</sup>, which can lead to adolescents' exposure to the internet and its impact on their mental health.

Prolonged screen time often leads to poor posture, which can trigger back, neck, and shoulder pain as well as eye problems. Continuous exposure to blue light emitted by screens, especially at night, can also affect adolescents' circadian rhythms and sleep quality, resulting in insomnia and other sleep disorders<sup>(8,9)</sup>. Moreover, depression, anxiety, hyperactivity, and attention deficit disorder can develop<sup>(7)</sup>.

Given this issue, the Brazilian Society of Pediatrics recommends that adolescents between the ages of 11 and 18 should not exceed three hours of screen time per day, including video games, as well as staying up all night playing them. Therefore, educational activities on balanced screen use are necessary to guide and raise awareness among adolescents about the impacts on their physical and mental health, as well as to help them make responsible choices in a constantly evolving digital world<sup>(10)</sup>.

Reflecting on the above, this study aimed to describe the experience of an educational activity with adolescents about the excessive use of screens and the impacts on physical and mental health.

## METHOD

This is a descriptive, experience-report study based on an educational activity carried out in September 2023 by nursing students at a state high school located in the southern zone of the city of Rio de Janeiro. The educational activity is part of the curriculum for the Integrated Clinical Teaching in Public and

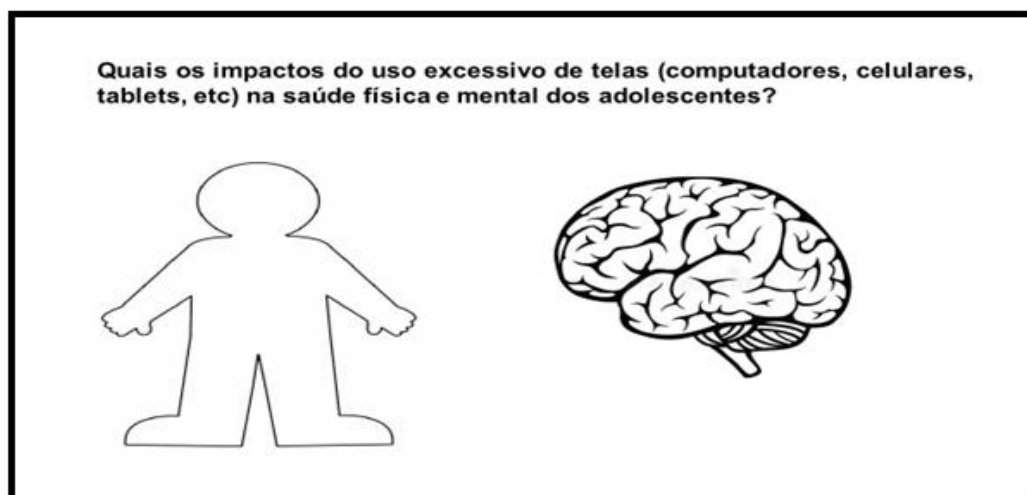


Mental Health discipline, as recommended by the Ministry of Education, through Ordinance 1,350 of December 17, 2018<sup>(11)</sup>.

To carry out the activity, nursing students created a material (Figure 1) using printed figures representing mental health (brain) and

physical health (human body), which were glued to poster board. Above them, the following question was written: What are the impacts of excessive screen use (computers, cell phones, tablets, etc.) on adolescents' physical and mental health?

**Figure 1** - Printed material used for artistic productions. Rio de Janeiro, RJ, 2025



The educational activity was implemented in two stages: In the first, adolescents were divided into four groups, and each group received a poster board and color set pens. They had 15 minutes to express themselves freely by answering the questions on the material provided. Afterward, each group presented their work, and further questions were asked, and any doubts and guidance on the topic were answered. In the second stage, students used the back of the poster board to write about strategies they should adopt to minimize the impacts of excessive screen time on their physical and mental health. After ten minutes, each group could share their work.

Since this is an experience report describing an educational activity, it was not

necessary to submit the study to a Research Ethics Committee. However, it is important to emphasize that the ethical principles of anonymizing participants and describing the educational activity for teaching purposes, as established by the Brazilian National Health Council, were strictly followed.

