Social Media Is Harming Young People at a Scale Large Enough to Cause Changes at the Population Level

Essay to Be Published in *World Happiness Report 2026*

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This is the nearly final version of our essay for World Happiness Report 2026. (There will be some minor proofreading and footnote changes). The World Happiness Report is published each March by the University of Oxford's Wellbeing Research Centre in partnership with Gallup, the UN Sustainable Development Solutions Network, and an Editorial Board. It is a report on the state of well-being in more than 140 countries. Each year the editors pick a theme and invite several experts to write essays on that theme. In 2024 the theme was happiness at different stages of life, and the finding was that young people in Western countries are declining in well-being. For 2026 the theme is social media: was its global spread in the 2010s a major contributor to the declining well-being of the young in certain regions*? We were invited to write a chapter and this is it, after revisions based on peer review. The editors graciously allowed us to post it online before the March 19 publication date so that discussion and debate on this topic can begin immediately.*

Abstract:

Is social media use reasonably safe for children and adolescents? We call this the *"product safety question,"* and we present seven lines of evidence showing that the answer is no. The evidence of harm is found in: 1) surveys of young people; 2) surveys of parents, teachers, and clinicians; 3) contents from corporate documents; 4) findings from cross-sectional studies; 5) findings from longitudinal studies; 6) findings from social media reduction experiments; and 7) findings from natural experiments. We show that there is now overwhelming evidence of severe and widespread direct harms (such as cyberbullying and sextortion), and compelling evidence of troubling indirect harms (such as depression). Furthermore, we show that the harms and risks to individual users are so diverse and vast in scope that they justify the view that social media is causing harm at a population level. We further argue that when these lines of evidence are considered alongside the timing, scope, and cross-national trends in adolescent well-being and mental health, they can help answer a second question: Was the rapid adoption of always-available social media by adolescents in the early 2010s a substantial contributor to the population-level increases in mental illness that emerged by the mid 2010s in many Western nations? We call this the *"historical trends question."* We draw on our findings about the vast scale of harm uncovered while answering the product safety question to argue that the answer to the historical trends question is "yes."

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Introduction

In this essay we address an academic debate whose resolution carries enormous implications for public policy, legal liability, and parental decision-making: *is social media safe for adolescents?* By "safe" we mean a product whose ordinary use does *not* place young users at substantially elevated risk of mental-health problems (especially depression and anxiety) or regularly expose them to serious direct harms. The average U.S. teen now spends nearly five hours per day on social media (including YouTube),[1] and a recent survey found that one quarter of U.S. thirteen- to fourteen-year-olds were on for seven or more hours each day.[2] This means that five hours per day must be considered ordinary common use, and even seven is not unusual. Are these levels safe? We refer to this as "the product safety question."

By "adolescence" we mean the broad developmental period from roughly age ten to age nineteen.[3] Puberty occurs in the first part of adolescence, usually beginning around ages nine to eleven and reaching completion for most adolescents by age fifteen or sixteen. Puberty is of special interest because it is well known as a period of very high brain plasticity: it is a "sensitive period" in which environmental factors and repeated experiences (such as watching very short videos for five hours a day) are especially likely to alter neuronal growth, pruning, and myelination.[4]

By "social media" we mean platforms that include user profiles, user-generated content, networking, interactivity, and (in most cases) algorithmically curated content. Platforms such as Instagram, Snapchat, TikTok, Facebook, YouTube, Reddit, and X all share these features.[5] This means that ordinary use includes interacting with anonymous adult strangers.

Social media use can harm adolescents in many ways. *Direct* harms include exposing them to graphic pornography and real-life violence, facilitating cyberbullying and deepfakes, promoting dangerous "challenges," connecting them with sexual predators, and facilitating the purchase of illegal drugs. As far as we know, no researchers challenge the claims that millions of adolescents experience these harms every year on the major platforms.[6] These experiences are so common that they should also count as ordinary use.

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[1] Rothwell (2023).
[2] Twenge (2025); Sawyer et al. (2018).
[3] World Health Organization (n.d.).
[4] Steinberg (1985).
[5] Haidt (2024).
[6] See Evidence Line Three later in this essay.

But social media use can also harm adolescents *indirectly*, by gradually making them more anxious and depressed, or more prone to self-harm and eating disorders.[7] These mental-health outcomes have garnered the largest body of research and are at the center of the fiercest scientific debate. Therefore, in evidence lines four to seven we will focus on the *indirect* harms, and in particular: elevated risks of depression and anxiety from heavy use of social media (five or more hours per day) over an extended period of time. These harms are often found to be more substantial for girls. But our larger argument about the product safety question is about the totality of harms—direct and indirect, to boys as well as girls. Are these harms happening at a scale large enough to change population-level measures of mental health?

The historical trends question

We note that there is a different but related question often asked about social media: Was the spread of social media in the early 2010s (as smartphones were widely adopted) a major contributing *cause* of the big increases in adolescent depression, anxiety, and self-harm that began in the U.S. and many other Western countries soon afterward? We call this the "historical trends question" because it concerns changes across entire populations, measured over many years.

Multiple studies and long-running surveys show that adolescent mental health and well-being declined across many Western nations in the 2010s, before the arrival of the COVID pandemic.[8] To take one example, between 2015 and 2018, there were nearly universal declines in Life Satisfaction among fifteen-year-olds in the Program for International Student Assessment. Out of forty-seven countries and territories with PISA data for both 2015 and 2018, forty revealed statistically significant evidence of a decline, six a statistically insignificant outcome, and only one—South Korea—a statistically significant increase in Life Satisfaction. These declines were similarly strong and universal for boys and girls.[9] Similarly, in that same dataset, there were nearly universal increases in adolescent school loneliness between 2012 and 2018 (increases in thirty-four out of thirty-five countries).[10] (For additional studies and a discussion of cross-national trends in adolescent mental health and well-being, see Appendix 1.)

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[7] We note that there are additional indirect harms, such as stunted social development, interference with cognitive development, and declining educational outcomes that fall beyond the scope of this essay. (See Nagata et al. (2025); Nguyen et al. (2025)).

[8] See Schrijvers et al. (2024); Twenge et al. (2021); Rausch & Haidt (2023a); Rausch & Haidt (2023b); Blanchflower, Bryson, & Xu (2024); McGorry et al. (2024)

[9] See Table A1.2 in Marquez et al. (2024). See Chapter 3 Appendix in Helliwell et al. (2024). We note there is variation by sex. For boys, there were 33 statistically significant decreases, 13 statistically insignificant outcomes, and 1 statistically significant increase (South Korea). For girls, there were 41 statistically significant decreases, 5 statistically insignificant outcomes, and 1 statistically significant increase (Greece).

[10] Twenge et al. (2021).

The historical trends question may be of greater interest to readers of the *World Happiness Report* because the *Report* has also tracked the decline of youth life satisfaction and measures of positive and negative affect in previous editions,[11] so the question naturally arises: Why is mental health getting worse for adolescents and young people at the population level across many countries?

Answering the historical trends question is more difficult than answering the product safety question. Surveys and experiments run today can provide strong evidence about whether social media use is safe for individual teens right now, but they are insufficient, on their own, to settle debates about what caused historical trends that began over a decade ago.[12]

In this essay, we begin by focusing on the product safety question. We show that the answer is "no," social media is not safe for adolescents. Additionally, the evidence we lay out reveals direct and indirect harm on a scale so vast—affecting millions of adolescents each year in the U.S. alone—that it becomes evidence that those harms are causing changes at the population level. This then makes it more plausible that the answer to the historical trends question is "yes," which means: the wholesale movement of adolescent social life onto social media platforms that began in most Western nations in the early or mid 2010s was a substantial contributor to the large increases in mental illness (especially depression and anxiety) at the population level, which began soon afterward in many countries.

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[11] Part of the variation that exists across surveys (e.g., Gallup World Poll and PISA) is measurement-related. In particular, PISA's life satisfaction item differs from the Cantril Ladder measure used by the Gallup World Poll and featured prominently in the *World Happiness Report* (where it is described as "happiness"). Cantril Ladder trends for adolescents and young adults show clearer declines in many Anglophone and Western European countries, but mixed patterns elsewhere, including parts of Central and Eastern Europe. A plausible reason is that the Cantril Ladder is not a pure measure of psychological well-being. Recent evidence indicates that respondents often interpret the ladder primarily in terms of social status, power, and material success, and that small changes in wording can greatly shift responses (Nilsson et al., 2024). If the ladder partially tracks perceived status or affluence, that can complicate comparisons across countries that experienced very different economic and social trajectories in the 2010s.

[12] The difference between these two questions is important because they are often conflated. In his 2024 Senate testimony, Mark Zuckerberg told the U.S. Senate that a report from the National Academies of Sciences "did not support the conclusion that social media causes changes in adolescent mental health *at the population level*." That statement pertains to whether current evidence can explain historical shifts in aggregate rates (the historical trends question). This conclusion does *not* speak to whether present-day use of specific platforms elevates risk for individual teens (the product-safety question). Indeed, that same report includes a long chapter (chapter four) documenting a variety of harms at the *individual* level. In other words: it is possible to conclude that "social media is unsafe for young people" even when the causes of past population trends remain uncertain.

The structure of this essay

To address the product-safety question, we present seven independent lines or bodies of evidence. We begin with three lines of evidence which, collectively, we refer to as "testimony." These testimonies reveal what adolescents report about their experiences; what parents, teachers, and clinicians observe; and what company documents and insiders reveal about design choices and known risks. These three lines of testimony are evidence that social media platforms are *causing* a variety of harms to adolescents.[13]

We then turn to the four lines of evidence that constitute most of the academic debate: cross-sectional studies, longitudinal studies, randomized controlled trials (RCTs), and natural experiments. These studies typically examine or manipulate the number of hours per day that young people spend using social media and relate them to measures of well-being or poor mental health. We show that these four lines, taken together, undermine the hypothesis favored by Mark Zuckerberg and some researchers that social media use is merely *correlated* with poor mental health rather than *causing* it.[14]

Combining all seven lines of evidence reveals consistent and converging evidence that the major social media platforms such as Instagram, Snapchat, TikTok, Facebook, and X, as they are currently designed and commonly used, are dangerous consumer products that harm children and adolescents at a massive scale. The evidence of harm—both direct and indirect—is so strong and comes from so many sources in so many countries that we believe policymakers around the world now have enough evidence to justify action to protect children and adolescents.

Which standard of evidence?

We will present seven lines of evidence in a framework modeled after a legal proceeding. Most readers have seen enough courtroom dramas to understand how an attorney lays out a case against a defendant in a series of exhibits. But if the readers of this essay are the jury, then what standard of proof should they use? In a criminal case, the standard is very high: "beyond a reasonable doubt." The prosecuting attorney must convince the jury that the defendant is almost certainly guilty. This high standard is

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[13] People's beliefs about causation may not be reliable for cancer or other diseases that don't become visible for many years after the events that caused them. People have much better insight into the foods that cause their allergic reactions. Social media is much more like allergies than like cancer in this regard. Like food allergies, some effects of social media show up within minutes, and people have many chances to observe the dose-response effect of their time on social media. This is why we consider these testimonials to be evidence of causation.

[14] Fridman (2022); Odgers (2024).

necessary because a false positive (convicting an innocent person) is a much graver error than a false negative (acquitting a guilty person).

But a lower standard is used in a civil trial: "the preponderance of the evidence." The jury's task is simpler—decide, based on the evidence presented, whether the plaintiff is *probably* right or *probably* wrong. This standard is appropriate because there is little reason to think that either error is vastly or consistently worse than the other.

So what is the right standard for the jury in our imaginary legal case about the product-safety question? It would be absurd to insist that the evidence must prove guilt "beyond a reasonable doubt." The cost of incorrectly concluding that social media is unsafe is not very large. The main cost is that children would have to wait a while—until the age of sixteen, according to some reform proposals—before they could open social media accounts. There are plenty of other ways for them to communicate and connect online and in person. And, as we'll show in Exhibit A, many young people say they would prefer to wait if everyone else waited too.

In contrast, the cost of the opposite error—incorrectly concluding that social media is safe for adolescents—is catastrophically high. If the case we lay out below is even partially correct, then the cost of not acting is to condemn millions of children to higher levels of mental illness, self-harm, and online victimization.

We therefore ask you, the reader, to use the preponderance standard.[15] As you consider our seven lines of evidence, please evaluate whether the preponderance of the evidence indicates that the major social media platforms are *probably* safe for children and adolescents, or whether they are *probably not* safe.

We also want to be transparent about our own priors. We come to this essay having written a book (*The Anxious Generation*) that argues that social media use poses significant risks to children and adolescents, and that the current evidence base supports policy changes. We are making the case for the prosecution. We nonetheless aim to present the evidence fairly and transparently, and to engage with counterevidence where it exists. There are many researchers who agree with us,[16] and there are many who don't. We urge you to read the work of our critics alongside this essay.[17]

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[15] We note that parents and legislators often use an even lower standard of proof: the precautionary principle, which says that when there is credible evidence that harm is possible, preventive action should be taken, especially when the costs of such action are low.

[16] See Haidt & Rausch (2025) on the Consensus Study, which found strong agreement among a large group of experts that 25 out of 26 claims drawn from The Anxious Generation were "probably true."

[17] Our most vocal critic is Candice Odgers. See her main essay: Odgers (2024). Or see Schiffer (2024) for an essay that interviews several critics.

Let's begin.

Evidence Line One: What the Victims Say

If the victim of a crime gets a good look at the alleged perpetrator, the prosecutor often calls that victim to the stand to tell her story. In this case, that victim is Gen Z (born 1996 through 2011 or so[18]). They were the first people to go through puberty while using social-media platforms that were constantly accessible on their new smartphones (beginning around 2012). When they look at their lives so far, do they feel grateful that these products were a part of their childhoods? Or do they believe that the social-media platforms harmed them? If we could call Gen Z to the witness stand, *what would they say?*

Exhibit A. Surveys of young people show harm and regret

Each year, the Pew Research Center releases a survey on U.S. teens' experiences with social media, and consistently finds that many report direct negative effects firsthand.[19] In 2024, nearly one-third of respondents reported being on at least one social media platform "almost constantly."[20] Among teenage girls, twenty percent said it hurts their confidence, twenty-five percent said it harms their mental health, and fifty percent said it negatively affects their sleep.[21] Thirty-four percent of teen girls (and twenty percent of teen boys) said it makes them feel worse about their own lives. We note that, at scale, this amounts to millions of U.S. adolescents.

