



Spring 2023

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David Franta
University of North Dakota

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Associations Between Screen Use and Depression in Youth

David Franta, RN, BSN, PA-S | Contributing: Russel Kauffman, MPAS, PA-C

Department of Physician Assistant Studies, University of North Dakota School of Medicine & Health Sciences

Grand Forks, ND 58202-9037



Abstract

- Associations between screen use and depression in the youth population have remained largely unclear
- Depression is common in children and adolescents
- Screen use is readily available and frequently used by children and adolescents
- This literature review was conducted to evaluate current literature regarding depression in the youth population, to include differences between sexes, across ages, and amongst different types of screen use
- Results demonstrate that an association between screen use and depression in the youth population does exist, particularly cross sectionally
- A causative or reciprocal relationship may be present, however, if it is present, it is quite minor
- Girls tend to use more screens than boys
- **Keywords:** screen time, screen use, depression, children, adolescent, adolescents, social media, mental disorders, mental health, depressive disorder, youth, screen media, digital media

Methods

- MeSH terms and keywords were used to identify research via database searches, including Pubmed, Embase, PsychInfo, and Google Scholar
- Priority of research was given to studies with a large sample size, those directly evaluating the relationship between depression and screen use, and studies utilizing a longitudinal method of evaluation
- All studies were published no more than 5 years prior to the initiation of the literature review

Introduction

Statement of the Problem

The direct relationship between screen use and depression is not completely clear. Differences in sex, age, and types of screen use could play a role in the relationship between screen use and depression in children and adolescents.

Determining the relationship between screen use and depression could lead to the development of evidence-based recommendations and improved clinical practice

Research Question

Do pediatric patients with increased daily screen time experience a higher prevalence of depression when compared to those with limited daily screen time?

Literature Review

Types of Screen Time and Depression

- Those spending >2 hours daily on screens were more likely to be depressed (Kidokoro et al., 2022; Robertson, et al., 2022)
- Passive forms of screen time >2 hours daily were associated with depression, while active forms were not (Kim, et al., 2020)
- Those using 4-5 hours or more of screens daily experienced much higher risk of depressive symptoms (Twenge & Campbell, 2018; Twenge & Farley, 2020)
- Social media and internet use were most strongly associated with depressive symptoms (Robertson, et al., 2022; Twenge & Farley, 2020)
- Social media had both within-person and between-person associations with depressive symptoms (Coyne, et al., 2020)

Screen Time and Depression: Males and Females

- At younger ages, boys engage in more screen time than girls, but girls use more screen time as the children age (Twenge & Farley, 2020)
- Girls tend to use more social media, while boys tend to use more gaming and girls tend to be more depressed (Twenge & Farley, 2020)
- Girls were more likely to experience associations between screen use and depression, although this was variable between studies (Robertson, et al., 2022; (Vannucci & McCauley Ohannessian, 2019)
- Females tended to fall into trajectories associated with higher screen use, but psychological outcomes were not different between sexes (Vannucci & McCauley Ohannessian, 2019)

