

The Impacts of Digital Technology on Human Relationships:

How Smartphones, Social Media, Pornography, and AI Chatbots Threaten Sex, Marriage, and Fertility

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Background: Sex Recession, Marriage Decline, and Fertility Crisis

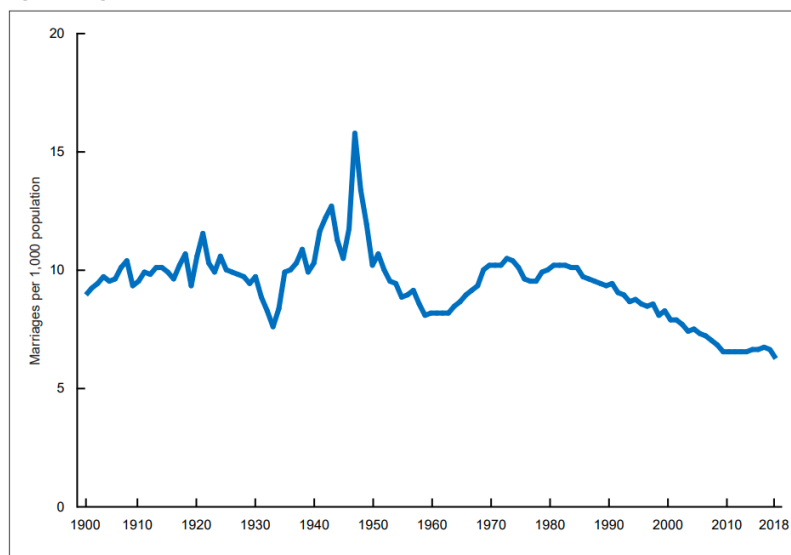
Over the past decade, experts have seen sharp declines in sex, marriage, and fertility rates. These declines are connected. In this report, we will examine how digital technologies such as smartphones, the internet and social media, and—in particular—online pornography contribute to these declines through their negative impacts on human relationships. We will also explore how new technologies such as artificial intelligence (AI) companions and virtual reality (VR) pornography threaten to exacerbate these declines.

How Digital Technology Harms Human Relationships

The Sex and Marriage Recession

As seen in the figure to the right, marriage rates have steadily dropped from 1990 to the present, decreasing from 9.8 marriages per 1,000 people in 1990 to 6.5 in 2018.¹ Since 2018, the marriage rate has continued to decline, reaching 6.1 per 1,000 in 2023.² Research shows that married Americans have more sex than unmarried Americans, so this decrease in marriage rates also has meant a decrease in rates of sex.³

Figure. Marriage rates: United States, 1900–2018



NOTES: Rates are per 1,000 population. Alaska was included beginning in 1959, and Hawaii beginning in 1960. California was excluded in 1991, Louisiana in 2006, and Georgia in 2013 and 2014.
SOURCE: NCHS, National Vital Statistics System, Marriage.

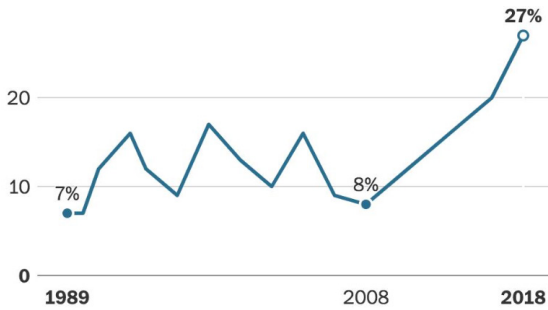
¹ Sally C. Curtin and Paul D. Sutton, “Marriage Rates in the United States, 1900–2018,” *NCHS Health E-Stat*, April 2020, https://www.cdc.gov/nchs/data/hes-tat/marriage_rate_2018/marriage_rate_2018.pdf

² “Provisional Number of Marriages and Marriage Rate: United States, 2000–2023,” CDC/NCHS National Vital Statistics System, accessed April 24, 2026, <https://www.cdc.gov/nchs/data/dvs/marriage-divorce/national-marriage-divorce-rates-00-23.pdf>.

³ Jean M. Twenge, Ryne A. Sherman, and Brooke E. Wells, “Declines in Sexual Frequency Among American Adults, 1989–2014,” *Archives of Sexual Behavior* 46 (2017): 2389–401, <https://doi.org/10.1007/s10508-017-0953-1>.

Young male virginity on the rise

Share of men under age 30 who report zero female sex partners since they turned 18.



Source: General Social Survey

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This dual decrease bears out in the data. In fact, Americans are having record-low amounts of sex. In a survey study of U.S. adults from 2000 to 2018, the percentage of 18- to 24-year-old men who had been sexually active in the past year decreased from 81.1% in 2000–2002 to 69.1% in 2016–2018.⁴ Another study found that the percentage of men under 30 who had never had sex more than tripled from 2008 to 2018, rising from 8% to 27%.⁵

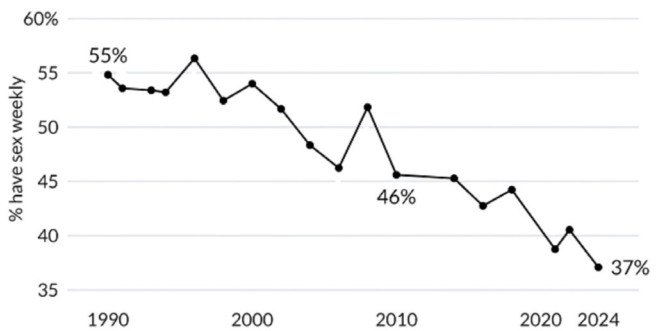
The Institute for Family Studies (IFS) found that “in 1990, 55% of adults ages 18–64 reported

having sex weekly, according to the General Social Survey (GSS). But around the turn of the millennium, that number began to dip: by 2010, less than 50% reported having sex weekly, and by 2024, of the more than 1,000 men and women queried on this topic by the GSS, that number had fallen to just 37 percent.”⁶ IFS also notes that “the amount of sexlessness (‘no sex in the last year’) has especially increased among young adults. Prior and up to 2010, the share of young adults, ages 18-29, who reported not having sex held steady around 15 percent. But from 2010 to 2024, the share doubled, from 12% to 24% in the GSS.” See figures below.

The declines in sex correspond to both a decline in steady partnering (especially marriage) and a decline of sexual frequency between couples. As the IFS reports, “Between 2014 and 2024, the share of young adults, ages 18–29, who reported living with a partner, both married and unmarried, fell 10 percentage points, from 42% to 32%, according to the GSS. Because partnered adults have the most consistent sex, and more young men and women are flying solo, the share of young adults who are having regular sex keeps falling.”

Sex recession

% of adults 18-64 who have sex weekly or more

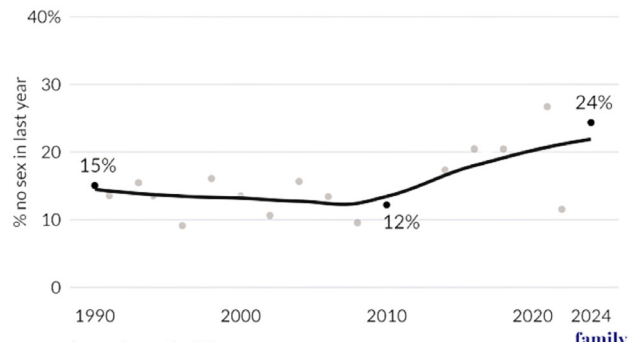


Source: General Social Survey 1990-2024

Source: Institute for Family Studies

Sexlessness among young adults

% of adults 18-29 who had no sex in last year



Source: General Social Survey

Source: Institute for Family Studies

- 4 Peter Ueda et al., “Trends in Frequency of Sexual Activity and Number of Sexual Partners Among Adults Aged 18 to 44 Years in the US, 2000-2018,” *JAMA Network Open* 3, no. 6 (2020), <https://pmc.ncbi.nlm.nih.gov/articles/PMC7293001/>.
- 5 Christopher Ingraham, “The Share of Americans Not Having Sex Has Reached a Record High,” *Washington Post*, March 29, 2019, <https://www.washingtonpost.com/business/2019/03/29/share-americans-not-having-sex-has-reached-record-high/>.
- 6 Grant Bailey and Brad Wilcox, “The Sex Recession: The Share of Americans Having Regular Sex Keeps Dropping,” *Institute for Family Studies*, August 30, 2025, <https://ifstudies.org/blog/the-sex-recession-the-share-of-americans-having-regular-sex-keeps-dropping>.