The study also found that many adolescents point to benefits. The most common benefits cited were that "what they see makes them feel more accepted or as if they have people who will support them through tough times" (fifty-two percent), that it gives them a creative outlet (sixty-three percent), and makes them feel *more* connected to what is happening in their friends' lives (seventy-four percent). However, the relevant product-safety question is not whether some users (even a majority) report benefits, but whether a substantial share experiences harm. If teens were surveyed about alcohol, many would likely report benefits as well; that does not resolve the safety question.

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[18] Pew says that Gen Z begins with the birth year 1997. Twenge (2017) said that "iGen" began with the birth year 1995. In *The Anxious Generation*, we split the difference and considered that 1996 was the first year. Of course the change in generations did not happen in a single year, but the mid to late 1990s seems to be the span of time in which it happened.
[8] Faverio et al. (2025).
[19] Faverio et al. (2025).
[20] Faverio & Sidoti (2024).
[21] The survey does not provide gender breakdowns for the experience of benefits. For teens in general, 4% report that social media improves their sleep, 19% report it improves their confidence, and 10% report it improves their mental health. Faverio et al. (2025).

A more revealing test is to ask young people whether, in retrospect, they wish these products had never been invented. In a U.S. survey we conducted with the Harris Poll of Gen Z adults (ages eighteen to twenty-seven),[22] regret was low for products such as YouTube (fifteen percent), Netflix (seventeen percent), and messaging apps (nineteen percent), but much higher for social-media platforms: thirty-four percent wished Instagram had never been created, forty-three percent said the same about Snapchat, and nearly half expressed regret about TikTok (forty-seven percent) and X (fifty percent). In other words, one-third to one-half of young adults wish that platforms they used for five or more hours each day had never existed.[23]

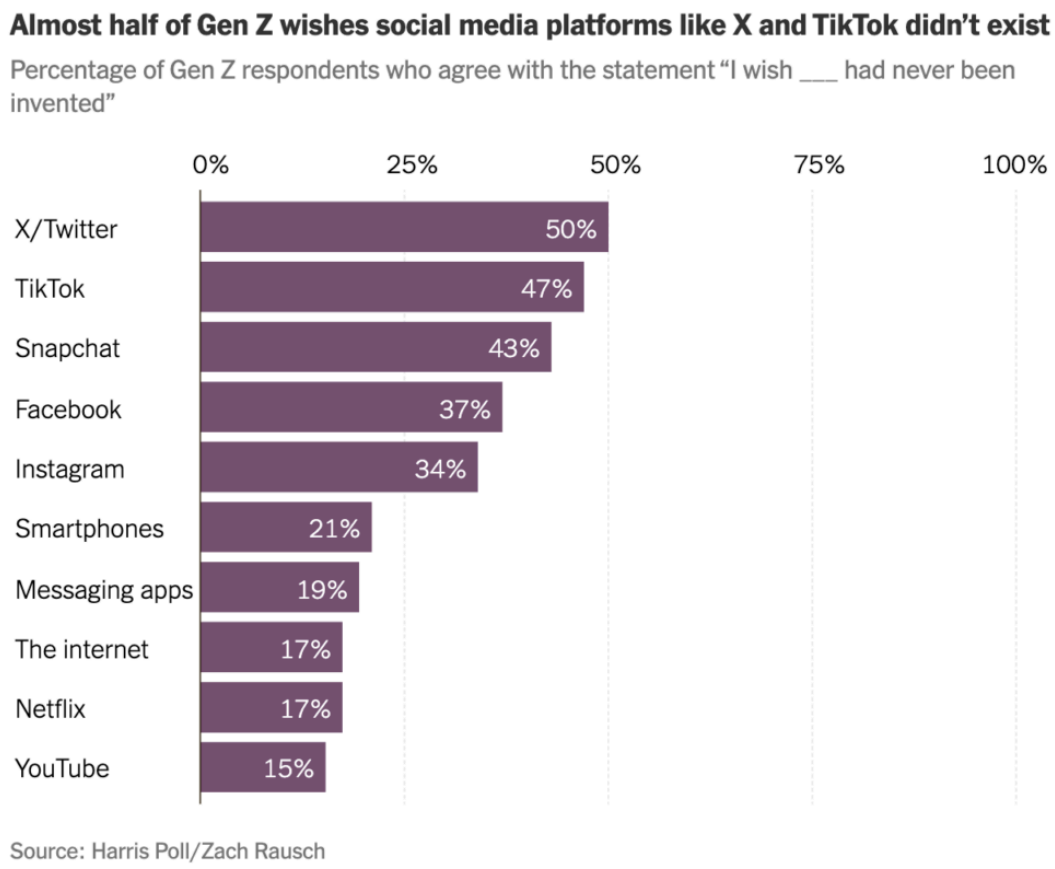

Figure A1. From The Harris Poll, Haidt, Rausch, & Johnson (2024)

We are not the only ones to find this high level of regret. A 2023 study led by Leonardo Bursztyn found that fifty-eight percent of U.S. college students would prefer a world without Instagram and fifty-seven percent without TikTok; even among active users,

[22] Haidt, Rausch, & Johnson (2024).
[23] Gen Z men and women showed similar amounts of regret across platforms, besides TikTok. Men were significantly more likely to wish that TikTok was never invented (55% to 39%). See Harris Poll (2024).

one-third of TikTok users and over half of Instagram users said the same.[24] The researchers also asked how much money they would have to pay participants to give up TikTok or Instagram for a month. The answer? $59 and $47, respectively. But when asked how much it would take if most others on their campus also gave up the apps, the average answer dropped below zero. In other words, *the participants were willing to pay the researchers* to help them and their peers get off social media.

In the UK, a 2025 nationally representative survey conducted by *More in Common* found that sixty-two percent of young people (ages sixteen to twenty-four) believe social media does more harm than good for those under sixteen, rising to sixty-six percent among Gen Z women; fifty-five percent said life would be better if social media were banned for under-sixteens, compared to twenty-two percent who said it would be worse.[25] A different survey, by BSI, the UK's national standards body, finds similarly grim assessments in 2025 from young people in the UK (ages sixteen to twenty-one) about their online lives.[26]

Australian survey data show similar patterns, with young people identifying social media as a leading contributor to declining youth mental health.[27] In sum, when the apparent victims are surveyed, they positively identify social media as the perpetrator. There is little gratitude[28] and a lot of regret expressed toward these companies and their products,[29] at least across three English-speaking countries. (More work is needed in other countries.)

Exhibit B: Internal surveys from social media companies show that Gen Z perceives high levels of harm

In October 2021, Facebook whistleblower Frances Haugen released thousands of internal documents and screenshots revealing that the company was well aware of the many harms its platforms were causing teens.[30] We will cover what Facebook/Meta's

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[24] Bursztyn et al. (2023).
[25] More in Common (2025).
[26] The British Standards Institution (2025). This study found that, "half (47%) of young people aged 16 to 21 would prefer to be young in a world without the internet, with 50% also saying a social media curfew would improve their lives."
[27] headspace & Brunton (2018).
[28] We have been looking for writings by members of Gen Z that defend social media, or that claim that it has been good for their generation. Such writings are hard to find, while it is very easy to find essays by members of Gen Z that blame social media for personal or generational harm.
[29] See also McKinsey Health Institute's 2022 Global Gen Z Survey of 42,000 people across 26 countries, although the key question about social media was actually about "technology and social media" so the regret numbers are lower, but they are consistently highest for Gen Z.
[30] Wells et al. (2021).

leaders and employees said in a later exhibit. For now we will focus on the surveys they themselves conducted or commissioned about what their young users experienced.

Among the most widely cited of these findings is an internal study—covering Brazil, India, Indonesia, Japan, Turkey, and the United States—showing that one in three teen girls said Instagram made their body image issues worse (while twenty-two percent said it improved their body image).[31] Meta researchers also analyzed qualitative data—what the teens said in their own words. From the report they submitted to Meta: "Teens blame Instagram for increases in the rate of anxiety and depression . . . This reaction was unprompted and consistent across all groups."[32]

A separate internal survey of 50,590 Instagram users across ten countries—Australia, Brazil, France, Germany, Great Britain, India, Japan, Korea, Mexico, and the United States—found that more than one-third of teen girls (thirty-seven percent) reported often or always seeing posts that made them feel worse about their bodies, compared to twenty-six percent of users overall.[33]

Two years after the release of the Facebook Files, another whistleblower, Arturo Béjar, came forward with internal research he had led at Instagram. His study of more than 200,000 Instagram users, known as the *Bad Encounters and Experiences Framework*, offered a snapshot of what teens were facing on the platform.[34] The picture was alarming. Among Instagram users ages thirteen to fifteen, thirteen percent reported receiving unwanted sexual advances—in *the past week alone*. That same percentage had seen violent, bloody, or disturbing images during the same time frame, and twenty-eight percent reported witnessing bullying on the platform.

Additional internal research from other platforms—including Snapchat and TikTok[35]—reveals similarly troubling patterns. In a 2024 court filing by the Nebraska Attorney General, evidence drawn from TikTok's own internal studies showed that

> [U]sers found that overuse of TikTok caused **"negative emotions," "interfered with [users'] obligations and productivity,"** and led to **"negative impacts . . . on their lives,"** including **"lost sleep, missed deadlines, poor school performance, running late, etc."** It reported that **"many participants described their use of TikTok disturbing their sleep, which limited their productivity and performance the following day,"** and that **"[e]very**

[31] Meta (2021).
[32] Wells et al. (2021).
[33] Appearance-Based Social Comparison Study, December 2020, available at MetasInternalResearch.org
[34] *State of New Mexico v. Meta Platforms, Inc.*, Doc 36-2 (2024).
[35] Haidt & Rausch (2025b); Haidt & Rausch (2025a).

> **participant indicated that time management on TikTok was especially difficult compared to other social media platforms."**

Across the board, these internal user surveys and related documents reveal that the companies *know* that millions of their young users perceive a great deal of harm to themselves and their peers from the ordinary use of these products.

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In a courtroom, it is powerful when a victim points to the defendant and says "he did it." The exhibits we highlighted—surveys of adolescents and teens from independent organizations like Pew as well as the social-media companies themselves—make it clear that Gen Z is pointing to social media platforms as the perpetrator.

Of course, the victim could be mistaken or could be lying, so direct positive identification is strengthened when corroborated by eyewitness testimony. The same logic applies here, so let's move to our second line of evidence and call a variety of witnesses to the stand.

Evidence Line Two: What the Witnesses Say

One of the most striking patterns we encountered in our research and conversations is that in every group of adults that works closely with young people—parents, teachers, school counselors, doctors, coaches, therapists, and more—many tell us they've seen firsthand a dramatic shift in kids' mental health beginning in the 2010s, well before the arrival of COVID-19. Their testimony corroborates the claims made by so many members of Gen Z.

Exhibit C: Parents fear social media and perceive harm

Parents are on the front lines. They know their children intimately. They watch closely as new experiences, relationships, and technologies shape their children's development. When something changes, parents are often the first to notice and to care.

When it comes to social media, most parents are deeply concerned about its impact on their children's well-being. They're not just reacting to headlines or stories about a crime committed far away, as in media-driven panics over comic books in the 1950s. Rather, parents are observing changes in their children's behavior, moods, sleep, and self-esteem after they give their children touchscreen devices and social media accounts. Parents see how these products and platforms are affecting their kids' daily

lives. In survey after survey, they corroborate the claims made by members of Gen Z in Evidence Line 1.

A 2025 Pew survey of U.S. teens and their parents found that forty-four percent of parents identified social media as the single most negative influence on teen mental health, ahead of "technology generally."[36] Similarly, the 2025 UK survey by *More in Common* (discussed in Exhibit A) asked parents to identify what most negatively affects their own children's mental health. The top response was "social media use/excessive screen time," followed by concerns closely linked to digital technology, including exposure to harmful online content, bullying, low self-esteem, and lack of sleep (Figure C1).

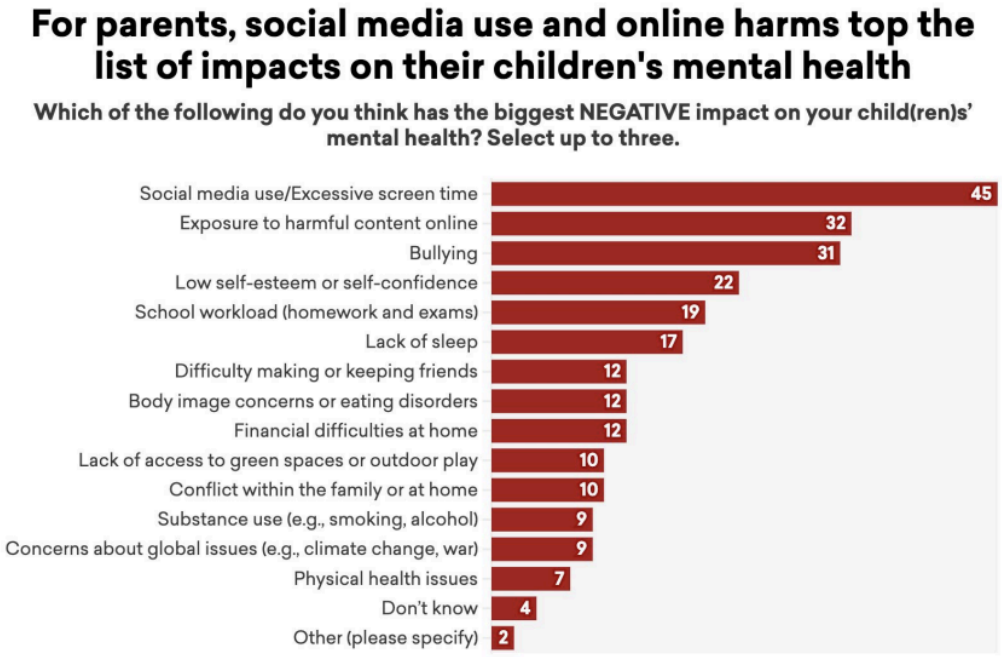

Figure C1. From More in Common

In our own research with the Harris Poll, we surveyed 1,013 U.S. parents to gauge regret, as we did with Gen Z (see Exhibit A).[37] Specifically, we asked parents to reflect on the role of various products in their children's lives by considering the sentence: *"When I think about my child's experience growing up, I wish ____ had never been invented."*

[36] Faverio et al. (2025).
[37] The Harris Poll (2025). Also see Haidt, Rausch, & Johnson (2025) for a summary of findings.