## RESULTS

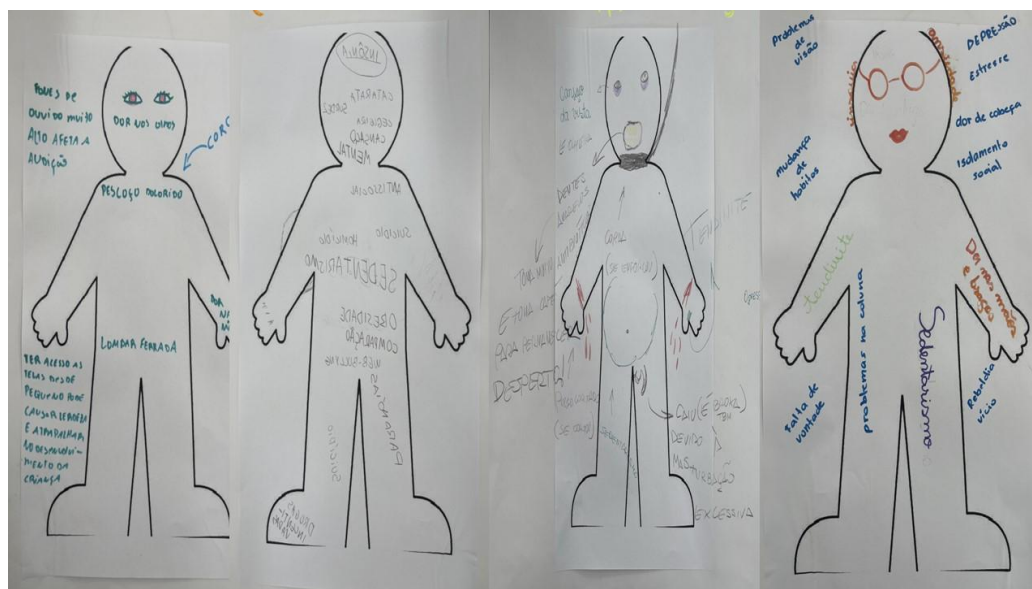
Twenty-two high school seniors, aged 16 to 18, of both sexes, participated. The following topics emerged from the group's artistic productions: Impacts on adolescents' physical health; Impacts on adolescents' mental health; and Strategies to minimize the impacts on adolescents' physical and mental health.

### Impacts on adolescents' physical health

The impacts on physical health were represented in the body drawing, with adolescents associating the impact of internet use

on the head, trunk, genitals and limbs, as illustrated in Figure 2.

**Figure 2** - Artistic productions on the impacts of screen time on adolescents' physical health. Rio de Janeiro, RJ, 2025



In their head, they pointed out that excessive screen time can cause vision problems, headaches, physical fatigue due to sleepless nights (represented, in the drawing, by dark circles under the eyes); yellowed teeth due to excessive coffee consumption to stay awake; and the use of antibiotics due to weakened immunity and changes in habits. Phrases such as “using the computer, we are in a terrible position for our posture and spine” and “having access to screens from an early age can cause sluggishness and hinder a child’s development” were used.

In the torso, they indicated problems with the spine (“sore lower back”) and neck (“hunchback”), a sedentary lifestyle, and obesity (represented by the abdominal region with excess fat and excess weight). Only one group drew a male genital organ representing erectile dysfunction due to excessive masturbation, since

the internet allows easy access to explicit pornographic content. Furthermore, they expressed body dysphoria due to the standardization of genitals depicted in adult films. In the limbs, they associated issues involving tendonitis and pain in the hands and arms due to the repeated use of cell phones, video games, and computers.

During the discussion, adolescents interacted with each other and with nursing students, exchanging information about the drawings and the insights they generated. This allowed the groups to discuss the impacts of screen time on physical health, even when the information was presented by a single group.

Concerning physical health, adolescents noted that excessive screen time can cause tendonitis, vision problems, a sedentary lifestyle (obesity, impaired hearing), deafness, headaches,



lifestyle changes, dark circles under the eyes, and drug use. They also drew dark circles representing the area, and the abdominal region representing excess fat.

