Youth and Social Media: Connections to Addiction and Mental Illness

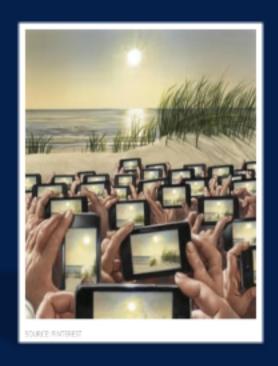
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Disclosure Information

- Emily Brunner, MD, DFASAM
 - No disclosures

- Sara Polley, MD, FAPA, FASAM
 - No Disclosures





Learning Objectives

- 1. Describe what is currently known about the relationship between youth social media use, mental health, and substance use disorders.
- 2. Synthesize the evidence for social media use as a behavior with the potential for development of addiction, particularly for at-risk youth, based on the ways it impacts brain development, behavior, and psychological functioning.
- 3. Evaluate social media usage through the lens of proposed social media use disorder criteria and theorize potential prevention and treatment options.



First- take your own pulse

- 1. Please raise your hand if you have a phone or electronic device with you
- 2. Please open all devices and power them down (unless there is a critical patient-centered reason to keep them on)
- 3. Please see how long you can keep your devices off through this presentation, which is 75 minutes
 - Americans check their phones on average 96 times per day, or once every ten minutes



Please don't x (tweet), insta, snap or tik tok these slides

- We are sharing our own experiences and the words of our children because of our deep concern for this issue as illustrations
- We are sensitive to our children not having these things about them easily available online



Social Media and Health











Technology Is Progress

- Gaming
- Entertainment
- Information widely available
- Remote schooling
- Expansion of healthcare via remote options
- Connecting with remote relatives
- Remote ASAM Board meetings
- Entertaining children on trips
- Friction-free music and answers to basic questions per Siri/Alexa

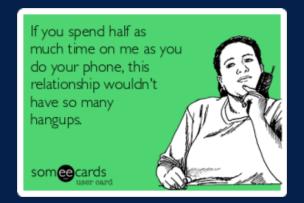




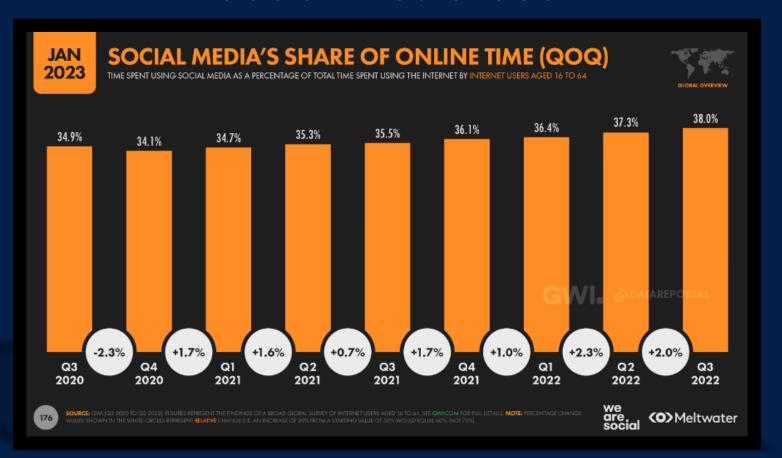
Social Media and Mental Health

"Right now, when I talk to young people on the road, they consistently tell me three things about social media: They say it makes them feel worse about themselves; it makes them feel worse about their friendships; and they can't get off it"

-Vivek Murthy, MD, US Surgeon General New York Times, 3/21/2023









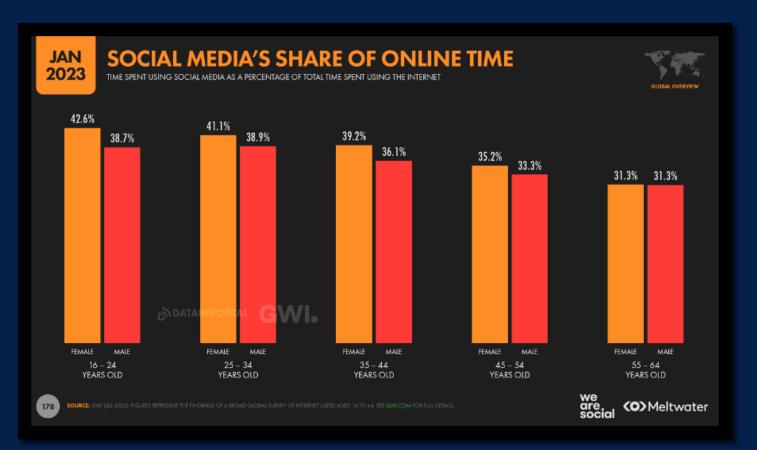
Social media now accounts for 38% of the world's total daily online time.

