Examining the Association Between Screen Time Exposure and Anxiety-Related Symptoms Among Adolescents

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The continued integration of technology is becoming a health concern due to the increasing amount of screen time, particularly among adolescents (Zablotsky et al., 2024). According to the Centers for Disease Control and Prevention (CDC), 95% of teenagers have access to smartphones and 96% use the internet daily (Cascio et al., 2023). In addition, 50.4% of youths in the United States (US) spend a minimum of 4 hours daily on digital devices for entertainment or recreation purposes (Zablotsky et al., 2024). Excessive screen time is a significant health issue associated with adverse physical and psychological effects, such as a sedentary lifestyle, sleep deprivation, mood disorders, and elevated levels of anxiety or depression (Devi & Singh, 2023). The problem of prolonged screen exposure necessitates understanding patterns of time use and the resultant health outcomes, including anxiety-related disorders (Alsaigh et al., 2022). The aim of this study is to assess the correlation between screen time exposure and anxiety-related symptoms among adolescents. The sections included in this chapter are the background of the study, purpose statement, hypothesis, significance, limitations, delimitations, definition of terms, and a summary.

Background of the Study

The advancement of technology in the interconnected world of the 2020s has led to an increased utilization of electronic devices, such as televisions, smartphones, tablets, and computers, in communication, learning, and information dissemination (Cascio et al., 2023). High technology modernization has also contributed to extensive and unwarranted exposure of individuals, particularly children and adolescents, to screen-based gadgets (Nuvoli et al., 2025). In 2022, during the coronavirus disease 2019 (COVID-19) pandemic, teenagers spent up to 9

hours a day using or watching digital screens (Alsaigh et al., 2022). Consequently, diverse collaborative measures were implemented to promote media awareness for reducing non-educational digital exposure among children (under 18 years) to less than 2 hours a day through health agencies, such as the American Academy of Pediatrics (AAP), the National Institute of Health (NIH), and the American Academy of Child and Adolescent Psychiatry (AACAP) (AACAP, 2025; Zablotsky et al., 2024). For instance, in 2024, screen time guidelines by AAP were updated to increase adults' awareness about the effects of extensive digital use on children and how to manage the problem (Weaver et al., 2024). Despite the integrated initiatives, the amount of sedentary time spent by teenagers on tablets, smartphones, television, gaming devices, and computers remains alarmingly high. As of 2024, 10% to 93.7% of children in high, medium, and low-income countries are affected by excessive screen time exposure globally (Khanani et al., 2025). The National Center for Health Statistics (NCHS) also indicated that 72.4% of adolescents in the US spend more than 4 hours daily on smartphones, tablets, television, and gaming devices (Zablotsky et al., 2024).

Excessive screen exposure is associated with adverse risks and outcomes such as insomnia, eye strain, reduced cognitive development, feelings of loneliness, obesity due to a sedentary lifestyle, and increased susceptibility to mood disorders (Alsaigh et al., 2022; Cascio et al., 2023). In addition, studies show that long-term digital media use can lead to high levels of stress, social isolation, sleep disturbances, and low emotional regulation (Alsaigh et al., 2022; Cascio et al., 2023; Francisquini et al., 2024; Zablotsky et al., 2024). Although the connection between extreme screen time and mental health outcomes has been examined in different studies, there is minimal research focused on anxiety disorders, which is a significant gap, as these conditions constitute the most common diagnoses among teenagers (Alsaigh et al., 2022; Cascio

et al., 2023; Francisquini et al., 2024; Zablotsky et al., 2024). Therefore, additional investigation of the interrelation between screen time and anxiety-related disorders among adolescents is required to facilitate effective strategies for addressing the problem.

Purpose Statement

The purpose of this quantitative, cross-sectional study is to examine the association between higher screen time exposure and increased prevalence of anxiety-related symptoms among adolescents in the US.

Hypotheses

The hypotheses that will be utilized to examine the relationship between the dependent and the independent variable in this study are:

H_0: There is no significant association between screen time exposure and the prevalence of anxiety-related symptoms among adolescents.