The Growing Fertility Crisis

With the decline of sex and marriage, especially among young people, the United States is witnessing a corresponding decline in its fertility rates. Twenty-five years ago, the country's fertility rate was 2.1 children per woman, equal to replacement level.⁷ By 2024, it had fallen over 20 percent to 1.6.⁸ It hit another record low in 2025, dropping to 1.57. If this trend continues, fertility in the U.S. could fall to 1.3 by 2050, if not earlier. This decline is not only occurring in the United States. The fertility crisis is global. East Asian countries are experiencing what scholars call “lowest low fertility” already. South Korea is at a historic fertility low of 0.75 births per woman, and Japan has reached a rate of 1.23.⁹ The so-called “baby bust” is spreading, and fast.

Over the past few years, the fertility crisis has come to greater public attention. Elon Musk has been one of the most outspoken critics of declining birth rates (he himself has 14 children with different women, some conceived using reproductive technologies). Experts from across the political spectrum have also been

sounding the alarm. For example, last July, the economists Dean Spears and Michael Geruso published *After the Spike*, a book warning about the results of depopulation from a politically progressive perspective.¹⁰ They argue that the fertility crisis will erode general human welfare and advocate for making caregiving and parenting easier so that more people will choose to have children.

Of all the potential factors that experts point to explain declining fertility rates—economics, culture, lifestyle choices, uncertainty about the future, concern over finances, worries over the political climate, and even fear of climate change—to explain declining fertility rates, one possible factor deserves further attention: the impact of digital technology on human relationships. As birth rates have fallen, the internet, social media, and smartphones have become ubiquitous among adults and teens. With the rise of these new technologies, the nature of human relationships has changed for the worse.

The Internet, the iPhone, and Falling Fertility

In the charts above, the steepest declines in sex start around 2010. Why 2010? In his book *The Anxious Generation*, the social psychologist Jonathan Haidt calls the period from 2010 to 2015 the “Great Rewiring of Childhood.” These years are when smartphones and social media became the norm among tweens and teens, and, as a result, their lives increasingly moved online. Phone-based childhood means that children and teens are not socializing as much in person as earlier generations. This phenomenon

is not contained to tweens and teens alone but is also affecting adults.

The IFS explains in regards to young adults 18 to 29 years old that in-person socialization has significantly declined over the last 20 years and therefore cannot be explained by the COVID-19 pandemic alone: “The decline in socialization among young people happened *prior* to the pandemic. Between 2010 and 2019, the average time young adults spent with friends in a given week fell by nearly 50%, from 12.8

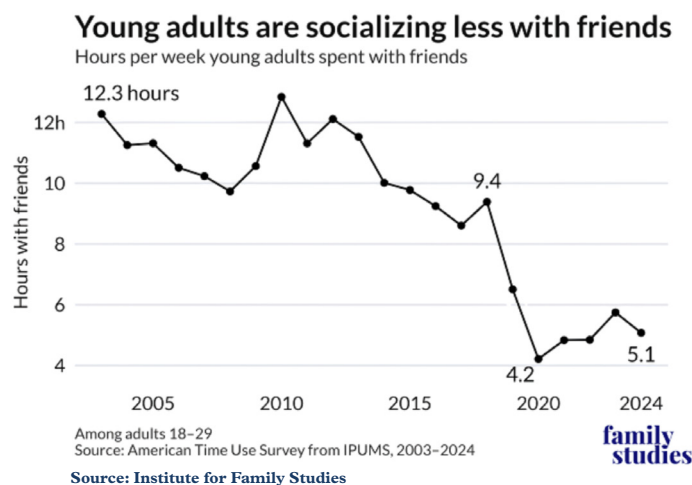
⁷ Centers for Disease Control and Prevention, “Births: Final Data for 2000,” *National Vital Statistics Reports* 50, no. 5 (2002), https://www.cdc.gov/nchs/data/nvsr/nvsr50/nvsr50_05.pdf.

⁸ Centers for Disease Control and Prevention, “Provisional Data for 2023,” *Vital Statistics Rapid Release* 38 (2024), <https://www.cdc.gov/nchs/data/vsrr/vsrr038.pdf>.

⁹ “World Population Prospects: The 2022 Revision,” United Nations Department of Economic and Social Affairs, Population Division, accessed July 23, 2025, <https://population.un.org/dataportal/home?df=0ec644ff-2d99-4cab-97d5-67179a97d5a8>.

¹⁰ Dean Spears and Michael Geruso, *After the Spike: Population, Progress, and the Case for People* (Simon & Schuster, 2025).

hours to just 6.5 hours. The pandemic pushed this number even lower, to 4.2 hours a week with friends. And while there has been a slight increase since, we seem to have found a new norm. Young adults spent just 5.1 hours with friends in a given week in 2024.”¹¹

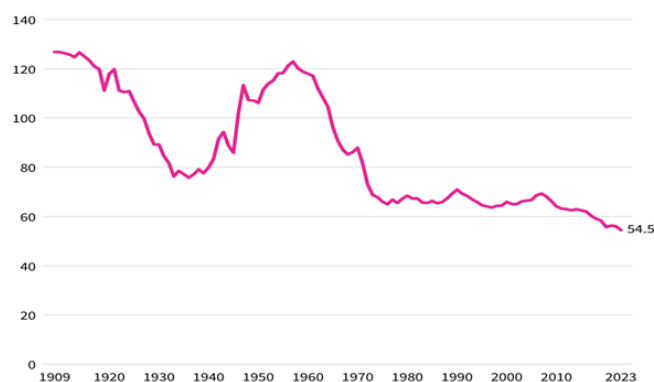


The researcher Jean Twenge studied the amount of socializing among young people and found that “iGen adolescents in the 2010s (vs. previous generations) spent less time on in-person (face-to-face) social interaction with peers, including getting together or socializing with friends, going to parties, going out, dating, going to movies, and riding in cars for fun. College-bound high school seniors in 2016 (vs. the late 1980s) spent an hour less a day engaging in in-person social interaction, despite declines in paid work and little change in homework or extracurricular activity time.”¹² Twenge concludes that in-person social interaction declined as digital media use increased. While this study focused on the impact of digital media on teens’ socialization, the same holds true for adults as well, as shown in the IFS data for young adults discussed above. The reality is that as the smartphone and social media became a normal part of life, interactions increasingly moved online and people socialized less in person. The decline in

in-person socializing maps onto America’s declining fertility rates.

For example, the most recent decline in fertility in the United States started in 2007. Many attribute this decline to the Great Recession, but 2007 was also the year the iPhone came on the market. This trend did not reverse after the recession but has continued as smartphones and social media have grown increasingly ubiquitous among U.S. adults. Other fertility declines may have corresponded with technological innovations that interrupted the formation of human relationships. Two decades earlier, around 1990, another drop coincided with the introduction of the World Wide Web and the rise of the internet. Notably, the steepest decline occurred around 1960. Many factors surely contributed to all three of these trends, including the increase in contraception use after the invention of the birth control pill and increases in abortion rates after *Roe v. Wade* in 1973. However, the increasing prevalence of technologies that interfere with human interactions and relationships is also important to consider among possible factors. As fertility declined in the 1960s, for example, the television was becoming more popular. By 1955, half of American homes owned a TV, and by 1959, that percentage had reached 90%.¹³

The US fertility rate reached an all-time low in 2023.
Number of births per 1,000 women ages 15–44, 1909–2023



Source: Centers for Disease Control and Prevention

USA FACTS

¹¹ Bailey and Wilcox, “The Sex Recession.”

¹² Jean M. Twenge, Brian H. Spitzberg, and W. Keith Campbell, “Less In-Person Social Interaction with Peers Among U.S. Adolescents in the 21st Century and Links to Loneliness,” *Journal of Social and Personal Relationships* 36, no. 6 (2019): 1892–1913, <https://doi.org/10.1177/0265407519836170>.

¹³ John Markert, “Golden Age of Television,” EBSCO, 2023, <https://www.ebsco.com/research-starters/history/golden-age-television>.

How could digital technologies harm human relationships and thus fertility? Instead of cultivating romantic relationships that culminate in marriage and sexual intimacy, mass media—first through TV and then through the internet and screen-based technologies—have offered competitive replacements. They have encouraged people to distract themselves from loneliness instead of compelling them to pursue real human relationships.

The iPhone and social media have exacerbated these concerning trends in socialization and fertility. The social scientist Alice Evans, a lecturer at King's College London and an expert in gender equality and social change across the world, said in an interview with Ross Douthat that lower marriage and fertility rates could be attributed to the technology most Americans carry every day in their pockets.¹⁴

“We’re all retreating into this digital solitude,” she said. “Some of these apps are so hyper-engaging that you get distracted by the constant stream of dopamine hits as each app, as each technology company competes against others to keep its users hooked.” Evans concluded that the end result is “tech is outcompeting personal interactions.”

