



The Mental Health Impact of Social Media on Youth

Shawen Ilaria, MD

Assistant Professor, Department of Psychiatry

Program Director, Child & Adolescent Psychiatry Fellowship

Rutgers Robert Wood Johnson Medical School

The Tenth Evidence-Based Pediatric Update Symposium

11/4/2023

Agenda

- Introduction to the Surgeon General's Report as a reference
- Social media factors that influence mental health in youth
- Negative and positive effects of social media use
- Primary care pearls

Trigger Warning

This presentation references potentially distressing topics including self-harm, eating disorders, suicide, hate speech, and bullying

There are no graphic or violent images

We will be viewing social media posts of a person in a swimsuit/athletic clothing as examples of photo editing (re: unrealistic beauty standards)

Social Media and Youth Mental Health

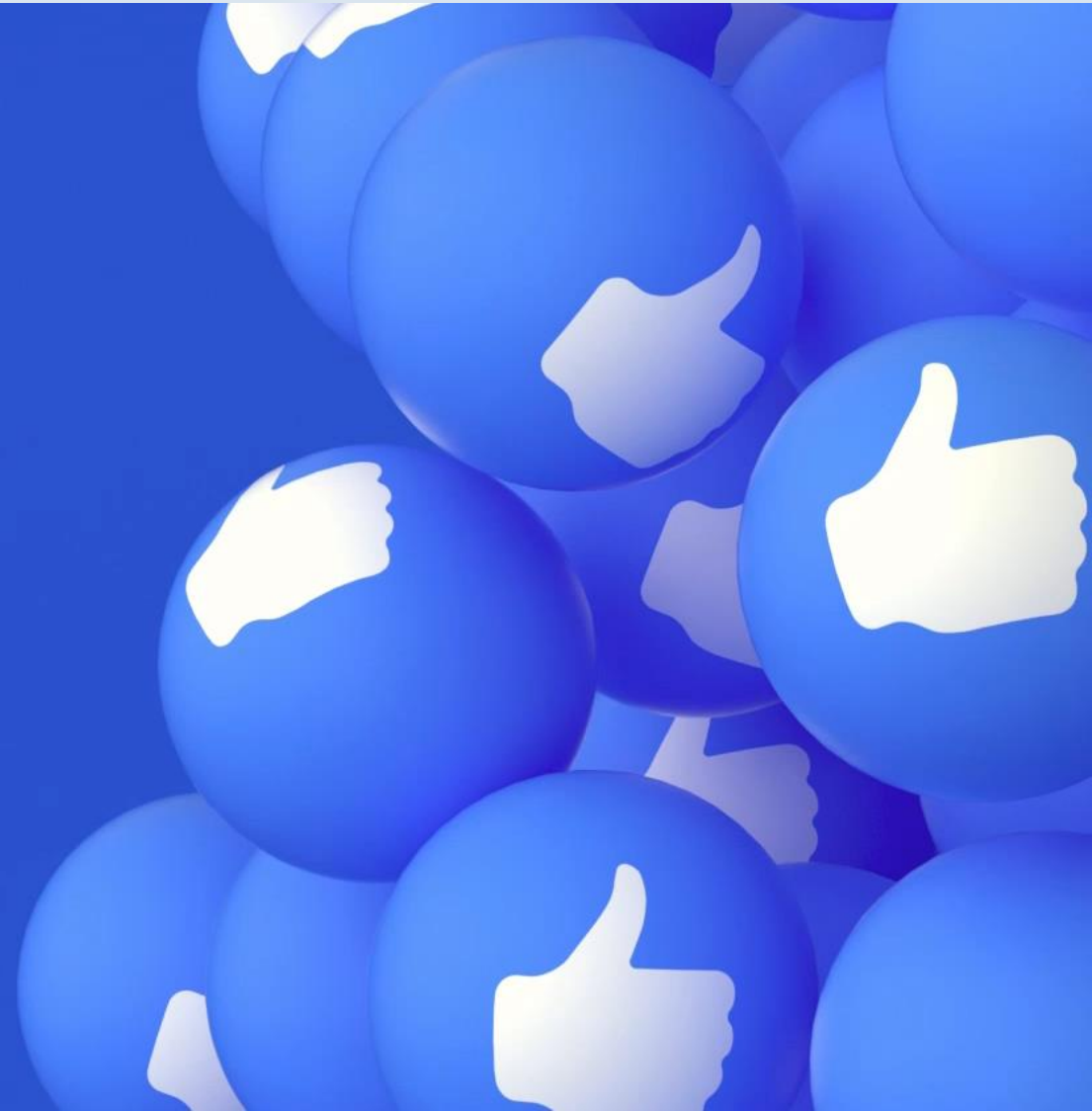
2023

The U.S. Surgeon General's Advisory



(1) See final slides for citations

**What percentage of youth
ages 13-17 report using a
social media platform?**

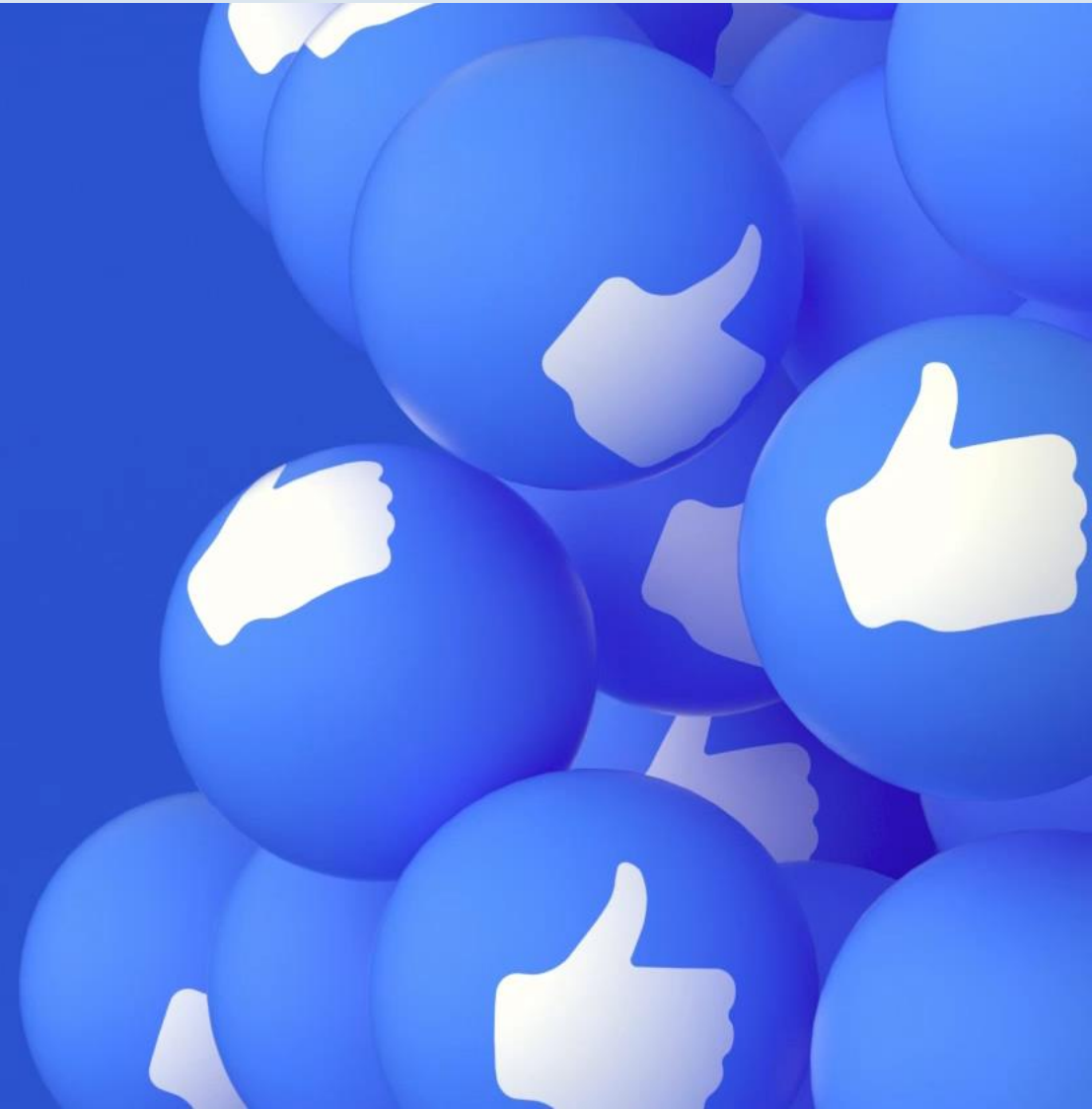


95%

More than a third report using social media “almost constantly”

Although age 13 is commonly the required minimum age used by social media platforms in the US...

What percentage of youth ages 8-12 use a social media platform?



40%

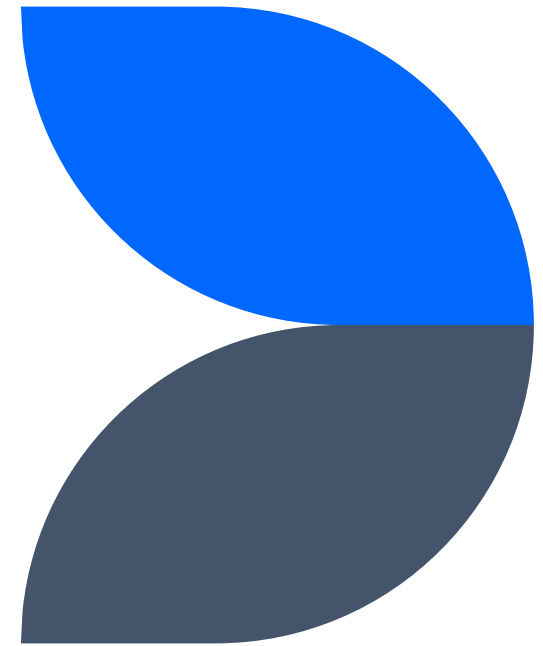
“

At this time, we do not yet have enough evidence to determine if social media is sufficiently safe for children and adolescents.

