

Health

We Need to Talk About Kids and Smartphones

Teen depression has surged, fueling concern about mobile devices

By Markham Heid



NINA LANGTON THOUGHT SHE HAD NO RIGHT TO BE DEPRESSED. She had a great group of friends, lived in a prosperous neighborhood and was close with her parents. Like most 16-year-olds at her Connecticut high school, Nina spent much of her free time on her smartphone. But unlike many of her classmates, she was never “targeted” on social media—her word for the bullying and criticism that takes place daily on apps like Snapchat. “Part of what made my depression so difficult was that I didn’t understand why I was feeling so sad,” she says.

Later, after her attempted suicide and during her stay at a rehabilitation facility, Nina and her therapist identified body-image insecurity as the foundation of her woe. “I was spending a lot of time stalking models on Instagram, and I worried a lot about how I looked,” says Nina, who is now 17. She’d stay up late in her bedroom, looking at social media on her phone, and poor sleep—coupled with an eating disorder—gradually snowballed until suicide felt like her only option. “I didn’t totally want to be gone,” she says. “I just wanted help and didn’t know how else to get it.”

Nina’s mom, Christine Langton, says she was “completely caught off guard” by her daughter’s suicide attempt. “Nina was funny, athletic, smart, personable . . . depression was just not on my radar,” she says. In hindsight, Christine says she wishes she had done more to moderate her daughter’s smartphone use. “It didn’t occur to me not to let her have the phone in her room at night,” she says. “I just wasn’t thinking about the impact of the phone on her self-esteem or self-image.”

It seems like every generation of parents has a collective freak-out when it comes to kids and new technologies; television and video games each inspired widespread hand-wringing among grownups. But the inescapability of today’s mobile devices—combined with the allure of social media—seems to separate smartphones from older screen-based media. Parents, teenagers and researchers agree that smartphones are having a profound impact on the way adolescents



Nina Langton, 17, shown in her college dorm room, says social media contributed to her depression

PHOTOGRAPH BY RANCA MATAR FOR TIME

today communicate with one another and spend their free time. And while some experts say it's too soon to ring alarm bells about smartphones, others argue that we understand enough about young people's emotional and developmental vulnerabilities to recommend restricting kids' escalating phone habits.

The latest statistics on teenage mental health underscore the urgency of this debate. Between 2010 and 2016, the number of adolescents who experienced at least one major depressive episode leaped by 60%, according to a nationwide survey conducted by a branch of the Department of Health and Human Services. The 2016 HHS survey of 17,000 kids found that about 13% of them had at least one major depressive episode the prior year, compared with 8% of the kids surveyed in 2010. Suicide deaths among people ages

and 2015 from more than 500,000 adolescents nationwide, Twenge's study found that kids who spent three hours a day or more on smartphones or other electronic devices were 34% more likely to suffer at least one suicide-related behavior—including feeling hopeless or seriously considering suicide—than kids who used devices two hours a day or less. Among kids who used devices five or more hours a day, 48% had at least one suicide-related outcome. Overall, kids in the study who spent low amounts of time engaged in real-life social interaction but high amounts of time on social media were the most likely to be depressed.

Twenge is quick to acknowledge that her research does not prove that a cause-and-effect relationship exists between smartphones and depression. Some experts have pointed to the aftermath of

young person all-the-time access to an Internet-connected device “may be playing with fire.”

TO UNDERSTAND HOW device use may be affecting a young person's mental health, it's important to recognize the complex changes occurring in an adolescent's still-developing brain. For one thing, that brain is incredibly plastic and able to adapt—that is, physically change—in response to novel activities or environmental cues, says Jensen, who is also the author of *The Teenage Brain*.

Some research has already linked media multitasking—texting, using social media and rapidly switching among smartphone-based apps—with lower gray-matter volume in the brain's anterior cingulate cortex (ACC), a region involved in emotion processing and decision-making. More research has associated lower ACC volumes with depression and addiction disorders.

“We know for a fact that teens have very underdeveloped impulse control and empathy and judgment, compared with adults,” Jensen says. This may lead them to disturbing online content or encounters—stuff a more mature mind would know to avoid. Teens also have a hyperactive risk-reward system that allows them to learn—but also to become addicted—much more quickly than grownups, she says. Research has linked social media and other phone-based activities with an uptick in feel-good neurochemicals like dopamine, which could drive compulsive device use and promote feelings of distraction, fatigue or irritability when kids are separated from their phones.

Another area of the brain—the prefrontal cortex—is critical for focus and interpreting human emotion, and doesn't fully develop until a person's mid-20s, says Paul Atchley, a professor of psychology at the University of Kansas. “During our teenage years, it's important to train that prefrontal cortex not to be easily distracted,” he says. “What we're seeing in our work is that young people are constantly distracted and also less sensitive to the emotions of others.”

