Social media use has changed the landscape of adolescent development.
Unique features of online peer experiences

Asynchronicity
Permanence
Publicness
Availability
Cue absence
Quantifiability
Visualness
Algorithmic

Nesi, Choukas-Bradley, & Prinstein, 2018
78% of 13-17-year-olds report checking their devices hourly and 46% check almost constantly (compared to 24% in 2018)
Collecting Digital Media Data

Every day for 14 days, teens upload a screenshot of their phone usage
- Objective
- Not retrospective
- Thousands of data points
Time on Smartphones

Average pickups = 100/day

Average time on smart phone = 500min/day (8.3 hours)
The Adolescent Brain
Social Brain Network → Enhanced Social Cognition

- Temporal poles
- Medial prefrontal cortex
- Precuneus
- Temporoparietal junction
The Costs and Benefits of Enhanced Social Cognition
Adolescence is a Sensitive Period for Social Processing

Somerville et al. (2013) *Psychological Science*
What do we know about the role of social media on adolescent development?
Generation Gap: Digital Divide
Science is hard

- Chicken vs egg?
- Tech changes fast!
- Correlation does not imply causation
- Research is slow

Correlation does not imply causation
A complex relationship

Mood/symptoms affect what teens do online

Tech provides soothing/coping

Tech can help (anxious) teens develop skills

Tech may take teens away from adaptive social/learning experiences (e.g., phubbing)

Flannery, Maza, Kilic, & Telzer, in press
Bottom line

Child characteristics × Tech/online behavior = Outcome

Resilient adolescent × News, friends chat =

Lonely adolescent × Addictive/harmful stimuli =
Under which conditions, and for which children may specific social media features or content be helpful or harmful to youth development?
1) Positive Attributes

• Affinity/identity communities
• Potential for immediate social support
• Online only friends buffer effects of stress on suicidal behavior
• Social companionship during COVID-19 lockdown
• #BoPo
• Civic engagement and activism

2) How teens use social media

Online social comparison and feedback seeking

- Depressive symptoms
- Anxiety symptoms
- Weight-related behaviors

Gender

Choukas-Bradley, Nesi, Widman, & Higgins, 2019; Nesi & Prinstein, 2015
3) Peer influence

- Exposure to Alcohol-related Posts
- Perception of Peers’ Attitudes
- Initiation of Heavy Episodic Drinking

Nesi, Rothenberg, Hussong, & Jackson, 2017
4) Digital Stress

- Connection overload
- Fear of Missing Out (FOMO)
- Availability Stress
- Approval Anxiety

“I have to get a certain number of likes!”

“I have to respond immediately!”

“I have to show the BEST version of myself online”

Nick, Kilic, Nesi, Telzer, Lindquist, & Prinstein, 2021
Digital Stress in High School

N = 680, aged 14-15

Experiencing Digital Stress

Nick, Kilic, Nesi, Telzer, Lindquist, & Prinstein, 2021
5) Interferes with Sleep

- 60% of adolescents report viewing or interacting with screens in the hour before bedtime
Nighttime screen use linked to Poor Sleep Health

- Nighttime smartphone use associated with poorer sleep
  - later sleep onset
  - shorter sleep duration
  - more frequent and longer wake events

Burnell et al., under review; Garrett et al., under review
6) Is Social Media Addictive?

- Do you ever feel like you spend more time on social media than you intended?
- Have you ever tried to spend time away from social media, but couldn't do it?
- Do you ever expend extra effort to make sure you will continue to have access to social media at times when you otherwise may not be able to use it?
- Do you ever have a craving or strong desire to use social media?
- Does social media use ever get in the way of things you are supposed to be doing (e.g., sleep, exercise, schoolwork)?
- Do you ever use social media even after you realized that it was getting in the way of what you thought was best for you?
- Have you ever been away from social media and felt like you were missing it too much to engage in normal day to day activities?
- Do you think you may be addicted to social media?
Addiction to Social Media

• Nearly all adolescents report spending more time on social media than they intended

• Half of adolescents report that being away from social media results in experiencing difficulties in engaging with daily life activities

• One-quarter perceive that they are “moderately” or “severely” addicted to social media
Neural Sensitivity Predicts Social Media Addiction and Depression

Flannery, Burnell, et al., under review
7) Social Media and Brain Development
In the immediate hour after teens use social media to connect with peers, they feel increased sensation seeking and crave more social interactions.
Social Media and Brain Development

Left Amygdala/ Posterior Insula/ Ventral Striatum

Maza, Fox et al., 2023 JAMA Pediatrics
Social media use has changed the landscape of adolescent development for good and for ill.
Recommendations from APA Health Advisory
1) Encourage Functions That Promote Healthy Socialization
2) Discourage functions that are not suitable for your child’s maturity
3) Monitor use for early adolescents

- Combination of:
  - Restrictive Monitoring
  - Active Monitoring
  - Validate importance of their online lives
4) Minimize exposure to and remove content depicting illegal or psychologically maladaptive behavior

○ At least 33-50% are exposed to this content
○ Discuss it
5) Minimize exposure to and remove content that promotes discrimination, prejudice, hate or cyberbullying

○ Discuss cyberhate and appropriate responses
6) Routinely screen for signs of “problematic use” that can impair their ability to engage in daily life and routines

○ Have you tried to reduce your screen time, but can’t?
○ Have you gone to extreme measures (e.g., lying) to retain access?
○ Does screen time interfere with your other roles and responsibilities?
7) Limit use that interferes with sleep and physical activity

- No Tech at Night!
8) Limit use that encourages social comparison, particularly around beauty- or appearance-related content.
9) Precede use with training teens in social media literacy

1) Question the accuracy/representativeness of content
2) Understand tactics used to spread mis-/disinformation
3) Limit “overgeneralization” and “misestimation” errors
4) Know the signs of problematic social media use
5) Learn how to build healthy online relationships
6) Understand how to solve conflicts on social media
7) Refrain from excessive social comparisons online
8) Recognize online structural racism and critique racist messages
9) Communicate safely about mental health online
10) Understand who benefits from kids using social media
10) More resources are needed to invest in scientific research of the positive and negative effects of social media on adolescent development
School Curricula

www.TeensAndTech.org

Studying how the use of technology and social media impact teen relationships, behavior, and well-being