



Addressing Problematic Technology Use in Children and Youth

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1620-1720 ET

April 04, 2024

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Learning Objectives

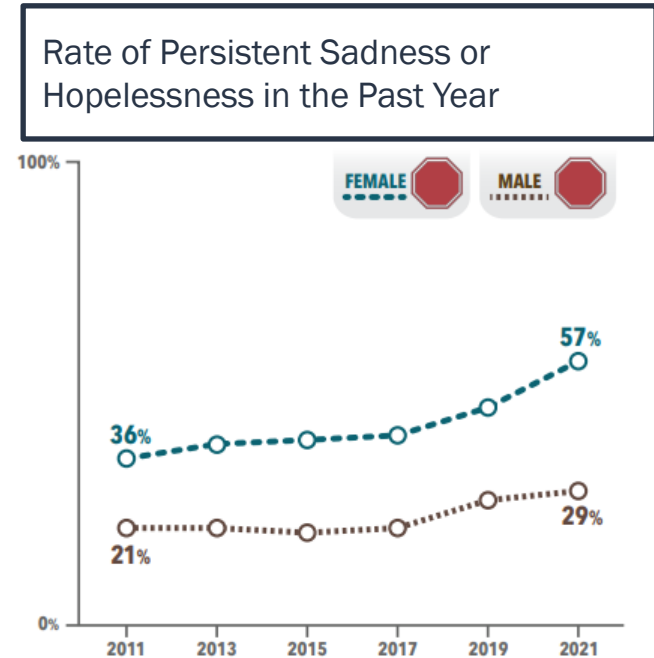
At the conclusion of this activity, participants will be able to:

1. Explore the research regarding the relationship between social media and mental health outcomes in youth including pros and cons of childhood social media access.
2. Describe the psychological impact of technology use on youth, including effects on attention, social development, and emotional well-being.
3. Identify strategies to promote healthy technology habits among youth, including the role of parental involvement.



Children and Adolescent Mental Health Trends

- While some risky activities are decreasing, mental health needs continue to increase in the adolescent and young adult population.

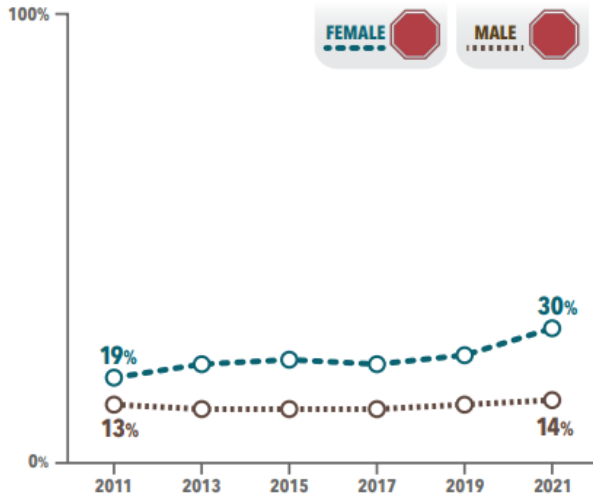


(CDC, 2021)

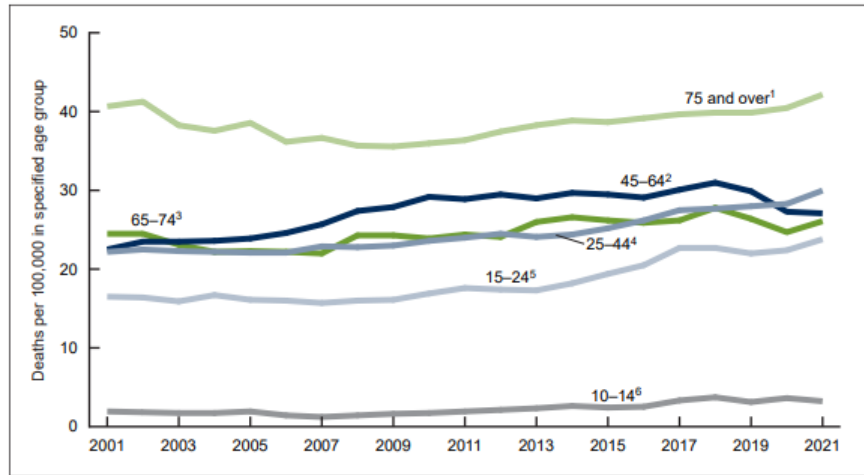


Adolescent Mental Health Trends -Continued-

Seriously Considered Attempting Suicide in the Past Year



Suicide Rates in the United States (US) by Age



(CDC, 2021) (NCHS Data Brief, 2023)



