

“Just One More Game!” A Review of the Literature Regarding Children and Screen Time

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Outline

- Introduction
- Current trends for screen time
- Review of the research literature
 - Common concerns
 - Possible benefits of digital media use
 - The “Goldilocks” approach
- Tools you can use



Introduction

- Postdoctoral Clinical Scholar Fellow
- PhD in Counseling Psychology from Virginia Commonwealth University
- Predoctoral Internship at Virginia Treatment Center for Children



Introduction

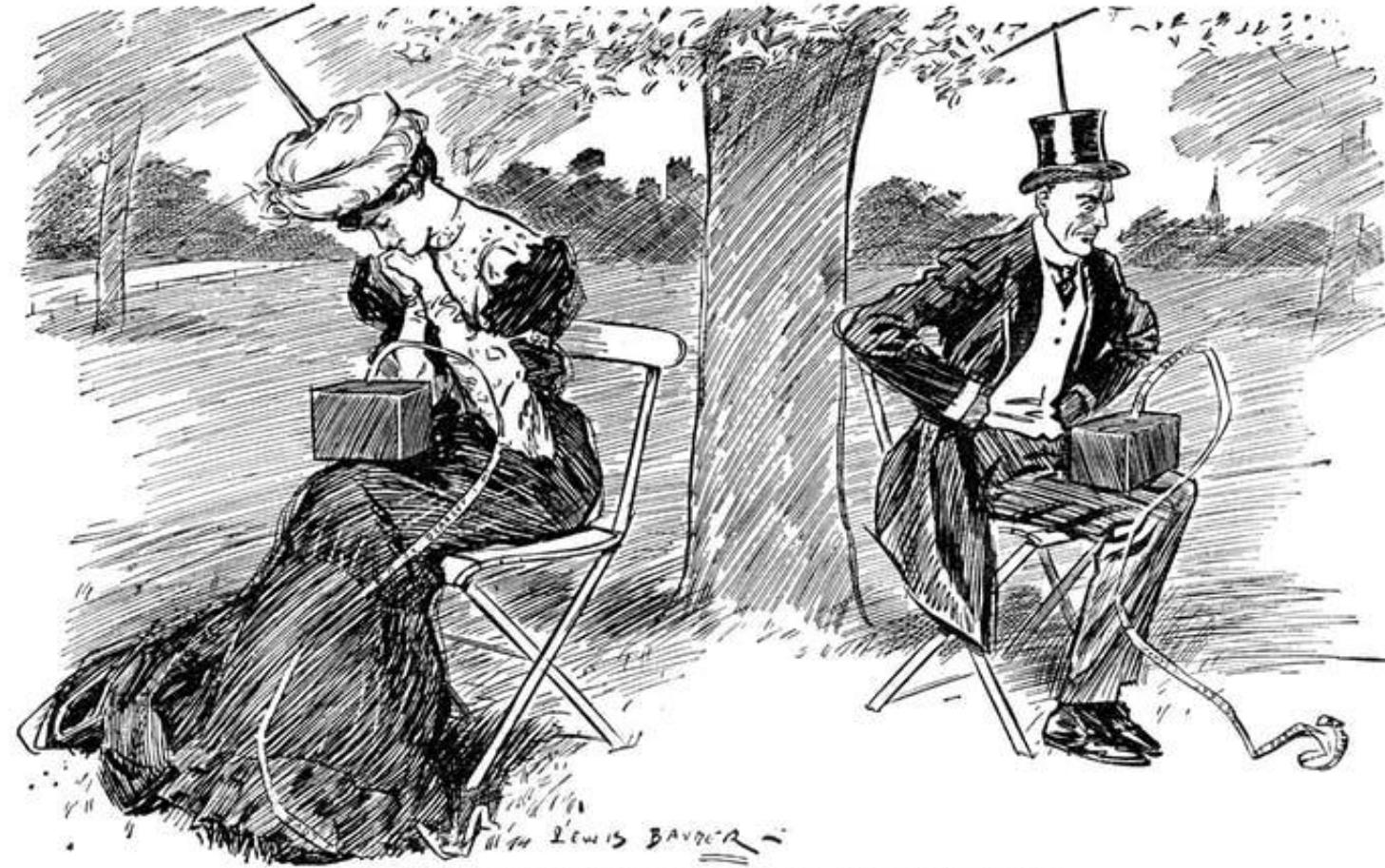
- “Access to Google will create forgetfulness because no one will use their memories.”
- “Twitter is the most powerful of ignorance’s weapons.”
- “Because of texting, kids will soon be nothing but transparent heaps of jelly to each other.”
- “Smartphones have led children to develop the habit of dividing attention between the humdrum of working on school assignments and the compelling excitement of their phone.”