Not surprisingly, few parents expressed regret about bicycles (nine percent), even though many children have been injured riding one. Bicycles are viewed as positive tools for growth and independence, despite their risks. In contrast, most parents see products like alcohol, guns, and pornography as clearly harmful in the context of childhood development.

So where do digital media products fall on this spectrum? Are they more like bicycles or guns?

For some items, like smartphones and YouTube, there was ambivalence: about one-third of parents said they wished these had never been invented, but the majority did not. But for social-media platforms, especially Facebook, Instagram, TikTok, and X, the results were far more stark. A majority of parents said they wished social media had never been created. For TikTok and X, sixty-two percent of parents expressed regret—higher than for alcohol and equal to guns.

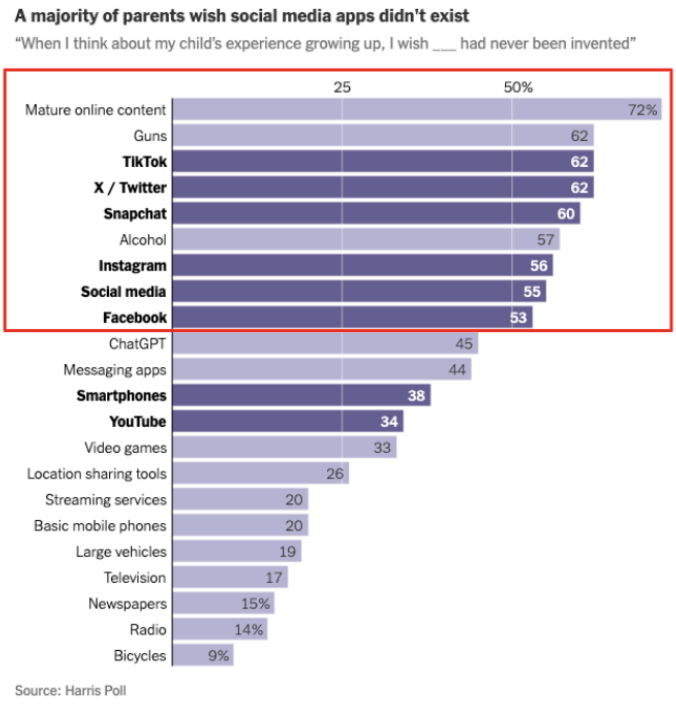

Figure C2. From the *New York Times*, Haidt, Rausch, & Johnson (2025)

It's not just parents in Anglophone countries who are worried.[38] An Ipsos education survey of parents with school-age children, conducted in thirty countries, found that

[38] See country specific surveys in France (Fondation pour l'Enfance, 2024), Germany (Bitkom, Woessman et al., 2025), Netherlands (ANP, 2025), and Japan (Bay, 2017).

mental health was the top concern, far ahead of physical health.[39] The survey also found that majorities in all thirty countries favored banning everyone under the age of fourteen from having a social-media account, although concerns about social media were generally higher in developed Western nations than in developing nations.

Parents are not unanimous, but increasingly, and across many nations, they are expressing their beliefs that smartphones and social media are harming their children.

Exhibit D: Educators perceive harms to education and mental health

Another group of adults with a front-row view of what is happening to young people are the teachers and school administrators who see them every school day. These adults witness firsthand how students behave, focus, interact, and learn. Many have been around long enough to witness how students have changed since 2010. So what do they see? Do they view social media as a relatively benign tool for social connection, or as something more harmful?

In recent years, several important surveys have explored exactly this question. These studies span different countries and school roles.

One 2024 study conducted by the television network NBC surveyed 559 U.S. elementary and secondary school principals about the impact of smartphones and social media on their students.[40] Just 1.3 percent believed that concerns about these technologies were “overblown.” In contrast, 42.2 percent said they *firmly believe* that smartphones and social media are “major causes of deteriorating student mental health.” When asked about the effects of smartphones on their own student bodies, large majorities said that they see these harmful effects: distraction and tiredness; depression, anxiety, and loneliness; and student conflicts and bullying. Few said they saw evidence of benefits, such as improving students’ work (3.4 percent) or improving their mental health (5.6 percent).

What about the teachers themselves? A 2024 survey of 2,889 U.S. educators—members of the National Education Association—asked participants to rate how much various factors contribute to student mental-health challenges in their schools.[41]

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[39] Ipsos Education Monitor (2025).
[40] NBC New York Staff (2024).
[41] National Education Association (2024).

The top concern was “lack of parental involvement and communication” (ninety-two percent). But just below that were two factors that point directly to technology: Eighty-four percent of educators said that “social media use” contributes to student mental health issues, and eighty-one percent said the same for “cell phone or personal device use after school hours.”

Beyond mental health, U.S. educators overwhelmingly agree that social media and smartphones are a major source of distraction that interferes with learning. In a recent Pew survey, seventy-two percent of U.S. high school teachers said that cell phone distraction is a *major problem* in their classrooms.[42] Another survey of 595 U.S. educators from EdWeek Research Center found that approximately nine out of ten believe social media harms students’ communication skills, their treatment of others, and girls’ mental health.[43]

We find similar concerns among teachers in other Western countries, including England,[44] Spain,[45] and France.[46] One survey of teachers (eighty percent of sample), school leaders, and parents across the European Union found that fifty-four percent believe that mobile phone use negatively affects the overall school environment, fifty-six percent reporting a negative impact on social interactions and well-being, and seventy-one percent reporting that it worsens students’ ability to focus.[47] Taken together, these findings show that the belief that social media and smartphones are harming students’ education and mental health is not isolated or fringe. It is the *dominant perceptio*n among educators across many Western nations. They stand in the witness box, point to social-media platforms, and say: “They did it.”

Exhibit E: Clinicians perceive harm to mental health (according to Meta)

A third group with deep insight into young people’s lives are mental health clinicians. They work closely with young people, observe their problems firsthand, are trained to identify and treat their distress, and see how those challenges change over time. So what do they report about social media’s impact on their clients?

While there is limited research available on the views of clinicians, Meta itself conducted a mixed-methods study of more than 1,000 psychiatrists, psychologists, therapists, and

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[42] Hatfield (2024).
[43] Prothero & Harwin (2024).
[44] UWE Bristol Media Relations Team (2025).
[45] Fundacion MAPFRE (2025).
[46] Fondation pour l’Enfance (2025).
[47] European School Education Platform Editorial team (2025).

social workers to answer this question.[48] According to findings disclosed in court documents from a Multi-District Litigation brought by U.S. school districts, eighty-one percent of clinicians said social media exacerbates anxiety disorders in their patients, seventy-eight percent said it worsens depressive disorders, and eighty-five percent agreed that social media can be addictive. In other words, Meta itself found that clinicians believe that social media platforms are causing harm to adolescents.

* * * * *

We close our discussion of Evidence Line Two with an observation about the witnesses: No group or occupational category that works closely with children has come forth to say that social media is, overall, *beneficial* for adolescent mental health. No group or professional body has stepped forward as a character witness to say that the defendants are benefactors to young people, or that they are not the sort of companies that would knowingly harm young people.

As we will show in Evidence Line Three, they are very much the sort of companies that knowingly harm young people.

Evidence Line Three: What Company Documents and Insiders Reveal

Executives and some employees at TikTok, Snap, and Meta know (or seem to believe) that they are causing widespread harm to adolescents on their platforms. Quotations and statistics revealed through whistleblowers, lawsuits, and leaked documents and studies from inside the major social-media companies make this clear.[49] We've compiled and organized such quotes and statistics—including direct quotes, internal slide decks, and stories of teens harmed.[50] Journalists such as Jeff Horwitz at *The Wall Street Journal* and *Reuters* have also reported extensively on the matter.[51] We also created a

[48] Each had at least two years of experience post licensure and provided care for at least 30 patients in the past 30 months.

[49] Although Evidence Line 3 focused on three major companies (TikTok, Snap, and Meta), they are not the only digital platforms at which the leadership is aware that their products pose significant risk of harm to minors. For example, a 2016 internal presentation from the YouTube Main App Team stated that they **"aspire[d] to create an app that is…addictive."** Another presentation revealed their goal to **"increase habitual users"** and **"focus on making YouTube a daily habit." (*In re Social Media Addiction Litig., 2024*)** Likewise, in litigation involving Roblox, one employee acknowledged: **You're supposed to make sure that your users are safe but the downside to that, if you're limiting user engagement, it's hurting our metrics. It's hurting our active users, the time spent on the platform, and in a lot of cases leadership doesn't want that. *(*See p. 31, paragraph 90 in *Jane Doe v. Roblox Corp., 2025*)**

[50] We compiled the quotes and statistics in open-source Google Docs and translated them into essays published on *After Babel*. See Haidt et al. (n.d.); Haidt & Rausch (2025a); Haidt & Rausch (2025b).

[51] The Wall Street Journal (n.d.); Reuters (n.d.).

website, MetasInternalResearch.org, which compiles all of the publicly available information about dozens of internal research projects carried out by Meta and brought out by whistleblowers, or in the process of discovery during legal proceedings.

Below we highlight just a few of the most revealing internal quotations and statistics. These are admissions from company insiders and external consultants hired to offer advice.

Exhibit F: TikTok knows or believes that it is harming children at an industrial scale

In our essay "TikTok Is Harming Children at an Industrial Scale,"[52] we collected direct quotations from TikTok employees and executives, drawn from the briefs of two court cases, and posted online by the Attorneys General of Kentucky and Nebraska.[53] Here are just a few of the most incriminating quotations. (**Text in boldface** comes directly from company employees and internal memos. The normal text around it was supplied by attorneys to frame the quotes.)

> **"Compulsive usage correlates with a slew of negative mental health effects like loss of analytical skills, memory formation, contextual thinking, conversational depth, empathy, and increased anxiety,"** in addition to **"interfer[ing] with essential personal responsibilities like sufficient sleep, work/school responsibilities, and connecting with loved ones."**
>
> —*TikTank Report, an internal TikTok research group* [54]

> **"The product in itself has baked into it compulsive use."**
>
> —*TikTok executive*

> **"The reason kids watch TikTok is because the algo[rithm] is really good. . . . But I think we need to be cognizant of what it might mean for other opportunities. And when I say other opportunities, I literally mean sleep, and eating, and moving around the room, and looking at somebody in the eyes."**
>
> —*TikTok executive* [55]

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[52] Haidt & Rausch (2025a).
[53] Link NKY (2024); *State of Nebraska v. TikTok Inc.* (2024).
[54].See p. 82, paragraph 213 in *Commonwealth of Kentucky v. TikTok Inc.* (2024).
[55] See p. 10, paragraph 19 in *Commonwealth of Kentucky v. TikTok Inc.* (2024).

> Internal documents highlight the fact that minor users are **“particularly sensitive to reinforcement in the form of social award,”** have **“minimal ability to self-regulate effectively,”** and **“do not have executive function to control their screen time.”**
>
> *—TikTok internal document* [56]

The full list of quotations is much longer.[57] The evidence is clear: At TikTok, they know they are harming millions of children.

Exhibit G: Snap Inc. knows or believes that it is harming children at an industrial scale

Our second essay in this series was “Snapchat Is Harming Children at an Industrial Scale.”[58] As we did for TikTok, we drew quotations from a legal brief that was posted online, in this case by the Attorney General of New Mexico.[59] The results are just as incriminating. One of the most widespread of the serious direct harms on Snapchat is sextortion, which causes great distress to its victims and sometimes leads directly to suicide as an escape from deep shame.[60] As of 2022 Snap was internally aware that they receive:

> **“[A]round 10,000 user reports of sextortion each month,”** and **“that 10k monthly reports likely represents a small fraction of this abuse as this is an embarrassing issue that is not easy to categorize in reporting.”**
>
> *—Snap Trust and Safety Team Member* [61]

> One year later, in March of 2023, an employee stated **“God I’m so pissed that we’re over-run by this sextortion shit right now. We’ve been twiddling our thumbs and wrung our hands all f…ing year.”**
>
> *—Snap employee* [62]

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[56] See p. 82, paragraph 216 in Commonwealth of Kentucky v. TikTok Inc. (2024).
[57] Haidt & Rausch (2025a).
[58] Haidt & Rausch (2025b).
[59] *State of New Mexico v. Snap Inc.* (2024).
[60] FBI Memphis (2024).
[61] See pp. 59-60, paragraphs 132-134 in *State of New Mexico v. Snap Inc.* (2024).
[62] See p. 54, paragraph 117 in *State of New Mexico v. Snap Inc.* (2024).

It's not just sextortion; Snap's design makes it an excellent platform for cyberbullying, which is also a common cause of death by suicide:

> In a February 2022 'In-App Reporting Research' deck by Snap's consultant, Snap found, **"cyberbullying, both anonymous and from known contacts, was a commonly cited problem [among users]... Disappearing messages can embolden bullies to harass people with less fear of consequence."**
>
> *—Internal research deck from Snap consultant* [63]

Because Snapchat is a way by which anonymous adults can easily reach young people once they connect with any young person (via the "quick add" or "find friends" feature) it is a vector for the sale of many illegal and dangerous products:

> An undated internal Snap presentation acknowledged that Snap had a **"problem"** with drugs and guns; that dealers are using Snapchat's **"sharing mechanisms" "to reach teens on Snapchat they would never encounter in real life"** and that **"some teens have even died as result of buying drugs that they found through Snapchat."**
>
> *—Snap internal presentation* [64]

While quotations about depression and anxiety do not seem to be as common at Snapchat as they are at Instagram and TikTok, the evidence that Snapchat's design facilitates a variety of very dangerous encounters is strong, and these direct harms can cause anxiety and exacerbate mental illness. At Snap, they know that they are harming millions of young people, and they know that these harms are directly linked to specific product design choices that they made.