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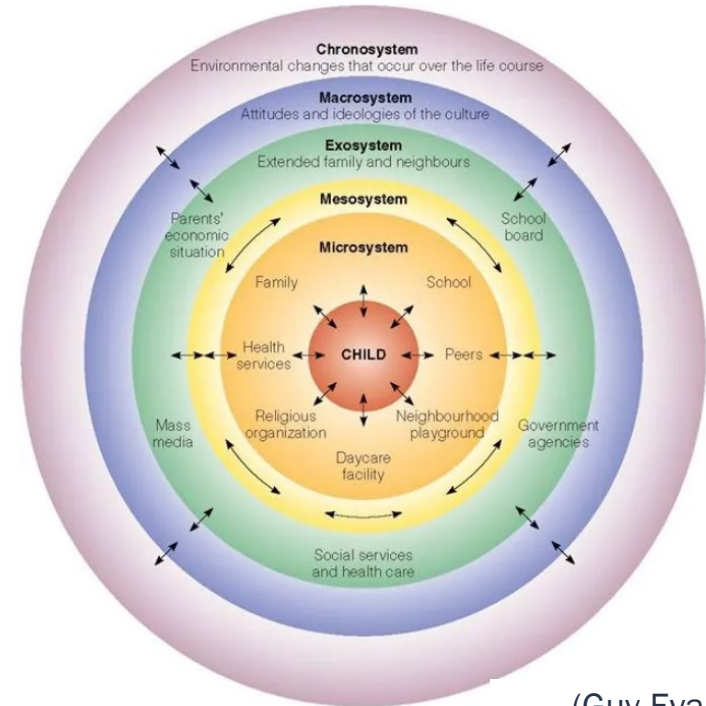
Surgeon General Report 2021

- Between 2011 and 2015, youth psychiatric visits to emergency departments for depression, anxiety, and behavioral challenges increased by 28%
- Between 2007 and 2018, suicide rates among youth ages 10-24 in the US increased by 57%



Influential Factors on Mental Health

- Openness to Discuss
- Increased Use
- Academic Requirements
- Limited Mental Health Access
- Increase High Risk Behavior
- Community-Global Stressors



(Guy-Evans, 2020)

Teens and Young Adults with Technology



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Smart Phone Ownership

- Average age in the US to have a smart phone is 10.3
- 100% Increase in smart phone ownership over the past eight years with minimal change in the last two years.

Smartphone Ownership by age, 2015-2021



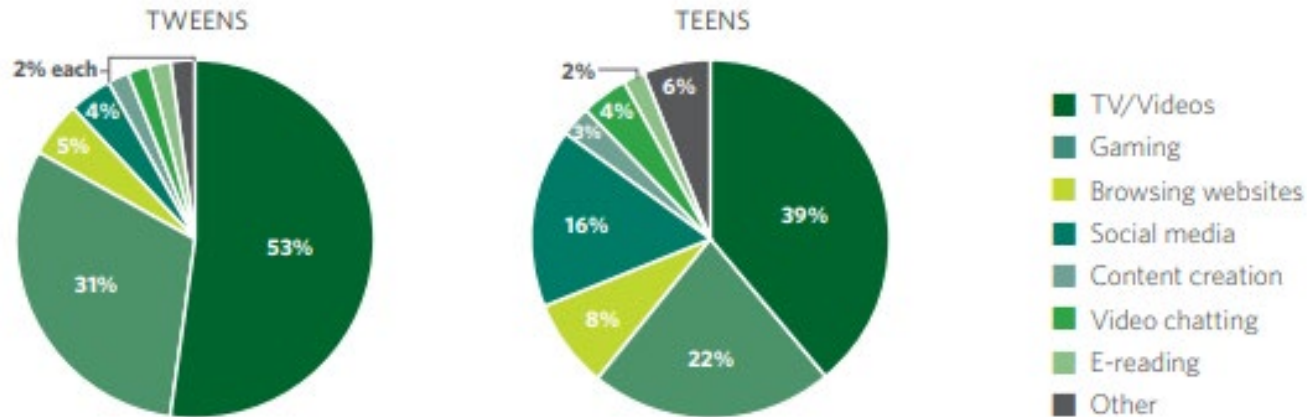
(Rideout et. al, 2022)



What are We/They Doing Online?