The U.S. Surgeon General's Advisory

”

**Social media
factors that
influence mental
health in youth**



**CONTENT
EXPOSURE**

**PROBLEMATIC
USE OF
SOCIAL MEDIA**



Self-Harm

A systematic review of more than two dozen studies found that some social media platforms show live depictions of self-harm acts (cutting, etc)

These studies found that discussing or showing this content can normalize such behaviors (suicide pacts, models for self-harm, etc) (4)

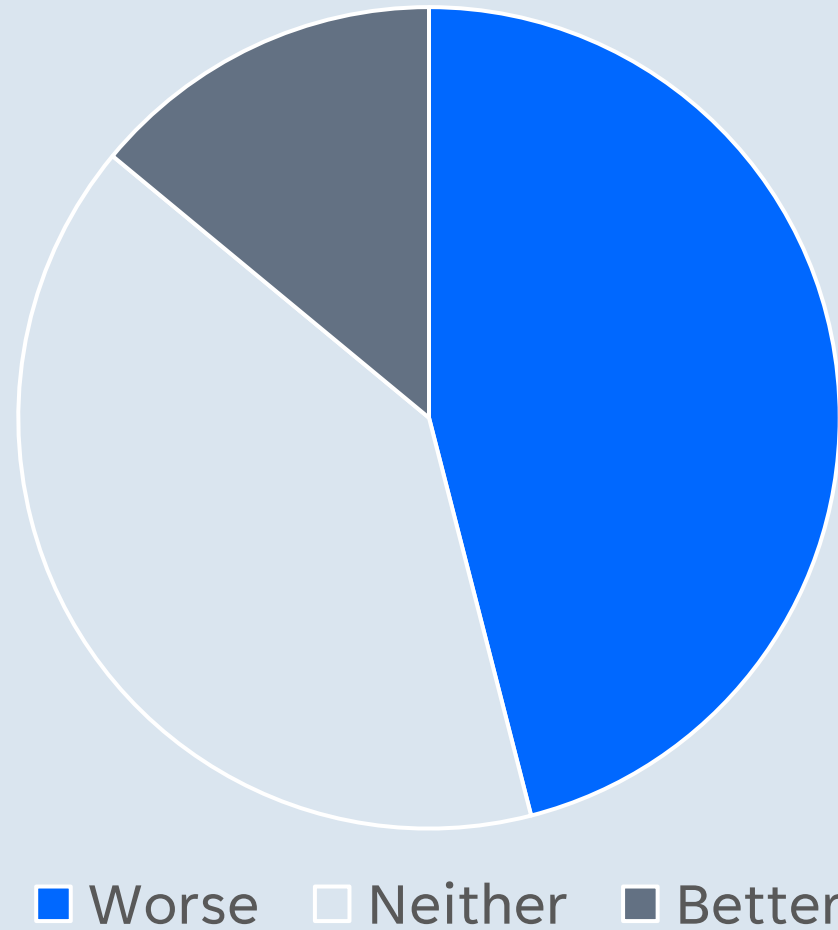
Social Comparison/Body Image

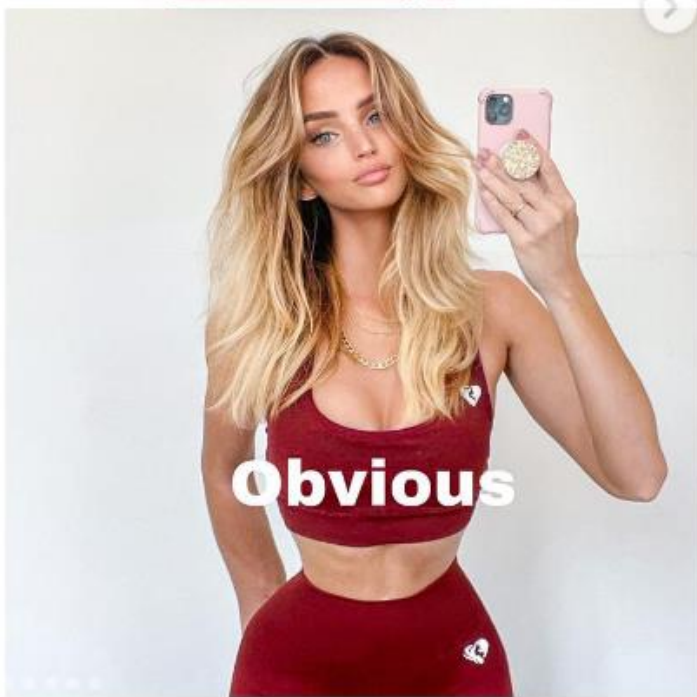
Social media may perpetuate body dissatisfaction, disordered eating behaviors, social comparison, and low self-esteem (1)