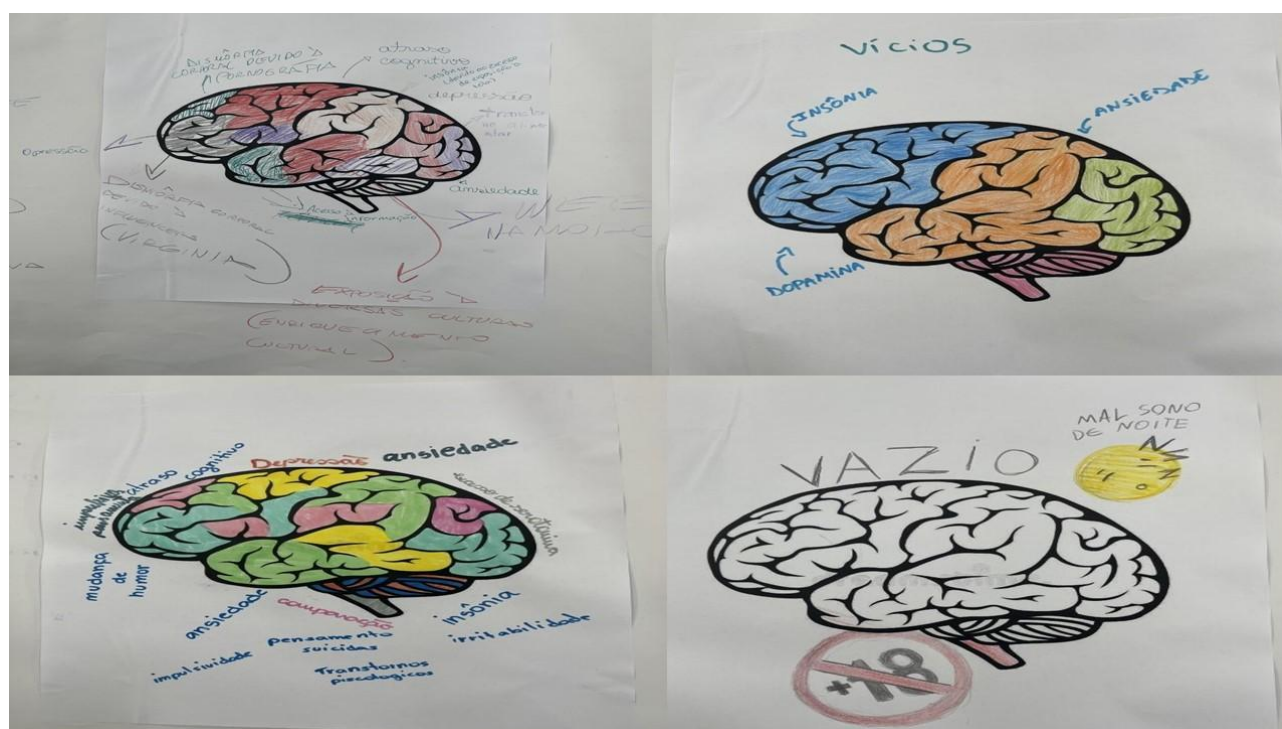
### Impacts on adolescents' mental health

In this thematic axis, adolescents represented excessive screen use within the body (neck, near the heart, and limbs) and around the body (Figure 2) and the brain. Within the body, two groups brought antisocial behavior, encouragement of drug use, self-harm, and suicide as a result of excessive screen use; the latter two represented by bloody cut forearms and a rope around the neck, respectively. Additionally, one group associated excessive

screen use with depression, stress, and social isolation.

Around the brain, with arrows, they reinforced the idea that excess can lead to depression and added issues of anxiety, stress, cognitive delay, mood swings, distorted body image, and addiction (excess dopamine and serotonin). They then mentioned “a vicious cycle of fast-paced content (TikTok®, reels, stories), watching content twice as fast”, insomnia, eating disorders, irritability, impulsive thoughts, and social isolation. They also describe mood swings, cognitive delay, psychological disorders, and suicidal thoughts. Figure 3 illustrates the impacts of excessive screen use on adolescents' mental health.

**Figure 3** - Artistic productions on the impacts of screen time on adolescents' mental health. Rio de Janeiro, RJ, 2025