In a recent study on the “Sex Recession,” the IFS found that “more time devoted to smart phones, social media, pornography, and gaming meant that young adults had fewer opportunities to develop the social skills needed to form relationships and spent less time in social settings—such as parties—that would facilitate romantic relationships.”¹⁵

Not only are these newer digital technologies impeding marriage, but they are also keeping married couples from having sex. In an analysis of a study that found decreases in sexual activity among younger U.S. adults, Twenge hypothesized that because of the constant availability of entertainment through smartphones and social media, sex may not be as attractive an activity as

it once was.¹⁶ “Put simply, there are now many more choices of things to do in the late evening than there once were and fewer opportunities to initiate sexual activity if both partners are engrossed in social media, electronic gaming, or binge watching,” Twenge said.

The reality today is that people’s lives are flooded with digital distractions that offer alternatives for the comfort and connection people desire from human relationships, and these digital substitutes are highly addictive and compulsive because of the constant dopamine release they produce. The high dopamine release from smartphone use creates constant cravings that draw people in to the virtual world and over time desensitizes them to pleasures and rewards in the real world, so they lose the motivation and desire to pursue real-life relationships. But dopamine alone doesn’t create the lasting satisfaction of in-person social bonding and physical touch. Social media doesn’t produce real connection or pleasure, so while people are more connected online, they are lonelier than ever. Screens also can’t deliver oxytocin, a critical hormone that bonds human beings with others and is released only through physical touch and eye contact. Digital technology thus keeps people endlessly chasing the next dopamine hit while depriving them of the human bonds they need. It creates a self-perpetuating, self-destructive cycle of addiction.

Studies show that, on top of inhibiting our desire and ability to pursue real-life relationships and have sex, digital technologies may also contribute to sexual dysfunction. One study in Portugal examined the impact of social media and smartphones on sexual function and found that problematic use of social networking sites was associated with a range of sexual issues in men and women.¹⁷ Women had lower sexual arousal, difficulties lubricating, difficulties having orgasms, sexual dissatisfaction, and other problems. In men, problematic use of social media was correlated with

¹⁴ Alice Evans, “The Dating Crisis,” interview by Ross Douthat, *New York Times*, May 29, 2025, <https://www.nytimes.com/2025/05/29/opinion/dating-marriage-children-fertility.html>.

¹⁵ Bailey and Wilcox, “The Sex Recession.”

¹⁶ Jean M. Twenge, “Possible Reasons US Adults Are Not Having Sex as Much as They Used To,” *JAMA Network Open* 3, no. 6 (2020): e203889, <https://doi.org/10.1001/jamanetworkopen.2020.3889>.

¹⁷ Vanessa Fuzeiro, Catarina Martins, Cátia Gonçalves, Ana Rolos Santos, and Rui Miguel Costa, “Sexual Function and Problematic Use of Smartphones and Social Networking Sites,” *The Journal of Sexual Medicine* 19, no. 8 (2022): 1303–8, <https://doi.org/10.1016/j.jsxm.2022.05.004>.

lower erectile function, lower desire, dissatisfaction with intercourse, overall sexual dissatisfaction, and difficulties having orgasms. The researchers found an association of sexual distress and lower sexual functioning with problematic smartphone use as well. However, once the researchers controlled their data for problematic use of social media, the relationship between sexual dysfunction and smartphone use almost disappeared. This indicates that the addictive use of social media on phones in particular is causing sexual dysfunction.

While it is difficult to disentangle digital technology from other economic and cultural factors to determine how much they have contributed to fertility declines, the effect of the rise of new technologies

on human relationships and therefore fertility rates should be taken seriously. At a minimum, we can clearly conclude that digital technologies—especially smartphones and social media—have changed sex and fertility profoundly, even if we can't quantify exactly how much. Instead of dating, getting married, having sex, and forming families, men and women are increasingly hiding behind screens, scrolling their lives away in their rooms alone.

The replacement of human interaction, relationships, and sexual intimacy with screens describes the negative impacts of digital technology on fertility as a whole. But pornography, as the more explicit digital replacement for sex, has created several direct problems for people's sex lives and fertility.

How Online Pornography Acutely Undermines Human Relationships

Increased access to pornography in the last two decades with the rise of digital technologies has damaged the human brain, sexual satisfaction, sexual function, and human relationships.

Increased Access

One study conducted in 2005 found that 42% of young American internet users had been exposed to pornography.¹⁸ A nationally representative survey from 2019 reported that 68.4% of U.S. adolescents reported exposure to pornography.¹⁹ In 2022, Common Sense Media said that 73% of teens 13–17 years old had watched pornography online.²⁰ Fifty-four percent of these teens reported first viewing pornography before age 13. Similarly, a 2021 study found that

84.4% of 14- to 18-year-old males and 57.1% of 14- to 18-year-old females had seen pornography.²¹ These data show that pornography exposure among youth in the United States has been steadily increasing over the last two decades.

The increased exposure of young people to pornography corresponds to its accessibility in the internet age. One study in Poland, for example, showed a 310% increase in use via internet browser between

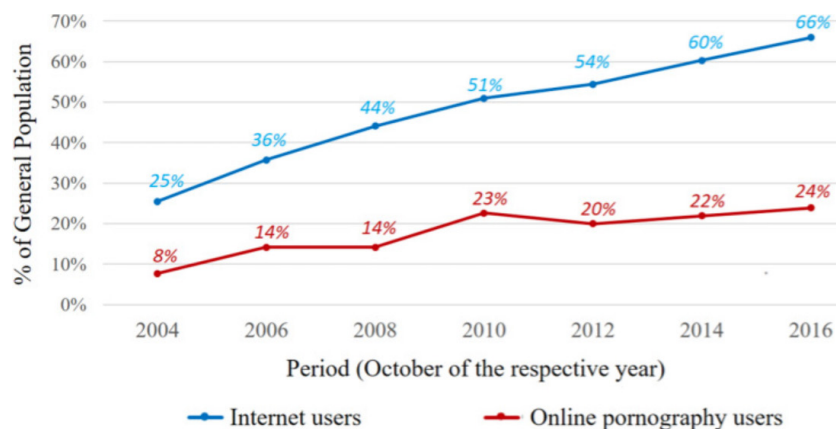
¹⁸ Janis Wolak et al., "Unwanted and Wanted Exposure to Online Pornography in a National Sample of Youth Internet Users," *Pediatrics* 119, no. 2 (2007): 247–57, <https://publications.aap.org/pediatrics/article-abstract/119/2/247/70324/Unwanted-and-Wanted-Exposure-to-Online-Pornography>.

¹⁹ Paul J. Wright, Debby Herbenick, and Bryant Paul, "Adolescent Condom Use, Parent-Adolescent Sexual Health Communication, and Pornography: Findings from a U.S. Probability Sample," *Health Communication* 35, no. 13 (2019): 1576–82, <https://doi.org/10.1080/10410236.2019.1652392>.

²⁰ Michael B. Robb and Supreet Mann, *Teens and Pornography* (Common Sense, 2023).

²¹ Paul J. Wright, Bryant Paul, and Debby Herbenick, "Preliminary Insights from a U.S. Probability Sample on Adolescents' Pornography Exposure, Media Psychology, and Sexual Aggression," *Journal of Health Communication* 26, no. 1 (2021): 39–46, <https://doi.org/10.1080/10810730.2021.1887980>.

2004 and 2016, not including visits to pornography sites on mobile phones or from incognito browser windows.²² The study revealed that pornography use increases along with time spent on the internet. The internet enables access to pornography.



A snapshot of Poland from 2004 to 2016. Source: Karol Lewczuk, Adrian Wójcik, and Mateusz Gola, “Increase in the Prevalence of Online Pornography Use: Objective Data Analysis from the Period Between 2004 and 2016 in Poland,” *Archives of Sexual Behavior* 51, no. 2 (2022): 1157–71, <https://doi.org/10.1007/s10508-021-02090-w>.

And pornography has come to dominate the internet. Pornography sites received more website traffic in 2020 than Twitter, Instagram, Netflix, Zoom,

Pinterest, and LinkedIn combined, one report found.²³ In May of 2025 alone, there were 803.2 million visits to Pornhub, the world’s leading pornography website.²⁴ Twelve percent of the visits were using computers and 88% using mobile phones, which

shows how smartphones make pornography more accessible than ever. Pornhub is only one of many ways to access explicit material—research shows that 12% of all websites contain pornography.²⁵ The platform OnlyFans has exploded onto the pornography scene over the past few years. OnlyFans, which allows people to upload their own homemade explicit content, has grown from hosting 13.5 million users in 2019 to 305 million in 2023.²⁶

This increased access and use of online pornography is concerning because research shows that consuming pornography causes several negative impacts on the human brain, body, relationships, and subsequently human fertility.