A synthesis of 20 studies demonstrated a significant relationship between social media use and body image concerns (5)

Social comparison driven by social media is associated with body dissatisfaction, disordered eating, and depressive symptoms (6)

Adolescents aged 13-17 were asked, how does social media make you feel about your body image?





danaemercer



danaemercer Researchers FACETUNED the MONA LISA.

Then they showed her, the edited her, to people.

And here's what they found:

When we stare at warped images enough,
They start to feel normal.
Especially with social media.
Especially with instagram.

They even start to MESS UP images we ALREADY have in our
brain.

Eventually we reach a point where the perfected,
The edited,
Begins to feel REAL.

And reality?
Well, it all feels a bit dull, a bit grey.

The danger, researchers noted,
Is that this perfection,
It 'can never be reached - only approached'.



93,878 likes

APRIL 19, 2022



Add a comment...



Post
(8)



**We've become so used to editing,
that now fake feels real**



danaemercer



danaemercer Researchers FACETUNED the MONA LISA.

Then they showed her, the edited her, to people.

And here's what they found:

When we stare at warped images enough,
They start to feel normal.
Especially with social media.
Especially with instagram.

They even start to MESS UP images we ALREADY have in our
brain.

Eventually we reach a point where the perfected,
The edited,
Begins to feel REAL.

And reality?
Well, it all feels a bit dull, a bit grey.

The danger, researchers noted,
Is that this perfection,
It 'can never be reached - only approached'.



93,878 likes

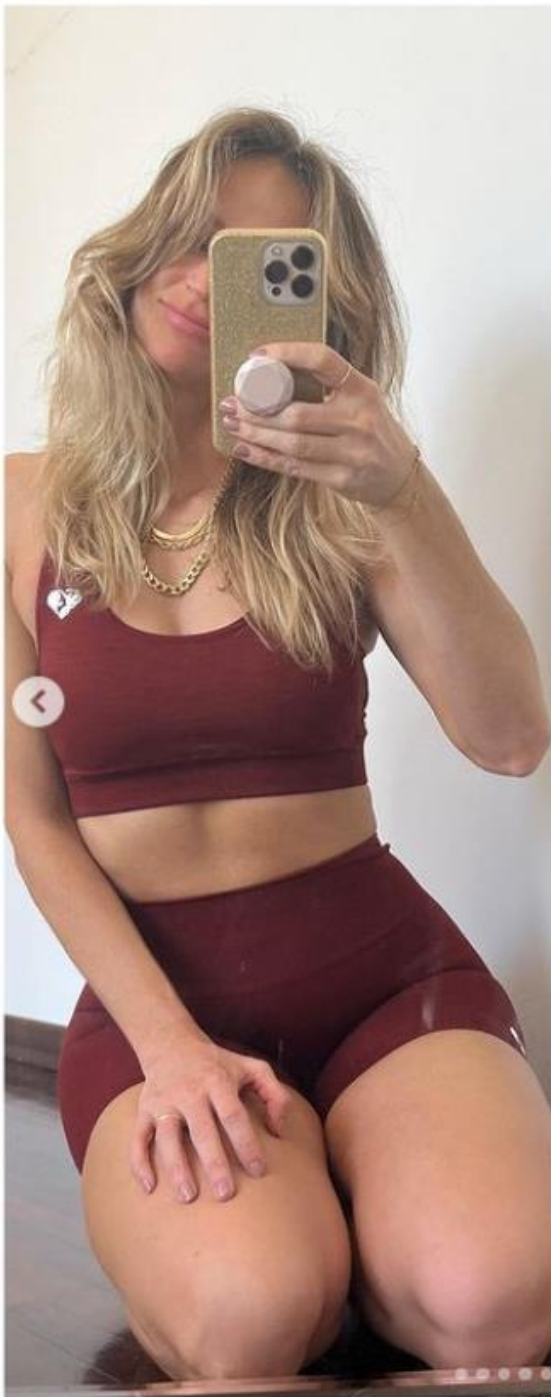
APRIL 19, 2022



Add a comment...


Post

(8)



danaemercer 



danaemercer  If I asked you to name all the things you loved, how long until you named yourself?

When I first heard this question
It blew my mind.

I didn't even consider myself an option.

But.
Maybe I should.
Maybe WE should.