That's up from its 35.5% in January of 2023, with that 2.5 percentage point increase representing a relative year-on-year increase of 7.2 percent.

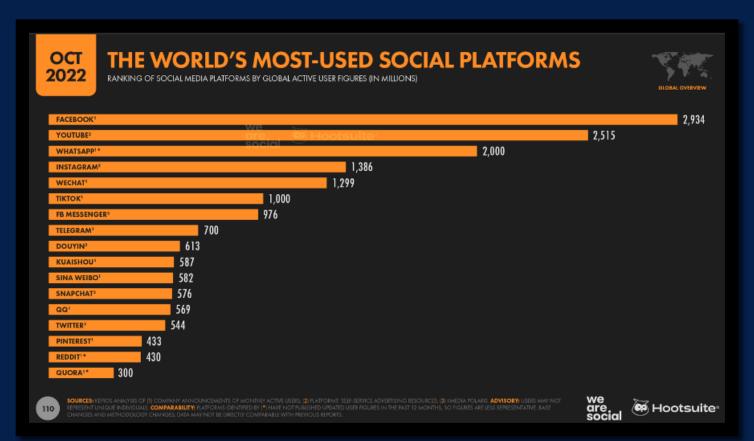


The typical working-age internet user now spends 30% more time using social media each day than they spend watching "traditional" TV (i.e., broadcast and cable).





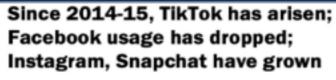




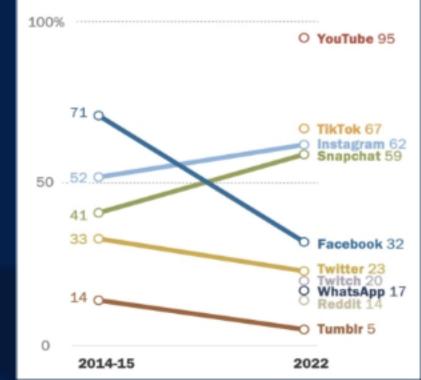


Social Media

- Up to 95% of young people aged 13-17 report using a social media channel
- ♦ With ¾ reporting use every day
 - ◆ And ⅓ "almost constantly"



% of U.S. teens who say they ever use any of the following apps or sites





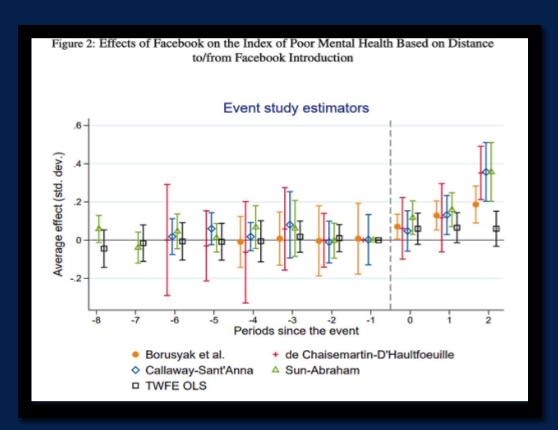
Factors Driving Use

- Schools often provide laptops/iPads to students
- Reduction of in-person social opportunities
 - If you are not online, you are missing out
- ♦ Loneliness: As this increases, the amygdala becomes more active/fearful
 - This can result in assuming bad intent in others (reinforcing the feeling of loneliness); this results in avoidant behavior
- Desire for community



Facebook and Mental Health

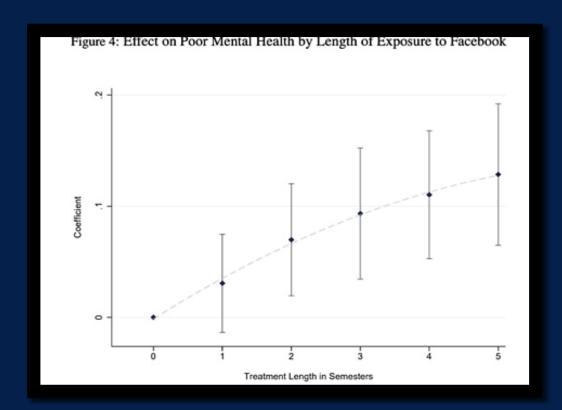
Index of Poor Mental
 Health increased with the
 introduction of Facebook
 on college campuses.





