

Social Media and Mental Health: A Collaborative Review

An ongoing open-source literature review posted and curated by [Jonathan Haidt](#) (NYU-Stern), [Jean Twenge](#) (San Diego State U), and [Zach Rausch](#) (NYU-Stern). You can cite this document as:

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*This Google doc is a working document that contains the citations and abstracts of the published articles we have found that shed light on a question that is currently being debated in the USA and UK: **Does social media use contribute to the rise of adolescent mood disorders (depression and anxiety) and related behaviors (especially self-harm and suicide) that began around 2012?** [See [companion review](#) for studies documenting this rise.] Is it a cause or just a correlate?*

This Google Doc is a work in progress. We (Haidt, Rausch, & Twenge) have not done an exhaustive search of citation databases. A Google Scholar search for ["social media" depression] yielded 72,000 hits in 2019. We begin instead with articles published in or after 2014 that are being cited by scholars on either side of the debate. We pick 2014 because the increase in adolescent depression and anxiety is not clearly visible until around 2013, and it takes a while for data to show up in a published paper. Also, [Haidt & Rose-Stockwell \(2019\)](#) argue that social media changed radically between 2009-2012, becoming more addictive and more toxic, so studies using data from before 2013 are not relevant to evaluating whether social media is harmful to teen mental health today. We invite fellow scholars to point us to studies we have missed, or to note ways in which we are misinterpreting the studies we cite below. Notes to fellow scholars are in green text.

We are not unbiased. Haidt came to the tentative conclusion that there is a causal link, and said so in his book ([The Coddling of the American Mind](#), with Greg Lukianoff.) Twenge said the same thing in her book ([iGen](#)). Haidt's own research (presented in [The Righteous Mind](#)) says that we are likely to be motivated to find evidence to support the positions we took publicly. Like all people, we suffer from confirmation bias. But we take [J.S. Mill](#) seriously, and we know that we need help from critics to improve our thinking and get closer to the truth.

If you are a researcher and would like to notify us about other studies, or add comments or counterpoints to this document, please request access to the Google Doc, or contact Haidt directly, and he will set your permissions to add comments to the Google doc. This document is evolving based on feedback. A copy of the original document, as posted on Feb 7, 2019, is here.

Notes:

- The review contains comments added by other researchers: [Chris Ferguson](#) (Stetson U), [Sarah Rose Cavanagh](#) (Assumption College), [Tom Hollenstein](#) (Queens U., Canada), [Kai Lukoff](#) (U. Washington), Ian Goddard, Ray Aldred (??), Sonia Livingstone (London School of Economics), Bradley Riew (??), [Madeleine George](#) (Purdue), [Raphaël Aubry](#) (U of Geneva), Eric Osika (Saint Camille hospital Bry sur Marne France)....
- You can always find this doc linked from thecoddling.com/better-mental-health.
- Also see our companion review: [Is there an increase in adolescent mood disorders, self-harm, and suicide since 2010 in the USA and UK? A review](#)
- See also [additional Google docs](#) laying out evidence for trends in mental health and social media use in Australia, Canada, New Zealand, and other countries.
- Last updated: Dec 30, 2024

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INTRODUCTION

Two studies published in January 2019 suggested that there is little or no association between social media use and harmful mental health outcomes: [Orben & Przybylski \(2019\)](#) and [Heffer, Good, et al. \(2019\)](#). A third study published in January suggested that there is a more substantial link: [Kelly, Zilanawala, Booker, & Sacker \(2019\)](#). These three studies, all published in reputable journals in the same month, were getting attention from journalists, leaving many parents and policymakers confused about what

to believe. We (Haidt & Twenge) therefore thought it would be useful to gather together in one place the abstracts of the studies that are often referred to in these debates.

We divide the studies into three categories, based on which method they use: 1) cross-sectional correlational studies, 2) time lag or longitudinal studies, and 3) true experiments. Each method answers a different question. Finding answers to the three questions will allow us to address the question everyone cares about: *is social media contributing to the [recent rise](#) in anxiety, depression, self-harm, and suicide among American and British teenagers?* It is vital that we find answers to these questions, to inform legislation, lawsuits, and above all parents, millions of whom are asking questions like: *Should I let my 11-year old child have an Instagram or Snapchat account? If not now, then when? If yes, then should I impose any time limits?* We'll offer some suggestions for parents at the end of the document.

We structure this list of abstracts around three questions, each one addressed by a different kind of study. Within each question we present the studies that DO find a relationship in subsection 1, and the studies that DON'T find a relationship in subsection 2. For each study we offer a link to the original publication and we reprint the full abstract with no edits, other than **bold-facing** the most relevant parts to help you skim the document. We offer brief comments [in brackets] and show figures from some of the studies.

News, Sept. 17, 2021: Facebook's own internal research--leaked by whistleblower Frances Haugen to journalists at the *Wall Street Journal*--shows that they have known since 2018 that Instagram harms many teen girls. See the Wall Street Journal's [14 part expose'](#) on Facebook's effects on mental health, democracy, human rights, and other topics.