H_1: There is a significant association between screen time exposure and the prevalence of anxiety-related symptoms among adolescents.

Significance

The pervasive development of digital technology and screen-based entertainment has considerably impacted adolescents who spend an extensive amount of time on immersive media using smartphones, television, tablets, and gaming devices (Cascio et al., 2023). On average, 50.4% of US teenagers use more than 4 hours of screen time daily, which increases exposure to inappropriate digital content that negatively impacts their psychological well-being (Alsaigh et al., 2022). Although various studies have been conducted to determine the interconnection between excessive digital time and mental health conditions, such as depression and mood disorders, there is a minimal focus on the adverse effects on anxiety-related disorders, despite

these conditions being the most prevalent diagnoses among adolescents (Alsaigh et al., 2022).

The National Institute of Mental Health (2025) indicates that one in four adolescents in the US has an anxiety disorder. Therefore, the proposed quantitative, cross-sectional study is aimed at addressing the research gap by evaluating whether there is a significant correlation between high screen time and the increasing prevalence of anxiety disorders among teenagers. Identifying the associations between the two variables will provide essential insights to future researchers on relevant hypotheses for establishing causal connections and developing effective interventions to improve mental health outcomes among adolescents (Francisquini et al., 2024). In addition, the study findings will contribute to the existing theoretical knowledge regarding the effect of digital exposure on children, impacting policies for reducing screen time in this population (Nuvoli et al., 2025).

Limitations

The proposed study has various limitations. The first limitation is the use of a cross-sectional design to show correlation between high screen time and anxiety symptoms, without establishing the cause-and-effect interconnection (Maier et al., 2023). The second limitation is a higher risk of confounding bias due to the exclusion of other variables, such as hormonal changes and environmental stressors, which contribute to elevated incidences of anxiety disorders among adolescents (Maier et al., 2023). The third limitation is a lack of generalizability of the study findings to other populations and regions due to the focus on US teenagers (Ahmad et al., 2023). The fourth limitation is the reliance on the publicly available secondary data that may potentially be misaligned with the study's purpose.

Delimitations

The delimitations that may affect the study outcomes include a specific focus on the adolescent population, emphasis on only screen-based technology devices, and the use of a cross-sectional approach. The study is delimited to adolescents in the US; other populations, such as adults and children below 12 years, will be excluded. The other delimitation is the focus on screen-based devices such as smartphones, television, and tablets as the main sources of teenagers' entertainment, leading to extensive digital exposure. In addition, the study will only be conducted using a quantitative, cross-sectional design to evaluate the association between the dependent and independent variables, without assessing the cause-and-effect factor.

Definition of Terms

The terms and concepts used in this study include *adolescents, anxiety-related disorders, anxiety symptoms, excessive screen-time exposure, and screen time.*

Adolescents

Individuals aged between 12 and 17 years, transitioning from childhood to adulthood, and characterized by a rapid growth in physical, cognitive, and psychosocial changes (Zablotsky et al., 2024).

Anxiety-Related Disorders

Mental health conditions, characterized by symptoms such as excessive worry, mood, irritability, restlessness, fear, and nervousness (National Institute of Mental Health, 2025).

Anxiety Symptoms

Signs experienced by individuals with anxiety-related disorders (National Institute of Mental Health, 2025).

Excessive Screen Time Exposure

The use of screen-based devices for non-educational purposes, beyond the recommended duration of about 2 hours daily, as indicated by organizations such as AAP (AACAP, 2025).

Screen Time

The period spent passively using devices such as smartphones, computers, televisions, or game consoles (Alsaigh et al., 2022).