Facebook and Mental Health

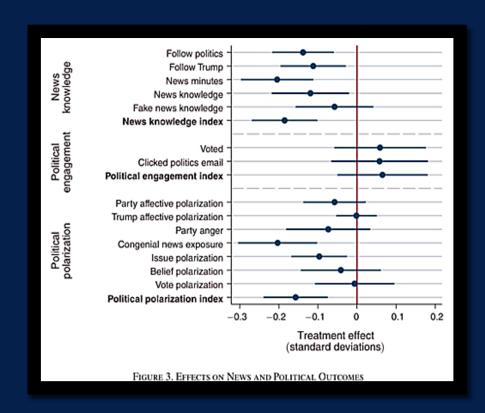
 Increased length of exposure to Facebook correlated with worsening mental health.





Removal of Facebook and Mental Health

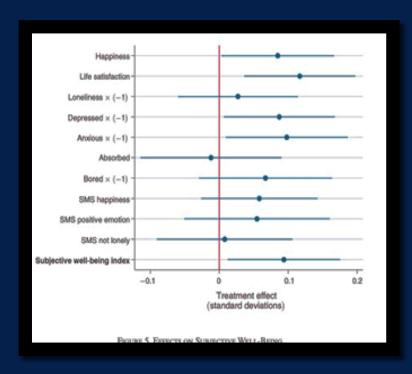
- Deactivation of Facebook was associated with a significant reduction in Political Polarization
- Also reductions in The News Knowledge Index scores
- Implications?





Removal of Facebook and Mental Health

 Trend was towards significantly positive mental health





Risks of social media

- Painful, even traumatizing experiences from posting the wrong thing
 - 24% of high-school age teens (ages 14 to 17) and 33% of college-age students (ages 18 to 24) have been involved in a form of nude sexting
- Exposure to positive messages about substance use
- Extended, repeated exposure to misinformation presented by people they have parasocial relationships with
- Negative effect on mental health, especially that of teenage girls
- Focus online without being involved in social activities IRL
- Fast changing world, more options for VR and AI to have unpredictable effects
- ASAM

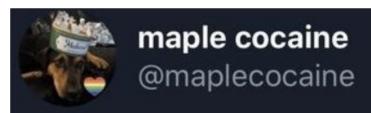
Privacy concerns with loading information into a system that monetizes that

It's not just dangerous for youth









Each day on twitter there is one main character. The goal is to never be it

7:20 PM · Jan 2, 2019 · Twitter Web Client



July 27, 2019: Biopsy of a very poorly composed "tweet"





Not Just Youth

"Mom, just pretend I'm a video on your phone. Then you will want to look at me more!"

Esme, Age 4

"Mom, what is that one where you just scroll and scroll and the videos keep playing and playing and you text it to dad?"



Social Media and Suicide



"It was horrific. I think when you get so many comments on the scale we did coming out of thousands of followers," she was quoted in the interview, adding: "Sometimes I would look for it ... There would be so many negative comments. They are commenting on the way you look, the way you talk." -Sophie Gradon





-Gradon, participating in a discussion of social media on children

Social Media and Substance Use





Social Media and Substance Use

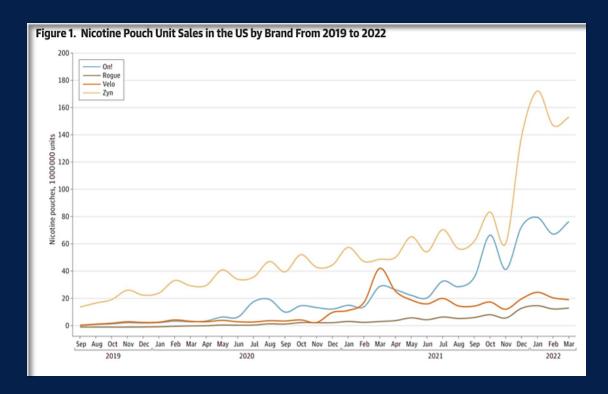


Adolescents who are regularly active on social media have a greater likelihood of subsequent tobacco or cannabis use initiation