Because our parts and pieces,
From our bodies to our souls,
Are the stories that shape us,
The bricks that build us.

They're our house and home and engine.

And these things
These glorious human things
Deserve so very much love.

So today



52,829 likes

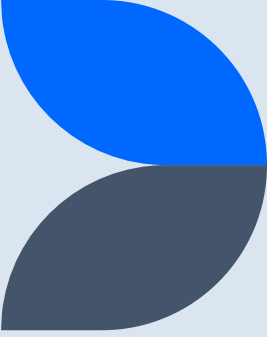
MAY 29, 2022



Add a comment...

Post

Cyberbullying/Hate Speech



Roughly two-thirds (64%) of adolescents are “often” or “sometimes” exposed to hate-based content (9)

Among adolescent girls of color, one-third or more report exposure to racist content or language on social media platforms (10)

Adolescent females and sexual minority youth more likely to report experiencing incidents of cyberbullying (11)

Predatory Interactions

Social media platforms can be sites for predatory behaviors and interactions with malicious actors who target children and adolescents

Adolescent girls and transgender youth are disproportionately impacted by online harassment and abuse (12)

Nearly 6 in 10 adolescent girls say they've been contacted by a stranger on certain social media platforms in ways that make them feel uncomfortable (10)

Addictive Features of Social Media



Push notifications, autoplay, infinite scroll, quantifying and displaying popularity (i.e., 'likes'), and algorithms that leverage user data to serve content recommendations are examples of features that maximize engagement



According to one recent model, nearly a third (31%) of social media use may be attributable to self-control challenges magnified by habit formation (13)

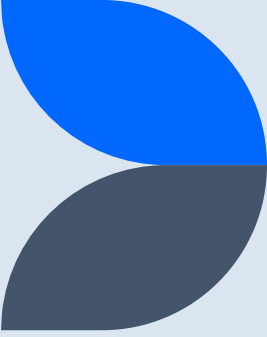


Some researchers have found that social media exposure can overstimulate the reward center in the brain and, when the stimulation becomes excessive, can trigger pathways comparable to addiction (14)



Small studies have shown changes in brain structure similar to changes seen in substance use or gambling addictions (15)

Overuse of Social Media



Compulsive or uncontrollable use has been linked to sleep problems, attention problems, and feelings of exclusion among adolescents (16)

A systematic review of 42 studies on the effects of excessive social media use found a consistent relationship between social media use and poor sleep quality, reduced sleep duration, sleep difficulties, and depression among youth (17)

Poor sleep has been linked to altered neurological development in adolescent brains, depressive symptoms, and suicidal thoughts and behaviors (18)

Links to ADHD and FOMO



In a recent narrative review of multiple studies, problematic social media use has also been linked to both self-reported and diagnosed attention-deficit/hyperactivity disorder (ADHD) in adolescents, although more research is necessary to understand whether one causes the other (19)



Additionally, social media-induced fear of missing out, or “the pervasive apprehension that others might be having rewarding experiences from which one is absent,” has been associated with depression, anxiety, and neuroticism (20)

The Developing Brain



Varying Amount of Impact

How much time is spent on platforms?

What kind of content are they consuming?

To what degree does social media disrupt their healthy activities like sleep and physical activity?

Youth are affected by social media in different ways, based on their individual strengths and vulnerabilities, and based on cultural, historical, and socio-economic factors (21)

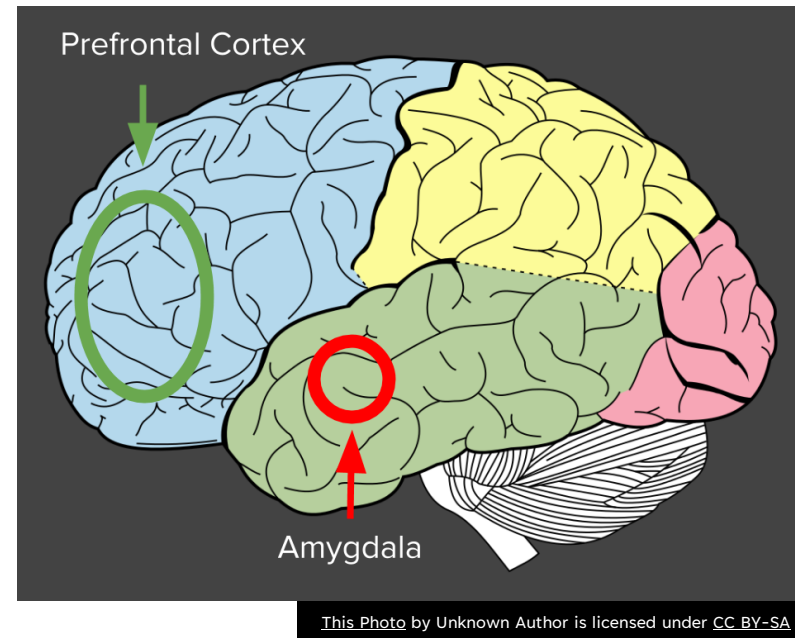
Brain Development

The adolescent brain is at its peak when it comes to risk-taking behaviors

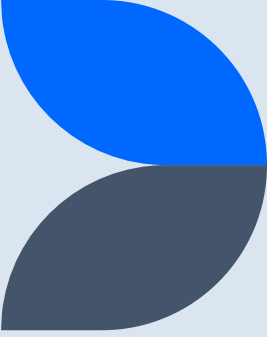
Identity formation and sense of self-worth --> the brain is susceptible to social pressures, peer opinions, and peer comparison (22)