Exhibit H: Meta knows or believes that it is harming children at an industrial scale

In September 2021, whistleblower Frances Haugen brought out thousands of pages of internal Facebook reports, memos, and emails. *The Wall Street Journal* published these revelations in a series of articles titled *The Facebook Files*.[65] Below we draw quotations

[63] See p. 126, paragraph 317 in *State of New Mexico v. Snap Inc.* (2024).
[64] See p. 100, paragraph 242 in *State of New Mexico v. Snap Inc.* (2024).
[65] The Wall Street Journal (2021).

from those documents, as well as from disclosures by Arturo Béjar,[66] another whistleblower from Meta, and from *New Mexico v. Meta* and *Northern District of California v. Meta*, two major ongoing lawsuits.[67]

> …[A]n internal Meta email to Adam Mosseri stated **"[o]ur overall goal remains total teen time spent . . . with some specific efforts (Instagram) taking on tighter focused goals like U.S. teen total time spent."** Another 2018 email stated Meta's focus succinctly: **"Short summary is the 'the young ones are the best ones.' You want to bring people to your service young and early."**
>
> *—Internal Meta email* [68]

> Facebook's founding President, Sean Parker, in 2017: **The thought process that went into building these applications, Facebook being the first of them, ... was all about: "How do we consume as much of your time and conscious attention as possible?" "And that means that we need to sort of give you a little dopamine hit every once in a while, because someone liked or commented on a photo or a post or whatever. And that's going to get you to contribute more content, and that's going to get you ... more likes and comments." "It's a social-validation feedback loop ... exactly the kind of thing that a hacker like myself would come up with, because you're exploiting a vulnerability in human psychology." "The inventors, creators—it's me, it's Mark [Zuckerberg], it's Kevin Systrom on Instagram, it's all of these people—understood this consciously. And we did it anyway."**
>
> *—Facebook founding president* [69]

> **"there are reasons to worry about self-control and use of our products"** and presenting a **"quick rundown of evidence"**—including **"**[a]**n experiment** [which] **found that a 1-month break from Facebook improved self-reported wellbeing."** In response, another senior data scientist at Meta (who also holds a PhD in neuroscience, and taught a university course on addiction) warned: **"It seems clear from what's presented here that some of our users are addicted to our products. And I worry that driving sessions incentivizes us to make our product more addictive, without providing much more value.**

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[66] *Written Testimony of Arturo Béjar before the Subcommittee on Privacy, Technology, and the Law* (2023).
[67] *State of New Mexico v. Meta Platforms, Inc.* Doc. 36-1, (2024); *In re Social Media Addiction Litig.* (2024).
[68] See p. 148, paragraph 296 in *State of New Mexico v. Meta Platforms, Inc.*, Doc 36-1 (2024).
[69] See p. 151, paragraph 306 in *State of New Mexico v. Meta Platforms, Inc.*, Doc 36-1 (2024).

> **How to keep someone returning over and over to the same behavior each day? Intermittent rewards are most effective (think slot machines) reinforcing behaviors that become especially hard to extinguish—even when they provide little reward, or cease providing reward at all."**
>
> *—A member of Meta's core data science team and a senior data scientist at Meta* [70]

> **"oh my gosh yall IG is a drug … We're basically pushers … We are causing Reward Deficit Disorder bc people are binging on IG so much they can't feel reward anymore … like their reward tolerance is so high … I know Adam** [Mosseri] **doesn't want to hear it — he freaked out when I talked about dopamine in my teen fundamentals leads review but its undeniable! Its biological and psychological … the top down directives drive it all towards making sure people keep coming back for more. That would be fine if its productive but most of the time it isn't … the majority is just mindless scrolling and ads."**
>
> *—A chat between two UX Meta researchers* [71]

At Meta, they know that they are harming millions of children and adolescents. They know this from their own research. As Sean Parker said, they knew what they were doing, and they did it anyway.

* * * * *

We have now examined the first three lines of evidence. Let us pause for a moment to evaluate the case so far. We have shown that:

- The victims identify the defendants as having harmed them (Exhibits A and B).
- Multiple witnesses who had a clear view of the scene agree (Exhibits C,D, and E);
- The defendants themselves talked and wrote extensively about the many ways that their products were harming children and adolescents (Exhibits F, G and H).

We believe that these eight exhibits, comprising three distinct lines of evidence, are sufficient in themselves to answer the product-safety question. The answer is: No, social-media platforms are *not* safe for children and adolescents. Even the people who

[70] See p. 27 in *In re Social Media Addiction Litig.* (2024).
[71] See p. 33 in *In re Social Media Addiction Litig.* (2024).

run them say so, in private, which may explain why many tech executives place very severe restrictions on their own children's exposure to smartphones and social media.[72]

Let us now turn from the three lines of "testimony" to the four lines of academic research that are at issue in academic debates over social media and adolescent mental health: cross-sectional studies, longitudinal studies, Randomized Control Trials (RCTs), and natural experiments.

We note up front that our goal is not to provide a comprehensive review of the academic literature, but rather to explain the four main kinds of studies that researchers are debating, and to show that within each line, there are many studies showing compelling evidence of harm. We also show that the studies most often cited as *failing* to show risk or harm do, in fact, show risk or harm when the analysis is "unblended" or when other problems are fixed.

Evidence Line Four: Cross-Sectional Studies

The most common type of study surveys hundreds or thousands of young people (often college students) about their daily social media use (self-reported in hours per day) and their mental health (also self-reported). Researchers who conduct these cross-sectional studies are trying to determine if there is an association between social media use and adolescent mental health outcomes. These cross-sectional studies, of course, do not establish causal relationships on their own, but they are a first step in public health and epidemiological research. If heavy users of social media are much worse off than light users (after controlling for relevant factors), then there is more reason to suspect a causal relationship than if there had been no association, or a reverse association.

These cross-sectional (or correlational) studies now number in the thousands, but researchers differ on how to interpret the findings. Most studies find statistically significant associations—heavy users of social media are nearly always found to be in worse mental health than light users or non-users.[73] But some researchers interpret the associations as being "too small to warrant policy change,"[74] while others (including us) interpret the associations as being much more worrisome, and comparable in size to other public-health risks for which societies take action. Which camp is correct?

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[72] E.g., Bowles (2018).
[73] Orben (2020); Liu et al. (2022).
[74] Orben & Przybylski (2019).

Exhibit I: Cross-sectional studies show that heavy users have elevated risk of depression

One of the most careful studies to date is Kelly et al. (2019), which analyzed data from 10,904 fourteen-year-olds in the UK Millennium Cohort Study.[75] The authors found that adolescents who spent five or more hours per day on social media were about *two times* more likely to meet criteria for depression than those who used it for less than one hour per day. (Note that heavy social media users—five or more hours per day—in Kelly et al. constituted roughly *one fourth* of fourteen-year-old girls and ten percent of boys).

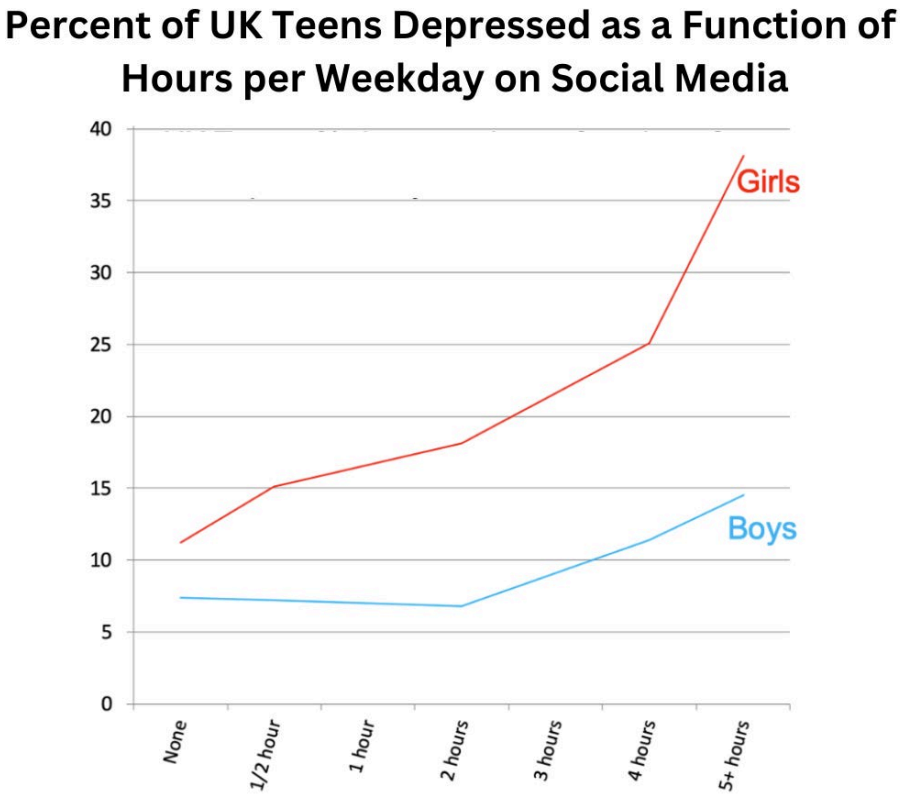

Figure D1. Kelly et al. (2019) find that heavy users of social media have substantially greater elevated risks of depression. (Data from Kelly, graphed by Jonathan Haidt)

Additional studies reinforce Kelly's findings (e.g., Twenge et al., 2022; Twenge, 2026; Grund, 2025).[76] A 2022 meta-analysis by Liu et al. found that the odds of depression increased by about 13% for every additional hour per day of social media use (OR = 1.13, 95% CI: 1.09–1.17).[77] Given that the average adolescent now spends roughly five

[75] Kelly et al. (2019).
[76] Twenge et al. (2022); Grund (2025).
[77] Liu et al. (2022).

hours per day on social media in the U.S. (4.4 hours for boys, and 5.3 for girls[78]), this translates into a very large cumulative risk. Using these numbers, we can extrapolate that even average daily use is associated with over a 50% increase in the risk of depression compared with little or no use — with even larger effects among girls.[79]

The risk elevation of heavy social media use for depression among girls (*RR* = 2.65 between those who spend more than five hours a day and those who spend less than one) is comparable, in this same dataset from Kelly et al., to that of sleep deprivation (sleeping less than seven hours per night, *RR* = 2.45), and victimization by online harassment (*RR* = 2.56).[80] The risk elevation from heavy social-media use is *greater* than the risk elevation from poverty (RR = 1.22) for adolescent depression.[81]

These elevated risk findings were central to the U.S. Surgeon General's warnings in 2023 and 2024.[82] Citing studies such as Riehm et al. (2019), which documented that high levels of social-media predicted double the future risk of depression among adolescents,[83] the Surgeon General cautioned that heavy and problematic use of social media poses "profound risk" to youth mental health.

Yet, some researchers do not account for these findings and argue that there is little or no association between social-media use and adolescent mental health. They tend to cite a few influential studies to make their case. In the section below, we show that even these studies, when analyzed correctly, reveal risks to adolescent mental health.

Exhibit J: Studies that report null findings actually yield significant associations when examining adolescent girls, heavy social media use, and internalizing disorders

Many of the most-cited "null" findings focus on broad well-being scales that dilute the primary outcomes of concern—anxiety and depression in adolescents. Among the most influential reviews that critics use to dismiss the harms of social media was conducted

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[78] Rothwell (2023).
[79] See the Appendix for conversions from OR to RR.
[80] Greb & Rausch (2025).
[81] Relative risks (RRs) were calculated as simple proportion ratios using depression prevalence data from Tables 1 and 2 of Kelly et al. 2018. Each RR represents the prevalence of depression in the exposed group divided by the prevalence in the reference group, comparing: social media use >5hours/day vs. <1hour/day; <7 hours of sleep vs. >7 hours of sleep; cyberbullying victims vs. not involved; and lowest economic quintile vs. highest economic quintile. Values >1.0 indicate increased depression risk.
[82] Office of the Surgeon General (2023); Murthy (2024).
[83] Riehm et al. (2019).

by Jeff Hancock and colleagues (2022).[84] Their meta-analysis of 226 studies was prominently cited in the National Academies of Sciences report *Social Media and Adolescent Mental Health*, which Mark Zuckerberg in turn cited for exoneration in front of the U.S. Senate.[85]

The headline claim in their abstract was that “social media use is not associated with an aggregated measure of well-being” (r = 0.01). Here the aggregated ‘wellbeing’ outcome blended together questions about anxiety and depression with eudaimonic and hedonic wellbeing as well as ‘social’ wellbeing, which is not a mental wellbeing outcome.

Yet, Hancock et al. *themselves* found that when the aggregated well-being measure is unblended and narrowed down to measures of internalizing disorders, the correlations are much larger: *r* = 0.18 for anxiety, and *r* = 0.13 for depression.[86]

Twenge et al.'s (2022) re-analysis found much larger associations in another study widely cited by researchers in the "too small" camp,[87] Orben & Przybylski (2019).[88] When the three large datasets in that study were “unblended” so that associations between social-media use (not all digital media) and internalizing disorders (not a broad measure of many diverse outcomes) were calculated for girls (not all teens), the associations were, once again, much larger.

These examples show why apparent “null” findings should not be taken at face value. Blending populations, technologies, and outcomes can often suppress the associations at the center of the debate about social media’s effects on adolescent mental health.[89] Once these studies analyze the core hypothesis that *heavy social-media use is causing internalizing disorders in adolescent girls*, social media’s exonerating evidence ends up pointing in the same direction as Exhibit I: Adolescents who are heavy social media users are at substantially elevated risk for depression, especially girls.

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[84] Hancock et al. (2022).
[85] National Academies (2023).
[86] Also note that the study does not provide separate results for girls and boys, even though sex and gender-based factors play a widely known role in mental health risks.
[87] Twenge et al. (2022); For more details, see Underestimating digital media harm. Here ‘wellbeing’ included outcomes such as “Restless, overactive, cannot stay still for long”; “Shares readily with other children (treats, toys, pencils, etc.)”; and “Generally obedient, usually does what adults request.” The ‘wellbeing’ measure was overwhelmed with outcomes unrelated to internalizing symptoms. When Twenge, Haidt, Lozano, & Cummins (2022) reanalyzed the same dataset and code, restricting outcomes to internalizing symptoms and focusing on girls’ social media use, the associations increased dramatically: median standardized betas were roughly –0.20 for girls (most between –0.25 and –0.15), compared to –0.04 for boys.
[88] Orben & Przybylski (2019).
[89] For a much deeper analysis of “blending” and related problems in the cross-sectional studies, see Haidt & Rausch, 2026).

Evidence Line Five: Longitudinal Studies

The longitudinal literature on social media and mental health allows researchers to follow individuals over time and can help clarify whether social-media use predicts subsequent changes in mental health, whether poor mental health predicts subsequent social-media use, or some combination of the two. The available longitudinal studies present clear and consistent evidence that social-media use predicts later depression, as we'll see in Exhibits K and L.