But some scientists contend that there isn't enough evidence to condemn smartphones. “I see the rise in depression, especially among girls, and I understand why people are making these connections

‘What this generation is going through right now with technology is a giant experiment.’

FRANCES JENSEN, chair of neurology at the University of Pennsylvania's Perelman School of Medicine

10 to 19 have also risen sharply; among teenage girls, suicide has reached 40-year highs, according to the Centers for Disease Control and Prevention. All this follows a period during the late 1990s and early 2000s when rates of adolescent depression and suicide mostly held steady or declined.

“These increases are huge—possibly unprecedented,” says Jean Twenge, a professor of psychology at San Diego State University and the author of *iGen*, which examines how today's super-connected teens are less happy and less prepared for adulthood than past generations. In a peer-reviewed study that will appear later this year in the journal *Clinical Psychological Science*, Twenge shows that, after 2010, teens who spent more time on digital devices were more likely to report mental-health issues than those who spent time on nonscreen activities.

Using data collected between 2010

the Great Recession or rising student workloads as possible non-device explanations for young people's recent struggles. “But when you look at the economic or homework data, it doesn't line up with the rise in teen suicide or depression,” Twenge says. Youth smartphone ownership does. “I'm open to exploring other factors, but I think the more we learn about kids and smartphones, the more we're going to see that limiting their exposure is a good idea.”

Others agree that it's time to approach adolescent device use with greater caution. “What this generation is going through right now with technology is a giant experiment, and we don't know what's going to happen,” says Frances Jensen, chair of neurology at the University of Pennsylvania's Perelman School of Medicine. While the science on kids and technology is incomplete, Jensen says that what we know about the minds of tweens and teens suggests that giving a

with new technologies," says Candice Odgers, a professor of psychology and neuroscience at Duke University who has published research on teenagers and tech. "But so far we have very little data to suggest mobile technologies are causing anxiety or social impairments." She points to evidence that some young people, particularly marginalized groups like LGBT youth, can derive benefits from online support networks and communication with friends and family. Odgers adds that jumping to conclusions and vilifying smartphones may lead us away from factors that may turn out to be more significant—a worry raised by other experts.

As researchers debate appropriate public health messaging, kids are receiving their first smartphone at ever-younger ages—the average is 10, according to one recent estimate—and they're spending more and more time on their devices. "I am probably on my phone 10 hours a day," says Santi Potocnik Senarighi, a 16-year-old 11th grader in Denver. Even when he's not using his phone, it's always with him, and he never considers taking a break. "This is part of my life and part of my work, and [that] means I need to be in constant contact."

Santi's dad, Billy Potocnik, says he worries about his son's phone habit. But every one of Santi's friends has a smartphone and uses it constantly, and so Potocnik says confiscating his son's phone seems oppressive. To complicate matters, many schools and after-school groups now use social media or online platforms to coordinate events or post grades and homework. "It's not as simple as saying, O.K., time to take a break from your phone," Potocnik says.

COLLEEN NISBET has been a high school guidance counselor for more than two decades. One of her duties at Connecticut's Granby Memorial High School is to monitor students during their lunch periods. "Lunch was always a very social time when students were interacting and letting out some energy," she says. "Now they sit with their phones out and barely talk to each other."

This scene—of young people gathering in parks or at houses only to sit silently and stare at screens—comes up frequently when talking with parents

5

Tips to Get Teens to Put Down Their Smartphones



Keep devices out of kids' bedrooms

There is strong data linking bedroom screen time with a variety of risks—particularly sleep loss, says David Hill, director of the American Academy of Pediatrics Council on Communications and Media. Even among adults, before-bed media use is associated with insomnia. And kids need more sleep than grownups. Taking away a child's phone at bedtime can be a battle, but it's worth the fight.



Set online firewalls and data cutoffs

It's unrealistic to expect teens to stay away from illicit content or to moderate their social-media use, says Frances Jensen, chair of neurology at the University of Pennsylvania. A young person's brain is wired for exploration and, to some extent, thrill-seeking—not restraint. Most devices and Internet providers, as well as some apps, offer parenting tools that restrict access to problematic content and curb data use. Take advantage of them.



Create a device contract

"This is something you create with your child that details rules around their device use," says Yalda Uhls, an assistant adjunct professor at UCLA and the author of *Media Moms & Digital Dads*. These rules could include no smartphones at the dinner table, or no more than an hour of social media use after school. If a child violates the rules, he or she should lose the phone for a period of time.



Model healthy device behaviors

Just as kids struggle to stay off their phones, so do parents. And if you're a phone junkie yourself, you can't expect your kids to be any different, says Jensen. Apart from putting your own phone away while driving or during mealtimes, it's important to recognize that your kids see what you put online. If you're criticizing another parent on Facebook or slamming someone's political beliefs on Twitter, your kids will follow suit.