Nicotine Use

- Who here has heard of "Zyn"?
 - ?Gum Pillows?
 - Zynfluencers









Advertising has changed quite a bit

- Posts hashtag #zyn have reached over 700 million views on TikTok
 - Often organically and more effectively reaching young people who are more influenced by micro-influencers
- Consuming nicotine in high amounts can put young people at risk of acute nicotine toxicity
 - Can cause a agitation, a fast HR and vomiting
- These nicotine pouches come in flavors, bright packaging, and seem designed to attract new users
- ♦ In November of 2022, phillip morris acquired the manufacturers of Zyn

Virtual Reality



But wait; is brain development complete by age 13? ...

- It is not advised for children under the age of 13 to use
 - Vision and brain are still developing
 - Potential for disruption of typical development
- Can cause neck strain and accidental injury
- Cybersickness
- Encountering harmful content
- Oversharing/information harvesting
- Depersonalization/Derealization
- Privacy Concerns/Data Collection
- Biometric data like pupil dilation in response to stimuli as well as where gaze is focused



Bipartisan Consensus: Politicians and Social Media

- New York City issued an advisory in 1/2024 declaring Social Media as an public health hazard
- -Mayor, Eric Adams claims social media is "fueling a mental health crisis in children" and recommended among other things, that children not have phones until age 14
- Senator Cruz in 2/2024 told Mark Zuckerberg and peers at a hearing "You have blood on your hands" and "you have a product that's killing people" in reference to the harm children have suffered in relation to social media



Children themselves identify this is an issue







Why does this matter?

- Because dangerous information that can hugely influence people
- Here is an example with someone with 171 million followers





Exposure to Misinformation

- Studies show that seeing the same piece of misinformation repeatedly can result in confusing someone into taking it for a fact:
- Mismatch between expertise and influence
 - ASAM instagram followers as of Feb 5- 3566
 - NYTimes instagram 18 million followers
 - In comparison, Selena Gomez has 430 million followers



He then adds



Subscribe

I've talked to many more people who were helped by psychedelics & ketamine than SSRIs & amphetamines

12:09 AM · Apr 30, 2022



And Also

Given his ownership of "X", it has been reported that Elon Musk changed the algorithm to boost his own tweets (xs?) so they will show up more often and higher in own's feed



Exposure to Harmful Content

- Racist
- Sexist
- Sex Trafficking
 - It is not physical, but the majority of trafficking occurs
- Online, and does not involve physical threats
- Politically or ideologically radicalized ideas
- Health Misinformation



Breakdown in Shared Reality

- Extreme emotion distortion- goal is to increase time on device
- Information flooding
 - Well known propaganda tool that we start to believe things we see repeated over and over, even if demonstrably inaccurate
- Micro-targeting distortion: advertising to very specific subset
- Moral outrage distortion:
 - algorithm amplifies emotionally shared content
- Engaging content distortion
- Anti-journalism distortion
- Disloyalty distortion
- Othering Distortion:
 - algorithms amplify divisive, negative, out-of-context content about particular groups. This incentivizes "othering" content, causing us to dehumanize others



Privacy Concerns

Zuckerberg: Yeah so if you ever need info about anyone at Harvard

Zuckerberg: Just ask.

Zuckerberg: I have over 4,000 emails, pictures, addresses, SNS

[Redacted Friend's Name]: What? How'd you manage that one?

Zuckerberg: People just submitted it.; I don't know why.

Zuckerberg: They "trust me"



Zuckerberg: Dumb f*cks.

Sections

What videos are most likely to be removed from TikTok?

Tiktok videos violating minor safety are most likely removed from TikTok. More than a third of the videos that violated TikTok's community guidelines concern minor safety.

Apart from that, videos on illegal activities and regulated goods are

Category	Percentage
Minor Safety	43%
Illegal Activities and Regulated Goods	21%
Adult Nudity and Sexual Activities	10.70%
Violet and Graphic Content	9.30%
Suicide, Self-harm, and Dangerous Acts	6.50%
Harassment and Bullying	5.90%
Hateful Behavior	2%
Violent Extremism	1%
Integrity and Authenticity	0.70°/ (⑦ Help
Source: Statiste	_

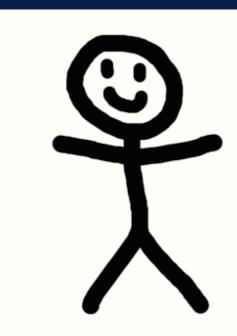
Where is TikTok not available (in which countries)?