To hear the other side—disputing Haugen and the WSJ interpretation, see:

- Mark Zuckerberg's first response, a [blog post](#) on 10/5/21
- Facebook's main response to the WSJ: [What our research really says about teen well-being and Instagram](#)
- Stuart Ritchie, [Is Instagram really bad for teenagers?](#) "The quality of the company's secret research into mental health is abysmal"
- Laurence Steinberg, [Does Instagram harm girls? No one actually knows.](#)
- Farhad Manjoo, [The moral panic engulfing Instagram](#)

Then see responses to those responses:

- The WSJ responds to FB's blog post, including the full decks of slides presenting Facebook's research on Instagram's effects on teen girls: [Facebook's documents about instagram and teens, published](#)
- Haidt's essay in The Atlantic (11/21/21): [The Dangerous Experiment on Teen Girls](#)

Update (May, 2024): The [After Babel](#) Substack debate on social media and mental illness.

On February 22nd, 2023, Jon published [Social Media is a Major Cause of the Mental Illness Epidemic in Teen Girls. Here's the Evidence.](#)

In that post, Jon summarized the four major categories of studies from this Google Doc that bear on the question of social media use and teen mental illness: correlational studies, longitudinal studies, true experiments, and quasi (or natural) experiments. Since publication, a number of social scientists and statisticians have written essays arguing that he is wrong.

Here are the published critiques that we have found:

- [Don't panic about social media harming your child's mental health – the evidence is weak.](#) By Stuart Ritchie, at inews.co.uk
- ["Some" Are Misrepresenting CDC Report Findings Specific To The Use Of Social Media & Technology By Youth.](#) By The White Hatter, at The White Hatter Blog.
- [Why I'm Skeptical About the Link Between Social Media and Mental Health.](#) By Dylan Selterman, at Psychology Today.
- [The Statistically Flawed Evidence That Social Media Is Causing the Teen Mental Health Crisis,](#) by Jon's NYU colleague Aaron Brown, at Reason.com.
- [Social Media and Youth Mental Health.](#) By Chris Ferguson, at Psychology Today.

Here is Jon's response (published on April 17, 2023): [Why Some Researchers Think I Am Wrong About Social Media and Mental Illness.](#)

After the release of *The Anxious Generation*, psychologist Candice Odgers published a notable critique of the book in *Nature* (published March 29, 2024), titled [The great rewiring: is social media really behind an epidemic of teenage mental illness?](#)

Here is Jon's response to Odgers (published April 09, 2024). [Yes, Social Media Really Is a Cause of the Epidemic of Teenage Mental Illness.](#)

Zach and Jean have also written a series of articles responding to other skeptics who point to other explanations for the mental health crisis. You can find them [all here](#).

* * * * *

CAUTIONS AND CAVEATS

1) *We all must beware of the risk of repeating previous moral panics over comics, TV, video games, etc.* Whenever a new fad or technology sweeps through the child or teen population, stories get written about how the new trend is harming children. These stories play well in a media environment that thrives on eliciting fear in parents. Later research often shows that there was no detectable harm. (See [Moral Combat](#), by Markey & Ferguson, about video games; see this [short review of moral panics about media tech](#), by Vaughn Bell, h/t to Sarah Rose Cavanaugh)

2) *We all must be mindful that psychology and other fields are now going through a “replication crisis”* as we discover that many -- perhaps half -- of published studies in some disciplines fail to replicate when other researchers try to do so. Much of the problem is due to the fact that researchers have so many degrees of freedom in how they interpret and analyze their data; they can sometimes find statistically significant results that are just random fluctuations in a sea of non-significant results. This is the problem that Orben & Przybylski (2019a) were responding to. So the studies below may not be as reliable as they seem; no one study is decisive. (We think that Orben & Przybylski is an advance, but is open to other interpretations too.) Don’t read this document like a tally sheet, awarding victory to whichever side has more studies. It is easier to publish statistically significant results indicating an effect of screens or social media than it is to publish a failure to find such effects, which tend to be left in the “file drawer.” But it is valuable to look through the studies that report effects to see if those effects are similar across studies, or if they are widely divergent.

3) *It is important to consult high quality review articles and meta-analyses.* We have now added these in section 5. We think it is helpful to read the details of particular studies in each category first.

4) *Context matters more than hours:* What kids are doing with their devices, how they do it, who they are, and above all *how it affects their relationships* matters more than how much time they spend doing it (see [Clark, Algoe & Green, 2017](#); [Waytz & Gray, 2018](#); and see comment from Sarah Rose Cavanaugh, at right). Unfortunately, nearly all

of the published research simply asks teens or parents to estimate the number of hours per day or week that the teen spends in various screen-based activities, and these estimates are often inaccurate. This is one reason why progress is slow; we need better data that will allow us to ask questions that are more nuanced than “does spending a lot of time on social media cause bad mental health outcomes.” But keep this in mind as you consider the many studies that find associations that explain only a tiny amount of the variance: Those tiny numbers don’t mean that the *relationship* is truly tiny; they mean that *the amount of variance we can explain with blurry and noisy measurement on both ends is tiny*. If we had perfect measurement on both ends, the numbers would go up, perhaps by a lot. [Commenter Bradley Riew suggests that we also try to “unbundle” the effects of social media use, distinguishing among at least these 4 negative effects: (a) Sleep deprivation, (b) Cyberbullying, (c) Negative emotion contagion, (d) Social comparison.]. For research documenting HOW American teens spend their “screen time” see: [Rideout \(2016\)](#) for an analysis using data from 2015, and see our new appendix 8.5, on time usage studies. [[Is there anything more recent?](#)]