Frequent social media use may be associated with changes in the amygdala (emotional learning and behavior) and the prefrontal cortex (impulse control, emotional regulation, and moderating social behavior), and could increase sensitivity to social rewards and punishments (23)

Therefore, adolescents may experience heightened emotional sensitivity to the effects of social media (24)



Potential Benefits



Community and connection with others who share identities, abilities, and interests

Space for self-expression

Formation and maintenance of friendships

Access to more diverse peer groups than are available to them offline

Studies have shown that these effects can be especially large for marginalized youth (racial, ethnic, and sexual and gender minorities) (25)

Social media may be a platform to which we can disseminate resources like mental health interventions

Potential Harms

A longitudinal cohort study of U.S. adolescents aged 12–15 (n=6,595) that adjusted for baseline mental health status found that adolescents who spent more than 3 hours per day on social media faced double the risk of experiencing poor mental health outcomes including symptoms of depression and anxiety (26)

As of 2021, youth spend an average of 3.5 hours per day on social media

Studies that have shown harm



Limits on the use of social media have resulted in mental health benefits



A small, randomized controlled trial in college-aged youth found that limiting social media use to 30 minutes daily over three weeks led to significant improvements in depression severity (27)



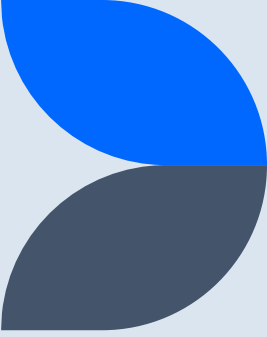
This effect was particularly large for those with high baseline levels of depression

Studies that have shown harm

A study conducted among 14-year-olds (n = 10,904) found that greater social media use predicted poor sleep, online harassment, poor body image, low self-esteem, and higher depressive symptom scores *with a larger association for girls than boys* (16)



The Role of the Pediatrician



Pediatricians play a crucial role in providing guidance and education to both patients and their families regarding the safe and responsible use of social media (28)

They can help families navigate potential risks and promote healthy social media habits

Advocate for policies aimed at protecting youth mental health in regards to social media

Suggest a Family Media Plan

<https://www.healthychildren.org/English/fmp/Pages/MediaPlan.aspx>

Saved

Create or Update Your Family Media Plan

To get started, create a profile for each member of your family. Include their names and ages. You can even add fun avatars for each family member. Add as many family members as you need.

To find this information in Spanish, [click here](#).

Back
←



Continue
2 of 11
→

Enter your family name *

Parziale

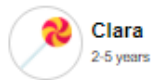
My Family

+ Add Another Family Member

Family Member's Name * Clara Age 0-24 months **2-5 years** 6-12 years 13-18 years Adult

Family Member's Name * Luca Age 0-24 months **2-5 years** 6-12 years 13-18 years Adult





Clara
2-5 years

The Parziale Family Media Plan

We will help balance tech with online and offline activities by:

- Planning a screen-free activity to do together as a family every day.
- Tracking online activities and talking about which activities may be taking up too much time.
- Making a habit of turning off media that's not being used by anyone.
- Participating in other activities available in our community.
- Having fewer apps on our devices.
- Setting lock-screen reminders.
- Filling our child's days with more play than media.
- Setting media time limits.
- Making sure screen time doesn't interfere with physical activity and healthy eating.
- Realizing when we turn to media to dull our own emotions, and finding healthier ways to cope.

We will communicate about media by:

- Talking about media on a regular basis.
- Using "talk-out-louds" to help teach little minds how to communicate about media.
- Becoming more aware of how media and our emotions connect.
- Learning how to better recognize ads on the internet.

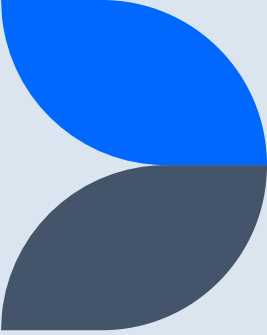
We will emphasize kindness and empathy when using technology by:

- Being polite and considerate to others online and in person.