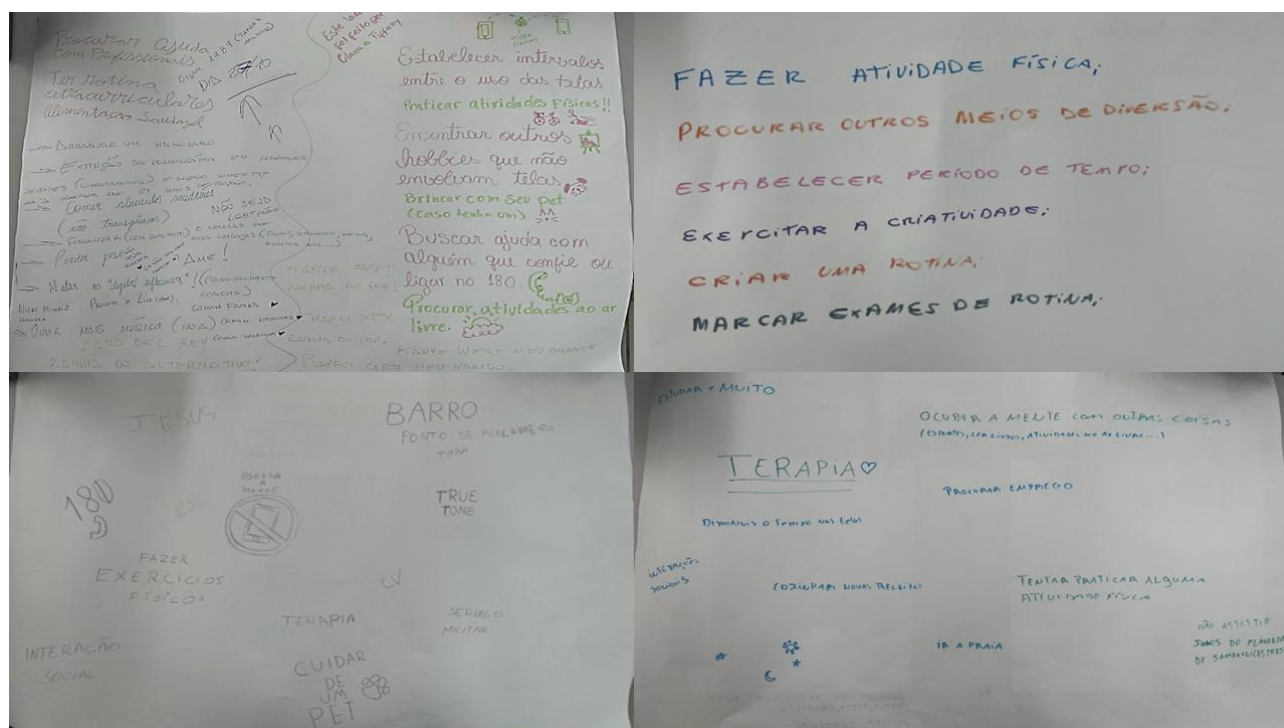
### Strategies to minimize the impacts on adolescents' physical and mental health

In relation to strategies, adolescents described the need for more outdoor activities, such as going to the beach, socializing, exercising, and playing with pets. Additionally, they should read books and study, create a routine, meet up with friends they feel comfortable with, cook new recipes, listen to music, date, and look for a job.

It is also worth noting that they mentioned the need for professional help in seeking therapy, calling the Life Appreciation Center (180), scheduling routine checkups and eating healthy. They also emphasized reducing

screen time, monitoring phones and computers by parents and guardians, and eliminating pornography from family devices (computers) and allowing access only to those over 21 years of age. Furthermore, they emphasized faith (Jesus) to occupy their minds positively, because for them “an empty mind is the devil’s workshop”. Figure 4 illustrates the strategies described by adolescents to minimize the impacts on their physical and mental health.

**Figure 4 -** Artistic productions on strategies to minimize the impacts of screen time on adolescents’ physical and mental health. Rio de Janeiro, RJ, 2025



## DISCUSSION

The educational activity allowed adolescents to express their concerns about the various negative physical and mental health impacts associated with excessive screen use.

Among the main problems mentioned were headaches, vision problems, physical fatigue, back and neck pain, as well as a sedentary lifestyle and obesity. These findings are consistent with international literature, which

indicates that prolonged screen use is correlated with visual disturbances<sup>(8,12)</sup>, headaches, and postural problems<sup>13</sup>.

They also highlighted more specific problems, such as yellowed teeth caused by excessive coffee consumption to stay awake, which disrupts sleep. Most studies did not examine the amount of sleep, but rather the quality. This is a significant factor, as it is associated with well-being and results in more restful sleep, provided there are fewer interruptions<sup>(14)</sup>. The recommended total sleep time is often reduced by excessive use of devices, interfering not only with the amount but also with the quality of uninterrupted sleep<sup>(10)</sup>.

Sedentary behavior, often exacerbated by prolonged time spent in front of electronic devices, has a significant negative impact on adolescents' health-related quality of life. In this context, physical inactivity not only contributes to the increased prevalence of obesity but is also associated with several mental and physical health problems. The complex relationship between these factors highlights the need for interventions that promote more active and balanced lifestyles to mitigate the adverse effects of sedentary lifestyles and obesity in adolescents<sup>(15,16)</sup>.