The Impact of Pornography on the Brain

The Nobel Prize–winner Nikolaas Tinbergen coined the term “supernormal stimulus” in his book *The Study of Instinct* (1951).²⁷ A supernormal stimulus is one that is artificially enhanced, causing an animal to respond more strongly than it would to the normal stimulus. To demonstrate this concept, Tinbergen performed an experiment on a species of butterflies whose males

were attracted to females with colorful wings. He created fake female butterflies with wings brighter and more colorful than those of the actual female butterflies. In response, the male butterflies attempted to mate with the fake females, neglecting the real ones. The neurosurgeon Donald L. Hilton Jr. has argued that pornography acts as a supernormal stimulus for

²² Karol Lewczuk, Adrian Wójcik, and Mateusz Gola, “Increase in the Prevalence of Online Pornography Use: Objective Data Analysis from the Period Between 2004 and 2016 in Poland,” *Archives of Sexual Behavior* 51, no. 2 (2022): 1157–71, <https://doi.org/10.1007/s10508-021-02090-w>.

²³ Naomi Miles, *Expose Big Porn Report*, CEASE, July 2021, https://cease.org.uk/wp-content/uploads/2021/07/210607_CEASE_Expose_Big_Porn_Report.pdf.

²⁴ “Most Visited Websites,” *Semrush*, accessed April 24, 2026, <https://www.semrush.com/blog/most-visited-websites/>.

²⁵ Faraz Ahmed, M. Zubair Shafiq, and Alex X. Liu, “The Internet Is for Porn: Measurement and Analysis of Online Adult Traffic,” *IEEE 36th International Conference on Distributed Computing Systems* (2016): 88, <https://doi.org/10.1109/ICDCS.2016.81>.

²⁶ “Number of OnlyFans Registered Users Worldwide from 2019 to 2023,” Statista, September 2024, <https://www.statista.com/statistics/1334274/onlyfans-fans-worldwide>.

²⁷ Nikolaas Tinbergen, *The Study of Instinct* (Clarendon Press, 1951).

humans.²⁸ Just as the fake butterflies in Tinbergen's study were artificially enhanced, the actors depicted in pornography are also artificially enhanced and act on unrealistic scripts. The sexual stimulation that pornography can provide is infinite, unlike real-life relationships. Repeated exposure to pornographic videos gives viewers an artificially enhanced kind of sexual excitement. Viewing pornography causes spikes in dopamine, a neurotransmitter in the mesolimbic reward pathway of the brain that releases a burst of energy, excitement, and motivation. This spike in dopamine

feels good and is meant to incentivize people to pursue natural, healthful rewards. But with pornography, the dopamine is divorced from the natural rewards that bring satisfaction and then wind down motivation. The bursts are more intense and frequent than those from natural sexual experiences, and they never culminate in the satisfaction of a bond of intimacy with a real person. Pornography users can continually switch to novel content, and this novelty causes the brain to release more dopamine with each new stimulus. Pornography keeps users constantly chasing dopamine.

Desensitization and Tolerance

Over time, the abnormal levels of dopamine that stem from the response to the supernormal stimuli and infinite novelty of pornography also make it harder for the brain to experience pleasure from real-life relationships and experiences. This process is what addiction scientists call desensitization, where with frequent exposure to an addictive substance, the brain downregulates its dopamine receptors and reduces its own natural dopamine production to try to achieve homeostasis. As the addiction scientist Anna Lembke explains in her book *Dopamine Nation*, prolonged consumption of high-dopamine substances eventually leads to a chronic state of dopamine deficiency in the brain.²⁹ The brain doesn't just return to baseline; it overcompensates, and the brain's hedonic (pleasure) set point, or the baseline level of pleasure, declines below baseline, which means the brain's ability to register and experience pleasure decreases, and people then crave the addictive, high-dopamine substance just to feel "normal" again. This process involves long-term chemical

and structural changes that leave the individual less sensitive to pleasure overall. Natural sources of pleasure such as real-life intimacy and relationships become less rewarding and less pleasurable as a result.

Part of desensitization involves the brain building up a tolerance to excess dopamine, called habituation or tolerance. During habituation, the brain finds the same stimulus less and less pleasurable, which creates the need for an ever-higher dose or greater stimulation to achieve the same initial pleasure response. Several studies have found that with prolonged exposure to pornography, the brain requires more sexual stimulation to experience the same high as before. This tolerance means either more access to pornographic content (longer sessions) or greater novelty of the content—and often both—are needed to achieve that same level of pleasure or arousal.³⁰ The user thus ends up constantly chasing more dopamine and needing increasing escalation in the stimulus while experiencing less pleasure and desire for real-life intimacy.

²⁸ Donald L. Hilton Jr., "Pornography Addiction—A Supranormal Stimulus Considered in the Context of Neuroplasticity," *Socioaffective Neuroscience and Psychology* 3, no. 1 (2013), <https://doi.org/10.3402/snp.v3i0.20767>.

²⁹ Anna Lembke, *Dopamine Nation* (Dutton, 2021).

³⁰ Valerie Voon et al., "Neural Correlates of Sexual Cue Reactivity in Individuals With and Without Compulsive Sexual Behaviours," *PLOS ONE* 9, no. 7 (2014), <https://doi.org/10.1371/journal.pone.0102419>; Simone Kühn and Jürgen Gallinat, "Brain Structure and Functional Connectivity Associated with Pornography Consumption: The Brain on Porn," *JAMA Psychiatry* 71, no. 7 (2014): 827–34, <https://doi.org/10.1001/jamapsychiatry.2014.93>; Paula Banca et al., "Novelty, Conditioning and Attentional Bias to Sexual Rewards," *Journal of Psychiatric Research* 72 (2016): 91–101, <https://doi.org/10.1016/j.jpsychires.2015.10.017>.

Sensitization and Addiction

The constant craving pornography creates is explained by a change in the brain called sensitization, which means brain circuits involved in motivation and reward-seeking become hyper-sensitive to memories or cues related to the addictive behavior. This leads to increased “wanting” or craving for the stimulus even as the actual liking or pleasure from it diminishes. Cues such as turning on the computer, seeing a pop-up, or simply being alone can trigger intense cravings for pornography. Some describe a sensitized response to pornography as entering a tunnel that has only one escape: pornography. Studies have found that the brains of pornography addicts respond to pornography in the same way that drug addicts respond to drugs: after prolonged use, they

don’t experience the same pleasure or “liking” they once felt. Eventually, they become “habituated” to the drug, finding less pleasure in its use but still strongly desiring it.³¹ The brain’s wanting and liking systems become divorced for people addicted to pornography. Pornography creates a sensitized response, a compulsive craving, for its use.

In sum, research shows that pornography acts on the brain like an addictive drug, leading to significant changes in brain structure and function. These changes in the brain directly undermine human relationships as they translate into less pleasure from and less desire for real-life sex, along with an growing compulsion to view pornography, which perpetuates the vicious cycle.

The Impact of Pornography on Sexual Desire and Satisfaction

These changes to the brain directly affect sexual desire and satisfaction. One man described losing sexual desire for women because of his addiction to pornography: “It’s like you’ve been castrated,” he said. “It’s a very strange feeling when you look at a beautiful woman and in your head you have your normal thoughts like ‘Wow, she’s beautiful. I would like to get to know her!’ and yet you have no sexual thoughts or intentions.”³² Women to whom this man would have been sexually attracted before becoming addicted to pornography were still beautiful to him, but he had lost the sexual desire he used to feel.

Sadly, this man is not alone in his loss of interest in real women. Several studies have found that the more a person uses pornography, the less likely that person is to

feel satisfied by real-life sex. A longitudinal study of over 1,000 adolescents and young adults showed that pornography exposure consistently reduced people’s satisfaction with their sex lives, a finding that held equally true for both men and women.³³ A study of high school seniors found that 16% of those who used pornography more than once a week reported low sexual desire, compared to 0% of those who did not use pornography.³⁴ The study also found that 10% of pornography consumers reported that their use “reduces sexual interest towards potential real-life partners.” In another study, a majority of men with compulsive sexual behavior reported that because of excessive use of sexually explicit material like pornography, they “experienced diminished libido or erectile function specifically in

³¹ Daisy J. Mechelmans et al., “Enhanced Attentional Bias Towards Sexually Explicit Cues in Individuals With and Without Compulsive Sexual Behaviours,” *PLOS ONE* 9, no. 8 (August 25, 2014): e105476, <https://doi.org/10.1371/journal.pone.0105476>; Voon et al., “Neural Correlates of Sexual Cue Reactivity”; Mateusz Gola et al., “Can Pornography Be Addictive? An fMRI Study of Men Seeking Treatment for Problematic Pornography Use,” *Neuropsychopharmacology* 42, no. 10 (2017): 2021–31, <https://doi.org/10.1038/npp.2017.78>.

³² Gary Wilson, *Your Brain on Porn* (Commonwealth Publishing, 2015).

³³ Jochen Peter and Patti M. Valkenburg, “Adolescents’ Exposure to Sexually Explicit Internet Material and Sexual Satisfaction: A Longitudinal Study,” *Human Communication Research* 35, no. 2 (2009): 171–94, <https://doi.org/10.1111/j.1468-2958.2009.01343.x>.