We will set and discuss digital safety rules by:

- Limiting media use for our young child to keep it from interfering with developmental, social and emotional skills.
- Exploring privacy settings and setting them at the highest level of security.
- Talking about ways to be a good digital citizen.

Pediatrician as Advocate (1)



Advocate at the local, state, or national level to urge policymakers to:

Strengthen protections to ensure greater safety for youth

Develop age-appropriate safety standards for technology platforms

Protect youth from accessing harmful content – enforce age minimums

Limit use of features that attempt to maximize engagement

Develop tools to protect activities such as sleep

Higher standard of data privacy for youth

Support the development of digital and media literacy curricula in schools

Support increased funding for future research on how social media impacts the developing brain

Ensure technology companies share data relevant to the health impact of their platforms



When to refer to psychiatric care?

As always, pediatricians are our first-line in screening for depression, anxiety, and eating disorders



Gaming Disorder proposal

There is currently no diagnosis of “social media addiction” or “internet addiction” in the DSM-5.

Internet Gaming Disorder is included in the DSM-5-TR (29)



Internet Gaming Disorder ⁽²⁹⁾

Must cause significant impairment or distress

Preoccupation with gaming

Sadness, anxiety, or irritability when gaming is taken away

Unsuccessful attempts to quit gaming

Giving up other activities due to gaming

The use of gaming to relieve negative moods (guilt, hopelessness)

Questions?



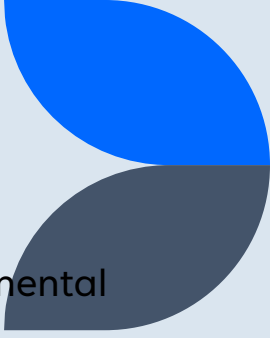
Citations

1. Social Media and Youth Mental Health: The U.S. Surgeon General’s Advisory (2023)
2. Vogels, E., Gelles-Watnick, R. & Massarat, N. (2022). Teens, Social Media and Technology 2022. Pew Research Center: Internet, Science & Tech. United States of America. Retrieved from <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>
3. Rideout, V., Peebles, A., Mann, S., & Robb, M. B. (2022). Common Sense Census: Media use by tweens and teens, 2021. San Francisco, CA: Common Sense. Retrieved from https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf
4. Dyson, M. P., Hartling, L., Shulhan, J., Chisholm, A., Milne, A., Sundar, P., Scott, S. D., & Newton, A. S. (2016). A Systematic Review of Social Media Use to Discuss and View Deliberate Self-Harm Acts. *PloS one*, 11(5), e0155813. <https://doi.org/10.1371/journal.pone.0155813>
5. Holland, G., & Tiggemann, M. (2016). A systematic review of the impact of the use of social networking sites on body image and disordered eating outcomes. *Body image*, 17, 100–110. <https://doi.org/10.1016/j.bodyim.2016.02.008>
6. Nesi, J., & Prinstein, M. J. (2015). Using Social Media for Social Comparison and Feedback-Seeking: Gender and Popularity Moderate Associations with Depressive Symptoms. *Journal of abnormal child psychology*, 43(8), 1427–1438. <https://doi.org/10.1007/s10802-015-0020-0>
7. Bickham, D.S., Hunt, E., Bediou, B., & Rich, M. (2022). Adolescent Media Use: Attitudes, Effects, and Online Experiences. Boston, MA: Boston Children’s Hospital Digital Wellness Lab. Retrieved from https://digitalwellnesslab.org/wpcontent/uploads/Pulse-Survey_Adolescent-Attitudes-Effectsand-Experiences.pdf
8. Mercer Ricci, Danae [danaemercer]. Various posts. Instagram, 15 Oct 2023, https://www.instagram.com/danaemercer/?img_index=1

Citations

9. Rideout, V., & Robb, M. B. (2018). Social media, social life: Teens reveal their experiences. San Francisco, CA: Common Sense Media. Retrieved from <https://www.commonsensemedia.org/sites/default/files/research/report/2018-social-mediasocial-life-executive-summary-web.pdf>
10. Nesi, J., Mann, S. and Robb, M. B. (2023). Teens and mental health: How girls really feel about social media. San Francisco, CA: Common Sense. Retrieved from https://www.commonsensemedia.org/sites/default/files/research/report/how-girls-really-feel-about-social-media-researchreport_final_1.pdf
11. Alhajji, M., Bass, S., & Dai, T. (2019). Cyberbullying, Mental Health, and Violence in Adolescents and Associations With Sex and Race: Data From the 2015 Youth Risk Behavior Survey. *Global pediatric health*, 6, 2333794X19868887. <https://doi.org/10.1177/2333794X19868887>
12. Finkelhor, D., Turner, H.A., & Colburn, D. (2023). Which dynamics make online child sexual abuse and cyberstalking more emotionally impactful: Perpetrator identity and images? *Child Abuse & Neglect*, 137, 106020. <https://doi.org/10.1016/j.chiabu.2023.106020>
13. Allcott, H., Gentzkow, M., & Song, L. (2022). Digital Addiction. *American Economic Review*, 112 (7): 2424-63. <https://doi.org/10.1257/aer.20210867>
14. Kuss, D. J., & Griffiths, M. D. (2011). Online social networking and addiction--a review of the psychological literature. *International journal of environmental research and public health*, 8(9), 3528-3552. <https://doi.org/10.3390/ijerph8093528>
15. He, Q., Turel, O., & Bechara, A. (2017). Brain anatomy alterations associated with Social Networking Site (SNS) addiction. *Scientific reports*, 7, 45064. <https://doi.org/10.1038/srep45064>
16. Kelly, Y., Zilanawala, A., Booker, C., & Sacker, A. (2019). Social Media Use and Adolescent Mental Health: Findings From the UK Millennium Cohort Study. *EClinicalMedicine*, 6, 59-68. <https://doi.org/10.1016/j.eclinm.2018.12.005>