Country	Current TikTok Access	
India	Permanently Banned	
Russia	Accessible with severe restrictions	
Afghanistan	Ongoing discussion to permanently ban the app	
Syria	Permanently Banned	
Indonesia	Temporarily Banned	
Bangladesh	Temporarily Banned	
Pakistan	Temporarily Banned	
U.S.	Temporarily Banned	
Jordan	Temporarily Banned	
Taiwan	Partially Banned	
Netherlands	Temporarily Suspended	



https://futurism.com/delphi-ai-ethics-racist













I'm Addicted to my Phone

Can you develop a Social Media Use Disorder?

Categories of Symptoms

CATEGORIES OF SUD SYMPTOMS

Symptoms of substance use disorders in the DSM 5 fall into four categories: 1) impaired control; 2) social problems; 3) risky use, and 4) physical dependence.

Impaired Control

Using more of a substance or more often than intended

Wanting to cut down or stop using but not being able to

Social Problems

Neglecting responsibilities and relationships

Giving up activities they used to care about because of their substance use

Inability to complete tasks at home, school or work

Risky Use

Using in risky settings

Continued use despite known problems

Physical Dependence

Needing more of the substance to get the same effect (tolerance)

Having withdrawal symptoms when a substance isn't used



Evidence of Social Media Addiction

Evidence now of many of the same brain changes happening with problematic social media use as we see with substance use, gambling, gaming. Problematic use associated with:

- Increased activity in Ventral Striatum/NAc with socially salient interactions. Activity level correlated with frequency of use.
- Altered connectivity between DLPFC and VMPFC and NAc
- Changed structure of PFC regions and increased signaling when trying to disengage from likes, retweeting, etc.
- Amygdala



"Tik Tok has been really bad for me. It freaks me out to see all the bad things happening in the world, all in one place. It puts me in a bad mental place and adds to the stress that it is already in my REAL life... even though I know it causes problems, I still always watch the video and click it [the app]. It isn't logical."

23 year old F identifying with GAD and MDD



"The dealers all have an account on the app. They post their menus each week. I was in my Mom's car on the way to school yesterday refreshing the app every second... waiting for the menu to be posted. My mom thought I was just on Reddit or something. I was so excited when the menu popped up, I just spent \$600 right away."

- 16 year old F identifying with OUD, AUD, CUD, PTSD



"She gets to excited about attention from men on [instagram], she posts pictures with more and more clothing removed... The cat is out of the bag, I can't possibly take away her phone or close the accounts now. She tells me she is going to kill herself and starts punching herself when I try to take the phone as a consequence. It would be even worse in a group home".

- Mom and guardian of a 22yo with FSIQ 65, ASD level 2



"I'm really into this guy on social, [insert name of non-medical health and supplement influencer]... I've bought his books, I hope to go to his workshop next. He talks about how to reset your brain using meditation and ancient healing. I bought his nutraceuticals. They are really expensive, 30 days is \$900. They are supposed to help my ADHD and depression. I probably shouldn't be buying them but I'm obsessed..."

- 25yo M identifying with childhood ADHD, one year since us of illicit substances with diagnoses of OUD, AUD, CUD



SBIRT for Social Media Use





Social Media Use Disorder: Screening

No *brief* screening tool has been validated

Ask about screen use, associated problems

Weave questions about social media into other presenting complaints:

- Sleep issues
- Body image concerns
- Struggles with Boundaries in Relationship
- Self-Harm



Bergen Social Media Addiction Scale

Scale

Here are six statements to consider. For each, answer: (1) very rarely, (2) rarely, (3) sometimes, (4) often, or (5) very often.

- 1. You spend a lot of time thinking about social media or planning how to use it.
- 2. You feel an urge to use social media more and more.
- 3. You use social media in order to forget about personal problems.
- 4. You have tried to cut down on the use of social media without success.
- 5. You become restless or troubled if you are prohibited from using social media.
- 6. You use social media so much that it has had a negative impact on your job/studies.