Music and Videos are the two most popular activities online, followed by gaming.

Content creation, video chatting, and reading make up between 6-9% of time online.



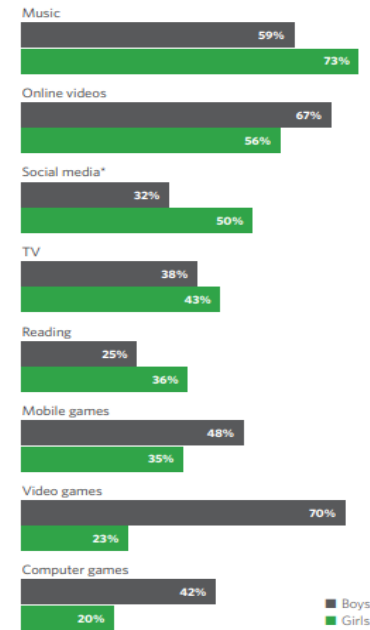
(Rideout and Robb, 2019)



Usage Difference by Race and Gender

- Boys favored gaming
- Girls favored listening to music and social media
- African American Adolescents
 - 51% reported enjoying it “A lot”
 - Average Use: 2:15 hours (hrs)/day
- Hispanic/Latino Adolescents
 - 43% reported enjoying it “A lot”
 - Average : 2:23 hrs./day)
- White American Adolescents
 - 37% reported enjoying it “A lot”
 - Average : 1:35 hrs./day

FIGURE H. Favorite media activities, 8- to 18-year-olds, by gender, 2019



*Among 13- to 18-year-olds

(Rideout and Robb, 2019)



Screen Time and Social Economic Status

- Tweens and Teens in high-income homes use 103-110 minutes less screen media/day.

FIGURE F. Average daily screen media use among tweens and teens, by household income, 2019



Note: "Lower income" is <\$35,000; "higher income" is \$100,000+ per year.

(Rideout and Robb, 2019)



What Apps are Pre-Teens and Teens Using?

YOUTUBE

INSTAGRAM

TWITTER (X)

TICTOC

FACEBOOK

TWITCH

SNAPCHAT

DISCORD

REDDIT

WHAT'S APP

BeReal



Average App Use

- 8–12-Year-olds: 4:44 hrs./day
- Teens: 7:22 hrs./day

Category	Use time, mean (SD)
Streaming	1 h 57 min (1 h 32 min)
YouTube	1 h 18 min (1 h 23 min)
Communication	48 min (1 h 17 min)
Gaming	41 min (41 min)
Social media	36 min (1 h 7 min)
SMS messages	6 min (11 min)
Reading	3 min (10 min)
Music ^b	2 min (5 min)
News	1 min (2 min)

(Rideout and Robb, 2019)



Youth vs. Adult

- More open-minded
- More social-oriented
- Less agreeable
- Less conscientious
- More impulsive
- Less capable of inhibiting behavior
- Media use increases and reaches a first peak in late adolescence
- More risk-taking
- More sensation seeking
- Derive larger parts of their well-being and life satisfaction from other peers
- General levels of life satisfaction and self-esteem drop and are often at their all-time lowest
- Less fixed sense of self
- Less mature prefrontal cortex



What are the Effects?

- US adolescents asked directly:
 - 31% say it is mostly positive
 - 45% estimate the effects to be neither positive nor negative
 - 24% believe effects are mostly negative



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Qualitative Themes

- Self-expression/validation: Encourage self-expression. Importance of others' opinions and cycles of modifying self-presentation. Need for validation and comparison of “likes” with peers. Self-esteem and anxiety were negatively impacted.
- Appearance comparison and body ideals



Overall Meta-Analyses findings

- Best et. al: Most studies reported mixed or no effect of online social technologies on wellbeing.
- McCrae et. al: Small positive relationship between social media use and depressive symptoms.
- Priftis et. al: Excessive passive screen time correlated with increased risk of obesity, cardiometabolic risk, sleep, physical activity, eyesight, headaches, musculoskeletal issues, mental health, unhealthy dietary habits eating disorders and problems in development and child-parent relationships.
- Lissak: Positive relationship between excessive screen time and less sleep, stress, mind wandering, ADHD-type behavior, negative thinking, less life satisfaction and increased health risks in adulthood.
- Wu et. al: Use of internet leads to increased connectedness, increase anxiety, and loneliness.