Exhibit K: Social media use at time 1 predicts depression at time 2

Overall, recent high-quality work provides support for the hypothesis that heavier use of social media *predicts later increases* in depressive symptoms[90]—especially when the focus is on time spent on social media and depressive outcomes in adolescent populations. Bidirectional effects have also been documented, with some evidence that declining well-being predicts subsequent increases in social-media use, particularly in studies that rely on broader definitions of use, wider age ranges, or broad measures of "well-being."

The strongest evidence comes from recent large-scale cohort studies. Riehm et al. (2019), analyzing a sample of 6,595 U.S. adolescents ages 12–15, found that heavy social-media use predicted later increases in internalizing symptoms.[91] Nagata et al. (2025), using the longitudinal Adolescent Brain Cognitive Development (ABCD) dataset, showed that increases in social-media use predicted subsequent increases in depression.[92] Meanwhile, Grund & Luciana (2025), also using the ABCD dataset, showed that earlier internalizing disorders *failed* to predict subsequent social-media use.[93] Vasconcellos et al. (2025) (which focused on "screen time") extended this to younger children, documenting bidirectional relationships: heavier use of screens predicted later depression, and depression symptoms also predicted greater subsequent use.[94] Together, these studies suggest that while reverse pathways are sometimes found, the forward relationship from social-media use to depressive symptoms is robust, particularly for adolescents.

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[90] McClean & Lebwohl (2025).
[91] Riehm et al. (2019).
[92] Nagata et al. (2025).
[93] Grund & Luciana (2025).
[94] Vasconcellos et al. (2025).

However, some researchers claim that the literature shows that poor mental health at Time 1 predicts later social-media use, but not the other way around. For example, psychologist Candice Odgers wrote in *Nature*:

> When associations over time are found, they suggest not that social-media use predicts or causes depression, but that young people who already have mental-health problems use such platforms more often or in different ways from their healthy peers.[95]

But as McClean and Lebwohl (2025) show, the three studies Odgers cited do not in fact support her "reverse predictability only" claim.[96]

In sum, across the most recent high-quality longitudinal studies, the dominant signal is that heavier social-media use at one moment in time predicts later depression, especially for adolescent girls.

Evidence Line Six: Randomized Controlled Trials of Time Reduction

We now turn to the major body of *experimental* research: social-media time-reduction experiments. These experiments randomly assign a portion of the participants to reduce or abstain from social media for a set period of time and then measure changes in their mental-health outcomes, compared to a control group that made no change.[97]

The pattern of results is surprisingly consistent: sustained reduction in time on social media tends to improve mental health, particularly depression. As with correlational studies, disputes in the field often arise from how data are analyzed and, especially, from the problem of blending together heterogeneous interventions, outcomes, and

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[95] Odgers (2022).

[96] McLean & Lebwohl (2025). The three studies cited by Odgers as showing only reverse prediction do not actually show it: (1) Puukko et al. (2020) did not measure time spent on social media, focusing instead on more positive forms of digital communication including emailing and direct messaging on WhatsApp. (2) Hancock et al. (2022) blended social media with other screen use, they mixed age groups and outcomes, and they still found *no evidence* for reverse predictability (the distress → social media path was zero). (3) Heffer et al. (2019) offers a case for reverse predictability—but only for girls, and even that study also found evidence for the forward direction. In other words, it suggests a reciprocal relationship, which still implies that social media use at Time 1 contributes to harm at Time 2.

[97] This work faces both conceptual and empirical challenges including issues of compliance (how many really reduced their use?), short intervention windows (reduction for one day versus multiple weeks), individuals reducing use while all of their peers remain online, misinterpretation of withdrawal effects, and varying definitions of "reduction."

populations. Likewise, effects that appear small on a statistical scale can translate into meaningful improvements when considered across large populations.

Exhibit L: Experiments show that social-media reduction leads to reduced depression

Among the most rigorous meta-analyses to date, Burnell et al. (2025) synthesized 32 randomized controlled trials of social media reduction experiments (5,544 participants, 91 effect sizes).[98] Their analysis found that restricting social media produced consistent improvements in mental health and well-being outcomes, with pooled significant effects of[99]:

- **Depression:** Hedges' g = 0.19 (roughly 19% of one standard deviation)[100]
- **Anxiety:** Hedges' g = 0.28
- **Well-being:** Hedges' g = 0.22

In fact, among the 16 experiments that provided a clear measure of depression, 14 found reductions in depression, and among the 10 that offered a clear measure of anxiety, 8 found reductions.[101]

One especially important study is Davis and Goldfield (2025),[102] which examined the effects of social media reduction among already distressed young people—a group of particular clinical concern. The researchers recruited 220 distressed U.S. youth ages 17–25 and randomly assigned them to either (a) reduce social media use to one hour per day for three weeks or (b) continue their usual use. Compared to the control group, those who reduced their use showed significant decreases in depression, anxiety, and fear of missing out (FOMO), along with improved sleep. These benefits were observed for both men and women.

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[98] Burnell et al. (2025).
[99] These values are from "Table 2. Social media restriction effects by individual outcome, problematic cases removed."
[100] Hedges' g is a version of Cohen's d that includes a small-sample correction. In practice, they are interpreted the same—for example, g = 0.20 is roughly equivalent to d = 0.20. The values we give here are from their analyses that exclude problematic studies. The corresponding rates for the full dataset (including all studies) was g = 0.22 (for depression) and g = 0.17 (for anxiety).
[101] See Appendix 1 for details.
[102] Davis & Goldfield (2025).

Exhibit M: Studies that report no improvement from social-media reduction actually do reveal benefits to depression when unblended

The first widely discussed meta-analysis of social-media-reduction experiments was conducted by psychologist Chris Ferguson, who analyzed 27 studies and reported an average effect size (*d* = 0.088) with a confidence interval that included zero (CI = −0.018, 0.197). He concluded that these findings "undermine causal claims … that reductions in social media time would improve adolescent mental health" (p. 205). However, this conclusion rests on major conceptual and methodological flaws.[103] Most notably, the analysis pooled together highly heterogeneous studies that varied widely in duration, design, and outcomes. The analysis also included several studies that *did not* examine reductions in social-media use, and thus cannot be used to assess the effects of social-media reduction.

By blending highly heterogeneous studies and outcomes, Ferguson's analysis obscured how short-term abstinence experiments (one or two days) often induce withdrawal-like responses (e.g., irritability, craving, and worse mood), whereas longer reductions (a week or more) usually improve mental health. Reanalyzing Ferguson's dataset, Thrul et al. (2025) found that interventions lasting under one week worsened mental health (d = −0.175), while those lasting longer than one week improved it (d = 0.156).[104] Additionally, when the studies that included clinical outcomes like anxiety and depression were isolated from studies that used broad, blended, composite well-being measures, effects were substantially larger: Stein (2024) found d = 0.22 (using Ferguson's own dataset) for experiments measuring symptoms of internalizing disorders,[105] and Burnell et al. (2025) reported (as noted above) robust pooled improvements (Anxiety: g = 0.28; Depression: g = 0.19).[106]

Taken together, these analyses show that when studies are unblended and properly analyzed, they confirm that a sustained reduction in social media use (a week or longer) does in fact improve adolescent mental health—especially for anxiety and depression.

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[103] Rausch & Haidt (2025).
[104] Thrul et al. (2025).
[105] Stein (2024).
[106] Similarly, another recent meta-analysis by Lemahieu et al. (2025) reported no significant effects of social-media abstinence on affective well-being or life satisfaction. This study focused narrowly on short-term abstinence interventions (most lasting about a week or less) and on mood-related outcomes such as positive affect and negative affect. They also included life satisfaction. In other words, the authors did not examine clinical outcomes like anxiety and depression, nor did they include longer-term reduction studies. Their null findings are therefore exactly what we would expect: when the analysis is limited to short-term abstinence studies that measure immediate mood states, there is little benefit to be expected. As other research on behavioral addictions shows, withdrawal from an addictive or habit-forming behavior can temporarily worsen mood before longer-term benefits emerge (Lembke, 2021).

Exhibit N: Meta's own RCT shows that social-media reduction leads to multiple mental-health benefits

In November 2025, documents obtained via discovery in a lawsuit brought by U.S. school districts against Meta and other platforms revealed that Meta had run *its own reduction experiment* in 2020, with Nielsen (the media measurement company).[107] The project, code-named Project Mercury, asked a randomly selected group of users to deactivate their Facebook accounts for one week. According to Meta's own summary, "people who stopped using Facebook for a week reported lower feelings of depression, anxiety, loneliness, and social comparison."

An internal researcher noted, "The Nielsen study does show causal impact on social comparison," adding an unhappy-face emoji. Another staffer reportedly warned that burying such results would put the company in the same position as the tobacco industry "doing research and knowing cigs were bad and then keeping that info to themselves."

Internal documents show that Meta subsequently called off further work and dismissed the findings as being "tainted" by the "existing media narrative" around the company. Yet the core fact is that Meta's own experiment found that sustained abstention from their product led to improvements in user mental health.[108]

Evidence Line Seven: Natural Experiments

One type of study rarely addressed in the debate over social media and mental health is the natural experiment, which is a research design that attempts to estimate causal effects without true random assignment.

Exhibit O: The evidence from natural experiments points to harm

The most common natural experiments examine the roll-out of high-speed internet during the late 2000s and early 2010s. These studies leverage variation in broadband expansion to estimate its causal impact on mental health in the newly connected region. This approach provides population-level insights that are not possible in short-term lab experiments. These studies rely on the assumption that the rollout of high-speed internet greatly increased access and time spent on social-media platforms (which

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[107] Horwitz (2025).

[108] Meta Internal Research (n.d.). We compiled an online document that describes more than 20 other internal studies that Meta conducted, nearly all documenting various risks to young users via platform design. To learn more about Project Mercury, see p. 29 in Sippel et al. (n.d.).

seems reasonable given that it was very slow to load photos and videos before high-speed internet).

McClean, Rausch, & Haidt (2025) examined four such studies, in Germany,[109] Italy,[110] the U.S.,[111] and Spain.[112] Across diverse contexts and datasets, including national health surveys, hospital admission records, and suicide statistics, all four studies reach a similar conclusion: The spread of high-speed internet and social-media platforms worsened mental health. The harms were most pronounced among young people and disproportionately affected women and adolescent girls. Documented outcomes include declines in self-reported mental health in Germany and England, increases in hospital-diagnosed mental disorders in Italy, higher suicide rates in the U.S., and rising adolescent mental health diagnoses (especially among girls) in Spain, plus increased depression symptoms among U.S. college students. Similar conclusions were drawn in another recent review of these studies (see Pugno, 2025).[113]

Three further studies augment this body of evidence. McDool et al. (2020) found negative effects of the arrival of high-speed internet in England on adolescent well-being.[114] These effects were strongest among heavy users (>5 hours per day) and were associated with social networking site use in particular. Churchill & Johnson (2026) found similar results looking at suicidal conduct among teens from 2009 to 2019 in the wake of broadband introduction in the U.S.[115] The impacts of broadband were associated with cyberbullying and body dissatisfaction for girls, and with decreases in sleep for boys. Braghieri et al. (2022) exploited a difference-in-differences design based on Facebook's staged rollout to U.S. colleges and universities between 2004 and 2006.[116] They found that whenever Facebook arrived on campus, symptoms of mental illness soon increased.[117]

We have only found one study—Johnson & Persico (2025)—that points in the opposite direction; it found improved aggregate well-being, reduction in suicides, and improved physical and mental health from broadband expansion in the U.S. from 2000–2008.[118]

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[109] Golin (2022).
[110] Donati et al. (2022).
[111] Kyung et al. (2021).
[112] Arenas-Arroyo et al. (2022).
[113] Pugno (2025).
[114] McDool et al. (2020).
[115] Churchill & Johnson (2026).
[116] Braghieri et al. (2022).
[117] Although most of these natural experiments offer compelling evidence of population-level harm, they are not without limitations. First, most studies examine broadband internet access rather than social-media use specifically. Meanwhile, the only study that examined a social media platform directly—Braghieri et al. (2022)—focused on Facebook's rollout in 2004–2006, when the platform was text-based, desktop-only, and limited to college students. This environment differed substantially from today's modern social media environment.
[118] Johnson & Persico (2025).

The authors themselves interpret these gains as stemming mainly from improved local economic conditions (lower unemployment, reduced poverty, more business activity) rather than from changes in internet or social media use itself.

Summary of the Evidence on the Product Safety Question

We have now presented fifteen exhibits organized into seven separate and independent lines of evidence. First we presented three lines of "testimony" from the groups that had the clearest view of the effects of social media: Gen Z (Line One); parents, teachers, school administrators and clinicians (Line Two); and employees and consultants working for the major social media platforms (Line Three).

Next we presented four lines of academic research showing that heavy users of social media suffer from substantially elevated risks of depression (Line Four); social media use at Time 1 predicts depression at Time 2 (Line Five); reducing time on social media causes improvements to mental health (Line Six); and, when high speed internet entered into communities and regions, mental health outcomes got worse soon afterward, especially for girls and women (Line Seven). These findings converge on the conclusion that when adolescents use social media in the normal way and in average amounts (around five hours per day), it causes their mental health to suffer (on average).

What do you think, readers? Is social media *probably* safe for children and teens, or *probably not*? Do you think that more research is needed before we can answer that question?

Of course, it is important to hear the arguments on the other side. You should hear from researchers who take a more positive view of social media, or who take issue with our work. We urge you to read the main essay that is cited by journalists as a rebuttal of our work—Candice Odgers' review in *Nature*.[119] But after reading our seven lines of evidence, including RCTs, natural experiments, and many quotes from social-media employees stating directly that their products are causing harm to adolescents at a massive scale, we believe that the preponderance of the evidence points to a clear answer to the product-safety question: No, social media platforms are *not* safe for children and adolescents.

Now let us turn, at last, to the historical population trends question.

[119] Others include Lebedikova et al. (2024), and Brown (2024).

Harm to Millions is Change at the Population Level

As we noted in the introduction, the product-safety question is easier to answer than the historical trends question, which we formulated like this: “Was the spread of social media in the early 2010s (as smartphones were widely adopted) a major contributing cause of the big increases in adolescent depression, anxiety, and self-harm that began in many Western countries soon afterward?”