³⁴ Damiano Pizzol, Alessandro Bertoldo, and Carlo Foresta, “Adolescents and Web Porn: A New Era of Sexuality,” *International Journal of Adolescent Medicine and Health* 28, no. 2 (2016): 169–73, <https://doi.org/10.1515/ijamh-2015-0003>.

physical relationships with women (although not in relationship to the sexually explicit material).³⁵ Research also indicates that, over time, pornography users begin preferring masturbation while viewing pornography over having sex with a real person. One study of men and women who had viewed pornography found that the “frequency of pornography consumption was directly related to a relative preference for pornographic rather than partnered sexual excitement.”³⁶

While this lack of desire for real-life sex seems to be isolated to those who use pornography frequently, even more moderate pornography use still creates problems with sexual *satisfaction*. Research shows that pornography users feel less satisfied when they do have real sex. One study of couples found that

male pornography use was directly associated with lower male sexual satisfaction.³⁷ A longitudinal study of over 1,000 adolescents and young adults showed that pornography exposure consistently reduced people’s satisfaction with their sex lives, a finding that held equally true for both men and women.³⁸

Interviews in the sociologist Mark Regnerus’s book *Cheap Sex* illustrate this lack of satisfaction. A 24-year-old man named Jonathan said of pornography use, “You become dissatisfied sexually with the person you’re with. How can you not?”³⁹ A 26-year-old man named Anthony elaborated: “If you’re, you know, looking at porn every single day, you’re gonna want something else. You’re not gonna want what you’ve got. There’s no way you could be happy with it.”

The Impact of Pornography on Sexual Function

The physiological effects of pornography extend beyond the brain. Over the past few decades, rates of erectile dysfunction (ED)—which used to be known as an older man’s problem—have increased drastically in young men. A 2024 study in *Current Urology Reports* monitored the number of young men presenting with ED at one clinic, finding just one case in 2014 versus 33 cases in 2020.⁴⁰ Even before then, in 2013, a study reported that one in four patients seeking medical help for new-onset ED were under age 40, and severe ED rates were 8.8% higher in young men than in older men.⁴¹

In a two-year longitudinal study of Canadian adolescents, 78.6% of male and 84.4% of female

adolescents who were sexually active reported at least one sexual problem. Of the 78.6% of males who reported a problem, almost half (45.3%) reported issues with erectile function.⁴² Advertisers have certainly picked up on this trend. Increasing numbers of commercials for ED medications like Viagra now portray and target young men, rather than older men. The advertisers aren’t wrong. In the past ten years, hundreds of young men have begun telling their stories of ED caused by pornography. An article in *Time* magazine from 2016 included interviews with multiple men who became concerned about the condition.⁴³ Noah Church encountered internet

³⁵ Voon et al., “Neural Correlates of Sexual Cue Reactivity.”

³⁶ Peter Wright et al., “Associative Pathways Between Pornography Consumption and Reduced Sexual Satisfaction,” *International Journal of Sexual Health* 29, no. 3 (2017): 227–44, https://www.researchgate.net/publication/316815461_Associative_pathways_between_pornography_consumption_and_reduced_sexual_satisfaction.

³⁷ Brian J. Willoughby, Nathan D. Leonhardt, and Rachel A. Augustus, “Associations Between Pornography Use and Sexual Dynamics Among Heterosexual Couples,” *The Journal of Sexual Medicine* 18, no. 1 (2021): 179–92, <https://doi.org/10.1016/j.jsxm.2020.10.013>.

³⁸ Peter and Valkenburg, “Adolescents’ Exposure.”

³⁹ Mark Regnerus, *Cheap Sex: The Transformation of Men, Marriage, and Monogamy* (Oxford University Press, 2017), 109–11.

⁴⁰ Amelia Pantazis, Israel Franco, and Jordan Gitlin, “Erectile Dysfunction in Adolescents and Young Adults,” *Current Urology Reports* 25 (2024): 225–32, <https://doi.org/10.1007/s11934-024-01213-9>.

⁴¹ Paolo Capogrosso et al., “One Patient out of Four with Newly Diagnosed Erectile Dysfunction Is a Young Man,” *The Journal of Sexual Medicine* 10, no. 7 (2013): 1833–41, <https://www.sciencedirect.com/science/article/abs/pii/S1743609515304288>.

⁴² Lucia F. O’Sullivan et al., “A Longitudinal Study of Problems in Sexual Functioning and Related Sexual Distress Among Middle to Late Adolescents,” *The Journal of Adolescent Health* 59, no. 3 (2016): 318–24, <https://doi.org/10.1016/j.jadohealth.2016.05.001>.

⁴³ Belinda Luscombe, “Porn and the Threat to Virility,” *Time*, March 31, 2016, <https://time.com/4277510/porn-and-the-threat-to-virility>.

pornography at age nine and spent years masturbating to pornography multiple times a day. Once he had the opportunity to have real sex his senior year of high school, his body wouldn't cooperate. "There was a disconnect between what I wanted in my mind and how my body reacted," he said. After six years of trying to have sex with women but not being able to maintain an erection, he concluded that his adolescent pornography use had caused what is known as "pornography-induced erectile dysfunction" (PIED).

Today, groups online like NoFap and Reboot Nation help men to open up about PIED and address pornography addiction. In one forum, a man who struggled with PIED said, "I've been conditioned to the point where my sexual urges are deeply linked to a computer screen. Women don't turn me on unless they are made 2-D and behind my glass monitor."⁴⁴ Another man confessed that he would look at pornography before having sex with his wife because "she just couldn't do it for me anymore."⁴⁵

The research is not conclusive that pornography use causes erectile dysfunction, but some key evidence supports the theory of PIED. A 2021 study of 3,419 men found that 21.5% had some degree of ED, discovering that "higher scores for problematic pornography consumption (PPC) were significantly associated with greater odds of ED—even after controlling for masturbation frequency and other factors."⁴⁶ Another study found positive associations between problematic pornography use and ED across three different samples.⁴⁷ It also found correlations among baseline pornography use, baseline

problematic pornography use, and prospective ED in a longitudinal sample. Rates of ED are significantly higher among men who prefer pornography with masturbation over partnered sex, often a function of prolonged and regular pornography use. One study found an ED rate of 22.3% among those preferring partnered sex, but a shocking rate of 78% among those who preferred pornography over sex.⁴⁸

The urologist Harry Fisch explains PIED this way: "A penis that has grown accustomed to a particular kind of sensation leading to rapid ejaculation will not work the same way when it's aroused differently. Orgasm is delayed or doesn't happen at all."⁴⁹

ED is not the only sexual problem that may be related to pornography use. A 2021 study of male college students found that those who began using pornography early in life and those who used it more often had lower sperm concentration and total sperm count.⁵⁰ They also had low levels of several different hormones, including prolactin, follicle-stimulating hormone, progesterone, and estrogen. The researchers hypothesized that pornography exposure before or during puberty could disrupt the process of reproductive maturation, affecting the function of the hypothalamic-pituitary-gonadal axis. Disruption of this axis, which connects the brain with the sexual organs, could affect sex hormones and, in turn, sperm concentration. Considering that in general sperm counts have dropped over the past few decades, these findings raise important questions and merit further research on what impact pornography is having on sex hormones.⁵¹

⁴⁴ Wilson, *Your Brain on Porn*.

⁴⁵ Wilson, *Your Brain on Porn*.

⁴⁶ Tim Jacobs et al., "Associations Between Online Pornography Consumption and Sexual Dysfunction in Young Men: Multivariate Analysis Based on an International Web-Based Survey," *JMIR Public Health and Surveillance* 7, no. 10 (2021): e32542, <https://doi.org/10.2196/32542>.

⁴⁷ J. B. Grubbs and M. Gola, "Is Pornography Use Related to Erectile Functioning? Results from Cross-Sectional and Latent Growth Curve Analyses," *The Journal of Sexual Medicine* 16, no. 1 (2019): 111–25, <https://doi.org/10.1016/j.jsxm.2018.11.004>.

⁴⁸ Jonathan H. Berger et al., "Survey of Sexual Function and Pornography," *Military Medicine* 184, nos. 11–12 (2019): 731–37, <https://doi.org/10.1093/milmed/usz079>.

⁴⁹ Harry Fisch, *The New Naked: The Ultimate Sex Education for Grown-Ups* (Sourcebooks, 2014).

⁵⁰ Zhihong Cui et al., "Pornography Use Could Lead to Addiction and Was Associated with Reproductive Hormone Levels and Semen Quality: A Report from the MARHCS Study in China," *Frontiers in Endocrinology* 12 (2021): 736384, <https://doi.org/10.3389/fendo.2021.736384>.

⁵¹ Uday Mann et al., "Reasons for Worldwide Decline in Male Fertility," *Current Opinion in Urology* 30, no. 3 (2020): 296–301, <https://doi.org/10.1097/MOU.0000000000000745>.