Erectile dysfunction was also discussed by adolescents, associated with easy access to pornographic content and body dysphoria due to the standardization of genitals depicted in adult films. Thus, excessive pornography consumption is linked to a range of sexual health problems, such as erectile dysfunction, reduced sexual

desire, and difficulties in maintaining satisfactory sexual relations. Adolescents who frequently use pornography may develop unrealistic expectations about sex and body appearance, resulting in challenges with sexual performance and satisfaction<sup>(17)</sup>.

Regarding limbs, adolescents reported pain in their hands and arms due to the repetitive use of cell phones, video games, and computers. These symptoms are consistent with tendonitis and other repetitive strain injuries, frequently documented in studies investigating the impact of electronic device use on adolescents' physical health<sup>(18)</sup>.

Artistic productions also revealed a strong association between excessive screen use and the occurrence of antisocial behavior, encouragement of drug use, self-harm and suicidal ideation<sup>(19,20)</sup>. These findings are alarming, though not surprising, given that international literature has already extensively documented the correlation between excessive screen use and a range of mental health problems, including depression, anxiety, and social isolation<sup>(21)</sup>.

Excessive social media use is associated with increased symptoms of depression, anxiety, and self-harm, with evidence suggesting that high levels of screen time can have detrimental effects on mental health. Adolescents frequently compare themselves to others on digital platforms, which can lead to feelings of inadequacy and low self-esteem. Furthermore, exposure to idealized or negative content can impact body perception and increase stress<sup>(22,23)</sup>.

Adolescents also reported that excessive screen time has led to symptoms of stress and social isolation, as well as cognitive problems, distorted body image, and addictive behaviors. This vicious cycle, fueled by the incessant consumption of fast-paced content, can result in increased impulsivity, irritability, and eating disorders, as shown by international studies<sup>(21,24)</sup>.

To mitigate these negative effects, adolescents suggested strategies such as increasing outdoor activities, promoting social interactions, physical activity, reading books, creating routines, and seeking professional help. The literature supports the effectiveness of these strategies, especially the importance of physical activity and social support in improving mental and physical health<sup>(24)</sup>.

Furthermore, participants highlighted the need for parents and guardians to monitor electronic device use, eliminate pornographic content accessible on family devices, and strengthen faith and spirituality. These suggestions reflect a holistic understanding of well-being needs and are supported by studies that advocate for regulating screen time and providing emotional support for adolescents<sup>(10,21)</sup>.

Additionally, schools play an important role in raising awareness about student cell phone use. This measure aims to reduce distractions and improve the learning environment by requiring students to store their cell phones in safe places during class. However, in the event of educational activities or emergencies, their use is permitted<sup>(25)</sup>.

The limitation of this study lies in the fact that it was conducted in a single setting, which may limit the generalizability of results to other contexts. Furthermore, it is important to recognize that, although qualitative aspects related to screen use were addressed, there is a need for additional research that quantitatively assesses the impact of screen use on adolescents' physical and mental health. Therefore, it is recommended that further research be conducted to explore not only the quality of the effects but also measure the impacts in terms of frequency and intensity of use, in order to provide a more comprehensive and informed understanding of the consequences for the well-being of this population.

## FINAL CONSIDERATIONS

The educational activity with adolescents allowed them to express significant concerns about the impacts of excessive screen time on their physical and mental health, including issues such as anxiety, depression, insomnia, a sedentary lifestyle, obesity, and postural problems. Furthermore, participants discussed sensitive topics such as pornography, distorted self-image, self-harm, and suicide.

Furthermore, they discussed strategies to mitigate these impacts, such as seeking outdoor activities, dedicating time to studying, and exercising. They also emphasized the importance of seeking support from healthcare professionals when necessary. Thus, using appropriate strategies, such as art, allows them to reflect on the appropriate amount of screen time and the



content they consume, shaping their individual perceptions, their views of the outside world, and their behavior.

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### Authorship criteria (authors' contributions)

Jéssica Renata Bastos Depianti: 1. contributed substantially to study design and planning; 2. in obtaining, analyzing and interpreting data; 3. as well as in the writing and critical review and final approval of the published version.

Laerte Bruno dos Santos: 1. contributed substantially to study design and planning; 2. in obtaining, analyzing and interpreting data; 3. as well as in the writing and critical review and final approval of the published version.

Myllena Miguel dos Santos da Silva: 1. contributed substantially to study design and



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Thaís Guilherme Pereira Pinheiro Pimentel: 1 contributed to study planning; 2 as well as in the writing and critical review and final approval of the published version.

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Nothing to declare.

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