< 12 : Normal Use

12-18: Problematic use

> 18: Suggests Social Media Disorder



Social Media use Disorder Scale for Adolescents

In the Past 12-months:

- 1. Use social media more frequently and longer than I planned to or agreed upon with my parents.
- 2. Cannot stop using social media even though it would be sensible to do so or I'm told to stop
- 3. Do not pursue other activities because I prefer social media
- 4. Neglect daily duties because I prefer using social media.
- 5. Continue using social media even though it causes me stress with others
- 6. Continue using social media even though it harms my performance in school/work
- 7. Neglect appearance, hygiene, or health in favor of social media
- 8. Risk losing important relationships due to social media use
- 9. Negative consequences from social media use at school, work, or at home
- 10. How often did you experience these problems in the past year?



Social Media Disorder Scale

Preoccupation

During the past year, have you ...

- ... often found it difficult not to look at messages on social media when you were doing something else (e.g. school work)?
- ... regularly found that you can't think of anything else but the moment ti
- ... often sat waiting until something happens on social media again?

During the past year, have you ...

- ... felt the need to use social media more and more often?
- ... felt the need to check messages on social media more and more often?
- ... regularly felt dissatisfied because you wanted to spend more time on s Withdrawal

During the past year, have you ...

- ... often felt tense or restless if you weren't able to look at your messages
- ... regularly felt angry or frustrated if you weren't able to use social media
- ... often felt bad when you could not use social media?*

Persistence

During the past year, have you ...

- ... tried to reduce your use of social media, but failed?
- ... tried to spend less time on social media, but failed?*
- \dots been unable to stop using social media, even though others told you the Escape

During the past year, have you ...

... regularly used social media to take your mind off your problems?

(continued)

- ... often used social media so you didn't have to think about unpleasant things?
- ... often used social media to escape from negative feelings?*

Problems

During the past year, have you ...

- ... often not paid attention at school, while doing homework or at work because you were using social media?
- ... regularly not had enough sleep because you were using social media too late at night?
- ... regularly had arguments with others because of your social media use?*

Deception

During the past year, have you ...

- ... regularly lied to your parents or friends about the amount of time you spend on social media?*
- ... regularly hidden your social media use from others?
- ... often used social media secretly?

Displacement

During the past year, have you ...

- ... regularly devoted no attention to people around you (e.g. family or friends) because you were using social media?
- ... regularly had no interest in hobbies or other activities because you would rather use social media?
- ... regularly neglected other activities (e.g. hobbies, sport) because you wanted to use social media?*

 Conflict

During the past year, have you ...

- ... had serious problems at school or at work because you were spending too much time on social media?
- ... had serious conflict with your parent(s) and sibling(s) because of your social media use?*
- ... jeopardised or lost an important friendship or relationship because you were spending too much time on social media?



Brief Intervention

Collaborative, Structured, and Goal-Oriented exchange drawing from motivational interviewing.

Ask Permission

Provide Factual Education

VALIDATE

Enhance Motivation - natural and imposed consequences

Summarize

Set a SMART Goal



Brief Intervention: Childhood

Talk about Social Media and Chatting Set a good example Heavy parent use associated with parent-child relationship conflict and youth use Screen-free times and areas of home Plan screen-free family activities Turn off or mute media that is not in use (TV, computer, phone)



Brief Intervention: Childhood

Set most secure parental controls to start Research your devices and how to set them up Don't trust "educational" as a description Avoid making media a main coping skills Test apps and play games before your child When looking at your device, share with your child what you are doing Demonstrate kindness







Family Media Plan

Family Media Plan

Media is everywhere, and managing it all can be tough. Creating a Family Media Plan can help you and your children set media priorities that matter most to your family. Come back to revise your plan as often as you need to, such as at the beginning of each school year or during summer and holiday breaks.

Here's how it works

Since media habits are different for every household, the Family Media Plan can be customized to meet your family's needs. Make a full plan, or just choose a few parts that matter the most to your family.

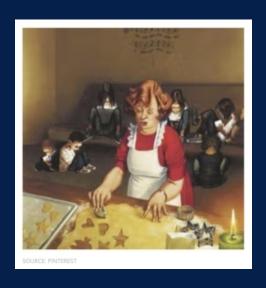
The Family Media Plan includes:

- A list of media priorities to choose from
- · Practical tips to help make the plan work
- · Why it's important
- The ability to print or share your finished plan
- The option to save your plan and return as often as you'd like to make changes



Social Media Use: Brief Intervention

- Time limits on screens and apps
- Delete difficult apps or move off of smartphone
- No access to screens within
- 1 hour of bedtime
- No screens in bedroom
- Planning for behavioral escalation with limit setting
- Recommend communication in family re: what they see online





Social Media Use: Brief Intervention

Take It Down.