Risks

- Physical Health
- Mental Health
- Development
- Cognition/Attention



Development

- Excessive Short Term (ST) negative impact on development
 - Language
 - Vocabulary
 - Number knowledge
 - Classroom engagement
 - Locomotion
 - Risk of being victim of crime
 - Communication
 - Daily living skills
 - Academic performance
 - In-class attention
 - Physical strength
 - Cardiorespiratory endurance



Mental Health

- A 7-year study of found a small negative between-person relationship between social media use and life satisfaction in a large sample of adolescents.
- >3 hrs. per week on electronic media correlated negatively with happiness, life satisfaction and self-esteem
- 2 hrs. a day on social networking sites and personal electronic devices with high rates of suicidality and depressive symptoms among adolescent girls
- Increased time of in-person social interactions, correlated positively with well-being, among adolescents and high levels of face-to-face socializing protected against negative consequences
- Two abstinence studies found small and mixed effects on wellbeing.



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Depression

- Longitudinal Study of 500 US teens found positive correlation between anxiety, depression and social media between people.
- A 2022 study found
 - Mood symptoms had a dose-dependent correlation with screen time
 - Girls had 1.5 times higher probability of displaying depressive behaviors for each hour of screen time
- Female participants reported more negative mood after just ten minutes of browsing their social media account compared with those who browsed an appearance-neutral control website.
- Active use was negatively linked to anxiety and depressive symptoms.



Depression -Continued-

- Web-browsing and gaming had low relationship between screen time and depressive symptoms.
- Passive social media use positively linked to anxiety and depressive symptoms



Anxiety

- More than 4 hrs. daily of television (TV) was found associated to panic disorder symptoms
- More than 4 hrs. daily of computer or video games associated with anxiety and social phobia symptoms
- Pre-existing panic or anxiety symptoms did not predict computer, video or TV use.



Eating

Increase use of social media by males and females associated with high risk of eating disorder, even when factors of sleep and cybervictimization were accounted for.

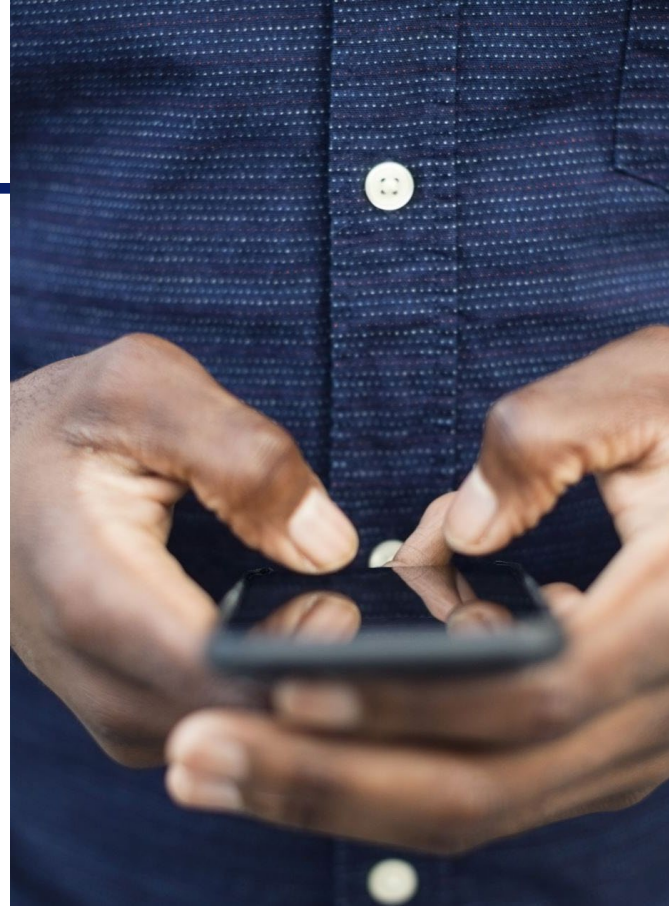


(Freepik, 2024)



Social Media and FOMO

- In 2018 of 143 undergraduate students from University of Pennsylvania.
- Randomly assigned two a group with ten-minute limits on three major social media platforms or the control group directed to use as usual for three weeks.
- Restricted group reported significant decreases in loneliness and depression I
- Both reported decreases in anxiety, and fear of missing out (FOMO) from baseline.