5) *Social media use may impose external costs even on those who don’t use it.* The hypothesis tested in most of the studies in this review is that there is a dose-response relationship: more hours-per-week, above the “safe” amount, causes more harm to the individual who consumes more. But if social media is part of the reason for the rise in teen depression/anxiety that began around 2012 ([see our companion review](#)), the causal path need not run through individual users. It may be that a middle-school community changes when many or most of its members get Instagram or Snapchat accounts. Kids may become more cruel, fearful, superficial, gossipy, or appearance-obsessed, and this could make many students more depressed and anxious, even if they do not use social media, or use it only lightly. So *the fact that most of the studies below can explain only a small portion of the variance in outcomes does not mean that social media has only tiny effects*. The network or group-wide or emergent effects could be quite large, and these would not be picked up by studies where the independent variable was how many hours each kid reported spending per week on “social networking sites.” See the book [Connected](#), by Christakis and Fowler, for an accessible presentation of these network effects. See [this paper](#) showing such effects for depression. See [these links](#) for recent evidence (2021) that teens and especially girls are developing Tourette’s syndrome symptoms via emotional contagion from TikTok “influencers.” Emotions spread through networks; you are affected not just by your friends, but by your friends’ friends’ friends. (But see also a [critique of this work here](#), and a [response here](#).)

When most teens moved online en masse, between 2010 and 2012, depression rates began to rise, even for kids who are not on social media. Jon explains the

difference in [this Nature essay](#), and this [blog post from Chris Said](#) illustrates how network effects can differ from individual-level effects. The kid who doesn't join doesn't stay happy either:

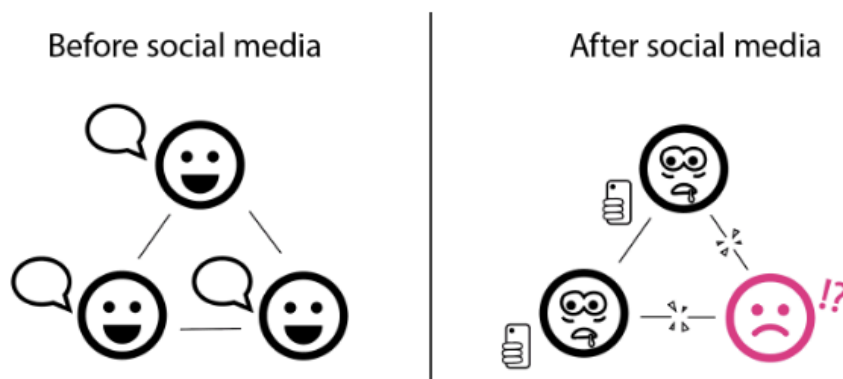


Figure 2. Social media as a trap.

--A related topic: the beneficial social effects that accrue to most students when schools ban cell phones, as in [this Australian high school](#). *We need systematic research on the effects of phone bans to evaluate these group-wide effects.* We'll collect such research in Appendix 8.13.

6) *There are benefits to social media use*, and digital media more generally, for some kids in some contexts. These benefits are not considered in this review, which is focused on trying to understand whether the move onto social media platforms between 2009-2012 can help to explain the sudden sharp rise in depression/anxiety that began in multiple countries around 2012. A report that tries to tally the costs and benefits is the American Academy of Pediatrics 2016 report: [Children and Adolescents and Digital Media](#) [Thanks to Sarah Rose Cavanaugh, and Kai Lukoff, for making this point and suggesting this report]. Researchers who are documenting these benefits, or finding ways to maximize them, include [Nicholas Allen](#) (U. Oregon; see his exchange with Haidt [here](#)), ... *who else?*

7) This Google doc is not about “screen time” or “digital media use” or video games. We agree with our critics that “screen time” is hard to define, and is not consistently associated with bad mental health outcomes, or is associated only weakly. We agree that video games are [sometimes associated](#) with good mental health outcomes. This review is focused on **social media usage**, which generally shows stronger links to poor mental health than does screen time or video game time. (See [Haidt's Twitter thread](#) on this point.) However, we do include many of the larger and more important studies that looked only at “screen time” because most of the studies that get cited looked only at

screen time. [In the text below, Jon is highlighting the relevant words in abstracts showing studies that used only **screen time in light red**, and those that had a measure of **social media use in light green**. Studies that allowed us to zoom in on girls, or that show a **sex difference**, are indicated by highlighting the key words in light blue. Those rare studies that included **preteens have the key words in light orange**, and the searchable key-word “preteen” inserted.] What we most need now is resolution within the category of social media. Are there any studies that allow us to compare using Instagram vs. TikTok vs. Snapchat? Also, we have almost nothing on effects on pre-teens; are there any good studies contrasting effects on 10-12 year olds with effects on 13-16?]