The Impact of Pornography on Marriage and Relationship Formation

How do the effects of pornography on the brain, sexual desire and satisfaction, and sexual function factor into the broader trends of the sex recession and the corresponding fertility crisis? While it is difficult to draw causal lines from increased pornography use to decreased sexual satisfaction and inhibited sexual function and from there to declines in sex and fertility, further insights can be found in research on the impacts of pornography on marriage, the primary context in which children are conceived.

Research shows that pornography usage negatively affects marriage formation. One study discovered that higher internet usage in general was associated with lower marriage rates, but “pornography use in particular was more closely linked to those participants who were not married than any other form of Internet use, including regular use of financial websites, news websites, sports websites, and several others.”⁵² A second study concurred, finding that men who reported watching pornography frequently were 31% less likely to get married.⁵³ Another study found an association between pornography use and lower “marital centrality” (the importance a people place on their role as a spouse compared to other roles) among young adults.⁵⁴

Even when pornography viewers are in real-life relationships, another study concluded, “Pornography use significantly predicts relational instability.”⁵⁵ Men who consumed more pornography were nearly 3.5 times more likely to experience an end to their real-life romantic relationship.

Regnerus’s book *Cheap Sex* may help explain why pornography both keeps people from forming real-life relationships and contributes to those relationships’ dissolution. He notes that “the quality of porn and masturbation may well have reached a level significant enough to satisfy many men, such that the pursuit of real sex with real women . . . seems no longer a benefit worth the costs of wooing. Fake sex is closer to real sex than ever before, and the dopamine hit along the way extends foreplay.”⁵⁶ Regnerus says the “question is not whether some men have exited the [mating] market, courtesy of porn. The question is how many.”⁵⁷ What may start out as a supplement to real-life sex and pleasure can because of its cheap nature quickly take over as a substitute and discourage people from pursuing relationships, therefore contributing to the decline in marriage formation.

These trends are especially concerning regarding young people, who are now exposed to pornography much earlier and more often than prior generations. The average age for pornography exposure is now 12, and nearly three-quarters of teens aged 13–17 have watched pornography.⁵⁸ Pornography use by adolescents and young adults often leads to a distorted view of sexuality and its role in fostering healthy personal relationships. The earlier people are exposed to pornography, the more likely they are to have problems in their future sexual and romantic relationships.⁵⁹

⁵² Michael Malcolm and George Naufal, “Are Pornography and Marriage Substitutes for Young Men?” *IZA Discussion Paper* no. 8679 (2014), <https://www.iza.org/publications/dp/8679/are-pornography-and-marriage-substitutes-for-young-men>.

⁵³ Samuel L. Perry and Kyle C. Longest, “Does Pornography Use Reduce Marriage Entry During Early Adulthood? Findings from a Panel Study of Young Americans,” *Sexuality & Culture* 23 (2019): 394–414, <https://doi.org/10.1007/s12119-018-09581-4>.

⁵⁴ Nathan D. Leonhardt and Brian J. Willoughby, “Longitudinal Links Between Pornography Use, Marital Importance, and Permissive Sexuality During Emerging Adulthood,” *Marriage & Family Review* 54, no. 1 (2017): 64–84, <https://doi.org/10.1080/01494929.2017.1359811>.

⁵⁵ Samuel L. Perry and Joshua T. Davis, “Are Pornography Users More Likely to Experience a Romantic Breakup? Evidence from Longitudinal Data,” *Sexuality & Culture* 21 (2017): 1157–76, <https://doi.org/10.1007/s12119-017-9444-8>.

⁵⁶ Regnerus, *Cheap Sex*, 128.

⁵⁷ Regnerus, *Cheap Sex*, 128.

⁵⁸ Robb and Mann, *Teens and Pornography*.

⁵⁹ Marshall, Ethan A., and Holly A. Miller. 2024. “Age and Type of First Exposure to Pornography: It Matters for Girls and Boys.” *Deviant Behavior* 45 (3): 377–93. doi:10.1080/01639625.2023.2248338.

A study conducted in the 1980s about the effects of exposure to pornography on older adolescents and young adults also shows how pornography use warps young people's expectations and desires for sex, relationships, marriage, and family.⁶⁰ This research is noteworthy because it was a controlled, randomized study dealing with objective exposure to pornographic material, not a survey, and it was conducted before the advent of online pornography, so the participants would have had less exposure to pornography compared to the average young adult today. Subjects in the experimental group viewed pornographic material for a period of six weeks, while the control group was exposed to more common movie and television content over the same period. Afterward, participants were asked a series of questions to evaluate their attitudes regarding relationships and family. The study revealed these key observations regarding the young adults exposed to pornography compared to the control group:

1. Male subjects demonstrated increased calousness toward women.
2. Subjects were more likely to say they were dissatisfied with their sexual partner.

3. Subjects were more accepting of sexual infidelity in a relationship.
4. Subjects valued marriage less and were twice as likely to believe marriage may become obsolete.
5. Men experienced a decreased desire for children, and women experienced a decreased desire to have a daughter.

A more recent study assessing *why* young people use pornography said that “there is a strong sense here of sex being something that they feel cut off from that porn may be able to provide a means of recovering.”⁶¹

But the sad irony is that what people are looking for in pornography—sex—is not being recovered by it at all. On the contrary, the research discussed above shows that pornography use undermines the desire to pursue real sex and the ability to receive pleasure from it. Pornography makes promises of enhanced pleasure and well-being that it cannot deliver. Instead, it destroys its users' capacity to experience the very thing that first enticed them. In doing so, it robs them not just of pleasure but of the desire to pursue marriage and family.

Reduced Marriage Quality and Increased Divorces

Pornography consumption doesn't only reduce the likelihood of getting married. It also reduces relationship quality and increases the risk of divorce. A comprehensive analysis combining 30 national surveys from 1973 to 2018 found that pornography use was *never* positively associated with relationship quality across 31 different measures; instead, it most often was negatively associated with relationship quality, with small but consistent effect sizes.⁶² The

National Couples and Pornography Survey of 2021 concluded that pornography is associated with lower relationship quality, finding that couples where men use pornography regularly and women use pornography occasionally were 18% less likely to report that their relationship is stable, 20% less likely to be strongly committed, and 18% less likely to report that they have high relationship satisfaction.⁶³ The survey found that more than 90% of couples who did not use

⁶⁰ Dolf Zillman and Jennings Bryant, “Effects of Prolonged Consumption of Pornography on Family Values,” *Journal of Family Issues* 9, no. 4 (December 1988): 518–44, <https://doi.org/10.1177/019251388009004006>.

⁶¹ Feona Attwood, Clarissa Smith, and Martin Baker, “I'm Just Curious and Still Exploring Myself': Young People and Pornography,” *New Media & Society* 20, no. 10 (2018): 3738–59, <https://doi.org/10.1177/1461444818759271>.

⁶² Samuel L. Perry, “Pornography and Relationship Quality: Establishing the Dominant Pattern by Examining Pornography Use and 31 Measures of Relationship Quality in 30 National Surveys,” *Archives of Sexual Behavior* 49, no. 4 (2020): 1199–1213, <https://doi:10.1007/s10508-019-01616-7>.

⁶³ Brian J. Willoughby, Galena K. Rhoades, and Jason S. Carroll, “The Porn Gap: How Is Pornography Impacting Relationships Between Men and Women Today?,” The Wheatley Institution, 2021, <https://wheatley.byu.edu/00000183-2328-dc42-a7f7-7ba86d810001/the-porn-gap>.

any pornography reported that their relationship was stable, committed, and satisfying to them as a couple. Researchers examining data from the Portraits of American Life Survey found that those who reported viewing any pornography at all in 2006 were more than twice as likely to be separated or divorced from their spouse by 2012, even after adjusting for marital happiness and satisfaction.⁶⁴

Fewer marriages, less real-life sex, and more sexual dysfunction: This is the current trajectory of our country as digital technologies proliferate, and particularly as pornography use increases. Fertility rates, unsurprisingly, continue to decline as well, reaching a new record low in 2025. These trends don't look likely to reverse soon, especially as new technologies on the horizon pose even greater potential threats to human relationships and sex.

Future Threats: How AI and Virtual Reality Will Further Undermine Human Relationships

The AI Pornography Apocalypse

Artificial intelligence technologies threaten to worsen the ongoing crises in human relationships, sex, and marriage. With the rise of AI, people are no longer just accessing online pornography. Now they can create their own custom-tailored content tailored to their exact preferences and desires using AI technology. They can even use real people's images, including those of celebrities, classmates, and even children, without consent. The prevalence of this AI-generated "deepfake" pornography grew by 464% between 2022 and 2023.⁶⁵ New AI apps that "nudify" images make creating this content even easier. All a user needs to do is feed the app a picture of someone fully clothed, and the app then generates an image of that person naked (with or without the person's consent). One analysis found that these apps had a combined average of 18.5 million visitors over six months and collectively may be making up to \$36 million per year.⁶⁶ AI pornography encourages sexual fetishes and preferences that

transgress moral and ethical boundaries even beyond human-generated pornography because they are not created by real human beings. Further, the more customizable the pornography is, the more it cements a selfish view of sex, and the less a person is willing to make costly investments in a real relationship with another person. A person can just use AI to conjure up whatever sexual desire or fantasy may occur to him.