(Microsoft PowerPoint 2019 Stock Images)



Self-Harm

- Normalization of self-harm behavior, discussion of practical issues regarding suicidality, live depictions of self harm acts
- Social media can teach the actual behavior via modeling
- Contagion of behavior among groups
- Escalation of behavior via competition, desire to belong to a group and be understood



Attention and Working Memory

- Multitasking is associated with negative effects on cognitive control, academic performance and socioemotional functioning in youth
- High-frequency digital media use was positively associated with emergence of symptoms meeting criteria for attention deficits hyperactivity disorder (ADHD) over a 2-year follow-up period, even after adjusting for known confounders



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Social Media and Sleep

- Presence of screen-based media device in bedroom shown to disrupt sleep.
- Two longitudinal studies, mounting to over 3300 participants across two continents found that poor sleep mediated the relationship between nighttime cell phone use and subsequent depressed mood, externalizing behavior and decline in self-esteem and coping.



Cyberbullying

- Intentional use of information and communication technologies to support deliberate, repeated, and hostile behaviors against a victim who cannot easily defend him or herself.
- 34% of kids in the US have experienced cyberbullying at least once
- 38% of cyberbullying victims are willing to admit it to their parents
- 42% of US teens experienced offensive name-calling
- High school girls with darker skin color are disproportionately targeted



Cyberbullying -Continued-

Most common reported effects from cyberbullying:

- Annoyance
- Suspicion
- Fear of Safety
- Frustration/Anger



(Kids Helpline, 2022)

Victims are 1.9 times more likely to die by suicide

Cyberbullying associated with increased: Anxiety, Depression, Suicidal Ideation, Suicide Attempts, and Sleep Problems



Cyber Bullying and Suicide

- Cyberbullying in youth under 25 has been linked with:
 - Suicidal ideation
 - Suicidal behavior
 - Suicide attempts
 - Self-harm
- A school-aged-children-only sub-analysis established equivalent results in young adolescents.
- Victims have a 2.5 times higher chance of presenting all four.
- Perpetrators have a higher chance of presenting Suicidal Ideations and Behaviors



(Freepik, 2024)



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Cyber Additions

- Youth classified with Internet Addiction had significantly increased risk of newly emerged self-harm or suicidal behavior within one year
- Adolescents estimated to have a gaming disorder up from 1.5% to 9.9% estimated in 2019 to 7.8 percent of girls and 19 percent of boys between 7-25 yrs. old.
- Some research reported rates as high as 25%
- Internet Addiction estimates range from 1.5% to 8.2%



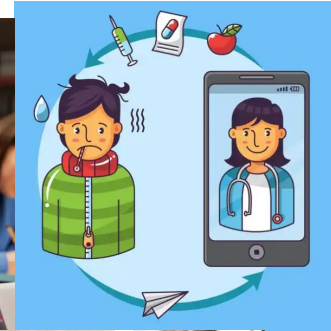
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Benefits of Social Media Use

Most benefits fall into the following categories:

- Socialization and Communication
- Enhanced Learning Opportunities
- Accessing Health Information



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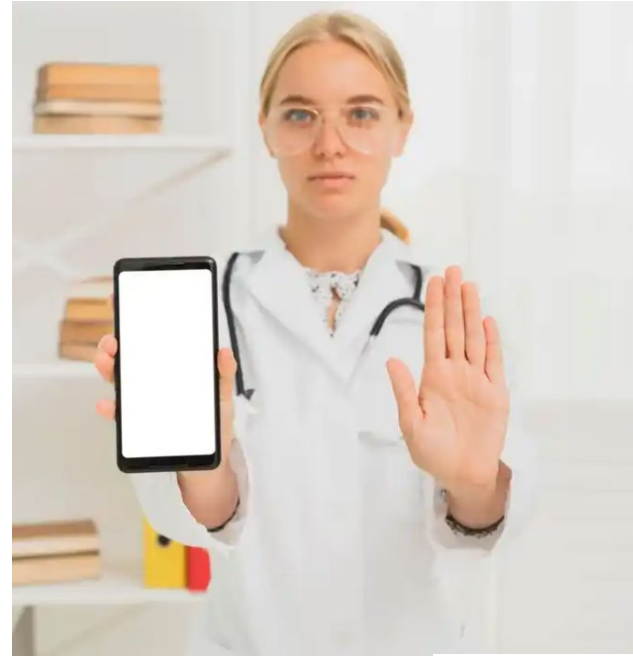