8) If you want to read *essays and articles in the popular press* that are skeptical of the link between social media use and mental health outcomes, see:

- [Resnick \(2019\)](#) Have smartphones really destroyed a generation? We don't know. *Vox*.
- [Denworth \(2019\)](#). Social Media Has Not Destroyed A Generation. *Scientific American*. (Gives a summary of Orben/Przybylski's studies)
- [Popper \(2020\)](#). Panicking About Your Kids' Phones? New Research Says Don't. *New York Times*.
- Here is Facebook's own post: [Hard Questions: Is Spending Time on Social Media Bad for Us?](#)
- [Metherell \(2023\)](#). On The 'Overwhelming Evidence' For Social Media Destroying Kids' Brains. *Wellcome-UCL*.
- *We need to update this: Any suggestions from 2023 or 2024?*

9) If you want to read short overviews of the academic literature, see:

- [Twenge \(2019\)](#). Why increases in adolescent depression may be linked to the technological environment. *Current Opinion in Psychology*.
- [Abi-Jaoude, Naylor & Pignatiello \(2020\)](#). Smartphones, social media use and youth mental health. *CMAJ* (Canadian Medical Association Journal).
- Haidt, [testimony to the Senate Judiciary Committee](#), Subcommittee on Technology, Privacy, and the Law, May 4, 2022.
- *[find a review that is critical of the link. Any suggestions?]*

* * * * *

QUESTION 1: IS THERE AN ASSOCIATION BETWEEN SOCIAL MEDIA USE AND BAD MENTAL HEALTH OUTCOMES?

This is the most basic question, asking about correlations in real-world data. Is it the case that kids who use social media are doing worse than kids who don't? What about heavy users, are they doing worse than light-to-moderate users? What about girls versus boys, or older teens versus younger teens? These questions are typically answered by examining large nationally representative datasets. These correlational studies cannot prove causality; we cannot assume that social media use *caused* any bad outcomes that “go along” with it. Causality could be the reverse process (perhaps depression causes teens to become heavier users of social media), or there could be a third variable that causes both social media use and depression/anxiety. But these studies are common and important first steps in the quest to answer many social science puzzles. What goes with what, and for whom?

Nearly all researchers now agree that there are correlations between (crude measures of) time spent using social media and (crude self report measures of) mental health problems, but there is heated disagreement about the size and significance of these effects. Some researchers believe the correlations are in the ballpark of $r = .04$, and are of no practical significance; others find that the correlations are between $r = .10$ and $r = .20$, which is the size of many other public health threats. (See [Gotz, Gosling & Rentfrow, 2021](#), for an argument that effects of this size are “The Indispensable Foundation for a Cumulative Psychological Science.”)