Consider old-school flip phones

Or try a smartphone without a data plan. This may seem like overkill for some parents—especially those of older teens. But unconnected phones still allow teens to call or text, says Jean Twenge, a professor of psychology at San Diego State University and the author of *iGen*. And kids can access social media or videos from home computers and tablets during their free time. But when they're out in the world, they won't be tempted with all-the-time access to screen-based distractions.

and kids. "When you're with people you don't know well or there's nothing to talk about, phones are out more because it's awkward," says Shannon Ohannessian, a 17-year-old senior at Farmington High School in Connecticut.

That avoidance of face-to-face engagement worries Brian Primack, director of the University of Pittsburgh's Center for Research on Media, Technology and Health. "Human beings are social animals," he says. "We evolved over millions of years to respond to eye contact and touch and shared laughter and real things right in front of us." If smartphones are interfering with a teen's facility for these normal human behaviors, that's a big deal, he adds.

But while they're not always speaking out loud, kids today are talking to each other—and about each other—on their phones. Not all of it is friendly. "They tell me they're making comments or criticizing each other to friends while they're all sitting together," says Nisbet. Backbiting and gossip are nothing new, of course. But research suggests that, even among adults, the Internet has a disinhibition effect that leads people to speak in coarser, crueler ways than they would offline.

Maryellen Pachler, a Yale-trained nurse practitioner who specializes in the treatment of adolescent anxiety disorders, says the glamor and gleam of social media is also fueling a rise in teen anxiety. "My patients see their friends' Snapchat or Instagram photos where they look so happy, and they feel like they're the only ones who are faking it," she says, referencing what researchers call the highlight-reel effect of social media. "I want to tell them, Listen, this girl you're jealous of—she was in here with me yesterday!"

Teenagers agree that social-media whitewashing is the rule, not the exception. "No one's going to post something

60%

Percentage rise in teenage depression in the U.S. between 2010 and 2016

10

Average age at which a child now receives his or her first smartphone

48%

Prevalence of suicide-related thoughts or actions among kids who use electronic devices five or more hours a day

SOURCES: U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, INFLUENCE CENTRAL, CLINICAL PSYCHOLOGICAL SCIENCE

that makes them look bad," Ohannessian says. "I know that, but it's still hard to separate what you see on social media from real life."

THERE ARE DOUBTLESS many factors contributing to teen depression. Parents say kids today are busier than ever before, with their lives increasingly crammed with the extracurriculars required to gain admission to a good college. But even researchers who aren't ready to slam smartphones say it's important to restrict an adolescent's device habit. "I don't think these devices are the main cause, but I think they contribute to a lot of the things we worry about," says David Hill, director of the American Academy of Pediatrics Council on Communications and Media. He counsels parents to set more limits—especially when it comes

to phones in the bedroom at night.

Educators are also grappling with smartphone-related dilemmas. Most schools allow smartphone use between classes and during free periods, but teachers say keeping students off their phones during class has become a tremendous burden. Now some schools are fighting back. Starting this fall, a few teamed up with a company called Yondr to restrict student smartphone access during school hours. Yondr makes lockable phone pouches that students keep with them but that can't be opened until the end of the day.

Allison Silvestri, the principal at San Lorenzo High School, near Oakland, Calif., says that since the school implemented the restrictions, "the changes have been profound." Kids are more focused and engaged during class, and student journals suggest that the high schoolers are feeling less stress. Silvestri says fewer fights have broken out this semester—a benefit she attributes to the absence of social media. "They have to look each other in the eye to make conflict happen," she says. "There's so much more joy and interaction, and I can't count the number of parents who have asked me, 'How do I buy this for my home?'"

The experiment at San Lorenzo doesn't meet the standards of the scientific method. But it's one more bit of evidence tying mobile devices to the troubles today's teenagers are facing. While there are helpful and healthy ways young people can use smartphones to enrich their lives, it's becoming harder to argue that the status quo—ubiquitous teen smartphone ownership, with near constant Internet access—is doing kids good.

A few months after her suicide attempt, Nina Langton addressed her classmates and spoke openly about her depression. She described the stigma of mental illness and lamented the fact that, while many teens experience depression, few are willing to talk about it. "I was worried for so long about opening up about my struggles, because I thought I would be judged," she said.

After her speech, "so many people my age reached out to me about their own experiences with technology and depression and therapy," she says. "I think this is a big problem that needs to be talked about more." □

'The more we learn about kids and smartphones, the more we're going to see that limiting their exposure is a good idea.'

JEAN TWENGE, professor of psychology at San Diego State University