Screen Time and Depression between Age Groups

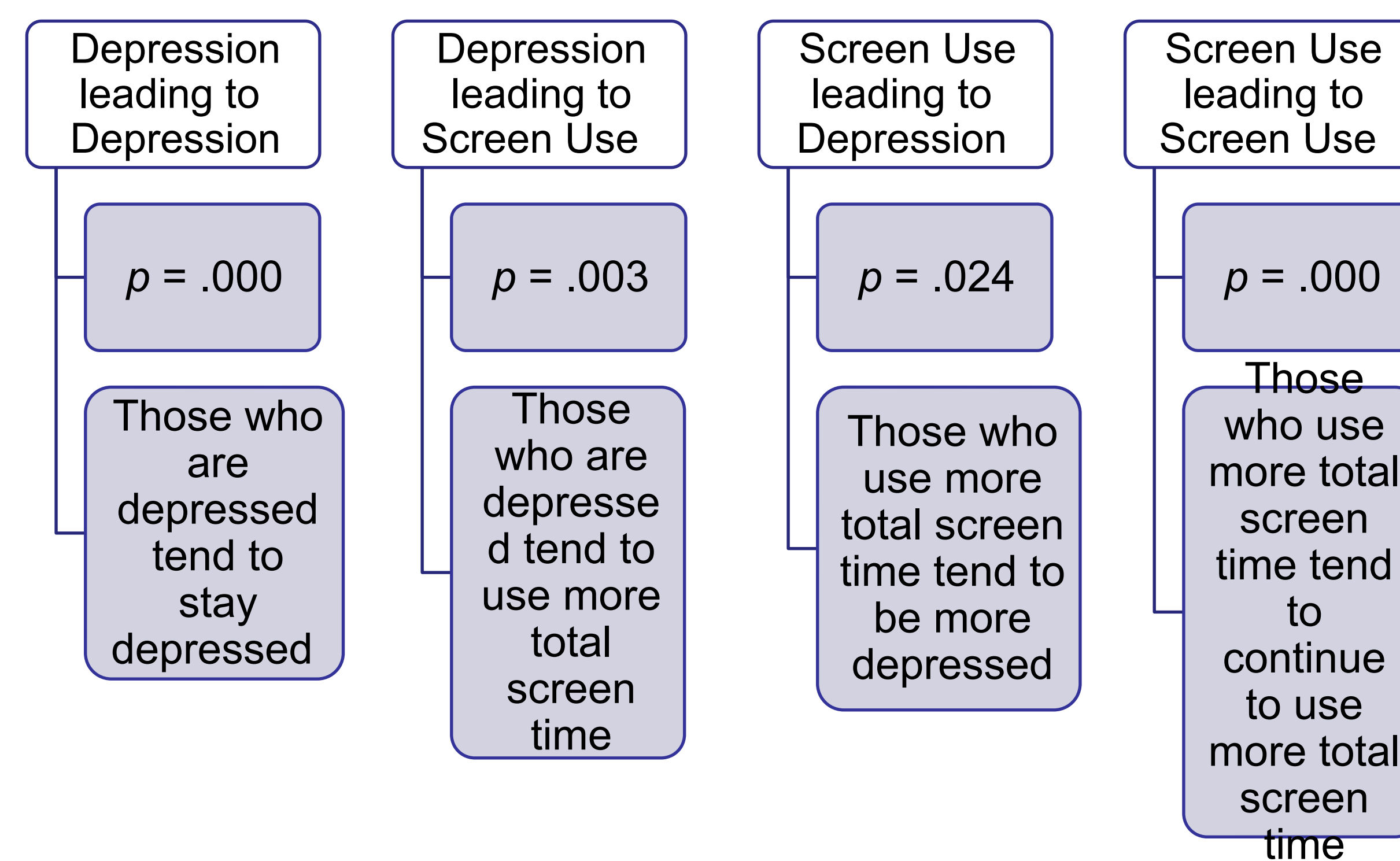
- As children age, they use more daily screen time and social media (Houghton, et al., 2018; Kidokoro, et al. 2022; Twenge & Campbell, 2018)
- The largest increase in screen use occurs between elementary and middle school ages (Twenge & Campbell, 2018)
- As children age, they report more depressive symptoms
- Those who tend to use more screen time tend to have more internalizing disorders (Neville et al., 2021)

Self-Harm and Suicide in Relation to Screen Media

- >2 hours of screen use daily was associated with increased suicidal behavior (Robertson, et al., 2022)
- Consuming 5 or more hours of screen time daily was associated with increased elevation in suicidal behaviors (Leventhal, et al., 2021; Twenge & Farley, 2020)
- Associations between screen use and suicidal behavior were more significant for females than males (Leventhal, et al., 2021)

Discussion

- A cross-sectional relationship exists between screen use and depression in the youth population
- Across multiple studies, increased risk of depression was found in those using >2 hours screen time daily
- Social media and internet use were associated with worse mental health when compared to other forms of screen use (Twenge & Farley, 2020)
- Girls tended to use more screens (particularly social media and the internet) and tend to be more depressed
- A causative relationship between screen use and depression is possible, but findings are variable between studies
- If a causal relationship between screen use and depression exists, the effect is small (Houghton, et al., 2019)
- A reciprocal relationship between screen use and depression is plausible (Houghton, et al., 2019)
- Screen time and depressive symptoms tend to fluctuate simultaneously, meaning those who are depressed tend to use more screens and vice-versa
- Those who are depressed tend to stay depressed and those who use elevated screen time continue to do so



This table is a brief summation of the findings of Houghton, et al. (2018). It represents statistical tendencies from one wave to a subsequent wave of the study. In this case, a reciprocal relationship was found between total screen time and depression between waves. However, these findings were miniscule, in that it would require 13 hours of total screen time daily to transition a person from being non-depressed to being depressed. Those who are depressed stayed depressed, and those who used high amounts of screens continued to do so from one wave to the next.

Conclusion and Applicability to Clinical Practice

- Recommendation to limit daily screen time to <2 hours daily seems reasonable
- Identifying youth using 4-5 hours or more of daily screen time should prompt a provider to assess for depressive symptoms and suicidal/self harm behavior
- Those who use more screen time tend to be more depressed
- A definitive causative relationship between screen use and the development of depression is not clearly demonstrated
- Not all types of screen use are equal regarding the association to depression: high levels of social media and internet use should raise suspicion of depression
- An acute increase in screen use should prompt evaluation of mental health deterioration

Acknowledgements

I would like to thank my advisor Vicki Andvik, MPAS, PA-C and my instructor Russell Kauffman, MPAS, PA-C for their support and insight regarding the development of this scholarly project. I would also like to thank Megan Denis, MLIS at the University of North Dakota's Library Resources, as her insight has been invaluable and a truly fantastic contribution to my research. In addition, I would like to thank Dr. Marilyn Klug for her insight regarding statistical analysis, which was instrumental to the data interpretation component of this scholarly project. Of course, I would like to thank my fellow classmates for remaining an unwavering support system throughout my time as a student in the UND Physician Assistant program. Thank you to Aubrey Sieberg, PsyD, LP for her insight regarding clinical assessment and practice.

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