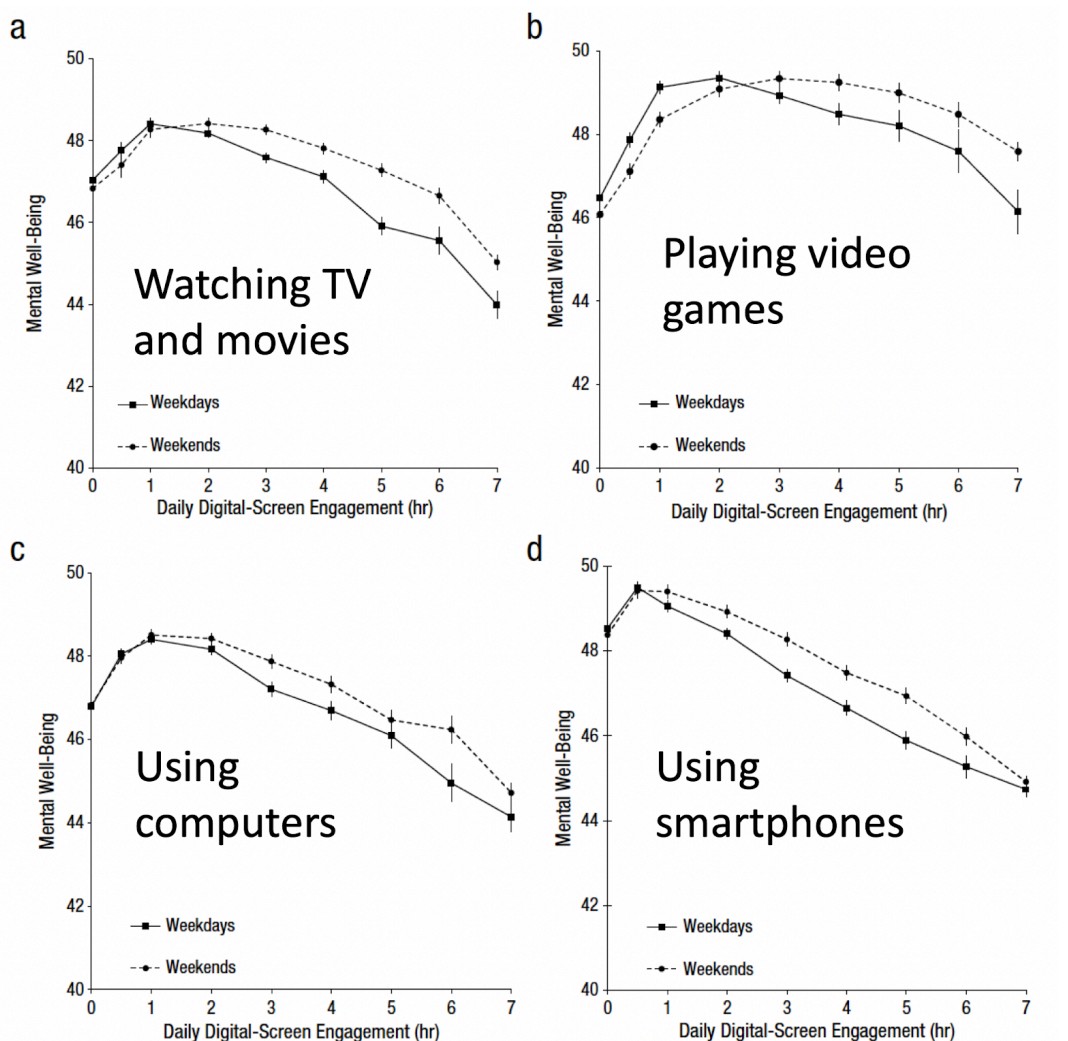
1.1 STUDIES INDICATING AN ASSOCIATION WITH BAD MENTAL HEALTH OUTCOMES

1.1.1 [Przybylski & Weinstein \(2017\)](#). A large-scale test of the goldilocks hypothesis: Quantifying the relations between digital-screen use and the mental well-being of adolescents. *Psychological Science*.

ABSTRACT: Although the time adolescents spend with **digital technologies** has sparked widespread concerns that their use might be negatively associated with mental

well-being, these potential deleterious influences have not been rigorously studied. Using a preregistered plan for analyzing data collected from a representative sample of English adolescents ($n = 120,115$), we obtained evidence that the links between digital-screen time and mental well-being are described by quadratic functions. Further, our results showed that these links vary as a function of when digital technologies are used (i.e., weekday vs. weekend), suggesting that a full understanding of the impact of these recreational activities will require examining their functionality among other daily pursuits. **Overall, the evidence indicated that moderate use of digital technology is not intrinsically harmful and may be advantageous in a connected world.** The findings inform recommendations for limiting adolescents' technology use and provide a template for conducting rigorous investigations into the relations between digital technology and children's and adolescents' health.

[COMMENT from Haidt: The authors find curvilinear effects in which one or two hours a day is associated with better outcomes than is zero usage, yet after that, outcomes become worse. The lowest "goldilocks point" and sharpest drop is for "using smartphones," which is the category likely to include most social media use. The highest "goldilocks point" and shallowest drop is for "playing video games," as you can see here:]



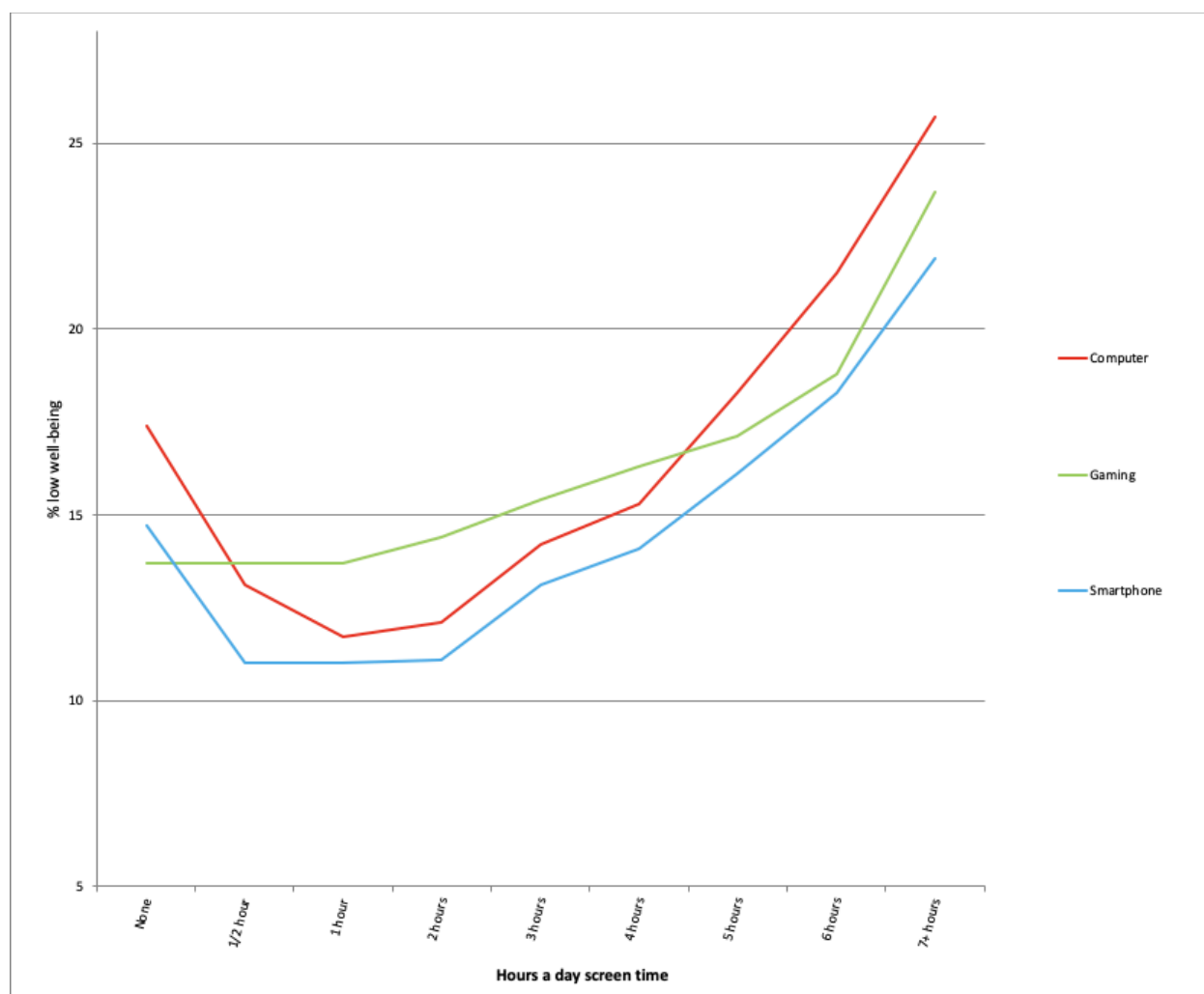
Source: Przybylski & Weinstein (2017), p. 207, with labels added.