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Tools for Health Providers

- Assessment
- Diagnosis
- Intervention



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Internet Addiction Measures

- Internet Addiction Test (IAT)
- Diagnostic Classification Test for Internet Addiction (DCT-IA)
- Addiction Diagnostic Questionnaire (DCT)
- Compulsive Internet Use Scale (CIUS)
- *Sample of several measures with varying, but generally low investigative study



DSM-V (2013) Internet Gaming Disorder

1. Preoccupation with Internet games.
2. Withdrawal symptoms when Internet gaming is taken away
3. Tolerance-need to spend increased amounts of time
4. Unsuccessful attempts to control participation in Internet games.
5. Low of interests in previous hobbies and entertainment.
6. Continued excessive use despite knowledge of psychosocial problems.
7. Deceived family members, therapists, or others about use.
8. Use Internet games to escape or relieve a negative mood.
9. Jeopardized or lost significant relationship, job, or educational or career opportunity due to use.



International Classification of Diseases, 11th Revision (2019)

Internet gaming disorder

- Criteria
 - Impaired control over gaming
 - Increasing priority given to gaming over other activities to the extent that gaming takes precedence over other interests and daily activities,
 - Continuation or escalation of gaming despite the occurrence of negative consequences.
 - Pattern of behavior sufficiently severe to result in significant impairment in personal, family, social, educational, occupational or other important areas of functioning and
 - Evident for at least 12 months
- Associated Findings
 - Enhanced reactivity to gaming cues
 - Aberrant reward-based learning
 - Changes in brain regions associated with addiction, rewards, and emotional processing
 - ✓ Increased activation in nucleus accumbens, amygdala, anterior cingulate, dorsolateral prefrontal cortex, and insula.
 - ✓ Decreased gray matter volumes in the cerebellum, orbitofrontal cortex, anterior cingulate cortex, and supplementary motor area



Treatment Recommendations

- Cognitive-Behavioral Therapy for Internet Addiction (CBT-IA)
 - Patients trained to recognize and respond to triggers and relapse antecedents
 - Alter thoughts and behaviors to promote abstinence
- Motivational Interviewing and Motivational Enhancement
 - Resolve ambivalence about internet use
 - Increase likelihood of change by fostering increased motivation
 - Focus on personal negative sequelae
- Harm Reduction
- Multidimensional Family Therapy



CBT-IA (1 of 4)

- Phase I: Behavioral Modification
 - Assess the Behavior: ABC's of Screen Use

CBT-IA: Treating Internet Addiction 307

Date and Time	Event	Online Activity	Duration	Outcome

FIGURE 1. Daily Internet Log.



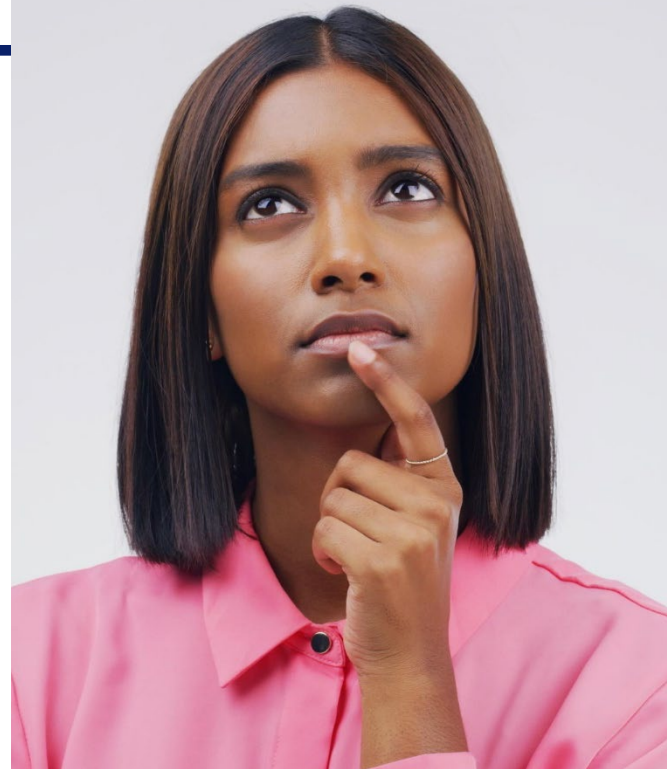
CBT-IA (2 of 4)