While our seven lines of evidence do not prove that social media was a major cause of those population-level changes in the 2010s, which are still with us today, they make it much more plausible. Conversely, had the preponderance of the evidence shown that social media was *safe* for adolescents at the individual level, that would have made it less plausible that social media caused those big increases at the population level.

In this section we present an estimate of the scale of direct harm, as well as an estimate of the scope of harm to mental health based purely on the size of the effect in the social-media-reduction experiments. For illustration purposes we calculate the damage to adolescents in the United States, which, in 2023, had a population of approximately forty-three million young people within the U.S. Census age band of ten to nineteen. If we assume that ninety percent of them use at least one social-media platform,[120] that gives us about thirty-nine million teens.[121] How many of those thirty-nine million may have been harmed by social media usage in ways that might have affected their mental health?

1. Direct harms to millions

- **Addiction and problematic use:** Rates of addiction and problematic use often fall around ten percent.[122] Facebook itself determined that 12.5 percent of its users were engaging in compulsive use of social media that affected their sleep, work, parenting, or relationships, and they found that teens have even less self-control than adults.[123] So if we assume that ten percent of all adolescents suffer from problematic use of at least *one* platform, that gives us just under four million in the U.S. alone.

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[120] Pew Research Center (2025).
[121] We previously estimated the number of U.S. teen users (ages 13 to 17) of TikTok and Snapchat. We estimated that in 2023 about 13.7 million teens in the U.S. used TikTok, and about 12.7 million of these teens were daily users of TikTok. Additionally, we estimated that between 2019 and 2023, there were about 13 to 15 million U.S. teens (ages 13 to 17) on Snapchat. We estimated that as of 2021, there were nearly 3 million 8 to 12 year olds in the U.S. on Snapchat. See Haidt et al. (2025a) for our TikTok estimates and Haidt et al. (2025b) for our Snapchat estimates.
[122] Boer et al. (2020).
[123] Wells et al. (2021).

- **Sleep deprivation**: According to Pew's 2025 Teens, Social Media, and Mental Health report,[124] forty-five percent of U.S. teens (17.5 million) report that social media hurts the amount of sleep that they get. Given the widely acknowledged harmful effects of sleep deprivation on mental illness, this effect alone could account for substantial changes at the population level.
- **Sextortion:** Snapchat was getting 10,000 reports of sextortion from its own users each month in 2022, which would be 120,000 cases per year.[125] One employee noted that this was likely just the "tip of the iceberg," meaning that most cases were not reported. Sextortion happens on many other platforms too, so the total number of victims per year could be well over a million.[126]
- **Sexual harassment:** Meta whistleblower Arturo Béjar conducted a study while working for Instagram.[127] He found that thirteen percent of Instagram users ages thirteen to fifteen self-reported having received unwanted sexual advances via the platform within the previous *seven days*. Thirteen percent of thirty-nine million is 5.7 million adolescents in any given week. Béjar explained that if "looked at over time, it is likely the largest-scale sexual harassment of teens to have ever happened, and one that clearly calls for action."[128]

We could go on. We could bring in the millions of teens cyberbullied each year,[129] and the millions of vulnerable teens who are fed self-harm content by the platforms' algorithms every week.[130] We could quantify the number of additional drug overdose deaths caused by the easy access to drugs on social-media platforms.[131]

Our point is that the direct harms from social media are not just occasional events or freak accidents that are happening to a few hundred adolescents each year. It would be bad policy to remove consumer products from the market every time one child finds an unusual way to get hurt by it. But there are so many different kinds of harm happening to adolescents who use social media in the ordinary way (meaning: five hours per day), that *the number of victims likely exceeds ten million each year in the United States alone*. This estimate is consistent with the Pew finding that twenty-five percent of girls

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[124] Faverio et al. (2025).
[125] Haidt & Rausch (2025a).
[126] Beauchere (2023).
[127] Béjar (2024).
[128] Written Testimony of Arturo Béjar before the Subcommittee on Privacy, Technology, and the Law (2023).
[129] Meta Internal Research (2025). Bad Experiences and Encounters Framework (BEEF) Survey (2021). This survey found that 10.8% of Instagram users aged 13-15 reported being a target of bullying *in the last week.* Also see Anderson (2018) where 59% of U.S. teens report having been cyberbullied.
[130] Meta Internal Research (2025). Bad Experiences and Encounters Framework (BEEF) Survey (2021). This survey found that 8.4% of Instagram users aged 13-15 reported seeing someone harm themselves or threaten to harm themselves in the last week alone.
[131] Bergman (2025); Gerber (2025).

(and fourteen percent of boys) in the U.S. believe that social media is harming their mental health.[132]

Given the scale of these harms, we believe that it is plausible and likely that the introduction of smartphones with chronically available social media caused a substantial portion of the decrease in adolescent mental health and well-being that has been documented in the English-speaking countries and Western Europe (in Chapter 2 of this report), and more broadly across the Western world in other datasets.[133]

2. Indirect harms to millions

Shifting to social media's indirect harms, we can use the effect sizes from the social media reduction experiments (Evidence Line Six) to estimate how a widespread reduction in social-media use would affect a population's well-being and mental health.

As noted in Exhibit M, Burnell et al. (2025) report an average effect of roughly $g = 0.22$ (about one-fifth of a standard deviation) for "well-being" outcomes in sustained social-media-reduction studies. The "well-being" outcome is often measured by the Warwick–Edinburgh Mental Wellbeing Scale (WEMWBS), which is normally distributed in national samples with a mean near 51 and a standard deviation near 7. On this scale, scores below 41 have been used as an indicator of probable clinical depression.[134]

Using these parameters, we can estimate that a plausible population impact of social media reduction for just two weeks by young adults would be a decline in the prevalence of clinical depression by *roughly one third,* and a plausible impact of a consequent return to regular social media use would be the rise in the prevalence of clinical depression *by one half* (see the Appendix for details).

As a point of comparison, Grummitt et al. (2024) estimate that the increased risk of depression and anxiety attributable to childhood maltreatment corresponds to effects of $d = 0.22$ and $d = 0.25$, respectively.[135] The fact that something as simple as a week or two of social media reduction produces improvements of a similar magnitude suggests to us that the relevant effect sizes are not "too small" to warrant policy change.

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[132] Faverio et al. (2025).
[133] See Schrijvers et al., 2024 on Europe; Twenge et al., 2021, which uses PISA internationally; Rausch & Haidt (2023a) on the Anglosphere; and Rausch & Haidt (2023b) on the Nordic Countries.
[134] University of Warwick (2025).
[135] Grummitt et al. (2024).

If carried out at scale, we predict that the widespread reduction of social media use by adolescents would cause substantial improvements in population-level measures of well-being and mental health.[136]

3. Group-level effects make population effects even larger

The cross-sectional, longitudinal, and experimental lines of evidence that we reviewed all examine the effects of social media and its associations with mental illness at the individual level, usually by measuring or manipulating the number of hours per day that each individual spends on social media. But when social media reconfigured teen social networks in the early 2010s, it had large group-level or emergent effects. Time spent with friends decreased rapidly, well before Covid-19,[137] and when teens are spending less time together then eye contact, physical touch, food-sharing, and other ancient human bonding mechanisms become rarer too, even for the minority who did not open accounts. Teens just aren't hanging out in person as much.

Once nearly everyone was on these platforms, everyone was stuck in a collective action trap. Even if the platforms were harming one hundred percent of the adolescents who used them, any individual who quit might find herself even *worse* off because she would lose her online connections and might have difficulty finding ways to replace them offline.

The 2023 study led by Leonardo Bursztyn that we discussed in Exhibit A gives us a vivid illustration of the collective-action trap.[138] College students said they'd have to be paid to quit social media, as individuals. But when the researchers asked them their price for quitting if most other students were also quitting, the students said they'd be willing to pay the researchers to make that happen.

These group-level effects change so many aspects of daily social interaction, for so many adolescents, that they could turn out to be much larger than the individual-level effects found in studies that ask individuals to decrease social-media usage for one week.

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[136] Burnell's Table 2 reports similar effects for internalizing symptoms more directly tied to depression and anxiety: d = 0.19 for depression and d = 0.28 for anxiety. These results confirm that the well-being findings are not a fluke of measurement. The pattern is consistent across outcomes that matter most for adolescents.

[137] Kannan & Veazie (2023). See graph of teens' weekly social outings data from Monitoring the Future, University of Michigan, graphed by Jean Twenge, as reproduced in De Visé (2023).

[138] Bursztyn et al. (2023).

4. Sensitive period effects make population effects even larger

A key theme of *The Anxious Generation* was that puberty is a sensitive period during which habits of attention, emotion, and social interaction will guide the rapidly changing brain in ways that could yield permanent effects. Neurons that fire together, wire together, and this is especially true during the years of heightened neural plasticity known as puberty.

One study specifically examined whether the associations of social-media use and poor mental health varied by age. Orben, Przybylski, Blakemore, & Kievit (2022)[139] found that there did seem to be sensitive periods—age ranges within which hours-per-day measures showed higher correlations with measures of poor mental health. For girls that period was ages eleven to thirteen. For boys, who hit puberty a bit later, it was ages fourteen to fifteen. (This is a good reason for nations to set minimum ages for opening social media accounts no lower than sixteen).

If radical changes in social and cognitive environments during puberty can lead to large and possibly lasting changes to an adolescent's brain and personality, then any effect sizes computed from brief reduction experiments using college students could be vast underestimates of the harms caused by heavy social-media use over several years during puberty.

Conclusion

The academic debate over whether social media is harming adolescents has been complicated by the occasional confusion of two different questions: the product-safety question and the historical trends question. Social-media executives have deflected questions about product safety by asserting that there is not sufficient evidence to answer the historical trends question with certainty.[140] But as we have shown, there is now plenty of evidence to answer the product safety question. The preponderance of the evidence points to this conclusion: *social media is not safe for children and adolescents*. The seven independent lines of evidence we presented show, collectively, that the ordinary use (five hours per day) of the major social media platforms (such as Instagram, TikTok, and Snapchat) causes substantial harm to the mental health of adolescents, especially girls.

It is admittedly more difficult to prove causality for historical population-level changes in adolescent mental health trends. However, while answering the product safety question,

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[139] Orben et al. (2022).
[140] Zuckerberg, Testimony before the U.S. Senate in 2024. See *Big Tech and the Online Child Sexual Exploitation Crisis* (2024).

we have shown that the scale of harm from the ordinary use of these dangerous consumer products is so great, affecting such a large percentage of their users, that it justifies as highly plausible the following answer to the historical trends question: *the sudden introduction of always-available social media, made possible by the spread of smartphones in the early 2010s, was a substantial contributor to the sharp increases in mental illness observed in many Western nations, and beyond, in the 2010s.*[141]

Academic debates over media effects often take decades to resolve. We expect that this one will continue for many years. But parents and policymakers cannot wait for resolution; they must make decisions now, based on the preponderance of the evidence.

We believe that the evidence is now sufficient to justify the sort of action that the Australian government took in 2025 when it raised the age for opening or maintaining a social media account to sixteen. Just as the recent international trend of removing smartphones from schools is beginning to produce educational benefits,[142] the research we have reviewed suggests that removing social media from childhood and early adolescence is likely to produce mental-health benefits.

Countries around the world ran a giant uncontrolled experiment on their own children in the 2010s by giving them smartphones and social-media accounts. The available evidence suggests that the experiment has harmed them. It is time to call it off.

[141] Schrijvers et al. (2024); Twenge et al. (2021); Rausch & Haidt, 2023a; Rausch & Haidt, 2023b; Blanchflower, Bryson, & Xu (2024); The Lancet Psychiatry (2024).
[142] Sungu, Choudhury, & Bjerre-Nielsen (pre-print); Abrahamsson (2024); Van Campenhout (2025).

Appendix

Appendix 1

References

Abrahamsson, S. (2024). *Smartphone bans, student outcomes and mental health* (SSRN Scholarly Paper No. 4735240). Social Science Research Network. https://doi.org/10.2139/ssrn.4735240

Anderson, M. (2018, September 27). *A majority of teens have experienced some form of cyberbullying*. Pew Research Center. https://www.pewresearch.org/internet/2018/09/27/a-majority-of-teens-have-experienced-some-form-of-cyberbullying/

ANP. (2025, May 21). Dutch kids, teens in favor of age limit for social media: UNICEF. *NL Times*. https://nltimes.nl/2025/05/21/dutch-kids-teens-favor-age-limit-social-media-unicef

Arenas-Arroyo, E., Fernandez-Kranz, D., & Nollenberger, N. (2025). High speed internet and the widening gender gap in adolescent mental health: Evidence from Spanish hospital records. *Journal of Health Economics*, *102*, 103014. https://doi.org/10.1016/j.jhealeco.2025.103014

Bay, W. (2017, September 17). *Teens and parents in Japan and US agree - mobile devices are an ever-present distraction*. USC Annenberg. https://annenberg.usc.edu/news/expert-view/teens-and-parents-japan-and-us-agree-mobile-devices-are-ever-present-distraction

Beauchere, J. (2023, June 21). *Two-thirds of Gen Z targeted for online "sextortion" – New Snap research*. WeProtect. https://www.weprotect.org/blog/two-thirds-of-gen-z-targeted-for-online-sextortion-new-snap-research/

Béjar, A. (2024, May 6). How to reduce the sexual solicitation of teens on Instagram. *After Babel*. https://www.afterbabel.com/p/make-social-media-safe-for-teens

Bergman, M. (2025). *Snapchat fentanyl lawsuit: December 2025 update*. Social Media Victims Law Center. https://socialmediavictims.org/snapchat-lawsuit/fentanyl/

Big Tech and the Online Child Sexual Exploitation Crisis: U.S. Senate Committee on the Judiciary, 118th Cong. (2024)(Testimony of Mark Zuckerberg). https://www.congress.gov/event/118th-congress/senate-event/LC74366/text

Bitkom. (2025). *Parents, their children and social media: the difficult balance between freedom and control*. https://www.bitkom.org/Presse/Presseinformation/Eltern-Kinder-Social-Media-Balance-Freiheit-Kontrolle

Blanchflower, D. G., Bryson, A., & Xu, X. (2024). *The declining mental health of the young and the global disappearance of the hump shape in age in unhappiness* (Working Paper No. 32337). National Bureau of Economic Research. https://doi.org/10.3386/w32337

Boer, M., van den Eijnden, R. J. J. M., Boniel-Nissim, M., Wong, S.-L., Inchley, J. C., Badura, P., Craig, W. M., Gobina, I., Kleszczewska, D., Klanšček, H. J., & Stevens, G. W. J. M. (2020). Adolescents' intense and problematic social media use and their well-being in 29 countries. *Journal of Adolescent Health, 66*(6, Supplement), S89–S99. https://doi.org/10.1016/j.jadohealth.2020.02.014

Bowles, N. (2018, October 26). A dark consensus about screens and kids begins to emerge in Silicon Valley. *The New York Times*. https://www.nytimes.com/2018/10/26/style/phones-children-silicon-valley.html

Braghieri, L., Levy, R., & Makarin, A. (2022). Social media and mental health. *American Economic Review, 112*(11), 3660–3693. https://doi.org/10.1257/aer.20211218

Brown, A. (2024). The bad science behind Jonathan Haidt's call to regulate social media. *Reason*. https://reason.com/video/2024/04/02/the-bad-science-behind-jonathan-haidts-anti-social-media-crusade/

Burnell, K., Meter, D. J., Andrade, F. C., Slocum, A. N., & George, M. J. (2025). The effects of social media restriction: Meta-analytic evidence from randomized controlled trials. *SSM - Mental Health, 7*, 100459. https://doi.org/10.1016/j.ssmmh.2025.100459

Bursztyn, L., Handel, B., Jimenez-Duran, R., & Roth, C. (2023, October 10). *When product markets become traps: The case of social media* (Working Paper No. 2023-131). University of Chicago, Becker Friedman Institute for Economics. http://dx.doi.org/10.2139/ssrn.4597079.