[We [Haidt & Twenge] agree with the authors' claim that "moderate use of digital technology is not intrinsically harmful and may be advantageous in a connected world." We think the "Goldilocks hypothesis" is true, as it shows up in several other studies listed below. It says that *heavy* use of smartphones is associated with reduced well-being. We expect--given other findings below--that the association would be even larger if the graphs were redrawn just for girls, and if they could be limited to social media use (as opposed to "smart phones" or "screen time" more generally).]

[COUNTERPOINT (From Andrew Przybylski, via Twitter, who quoted this text from the paper:) "These analyses indicated that the possible negative effects of excessive screen time found that the average effect size (Cohen's d) for engagement in excess of the inflection points was -0.18 . In other words, these negative slopes accounted for 1.0% or

less of the observed variability in the mental well-being of the young people in the sample. Exploratory analyses examining links between individual difference measures in the data set and well-being provide some context to interpret these modest relationships. were less than a third of the size of the positive associations between well-being and eating breakfast regularly ($d = 0.54$) or getting regular sleep ($d = 0.58$). Although the coefficients we have reported are statistically significant, it is noteworthy that the size of both the linear and the quadratic relations between screen time and wellbeing were noticeably diminished in half the cases once control factors were accounted for, and that incremental increases in screen time above moderate levels accounted for very little of the variability we observed in mental Well-being.”]

[RESPONSE to Przybylski [from Twenge]: The use of percent variance explained may be obscuring practically important associations. In the same dataset used by Przybylski & Weinstein, which he notes explains only 1% of the variance, twice as many heavy smartphone users (vs. light) were low in well-being, as shown here:



Source: Twenge & Campbell (2019). Includes demographic controls.