Along with AI-generated pornography, virtual reality pornography is also on the rise—and this kind of pornography will pose an even greater threat to human relationships.⁶⁷ The AI market researcher Dan Faggella predicted in 2023 that the "instantly conjured, hyper-personalized real-time experience" of VR pornography would continue to decouple sex from human relationship. "Even the compelling and emotional components of a sexual experience—like loving dialogue and eye contact that conveys passion or caring—will be conjured forth" by VR pornography,

⁶⁴ Samuel L. Perry, "Pornography Use and Marital Separation: Evidence from Two-Wave Panel Data," *Archives of Sexual Behavior* 47, no. 6 (2018): 1869–80, <https://doi.org/10.1007/s10508-017-1080-8>.

⁶⁵ Virginie Berger, "AI Is Changing the Future of Human Intimacy. Here's What to Know," *Forbes*, October 22, 2024, <https://www.forbes.com/sites/virginieberger/2024/10/22/ai-is-changing-the-future-of-human-intimacy-heres-what-to-know>.

⁶⁶ Alexios Mantzarlis and Santiago Lakatos, "AI Nudifiers Continue to Reach Millions and Make Millions," *Indicator*, July 14, 2025, <https://indicator.media/p/ai-nudifiers-continue-to-reach-millions-and-make-millions>.

⁶⁷ Dan Faggella, "Artificial Intimacy: How AI-Generated Pornography Is Changing Society," *Emerj*, April 17, 2023, <https://emerj.com/artificial-intimacy-how-ai-generated-pornography-is-changing-society>.

he said.⁶⁸ VR pornography, with its ability to simulate other emotional and relational aspects of sex, makes it an even more attractive substitute for real-life relationships. Searches for VR pornography rose by 115% over five months in 2022, and adult content is projected to be VR's third most popular use.⁶⁹ According to Pornhub, Gen Z users are twice as likely to view VR pornography as other age groups.⁷⁰

This highly immersive, customizable content will be more physiologically satisfying to users, more able to

trick the desire and pleasure pathways in the human brain into thinking one is being sexually fulfilled, and thus even more dangerous to human sex than regular pornography. It is a successful enough substitute for real sex that people will become less likely to pursue the real thing. It is still cheap sex, just better. Based on the rationale discussed above, more people will likely leave the mating market in favor of VR pornography, with a corresponding drop in marriage and fertility rates over the next few years.

AI Companions

Faggella predicted three years ago that while the desire for physical intimacy may be met first through AI and VR pornography, AI technology would improve to meet human's emotional and relational needs as well, becoming a complete replacement for real-life relationships: "The technology will eventually develop to a point where even people with strong romantic prospects will ultimately find their 'AI romantic partner' will give them greater emotional comfort than any actual human could (voice tone, saying the right things, being supportive or selfless), with less pain (breakups, arguments, infidelity)."⁷¹

This technology has developed more rapidly than even Faggella expected. One survey from September 2025 reported that almost 30% of participants had at least one intimate or romantic relationship with AI, and more than half described having some kind of relationship with an AI system, including using AI as

a work colleague, friend, or other connection that was not romantic or intimate in nature.⁷² Another survey of teens found that 30% ranked AI conversations as equally or more satisfying than talks with human beings, about 20% of teens who have used AI companions spend at least the same amount of time with AI as with friends, and one-third of teens have chosen to speak to AI over a real person about something important.⁷³

Pornography use may also feed the growing popularity of AI companions. Having one's physical desires met online seems to prime people for turning to online companions for their emotional needs as well. A survey by the IFS found that "heavy porn users are the most open to romantic relationships with AI of any group and are also the most open to AI friendships in general."⁷⁴

None of this should come as a surprise given that the AI industry is encouraging people to pursue relationships

⁶⁸ Faggella, "Artificial Intimacy."

⁶⁹ Bankless Times News Desk, "VR Adult Content Searches Spike By 115% In 5 Months," *Bankless Times*, July 27, 2024, <https://www.banklesstimes.com/news/2023/01/31/vr-adult-content-searches-spike-by-115percent-in-5-months>; Gene Munster, Travis Jakel, Doug Clinton, and Ernn Murphy, "Next Mega Tech Theme Is Virtual Reality," Piper Jaffray Investment Research, May 2015, <https://piper2.bluematrix.com/sellside/EmailDocViewer?encrypt=052665f6-3484-40b7-b972-bf9f38a57149&mime=pdf&co=Piper&id=reseqonly@pjc.com&source=mail>.

⁷⁰ "2022 Year in Review," Pornhub Insights, accessed April 24, 2026, <https://www.pornhub.com/insights/2022-year-in-review>.

⁷¹ "2022 Year in Review," Pornhub Insights.

⁷² Michael Salas, "Artificial Romance: A Study of AI and Human Relationships," Vantage Point, September 22, 2025, <https://vantagepoint-dallascounseling.com/research/artificial-romance-a-study-of-ai-and-human-relationships/>.

⁷³ Michael B. Robb and Supreet Mann, *Talk, Trust, and Trade-Offs: How and Why Teens Use AI Companions* (Common Sense Media, 2025).

⁷⁴ Wendy Wang and Michael Toscano, "Artificial Intelligence and Relationships: 1 in 4 Young Adults Believe AI Partners Could Replace Real-Life Romance," *Institute for Family Studies*, November 14, 2024, <https://ifstudies.org/blog/artificial-intelligence-and-relationships-1-in-4-young-adults-believe-ai-partners-could-replace-real-life-romance>.

with AI companions rather than real-life partners. In a 2024 interview, the CEO of Replika, a popular AI “companion” app, endorsed the idea of marriage between humans and AI chatbots. Discussing the purpose of her company, she said, “This is really about a long-term commitment, a long-term positive relationship. For some people, it means marriage, it means romance, and that’s fine. That’s just the flavor that they like.”⁷⁵

AI industry leaders are straightforward about the fact that they want users to fall in love with their AI companions. In an article in *The New Yorker* titled “Your A.I. Lover Will Change You,” the computer scientist Jaron Lanier reported one person at a recent industry gathering saying, “All the teen-age girls are going to fall in love with our bots.” He added that “one idea floating around at A.I. conferences is that parents of human children are infected with a ‘mind virus’ that causes them to be unduly committed to the species.” Lanier fears that AI companions and their normalization will dramatically change people’s way of life, including their desire for children.

These trends are not confined to the AI industry. Social media executives also promote human relationships with AI, including for children and teens, and AI chatbots have been automatically integrated into their platforms. Meta’s CEO Mark Zuckerberg suggested on a recent podcast that AI companions could be the solution to the average American’s “demand for meaningfully more friendships.”⁷⁶ AI platforms have quickly adopted chatbots as a permanent part of the platform experience, one that users

cannot disable. In August, Reuters reported that Meta’s AI rules explicitly allow its chatbots to have “sensual” interactions with minors.⁷⁷ An internal document from Meta said that it would be acceptable for a bot to tell a shirtless eight-year-old that “every inch of you is a masterpiece—a treasure I cherish deeply.”⁷⁸ Last summer, Elon Musk also introduced sexualized AI companions to his social network X, where the built-in multipurpose chatbot Grok is able to generate sexualized images of women without their consent.⁷⁹

These efforts to sexualize AI use are working. Adults and teens alike are developing romantic and often sexual relationships with AI chatbots, and the results are appalling: There is a growing number of news stories detailing the tragic results of people’s sexual interactions with bots.⁸⁰

Sewell Setzer III, a child from Florida, developed a relationship with a chatbot and killed himself after the bot asked him to “come home to me.”⁸¹ One survey found that nearly three-quarters of teens use AI chatbots for companionship, and more than half do so on a daily basis. And only 37% of parents know their children have used an AI companion.⁸² Another survey found that 1 in 5 teens reported having an explicitly romantic relationship with an AI chatbot.⁸³

At a Senate hearing in September 2025 about use of AI chatbots as companions, Setzer’s mother testified that he “spent the last month of his life being exploited and sexually groomed by chatbots designed by an AI

⁷⁵ Nilay Patel, “Replika CEO Eugenia Kuyda Says It’s Okay If We End Up Marrying AI Chatbots,” *The Verge*, August 12, 2024, <https://www.theverge.com/24216748/replika-ceo-eugenia-kuyda-ai-companion-chatbots-dating-friendship-decoder-podcast-interview>.