Introduction

- Writing will “create forgetfulness in the learners' souls, because they will not use their memories”. – Socrates
- “The most powerful of ignorance’s weapons is the dissemination of printed matter” – Leo Tolstoy 1869
- “We will soon be nothing but transparent heaps of jelly to each other” -- NYT editorial in 1877 warning about the effects of the telephone
- Children have “developed the habit of dividing attention between the humdrum preparation of their school assignments and the compelling excitement of the loudspeaker” -- *Gramophone* magazine 1936



FORECASTS FOR 1907.



IV.—DEVELOPMENT OF WIRELESS TELEGRAPHY. SCENE IN HYDE PARK.
[These two figures are not communicating with one another. The lady is receiving an amatory message, and the gentleman some racing results.]



Why is this an important topic?

- Rise in digital technology and youth mental health concerns
- Popular media articles
- Point of conflict between parents and children

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Is Screen Time Bad for Children's Mental Health?

When does screen time become harmful for adolescents? Three experts break down the research



Current Trends



Proliferation of Digital media

- In 2016¹:
 - 75% of teenagers owned a smartphone
 - 76% were connected to at least one social media site
 - 80% of households had devices used to play video games.
- Almost 90% of children engage in some form of video game play, including 97% of adolescents.²
- Children and adolescents are spending anywhere from one to six-plus hours each day engaged in digital activities ^{3,4,5,6,7}



Rise in Mental Health Concerns

- Between 2009 and 2015¹⁰:
 - 33% rise in the proportion of adolescents who endorsed high levels of depression symptoms
 - 12% rise in the proportion of adolescents who endorsed a suicide-related outcome
 - 31% rise in the proportion of adolescents who completed suicide.
 - Each of these trends were driven by female adolescents



Review of the Research Literature

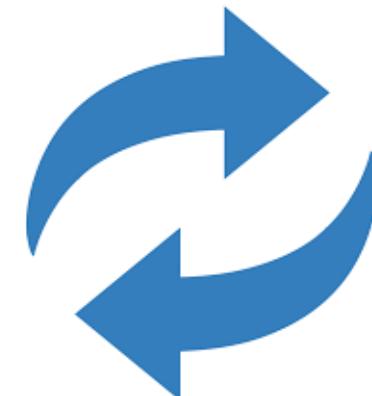
Common Concerns

- Digital communication hindering social skills
- Screen time on obesity and sleep
- Social media use on adolescent mental health
- Violent video games leading to aggression



Displacement Theory

- Premise that time spent consuming digital media will *displace* time spent on healthier activities.
- Despite some early supporting research, more recent research is much more mixed^{4,7,11}



Concerns About Social Skills

- Displacement Theory – individual vs. group perspective
- Research suggests that digital forms of communication do not dictate the quality of interaction and relationships. Rather, the quality of the pre-established relationships often determines what effect using digital forms communication will have.

Concerns About Mental Health

- Overall screen time associated with higher rates of depression symptoms for adolescents^{10,14,15}



Concerns About Mental Health

- Social media ¹⁰
 - Adolescents were 13% more likely to experience high levels of depression symptoms if they used social media at least once per day
 - 34% more likely to have at least one Suicide-related outcome if using an electronic device three or more hours per day, compared to two or fewer hours per day
 - 66% more likely to have at least one Suicide-related outcomes if using an electronic device five or more hours per day (48%), compared to just one hour per day (29%)

Concerns About Mental Health

- Caveats
 - Correlational
 - Time spent on social media was only related to higher depressive symptoms for adolescents who did not engage much in face-to-face socializing
 - The correlation between time spent on social media and depressive symptoms was only evident for female participants

Concerns About Mental Health



Adolescent Brain Cognitive Development Study

- “Little evidence” of an association between screen time in general or social medial use with internalizing symptoms (e.g., depression)¹⁹