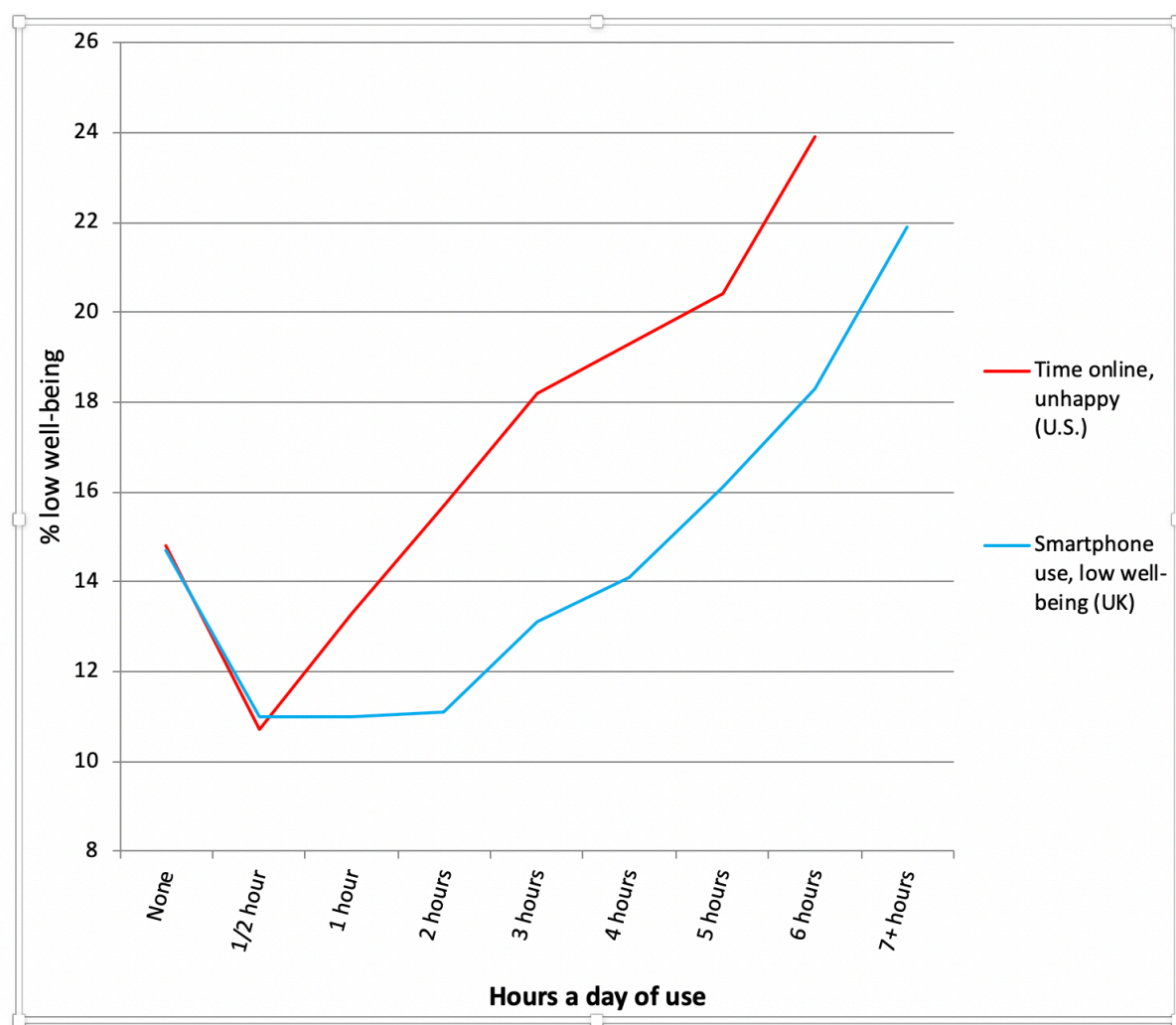
The same doubling of low well-being appeared for light vs. heavy computer users. For gaming, 73% more heavy users had low well-being compared to light users. Thus, when the data are analyzed by examining low well-being within levels of use rather than percent variance explained, the associations are more than practically important.]

1.1.2 [Twenge, & Campbell \(2019\)](#). Digital media use is linked to lower psychological well-being: Evidence from three datasets. *Psychiatric Quarterly*.

ABSTRACT: Adolescents spend a substantial and increasing amount of time using digital media (smartphones, computers, social media, gaming, Internet), but existing studies do not agree on whether time spent on digital media is associated with lower psychological well-being (including happiness, general well-being, and indicators of low

well-being such as depression, suicidal ideation, and suicide attempts). **Across three large surveys of adolescents in two countries ($n = 221,096$), light users (<1 h a day) of digital media reported substantially higher psychological well-being than heavy users (5+ hours a day). Datasets initially presented as supporting opposite conclusions produced similar effect sizes when analyzed using the same strategy. Heavy users (vs. light) of digital media were 48% to 171% more likely to be unhappy, to be in low in well-being, or to have suicide risk factors such as depression, suicidal ideation, or past suicide attempts. Heavy users (vs. light) were twice as likely to report having attempted suicide. Light users (rather than non- or moderate users) were highest in well-being, and for most digital media use the largest drop in well-being occurred between moderate use and heavy use.** The limitations of using percent variance explained as a gauge of practical impact are discussed.

[COMMENT [from Twenge]: As Rosnow and Rosenthal (1989, 2003) and Abelson (1985) showed decades ago, percent variance explained is not a valid measure of practical importance. More recently, Funder and Ozer (in press) described percent variance explained (r^2) as “not merely uninformative; for purposes of evaluating effect size, the practice is actively misleading.” Thus, some of the discrepancy in conclusions between studies might be due to analysis strategy. Sure enough, when datasets initially presented as supporting different conclusions are analyzed in the same way, the results are the same:



Source: Twenge & Campbell (in press)

[The graph above shows smartphone use in the dataset used by Przybylski & Weinstein and time online from the dataset used in 1.1.11 (Twenge et al., 2018, *Emotion*). Note that both show the “Goldilocks” J-curve effect, with well-being most favorable at low levels of use, with issues increasing after ½ hour online or 2 hours using the smartphone in total. Both also show a doubling of low well-being from light to heavy use.]

[A note on data sources: Przybylski & Weinstein made their data available on [OSF](https://osf.io/), and the Monitoring the Future data used by Twenge are publicly available here: <https://www.icpsr.umich.edu/icpsrweb/NAHDAP/index.jsp>.]

1.1.3 [Twenge, Joiner, Rogers, & Martin \(2018\)](#). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. adolescents after 2010 and links to increased new media screen time. *Clinical Psychological Science*.

ABSTRACT: In two nationally representative surveys of U.S. adolescents in grades 8 through 12 ($N = 506,820$) and national statistics on suicide deaths for those ages 13 to 18, adolescents' depressive symptoms, suicide-related outcomes, and suicide rates increased between 2010 and 2015, especially among females. **Adolescents who spent more time on new media (including social media and electronic devices such as smartphones) were more likely to report mental health issues, and adolescents who spent more time on nonscreen activities (in-person social interaction, sports/exercise, homework, print media, and attending religious services) were less likely.** Since 2010, iGen adolescents have spent more time on new media screen activities and less time on nonscreen activities, which may account for the increases in depression and suicide. In contrast, cyclical economic factors such as unemployment and the Dow Jones Index were not linked to depressive symptoms or suicide rates when matched by year.