- Phase I: Behavioral Modification
 - Antecedent Control: Media restructuring, reorganization, change routines, restrict access



CBT-IA (3 of 4)

- Phase II: Cognitive Restructuring
 - Address maladaptive cognitions
 - ✓ I will lose out
 - ✓ People won't want to be my friend
 - ✓ It doesn't matter if I can't post it
 - ✓ What happens online can't really hurt me



(Microsoft PowerPoint 2019 Stock Images)



CBT-IA (4 of 4)

- Phase III: Harm Reduction Therapy
 - Address co-existing factors associated with problematic use.
 - Develop plan to respond early to warning signs of problematic use and recover from relapse/lapse.



For Parents



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When Should My Child Get a Phone?

- Starting Young
 - More likely to report doing things in secret
 - More fixated on the phone
 - More likely to be part of a supportive social online community
 - More likely to experience harassment and drama
- Starting late (around 14)
 - More likely to feel left out
 - Less likely to jump in and find support
 - Slower to grow some online behaviors



(Microsoft PowerPoint 2019 Stock Images)



Media Centric Parents (~11 hrs/day)

- More likely to:
 - Use media to connect with their children
 - Use media to keep their children busy
 - Use media to settle children before bedtime
 - Be in a lower socioeconomic strata
 - Have lower educational attainment
 - Have depressed parents
 - Be in a single-parent household
 - Have fewer developmental resources



Parental Mediation

- Restrictive and Active mediation can reduce digital learning of:
 - Aggressive behavior
 - Substance use
 - Sexual behavior
- Co-viewing (without discussion) enhances media effects
- Parents talk to young children less when the television is on



(Microsoft PowerPoint 2019 Stock Images)



Aim for Balance

- Individual and Family Differences
- Pay Attention to Types of Media Being Used
- Set Limits
- Watch for warning signs of unhealthy use:
 - Complaining of being bored or unhappy when not using
 - Tantrum or harsh resistance with limits
 - Interference on sleep, school, face-to-face communication
- Talk about It again and again
- Kid-proof your devices:
 - Use passwords
 - Review privacy settings
 - Review Content Ratings



Getting Control Back from Producers

- Turn off Notifications
- Delete Toxic Apps (Use Safer Alternatives)
 - ✓ Facebook -> Signal
 - ✓ TikTok -> MarcoPolo
- Download Helpful Tools
 - ✓ Mindfulness Apps
 - ✓ Organization Apps
- Eliminate Outrage from your Diet
- Follow Voices you Disagree With
- Practice Compassion
- Set Boundaries
- Disconnect Fully One Day each Week
- Be Intentional and Focus on the Positive
- Support Local Journalism



Model Healthy Use

- Give Example of Healthy Balance
- Set personal boundaries
- Especially limit use when:
 - Pick up and Drop-off
 - Return Home
 - Meals
 - Family Outings/Activities



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Tools/Resources

- [Logoffmovement.org](https://logoffmovement.org)
- Your Hour App
- Lock my phone App
- [Humanetech.com](https://humanetech.com)
- The Social Dilemma



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Key Takeaways

- Many researchers argue that digital technologies can expose children to bullying, contribute to sleep problems, negatively comparisons, depressive symptoms, anxiety, and self-harm.
- Meanwhile, others have cast doubt on the idea that technology or social media use is a major factor in youth wellbeing.
- Mediating factors include the type of media, the way the media is being used, and parental involvement.
- There are things clinicians can for children and parents to support healthy use and address problematic use.
- There are great resources available to support parents and children.



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