Churchill, B. F., & Johnson, K. R. (2026). *Broadband internet access and adolescent mental health in the U.S.* (Working Paper No. 34614). National Bureau of Economic Research. https://doi.org/10.3386/w34614

Coe, E., Doy, A., Enomoto, K., & Healy, C. (2023, April 28). *Gen Z mental health: The impact of tech and social media.* McKinsey Health Institute. https://www.mckinsey.com/mhi/our-insights/gen-z-mental-health-the-impact-of-tech-and-social-media

Commonwealth of Kentucky, ex rel. Russell Coleman, Attorney General, v. TikTok, Inc., Bytedance Inc., Bytedance Ltd., TikTok Ltd., and TikTok LLC., No. 24-CI-00824 (Ky. Cir. Ct. Oct. 8, 2024) available at https://www.dropbox.com/scl/fi/sfxbtc79imdvm4nmnjcnz/tiktok.kentuckyAG.unredacted.complete.ANNOTATED-edited.pdf?rlkey=z74c83rziez1vd68ii8boepi8&e=3&st=k5gch683&dl=0

C.S. Mott Children's Hospital. (2023). *Mott Poll Report: Overuse of devices and social media top parent concerns.* https://mottpoll.org/reports/overuse-devices-and-social-media-top-parent-concerns.

Davis, C. G., & Goldfield, G. S. (2025). Limiting social media use decreases depression, anxiety, and fear of missing out in youth with emotional distress: A randomized controlled trial. *Psychology of Popular Media, 14*(1), 1–11. https://doi.org/10.1037/ppm0000536

De Visé, D. (2023, June 7). Teens are spending less time than ever with friends. *The Hill*. https://thehill.com/blogs/blog-briefing-room/4037619-teens-are-spending-less-time-than-ever-with-friends/

Donati, D., Durante, R., Sobbria, F., & Zejcirovic, D. (2022). *Lost in the net? Broadband internet and youth mental health*. SSRN. https://ssrn.com/abstract=3949645

European School Education Platform Editorial team (2025, June 5). Survey on using mobile phones in schools – Results. *European School Education Platform*. https://school-education.ec.europa.eu/en/discover/surveys/mobile-phones-schools

Faverio, M., Anderson, M., & Park, E. (2025, April 22). *Teens, social media and mental health*. Pew Research Center. https://www.pewresearch.org/internet/2025/04/22/teens-social-media-and-mental-health/.

Faverio, M., & Sidoti, O. (2024, December 12). *Teens, social media and technology*. Pew Research Center. https://www.pewresearch.org/internet/2024/12/12/teens-social-media-and-technology-2024/

FBI Memphis. (2024, January 23). *Sextortion: A growing threat targeting minors.* FBI. https://www.fbi.gov/contact-us/field-offices/nashville/news/sextortion-a-growing-threat-targeting-minors

Ferguson, C. J. (2025). Do social media experiments prove a link with mental health: A methodological and meta-analytic review. *Psychology of Popular Media, 14*(2), 201–206. https://doi.org/10.1037/ppm0000541

Fondation pour l'Enfance. (2024, February 1). *Results of the 2nd barometer on the impact of digital technology on the development of young children*. https://www.fondation-enfance.org/2024/02/01/resultats-du-2eme-barometre-sur-limpact-du-numerique-sur-le-developpement-des-jeunes-enfants/

Fondation pour l'Enfance. (2025, January 29). *The impact of digital practices on the development of young children: our 3rd barometer is out!* https://www.fondation-enfance.org/2025/01/29/enfance-et-numerique-3e-barometre-croise-parents-enseignants/

Fridman, L. (2022, February 26). *Mark Zuckerberg: Meta, Facebook, Instagram, and the Metaverse | Lex Fridman Podcast #267* [Video]. YouTube. https://www.youtube.com/watch?v=5zOHSysMmH0

Fundacion MAPFRE. (2025). *State of mental health in the classroom.* https://www.fundacionmapfre.org/publicaciones/todas/estado-salud-mental-aula/

Gerber, M. (2025, March 5). Parents are blaming Snapchat for their teens' fentanyl deaths. Will an L.A. lawsuit shape the future of social media? *Los Angeles Times*. https://www.latimes.com/business/story/2025-03-05/snap-lawsuit-fentanyl-death-teens

Golin, M. (2022). The effect of broadband Internet on the gender gap in mental health: Evidence from Germany. *Health Economics*, *31*(S2), 6–21. https://doi.org/10.1002/hec.4570

Greb, N., & Rausch, Z. (2025). *Kelly RR calculations* [Unpublished spreadsheet]. *New York University*. https://docs.google.com/spreadsheets/d/1NPWce_FHjqnE-8MdqYqWa6S-TJI5AjbbvpuG-82cPoY/view?gid=0#gid=0

Grummitt, L., Baldwin, J. R., Lafoa'i, J., Keyes, K. M., & Barrett, E. L. (2024). Burden of mental disorders and suicide attributable to childhood maltreatment. *JAMA Psychiatry, 81*(8), 782–788. https://doi.org/10.1001/jamapsychiatry.2024.0804

Grund, T. U., Krüger, H., & Pascu, I. (2025). Social media use and adolescent depressive symptoms: The moderating roles of gender and parental monitoring. *International Journal of Mental Health and Addiction*. https://doi.org/10.1007/s11469-025-01566-3

Grund, B. A., & Luciana, M. (2025). Prospective predictors of adolescent screen time and problematic screen use. *JAACAP Open, 3*(4), 1259–1269. https://doi.org/10.1016/j.jaacop.2025.06.007

Haidt, J. (2024). *The Anxious Generation*. Penguin Random House.

Haidt, J., & Johnson, W. (2024, September 17). Gen Z has regrets. *The New York Times*. https://www.nytimes.com/2024/09/17/opinion/social-media-smartphones-harm-regret.html

Haidt, J., Johnson, W., & Rausch, Z. (2025, June 18). We don't have to give in to smartphones. *The New York Times*. https://www.nytimes.com/2025/06/18/opinion/parents-smartphones-tiktok-facebook.html

Haidt, J., & Rausch, Z. (2025b, April 16). Snapchat is harming children at an industrial scale. *After Babel*. https://www.afterbabel.com/p/industrial-scale-snapchat

Haidt, J., Rausch, Z., & Aslam, A. (2025a). *Population estimates for industrial scale harm post* [Unpublished manuscript]. New York University. https://docs.google.com/document/d/1m4bBKfhbNqCeSUsLtPmqTZ_EDykVHUh0C2p27sJjpuo/edit?usp=drive_web&ouid=109151487798577830451

Haidt, J., Rausch, Z., & Aslam, A. (2025b). *Population estimates for Snapchat users* [Unpublished manuscript]. New York University. https://docs.google.com/document/d/1dnCPs5kGeba0Jy2fLCiUvSuCaM-TNyeOpIM-NAIIDtA/edit?tab=t.0#heading=h.xx90722q27p2

Haidt, J., Rausch, Z., & Aslam, A. (n.d.). *Social media industrial scale harms: Statistics* [Unpublished manuscript]. New York University. https://docs.google.com/document/d/1wZ-sKSiVdCOkoY4yoyIj9YXUwBDWhOig3Keb3sFDO50/edit?tab=t.0

Haidt, J., & Rausch, Z. (2025a, January 9). TikTok is harming children at an industrial scale. *After Babel*. https://www.afterbabel.com/p/industrial-scale-harm-tiktok

Half of young people want to grow up in a world without internet. (n.d.). YouthLink Scotland. https://www.youthlink.scot/news/half-of-young-people-want-to-grow-up-in-a-world-without-internet/

Hancock, J., Liu, S. X., Luo, M., & Mieczkowski, H. (2022). *Psychological well-being and social media use: A meta-analysis of associations between social media use and depression, anxiety, loneliness, eudaimonic, hedonic and social well-being* (SSRN Scholarly Paper No. 4053961). Social Science Research Network. https://doi.org/10.2139/ssrn.4053961

Hatfield, J. (2024, June 12). 72% of U.S. high school teachers say cellphone distraction is a major problem in the classroom. *Pew Research Center*. https://www.pewresearch.org/short-reads/2024/06/12/72-percent-of-us-high-school-teachers-say-cellphone-distraction-is-a-major-problem-in-the-classroom/

headspace & Brunton, C. (2018). *headspace National Youth Mental Health Survey 2018*. https://headspace.org.au/assets/headspace-National-Youth-Mental-Health-Survey-2018.pdf

Heffer, T., Good, M., Daly, O., MacDonell, E., & Willoughby, T. (2019). The longitudinal association between social-media use and depressive symptoms among adolescents and young adults: An empirical reply to Twenge et al. (2018). *Clinical Psychological Science*, *7*(3), 462–470. https://doi.org/10.1177/2167702618812727

Helliwell, J. F., Layard, R., Sachs, J. D., De Neve, J.-E., Aknin, L. B., & Wang, S. (Eds.). (2024). *World Happiness Report 2024*. University of Oxford: Wellbeing Research Centre.

Horwitz, J. (2025, November 24). Meta buried 'causal' evidence of social media harm, U.S. court filings allege. *Reuters*. https://www.reuters.com/sustainability/boards-policy-regulation/meta-buried-causal-evidence-social-media-harm-us-court-filings-allege-2025-11-23/

In re Social Media Adolescent Addiction/Personal Injury Products Liability Litigation, No. 4:22-md-03047-YGR, Doc. 2480 (N.D. Cal. Nov. 21, 2025) available at https://www.lieffcabraser.com/pdf/2025-11-21-Brief-dckt-2480_0.pdf

Ipsos. (2025). *Ipsos Education Monitor 2025: A 30-Country Ipsos global advisor survey*. https://www.ipsos.com/sites/default/files/ct/news/documents/2025-08/Education_Monitor_2025%20%281%29.pdf

Jane Doe v. Roblox Corporation & Discord Inc., No. 4:25-cv-03520-YGR, Doc. 1-1, at 31, 90 (N.D. Cal. filed Apr. 22, 2025) available at https://storage.courtlistener.com/recap/gov.uscourts.cand.448351/gov.uscourts.cand.448351.1.1_1.pdf
https://www.scribd.com/document/853520971/New-lawsuit-accuses-Roblox-of-enabling-sexual-exploitation-via-Polygon

Johnson, K. R., & Persico, C. (2024). *Broadband Internet Access, Economic Growth, and Wellbeing* (Working Paper No. 32517). National Bureau of Economic Research. https://doi.org/10.3386/w32517

Kannan, V. D., & Veazie, P. J. (2023). US trends in social isolation, social engagement, and companionship _ nationally and by age, sex, race/ethnicity, family income, and work hours, 2003-2020. *SSM - Population Health*, *21*, 101331. https://doi.org/10.1016/j.ssmph.2022.101331

Kelly, Y., Zilanawala, A., Booker, C., & Sacker, A. (2019, January 4). Social media use and adolescent mental health: Findings from the UK Millennium Cohort Study. *eClinicalMedicine*. https://doi.org/10.1016/j.eclinm.2018.12.005

Kyung, N., Lim, S., & Lee, B. (2021). Digital self-harm: an empirical analysis of the effects of broadband adoption on suicide. *Internet Research, 31*(4), 1444--1462. https://doi.org/10.1108/INTR-04-2020-0171

Lebedikova, M., Tkaczyk, M., Mylek, V., & Smahel, D. (2024, May 15). Do smartphones really cause mental illness among adolescents? Ten problems with Jonathan Haidt's book. *The London School of Economics and Political Science*. https://blogs.lse.ac.uk/parenting4digitalfuture/2024/05/15/haidt/

Lemahieu, L., Vander Zwalmen, Y., Mennes, M., Koster, E. H. W., Vanden Abeele, M. M. P., & Poels, K. (2025). The effects of social media abstinence on affective well-being and life satisfaction: A systematic review and meta-analysis. *Scientific Reports*, *15*(1), 7581. https://doi.org/10.1038/s41598-025-90984-3

Lembke, A. (2021). *Dopamine Nation: Finding balance in the age of indulgence*. Penguin Random House.

LINK NKY Staff. (2024, October 9). Kentucky attorney general, 12 states sue TikTok. *LINK NKY*. https://linknky.com/news/2024/10/09/tiktok-lawsuit-kentucky-attorney-general/

Liu, M., Kamper-DeMarco, K.E., Zhang, J., Xiao, J., Dong, D., & Xue, P. (2022, April 24). Time spent on social media and risk of depression in adolescents: A dose-response meta-analysis. *International Journal of Environmental Research and Public Health*. https://doi.org/10.3390/ijerph19095164

Marquez, J., Taylor, L., Boyle, L., Zhou, W., & De Neve, J. (2024). Child and adolescent well-being: Global trends, challenges, and opportunities. In Helliwell J.F., Layward, R., Sachs, J.D., De Neve, J.-E., Aknin, L.B., & Wang. S. (Eds). (2025). *World Happiness Report 2024* (Chapter 3). University of Oxford: Wellbeing Research Centre.