FIGURE FROM THE PAPER:

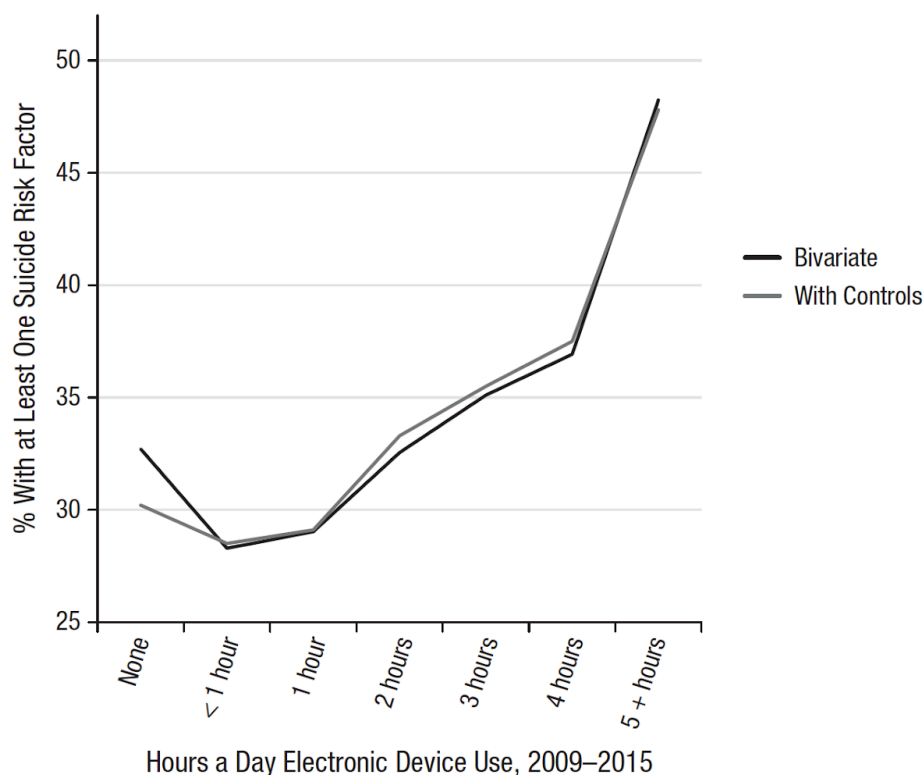


Fig. 2. Exposure-response relationship between electronic device use and having at least one suicide-related outcome, bivariate and with demographic controls for race, sex, and grade, 9–12th graders, Youth Risk Behavior Surveillance Survey (YRBSS), 2009–2015.

Source: Twenge, Joiner, Rogers, & Martin (2018), p. 12.

COMMENT: This study also finds a “Goldilocks” effect -- a J curve. Teens who use “electronic devices” for more than 5 hours per day are much more likely to report suicide-related ideation and other risk factors than kids who use such devices for just one hour per day. (Note that YRBSS does not allow us to break out social media use specifically; just “electronic device use,” as opposed to TV use.)

1.1.3a [Ophir, Lipshits-Brazilier, & Rosenberg \(2019\)](#). New-media screen time is not (necessarily) linked to depression: Comments on Twenge, Joiner, Rogers, and Martin (2018). *Clinical Psychological Science*.

ABSTRACT: In this commentary, we raise seven methodological concerns regarding Twenge, Joiner, Rogers, and Martin (2018), among which are inaccurate research measurements, negligible correlations between the main variables, insufficient and inadequate statistical analyses, and problematic interpretation of the results. In fact, the

negligible associations between screen activities and depression, their decrease when demographic variables are controlled, and their fading away to nil among boys challenge the article's title and conclusions, according to which increases in depressive symptoms are attributed to increases in new-media screen use. This conclusion cannot be deduced from the reported results and could be misleading to the general public.

1.1.3b [Twenge, Joiner, Rogers, & Martin \(2020\)](#). Considering all of the data on digital media use and depressive symptoms: Response to Ophir et al. *Clinical Psychological Science*.

ABSTRACT: We have documented increases since 2012 in depressive symptoms, suicide-related outcomes, and suicide and identified associations between digital-media use and depressive symptoms and suicide-related outcomes across two data sets: Monitoring the Future (MtF) and the Youth Risk Behavior Surveillance System (YRBSS). Ophir, Lipshits-Braziler, and Rosenberg's criticisms of the MtF data (this issue; pp. 374–378) are addressed by the YRBSS data, which included a measure of digital-media use in hours. Ophir et al. assumed that the displacement of nonscreen activities by screen activities occurs only at the individual level, whereas in fact, time displacement at the group or cohort level may be more important. Some discrepancies in the literature can be traced to the use of percentage variance explained; in fact, heavy (vs. light) digital-media users are considerably more likely (often twice as likely) to be depressed or low in well-being across several large data sets.