Citations

- 
17. Alonzo, R., Hussain, J., Stranges, S., & Anderson, K. K. (2021). Interplay between social media use, sleep quality, and mental health in youth: A systematic review. *Sleep medicine reviews*, 56, 101414. <https://doi.org/10.1016/j.smrv.2020.101414>
18. Telzer, E. H., Goldenberg, D., Fuligni, A. J., Lieberman, M. D., & Gálvan, A. (2015). Sleep variability in adolescence is associated with altered brain development. *Developmental cognitive neuroscience*, 14, 16–22. <https://doi.org/10.1016/j.dcn.2015.05.007>
19. Dekkers, T. J., & van Hoorn, J. (2022). Understanding Problematic Social Media Use in Adolescents with AttentionDeficit/Hyperactivity Disorder (ADHD): A Narrative Review and Clinical Recommendations. *Brain Sciences*, 12(12), 1625. <https://doi.org/10.3390/brainsci12121625>
20. Fioravanti, G., Casale, S., Benucci, S.B., Probst, A., Falone, A., Ricca, V., & Rotella, F. (2021). Fear of missing out and social networking sites use and abuse: A meta-analysis. *Computers in Human Behavior*, 122, 106839. <https://doi.org/10.1016/j.chb.2021.106839>
21. Beyens, I., Pouwels, J. L., van Driel, I. I., Keijsers, L., & Valkenburg, P. M. (2020). The effect of social media on well-being differs from adolescent to adolescent. *Scientific reports*, 10(1), 10763. <https://doi.org/10.1038/s41598-020-67727-7>
22. Blakemore, S. J., & Mills, K. L. (2014). Is adolescence a sensitive period for sociocultural processing?. *Annual review of psychology*, 65, 187–207. <https://doi.org/10.1146/annurev-psych-010213-115202>
23. Maza, M. T., Fox, K. A., Kwon, S. J., Flannery, J. E., Lindquist, K. A., Prinstein, M. J., & Telzer, E. H. (2023). Association of Habitual Checking Behaviors on Social Media With Longitudinal Functional Brain Development. *JAMA pediatrics*, 177(2), 160–167. <https://doi.org/10.1001/jamapediatrics.2022.4924>
24. Crone, E. A., & Konijn, E. A. (2018). Media use and brain development during adolescence. *Nature communications*, 9(1), 588. <https://doi.org/10.1038/s41467-018-03126-x>

Citations

25. Charmaraman, L., Hernandez, J., & Hodes, R. (2022). Marginalized and Understudied Populations Using Digital Media. In J. Nesi, E. Telzer, & M. Prinstein (Eds.), *Handbook of Adolescent Digital Media Use and Mental Health* (pp. 188- 214). Cambridge: Cambridge University Press. <https://doi.org/10.1017/9781108976237.011>
26. Riehm, K. E., Feder, K. A., Tormohlen, K. N., Crum, R. M., Young, A. S., Green, K. M., Pacek, L. R., La Flair, L. N., & Mojtabai, R. (2019). Associations Between Time Spent Using Social Media and Internalizing and Externalizing Problems Among US Youth. *JAMA psychiatry*, 76(12), 1266–1273. <https://doi.org/10.1001/jamapsychiatry.2019.2325>
27. Hunt, M. G., Marx, R., Lipson, C., & Young, J. (2018). No more FOMO: Limiting social media decreases loneliness and depression. *Journal of Social and Clinical Psychology*, 37(10), 751–768. <https://doi.org/10.1521/jscp.2018.37.10.751>
28. Gwenn Schurgin O'Keeffe, Kathleen Clarke-Pearson, Council on Communications and Media; The Impact of Social Media on Children, Adolescents, and Families. *Pediatrics* April 2011; 127 (4): 800–804. 10.1542/peds.2011-0054
29. American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). <https://doi.org/10.1176/appi.books.9780890425787>