Having nudes online is scary, but there is hope to get it taken down.

This service is one step you can take to help remove online nude, partially nude, or sexually explicit photos and videos taken before you were 18.

Get Started +



missingkids.org/gethelpnow/cybertipline

takeitdown.ncmec.org



Social Media Use: Brief Intervention 2.0

Vulnerable kids need a **more** robust prevention and intervention planthat is culturally attuned and implemented at an earlier age.

- Kids of parents who themselves have media overuse
- Family history of addiction, eating disorders, impulse control difficulty
- Limited intellectual functioning, ASD, emerging personality disorders
- Children experiencing chronic stress and systemic racism
- Those with limited access to prosocial non-media activities



Social Media Use Disorder: Treatment

Optimize treatment of other conditions:

- Trauma
- Anxiety and Depression
- Family communication and parenting
- Neurodevelopmental Concerns (ASD, ADHD)

Harm reduction approach
Utilize evidence-based addiction interventions
Medications?



Social Media Use Disorder: Treatment

Optimize treatment of other conditions:

- Trauma
- Anxiety and Depression
- Family communication and parenting
- Neurodevelopmental Concerns (ASD, ADHD)

Harm reduction approach
Utilize evidence-based addiction interventions
Medications?



Role of Specialty Care

-There is a pending textbook on levels of care in patients with behavioral addictions

- Find a therapist that specializes in this area (if you can)





National Intervention Opportunities

- Funding for National Institute of Behavioral Addiction
- Create SBIRT materials for social media use
- Develop official DSM 5 criteria for Social Media Use Disorder
- Regulate the age children can own an unrestricted smartphone
 - Groups suggesting 14 years old
- Fund studies looking at the role of Al, virtual reality within social media along with the impacts of social media on mental health, etc.
- Engage with international partners



DSM 5 Diagnosis?

- A. Persistent and recurrent problematic social media use leading to clinically significant impairment and distress, as indicated by the individual exhibiting five (or more) of the following over a 12-month period:
 - a. Preoccupation with social media
 - b. Needs to use social media at increasing frequency (or novelty?) to feel satisfied with use
 - c. Restlessness, sadness, irritability when social media is taken away or not possible to use
 - d. Inability to reduce engagement with social media, unsuccessful attempts to disengage
 - e. Giving up other activities, loss of interest in other activities due to social media use
 - f. Continues to use social media even after negative consequences or problems
 - g. Lies to conceal the extent of involvement in social media.
 - h. Has jeopardized or lost significant relationships, job, educational or career opportunities because of social media use
 - Uses social media excessively or exclusively to to bolster self-worth, mood, relieve loneliness

Mild: 5 -6

Moderate: 7-8

Severe: 9

Episodic
Persistent
In early remission
In sustained remission



Industry and Engagement Regulation

- Create regulation that requires people to be identifiable online and not allow anonymous accounts
- Require transparency from tech companies on data they keep internally on how they use their targeting algorithms and outcome data.
- Require more robust enforcement of content
- Prevent content from being labeled "educational" unless proven to be the case
- İncreased sophistication of parental control capabilities on platforms and devices
- Eliminate advertising on social media
- Create easy ways for youth and families to report concerns



Community Intervention

- Incorporate methods for screening and education on social media into health and wellness content for children and families.
- Increase friction-free opportunities for children to play/bond in person
- Limit use of rewarding technology in schools, study the impact and effectiveness of these paradigms



Final Takeaways

- Social Media Use is ubiquitous and incredibly rewarding for young brains. There is evidence that, like substance use, exposure during sensitive periods of brain development leads to increased risk of addictive disorders
- ◆ In addition to risk of addiction, use of social media exposure has a negative impacts on youth mental health, body image and social development.



Final Takeaways

Intervention starts with adults - YOU. Model healthy boundaries, behaviors, and moderation in use.

Take social media use seriously as an environmental toxin that has real impacts on young people, particularly those with preexisting risk factors.

Consider that there is concrete evidence suggesting social media addicton is occuring, and our first step is recognizing that

Implement guidance and limits for young people in your life with regard to their use of social media. Guide patients, communities, legislators to do the same.



Thanks!

 Please stand up if you were able to stay off your devices for the entire presentation

 Thank you so much for your time, and please contact us as needed at ebrunner@hazeldenbettyford.org



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