Concerns About Mental Health



Adolescent Brain Cognitive Development Study

- Other results
 - Some evidence of premature cortical thinning. However, this is a natural maturation process, and it is not clear what, if any, difference the earlier onset causes
- Fluid and crystallized intelligence
 - Time spent in gaming activities had a positive association with both
 - Time spent on social media showed a negative association with both

Concerns About Physical Health

- Sedentary Behavior is a risk for poor health, including obesity
- However, most studies linking screen time to poor health outcomes are correlational rather than causational



Concerns About Physical Health



- Electronic media use close to bedtime can interfere with an individual's ability to fall asleep.^{1,12,13}
- As a result, the American Academy of Pediatrics (AAP) recommend in 2016 that children do not consume digital media for at least one hour before bedtime, and that they do not keep electronic devices in their bedrooms.

Concerns About Aggression

- There are some clear links between exposure to violent video games and aggression^{2,16}



Concerns About Aggression

- Caveats
 - “Aggression” in this context does not necessarily mean “violence”, and instead can refer to aggressive thoughts and emotions.
 - “insufficient” evidence that playing violent video games leads to “lethal violence”²
 - Prosocial aspects (sharing, helping, protecting, and working together) often mitigate the effects of violent video games on aggression¹⁶

Benefits of Digital Use

- Texting & social media can have positive effects for connection and socialization^{1,4,16,17,18}
- Internet connectivity and access to software can promote creativity & build knowledge^{4,7,17}
- Video games, including violent games, can positively influence cognitive skills, including problem solving, spatial reasoning, and creativity¹⁷

The Goldilocks Approach

- Researchers in the UK recently conducted a study of screen time on psychological wellbeing for 15-year-olds, and found “inflection points”, below which screen time was beneficial or neutral, and above which it was demonstrated to be detrimental^{4,7}



The Goldilocks Approach

- Video Game
 - 1 hour 40 minutes weekday
 - 3 hours 35 minutes weekend
- Smart Phone Use (social networking, texting, etc.)
 - 1 hour 57 minutes weekday
 - 4 hours 10 minutes weekends
- Watching Videos
 - 3 hours 41 minutes weekday
 - 4 hours 50 minutes weekend
- Recreational Computer Use (internet browsing, email, etc.)
 - 4 hours 17 minutes weekday
 - 4 hours 39 minutes weekend



Recommendations



Recommendations: Tools You Can Use

- Shift focus away from total screen time (AAP, UNICEF)
 - Instead, identify the concern and focus there
- Encourage physical activity
 - Focus on promoting healthy behaviors directly rather than simply trying to limit screen time

<https://www.healthychildren.org/English/media/Pages/default.aspx>

Recommendations: Tools You Can Use

- Approach social media based on what the adolescent needs
 - For adolescents with well-developed social skills and supports, rather than focusing specifically on total time spent, instead focus on teaching how to interpret messages they see from others, about internet safety, and how to be a good digital citizen

Recommendations: Tools You Can Use

- Approach social media based on what the adolescent needs (continued)
 - For adolescents who do not have well-developed social skills or a strong in-person social network, it will be important to work with this adolescent to find ways to build social skills, and to prioritize time for face-to-face social interaction.

Recommendations: Tools You Can Use

- Promote healthy video game play
 - Explore what prosocial aspects are included in the gameplay, and consider refraining from games that are purely violent without any prosocial elements, if there are concerns about aggression
 - Talk about the differences between the violent game play and violence in real life. This is likely particularly important at younger ages.

Recommendations: Tools You Can Use

- Set parameters to promote healthy sleep patterns
 - Following the recommendations of the American Academy of Pediatrics (AAP), parents should encourage their children to cease digital media consumption one hour before their bedtime.
 - It should also be expected that children do not keep electronic devices in their bedrooms.
 - However, this may be a little more flexible for older teenagers, who need to learn on their own how to inhibit use of digital media after bedtime, despite access to it.

Recommendations: Tools You Can Use

- Pay attention to family processes that are related to screen time
 - A strong parent-child connection can mitigate risk of high levels of screen time on negative outcomes
 - Remember the importance of parental modeling, be the digital consumer you want your child to be
 - Keep in mind that the research indicates parent's influence on their children's digital media use decreases as the child gets older.

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