Summary

The advancement in technology has contributed to the increased use of electronic devices, such as smartphones, tablets, and computers, by teenagers. The continued utilization of these technological gadgets has led to excessive daily screen time exposure among adolescents. Extreme digital time is a significant health concern that is associated with adverse outcomes such as increased feelings of loneliness, mood disorders, and elevated levels of anxiety. Despite guidelines and efforts to resolve the issue, high screen use is still high in this population. Therefore, additional studies are required to investigate the correlation between excessive digital time and anxiety disorders among teenagers to determine effective strategies for addressing the problem. The purpose of this quantitative, cross-sectional study is to examine the association between higher screen time exposure and increased prevalence of anxiety-related symptoms among adolescents in the US. The next chapter is the literature review, which will contain literature synthesis and a theoretical framework to support the study implementation.

References

Ahmad, N., Alias, F. A., & Abdul Razak, N. A. (2023). Understanding population and sample in research: Key concepts for valid conclusions. *Sigcs: E-Learning*, *6*, 19-24. https://appspenang.uitm.edu.my/sigcs/2023-2/Articles/20234_UnderstandingPopulationAndSampleInResearch.pdf

Alsaigh, R. R., Assas, G. E., Yahia, N. H., Sharaf, N. F., Shaikh, S. F., Alghamdi, H. M., & Alghamdi, S. A. (2022). The relationship between screen time exposure and the presence of anxiety-related disorders among adolescents during the COVID-19 pandemic: A cross-sectional study. *Belitung Nursing Journal*, *8*(3), 1–7. https://doi.org/10.33546/bnj.2058

American Academy of Child and Adolescent Psychiatry. (2025, June). *Screen time guidelines: Screen time and children*. https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Children-And-Watching-TV-054.aspx#:~:text=For%20children%202%2D5%2C%20limit,during%20family%20meals%20and%20outings.

Cascio, C. N., Selkie, E., & Moreno, M. A. (2023). Effect of technology and digital media use on adolescent health and development: Protocol for a multimethod longitudinal study. *JMIR Research Protocols*, *12*(1), e50984. https://doi.org/10.2196/50984

Devi, K. A., & Singh, S. K. (2023). The hazards of excessive screen time: Impacts on physical health, mental health, and overall well-being. *Journal of Education and Health Promotion*, *12*(1), 1-2. https://doi.org/10.4103/jehp.jehp_447_23

Francisquini, M. C. J., Silva, T. M. D. S., Santos, G. C. D., Barbosa, R. D. O., Dias, P. H. G., Ruiz, A. B., da Silva, J. M., & Stabelini, A. (2024). Associations of screen time with symptoms of stress, anxiety, and depression in adolescents. *Revista Paulista de Pediatria*, *43*, e2023250. https://doi.org/10.1590/1984-0462/2025/43/2023250

Khanani, M. I., Khan, M. R., Farooqi, M. F., Fazal, J., Aabideen, Z., Alkuwaiti, N. S., & Khan Sr, M. R. (2025). Digital media use and screen time exposure among youths: A lifestyle-based public health concern. *Cureus*, *17*(7). e88373. https://doi.org/10.7759/cureus.88373

Maier, C., Thatcher, J. B., Grover, V., & Dwivedi, Y. K. (2023). Cross-sectional research: A critical perspective, use cases, and recommendations for IS research. *International Journal of Information Management*, *70*, e102625. https://doi.org/10.1016/j.ijinfomgt.2023.102625

National Institute of Mental Health. (2025). *Any anxiety disorders*. https://www.nimh.nih.gov/health/statistics/any-anxiety-disorder

Nuvoli, V., Camanni, M., Mariani, I., Ponte, S., Black, M., & Lazzerini, M. (2025). Digital screen exposure in infants, children, and adolescents: A systematic review of existing recommendations. *Public Health in Practice*, *2025*, e100653. https://doi.org/10.1016/j.puhip.2025.100653

Weaver, S. (2024, May 8). *Screen time for kids and teens: AAP updates guidelines for parents*. Fox Live. https://www.livenowfox.com/news/screen-time-kids-teens-aap-guidelines-parents

Zablotsky, B., Arockiaraj, B., Haile, G., & Ng, A. E. (2024, October). *Daily screen time among teenagers: United States, July 2021–December 2023*. National Center for Health Statistics Data Brief. https://doi.org/10.15620/cdc/168509