McDool, E., Powell, P., Roberts, J., & Taylor, K. (2020). The internet and children's psychological wellbeing. *Journal of Health Economics, 69*, 102274. https://doi.org/10.1016/j.jhealeco.2019.102274

McGorry, P. D., Mei, C., Dalal, N., Alvarez-Jimenez, M., Blakemore, S.-J., Browne, V., Dooley, B., Hickie, I. B., Jones, P. B., McDaid, D., Mihalopoulos, C., Wood, S. J., El Azzouzi, F. A., Fazio, J., Gow, E., Hanjabam, S., Hayes, A., Morris, A., Pang, E., … Killackey, E. (2024). The Lancet Psychiatry commission on youth mental health. *The Lancet Psychiatry*, *11*(9), 731–774. https://doi.org/10.1016/S2215-0366(24)00163-9

McClean, A., & Lebwohl, J. (2025, October 6). Does social media use at one time predict teen depression at a later time? *After Babel*. https://www.afterbabel.com/p/social-media-debate-longitudinal

McClean, A., Rausch, Z., & Haidt, J. (2025). *The effect of Broadband access on mental health: A review of instrumental variable studies* (SSRN Scholarly Paper No. 5188105). Social Science Research Network. https://doi.org/10.2139/ssrn.5188105

Meta. (2021). *Hard life moments - Mental health deep dive*. https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf

Meta Internal Research. (n.d.). metasinternalresearch.org.

More in Common. (2025). *Public attitudes to smartphones, social media, and online safety*. https://www.moreincommon.org.uk/media/flrnzo5x/public-attitudes-to-smartphones-social-media-and-online-safety-1.pdf

Murthy, V. (2024, June 17). Surgeon General: Why I'm calling for a warning label on social media platforms. *The New York Times*.

https://www.nytimes.com/2024/06/17/opinion/social-media-health-warning.html

Nagata, J. M., Otmar, C. D., Shim, J., Balasubramanian, P., Cheng, C. M., Li, E. J., Al-Shoaibi, A. A. A., Shao, I. Y., Ganson, K. T., Testa, A., Kiss, O., He, J., & Baker, F. C. (2025). Social media use and depressive symptoms during early adolescence. *JAMA Network Open, 8*(5), e2511704. https://doi.org/10.1001/jamanetworkopen.2025.11704

National Academies of Sciences, Engineering & Medicine. (2024). *Social Media and Adolescent Health* (S. Galea, G. J. Buckley, & A. Wojtowicz, Eds.). The National Academies Press. https://doi.org/10.17226/27396

National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Division of Behavioral and Social Sciences and Education; Board on Children, Youth, and Families; Committee on the Neurobiological and Socio-behavioral Science of Adolescent Development and Its Applications. (2019). *The Promise of Adolescence: Realizing Opportunity for All Youth*. National Academies Press (US). https://doi.org/10.17226/25388

National Education Association. (2024). *Impact of social media and personal devices on mental health.* https://www.nea.org/resource-library/impact-social-media-and-personal-devices-mental-health

NBC New York Staff. (2024, July 29). Generation Text: See the full NBC survey results as principals reveal concern about phones in schools. *NBC*. https://www.nbcnewyork.com/news/local/generation-text-see-the-full-nbc-survey-results-as-principals-reveal-concern-about-phones-in-schools/5645963/

O'Day, E. B., & Heimberg, R. G. (2021). Social media use, social anxiety, and loneliness: A systematic review. *Computers in Human Behavior Reports, 3*, 100070. https://doi.org/10.1016/j.chbr.2021.100070

Odgers, C.L. (2024). The great rewiring: is social media really behind an epidemic of teenage mental illness? *Nature*. https://www.nature.com/articles/d41586-024-00902-2

Office of the Surgeon General (2023). *Social media and youth mental health: The U.S. Surgeon General's Advisory*. https://www.hhs.gov/surgeongeneral/reports-and-publications/youth-mental-health/social-media/index.html

Orben, A., & Przybylski, A. K. (2019). The association between adolescent well-being and digital technology use. *Nature Human Behaviour, 3*(2), 173–182. https://doi.org/10.1038/s41562-018-0506-1

Orben, A., Przybylski, A. K., Blakemore, S.-J., & Kievit, R. A. (2022). Windows of developmental sensitivity to social media. *Nature Communications*, 13(1), 1649. https://doi.org/10.1038/s41467-022-29296-3

Pew Research Center. (2025). *Teens and social media fact sheet*. https://www.pewresearch.org/internet/fact-sheet/teens-and-social-media-fact-sheet/

Prothero, A., & Harwin, A. (2024, March 28). Educators say social media hurts their colleagues' social skills. Their own? Not as much. *EducationWeek*. https://www.edweek.org/teaching-learning/educators-say-social-media-hurts-their-colleagues-social-skills-their-own-not-as-much/2024/03

Pugno, M. (2025). Does social media harm young people's well-being? A suggestion from economic research. *Academia Mental Health and Well-Being, 2*(1). https://doi.org/10.20935/MHealthWellB7581

Puukko, K., Hietajärvi, L., Maksniemi, E., Alho, K., & Salmela-Aro, K. (2020). Social media use and depressive symptoms—A longitudinal study from early to late adolescence. *International Journal of Environmental Research and Public Health*, *17*(16), 5921. https://doi.org/10.3390/ijerph17165921

Rausch, Z., & Haidt, J. (2023a). The teen mental health crisis is international, part 1: The Anglosphere. *After Babel*. https://www.afterbabel.com/p/international-mental-illness-part-one

Rausch, Z., & Haidt, J. (2023b). The teen mental illness epidemic is international, part 2: The Nordic nations. *After Babel.* https://www.afterbabel.com/p/international-mental-illness-part-two

Rausch, Z., & Haidt, J. (2025). *Why Ferguson's meta-analysis should not be used to inform debates on social media's impact on depression and anxiety: A commentary*. Available at SSRN: https://ssrn.com/abstract=5224958

Reuters. (n.d.). *Jeff Horwitz*. https://www.reuters.com/authors/jeff-horwitz/

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 U.S. youth. *JAMA Psychiatry, 76*(12), 1266–1273. https://doi.org/10.1001/jamapsychiatry.2019.2325

Rothwell, J. (2023, October 13). *Teens spend average of 4.8 hours on social media per day*. Gallup. https://news.gallup.com/poll/512576/teens-spend-average-hours-social-media-per-day.aspx

Sawyer, S. M., Azzopardi, P. S., Wickremarathne, D., & Patton, G. C. (2018). The age of adolescence. *Lancet Child & Adolescent Health, 2*(3), 223–228. https://doi.org/10.1016/S2352-4642(18)30022-1

Schiffer, Z. (2024, April 11). Inside the debate over The Anxious Generation. *Platformer*. https://www.platformer.news/anxious-generation-jonathan-haidt-debate-critique/

Schrijvers, K., Cosma, A., Potrebny, T., Thorsteinsson, E., Catunda, C., Reiss, F., Hulbert, S., Kostičová, M., Melkumova, M., Bersia, M., Klanšček, H. J., Gaspar, T., & Dierckens, M. (2024). Three decades of adolescent health: Unveiling global trends across 41 countries in psychological and somatic complaints (1994–2022). *International Journal of Public Health*, *69*, 1607774. https://doi.org/10.3389/ijph.2024.1607774

Sharma, A., & Vidal, C. (2023). A scoping literature review of the associations between highly visual social media use and eating disorders and disordered eating: A changing landscape. *Journal of Eating Disorders, 11*(1), 170. https://doi.org/10.1186/s40337-023-00898-6

Skiera, A. (2024, September 10). *What Gen Z thinks about its social media and smartphone usage*. The Harris Poll. https://theharrispoll.com/briefs/gen-z-social-media-smart-phones/

Sippel, B., Greb, N., Rausch, Z., & Haidt, J. (2025). *A review of Meta Inc.'s internal research on social media and youth mental health* [Unpublished manuscript]. New York University. https://docs.google.com/document/d/1fYTK--Wq_mLANQ7PEp12TTBsLRxywU1P_ketft6TUb0/

State of Nebraska ex rel. Hilgers v. TikTok Inc. et al., No. CI 24-1759, Stipulation Regarding Narrowed Redactions and the State's Amended Complaint (Neb. Dist. Ct. Lancaster Cty. 2024) available at https://www.dropbox.com/scl/fi/x0263qb6l6k680hd3omxb/tiktok.nebraska.redactions.ORGINAL.pdf?rlkey=y1au3kre23x7di1bry6gxgw7o&e=3&st=jou1z3xj&dl=0

State of New Mexico ex rel. Torrez v. Meta Platforms, Inc., Instagram, LLC, Meta Payments, Inc., Meta Platforms Technologies, LLC, & Zuckerberg, No. 1:23-cv-01115-MIS-KK, Doc. 36-1 (N.M. First Jud. Dist. Ct. Jan. 19, 2024) available at https://www.dropbox.com/scl/fi/1r0huee3tr403y1pu4isj/NewMexico.v.Meta.ORIGINAL.pdf?rlkey=7hgsst9avkq5zwcuei4i3cols&e=1&st=tejgvhpp&dl=0

State of New Mexico ex rel. Raúl Torrez, Attorney General v. Snap Inc., No. D-101-CV-2024-02131 (N.M. First Jud. Dist. Ct. Oct. 1, 2024), Amended Complaint for Abatement and Civil Penalties and Demand for Jury Trial, available at https://nmdoj.gov/wp-content/uploads/2024-10-01-SNAP-NM-Amended-Complaint_Redacted.pdf

State of New Mexico ex rel. Torrez v. Meta Platforms, Inc., Instagram, LLC, Meta Payments, Inc., Meta Platforms Technologies, LLC, & Zuckerberg, No. 1:23-cv-01115-MIS-KK, Doc. 36-2 (N.M. First Jud. Dist. Ct. Jan. 19, 2024) available at https://storage.courtlistener.com/recap/gov.uscourts.nmd.496039/gov.uscourts.nmd.496039.36.2.pdf

Stein, D. (2024, September 5). Social media experiments and weighted averages. *The Shores of Academia*. https://shoresofacademia.substack.com/p/social-media-experiments-and-weighted

Steinberg, L. (1985). *Adolescence* (2025 Release). McGraw Hill.

Sungu, A., Choudhury, P. K., & Bjerre-Nielsen, A. (2025). *Removing phones from classrooms improves academic performance* (SSRN Scholarly Paper No. 5370727). Social Science Research Network. https://doi.org/10.2139/ssrn.5370727

The British Standards Institution. (2025). *Supporting a safe and secure digital world for adolescents*. https://www.bsigroup.com/en-GB/insights-and-media/insights/whitepapers/supporting-a-safe-and-secure-digital-world-for-adolescents

The Facebook Files. (2021, October 1). *The Wall Street Journal*. https://www.wsj.com/articles/the-facebook-files-11631713039

The Harris Poll. (2025, June 18). *What parents think about their kids social media and smartphone usage*. https://theharrispoll.com/briefs/what-parents-think-about-their-kids-social-media-and-smartphone-usage/

The Lancet Psychiatry. (2024). *The Lancet Psychiatry commission on youth mental health – policy brief*. https://www.thelancet.com/pb-assets/Lancet/stories/commissions/youth-mental-health/policy-1723555044810.pdf

The Wall Street Journal. (n.d.). *Jeff Horwitz*. https://www.wsj.com/news/author/jeff-horwitz

Thrul, J., Devkota, J., AlJuboori, D., Regan, T., Alomairah, S., & Vidal, C. (2025). Social media reduction or abstinence interventions are providing mental health benefits—Reanalysis of a published meta-analysis. *Psychology of Popular Media, 14*(2), 207–209. https://doi.org/10.1037/ppm0000574

Twenge, J. (2026). Adolescent life satisfaction and social media use: gender differences in an international dataset. In *World Happiness Report 2026* (Chapter 3). University of Oxford: Wellbeing Research Centre.

Twenge, J. M., Haidt, J., Blake, A. B., McAllister, C., Lemon, H., & Le Roy, A. (2021). Worldwide increases in adolescent loneliness. *Journal of Adolescence*, *93*, 257–269. https://doi.org/10.1016/j.adolescence.2021.06.006

Twenge, J.M., Haidt, J., Lozano, J., & Cummins, K.M. (2022). Specification curve analysis shows that social media use is linked to poor mental health, especially among girls. *Acta Psychologica*. https://doi.org/10.1016/j.actpsy.2022.103512

University of Warwick. (2025). *How it works*. https://warwick.ac.uk/services/innovations/wemwbs/how/

UWE Bristol Media Relations Team (2025, September 29). *Smartphone use hitting struggling pupils hardest, major study finds*. UWE Bristol. https://www.uwe.ac.uk/news/smartphone-research-project

Van Campenhout, C. (2025, July 4). Study finds smartphone bans in Dutch schools improved focus. *Reuters*. https://www.reuters.com/technology/study-finds-smartphone-bans-dutch-schools-improved-focus-2025-07-04/

Vasconcellos, R. P., Sanders, T., Lonsdale, C., Parker, P., Conigrave, J., Tang, S., del Pozo Cruz, B., Biddle, S. J. H., Taylor, R., Innes-Hughes, C., Salmela-Aro, K., Vasconcellos, D., Wilhite, K., Tremaine, E., Booker, B., & Noetel, M. (2025). Electronic screen use and children's socioemotional problems: A systematic review and meta-analysis of longitudinal studies. *Psychological Bulletin, 151*(5), 513–543. https://doi.org/10.1037/bul0000468

Wells, G., Horwitz, J. & Seetharaman, D. (2021, September 14). Facebook knows Instagram is toxic for teen girls, company documents show. *The Wall Street Journal*. https://www.wsj.com/tech/personal-tech/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739

Woessmann, L., Wedel, K., Pfaehler, F., & Freundl, V. (2025, December 16). Strong public support to restrict social media for children in Germany. *After Babel*. https://www.afterbabel.com/p/strong-public-support-to-restrict

World Health Organization. (n.d.). *Adolescent health*. https://www.who.int/health-topics/adolescent-health#tab=tab_1

Written Testimony of Arturo Béjar before the Subcommittee on Privacy, Technology, and the Law, 118th Cong. (2023) (testimony of Arturo Béjar). https://www.judiciary.senate.gov/imo/media/doc/2023-11-07_-_testimony_-_bejar.pdf