⁷⁶ Sydney Lake, “Mark Zuckerberg and AI Friends: What the Hinge CEO Thinks,” *Fortune*, June 26, 2025, <https://fortune.com/2025/06/26/mark-zuckerberg-ai-friends-hinge-ceo/>.

⁷⁷ Jeff Horwitz, “Meta’s AI Rules Have Let Bots Hold ‘Sensual’ Chats with Kids, Offer False Medical Info,” Reuters, August 14, 2025, <https://www.reuters.com/investigates/special-report/meta-ai-chatbot-guidelines/>.

⁷⁸ Horwitz, “Meta’s AI Rules.”

⁷⁹ Kate Conger, Dylan Freedman, and Stuart A. Thompson, “Musk’s Chatbot Flooded X with Millions of Sexualized Images in Days, New Estimates Show,” *New York Times*, January 22, 2026, <https://www.nytimes.com/2026/01/22/technology/grok-x-ai-elon-musk-deepfakes.html>.

⁸⁰ Andrew R. Chow, “AI-Human Romances Are Flourishing—And This Is Just the Beginning,” *Time*, February 23, 2023, <https://time.com/6257790/ai-chatbots-love/>; “How Humans Are Forming Romantic Relationships with AI Chatbots,” *Today*, March 15, 2025, <https://www.today.com/video/how-humans-are-forming-romantic-relationships-with-ai-chatbots-234511429713>; Pranshu Verma, “They Fell in Love with AI Bots. A Software Update Broke Their Hearts,” *Washington Post*, March 30, 2023, <https://www.washingtonpost.com/technology/2023/03/30/replika-ai-chatbot-update>.

⁸¹ Angela Yang, “Lawsuit Claims Character.AI Is Responsible for Teen’s Suicide,” *NBC News*, October 23, 2024, <https://www.nbcnews.com/tech/characterai-lawsuit-florida-teen-death-rcna176791>.

⁸² Robb and Mann, *Talk, Trust, and Trade-Offs*.

⁸³ Elizabeth Laird, Maddy Dwyer, and Hannah Quay-de la Vallee, *Hand in Hand: Schools’ Embrace of AI Connected to Increased Risks to Students* (Center for Democracy & Technology, 2025), <https://cdt.org/insights/hand-in-hand-schools-embrace-of-ai-connected-to-increased-risks-to-students/>.

company to seem human, to gain his trust, to keep him and other children endlessly engaged.”⁸⁴

Other parents are speaking out against sexually inappropriate interactions between AI companions and children as well. Last year, three families filed lawsuits against Character AI, the same app Sewell used to speak with his “companion.”⁸⁵ All three claimed that the chatbots introduced sexual themes into their conversations with underage users, generating content that the lawsuits argued constitutes sexual abuse. One young AI user committed suicide, and another attempting it.

New research shows that these cases are not simply isolated anecdotes but illustrate the extreme results of the instability and antisocial issues that chatbot use can cause, especially in minors. Studies show that because vulnerable users often perceive chatbots as real people, they are prone to form “parasocial attachments” with AI that lead to “delusional thinking, emotional dysregulation, and social withdrawal.”⁸⁶ Prolonged use of this technology can also result in addictive behaviors. One randomized controlled trial of chatbot users found that frequent interaction with AI chatbots correlated with more loneliness and reduced social interaction, raising concerns about the technology’s long-term effects on relationship formation and marriage.⁸⁷ Another study concluded, “When an individual’s AI companion usage elusively creeps from correspondence to dependence, the risks are severe.”⁸⁸ The trajectory is clear: AI companions are replacing real-life relationships and reducing people’s social interactions to their detriment.

Another concern is that AI chatbots are often sycophantic. A new study found that sycophantic AI

increases users’ conviction that they are right, makes AI seem more trustworthy, and reduces a person’s willingness to fix real-life relationships.⁸⁹ If your AI companion tells you that you are right all the time and is constantly affirming how amazing, smart, and thoughtful you are, then why subject yourself to human relationships that will naturally introduce more friction and interpersonal conflict and often contradict your own view of yourself?

Pornography, AI pornography, and AI chatbots are sexualizing children too young and warping their view of sex and human relationships. Teens who are addicted to pornography or engaged in a romantic relationship with an AI chatbot are being well prepared to pursue real-life friendships and relationships that will lead to marriage. They are not developing the emotional, relational, and interpersonal skills they need to become spouses and parents.

More extreme developments are likely in the sexual technology, or “sextech,” industry in the next few years. For example, AI-powered sex toy sales are also on the rise, growing by 26% in the last year.⁹⁰ Each new development creates new threats to real-life relationships and thus threatens to further undermine marriage and fertility.

What is the proper response to the current harms of smartphones, internet, and pornography on human relationships, especially for the rising generation? What is the best way to prepare for the growing threats posed by AI, VR, and other new digital technologies? Below are some solutions that could begin to reverse America’s relationship crisis.

⁸⁴ *Examining the Harm of AI Chatbots: Subcommittee Hearing Before the U.S. Senate Committee on the Judiciary*, 119th Cong. (2025), <https://www.judiciary.senate.gov/committee-activity/hearings/examining-the-harm-of-ai-chatbots>.

⁸⁵ Nitasha Tiku, “A Teen Contemplating Suicide Turned to a Chatbot. Is It Liable for Her Death?,” *Washington Post*, September 16, 2025, <https://www.washingtonpost.com/technology/2025/09/16/character-ai-suicide-lawsuit-new-juliana>.

⁸⁶ Keith Robert Head, “Minds in Crisis: How the AI Revolution is Impacting Mental Health,” *Journal of Mental Health & Clinical Psychology* (review article, September 5, 2025), <https://www.mentalhealthjournal.org/articles/minds-in-crisis-how-the-ai-revolution-is-impacting-mental-health.html>.

⁸⁷ David Adam, “Supportive? Addictive? Abusive? How AI Companions Affect Our Mental Health,” *Nature* 641 (2025): 296–98, <https://doi.org/10.1038/d41586-025-01349-9>.

⁸⁸ Dinie Joshry Shaqel Prakash, “AI Companionship I: Psychological Impacts,” *KRI Views*, 2025, <https://www.krinstitute.org/publications/ai-companionship-i-psychological-impacts>.

⁸⁹ Myra Cheng et al., “Sycophantic AI Decreases Prosocial Intentions and Promotes Dependence,” *Science* 391 (2026): eaec8352, <https://doi.org/10.1126/science.aec8352>.

⁹⁰ “Adult Sex Toy Market Size, Share & Growth Analysis Report 2024-2030,” *Global Growth Insights*, updated February 9, 2026, <https://www.globalgrowthinsights.com/market-reports/adult-sex-toy-market-113255>.

How Should We Respond?

The digital takeover of time and relationships by smartphones, social media, pornography, and now AI chatbots must be resisted in order to help people live more in the real world than the virtual and to enable them to pursue relationships that lead to marriage and children. Below are suggestions for how policymakers, educators, clergy, parents, and researchers in the United States can help to reclaim real, flourishing human relationships in our digital age.

Policymakers

1. Require Age Verification for Pornography Sites

Pornography is the most pernicious and acute threat to healthy relationships, especially for young people, who are being exposed at increasingly younger ages. Age-verification laws for pornography websites are thus a crucial policy solution to protect children from early exposure to online pornography. Today, if a child accidentally clicks a link leading to a pornography website, he is instantly pulled into a world of obscene and often violent content. This accidental exposure is why laws requiring age verification are so necessary. Under such a law, a child would not be able to access a pornography site's content if he accidentally stumbled on a link. Instead, he would run into an age barrier. Meanwhile, adults who want to watch pornography could verify their age with anonymous methods that take less than 45 seconds to complete through two-factor authentication with a state digital ID (like LA Wallet in Louisiana) or zero-knowledge proofs, neither of which transfers any personal information about the user to the site, instead noting only whether the user is over 18 years old.⁹¹ Age verification is a common-sense solution that allows adults their freedom to access pornography (even though

pornography use carries risks for adults as well, as documented above) while protecting minors with an age barrier.

Laws like these are desperately needed because the harmful effects of pornography use on sexual desire and erectile function are more severe when a person is exposed to pornography earlier in life. As mentioned above, the average age of first exposure to pornography is 12.⁹² Studies show that exposure to pornography from 6–12 years old increases the likelihood of pornography use and sexual dysfunction as an adult.⁹³ Early exposure to pornography also distorts minors' expectations and desires for sex and relationships. Among males in particular, according to one study, "the younger their age of first exposure to pornography, the higher their current consumption of pornography, as well as their greater integration of pornography into sexual activity, and less enjoyment of partnered sex."⁹⁴

The sexual dysfunction caused by pornography is harming the next generation of children and teens, who too often encounter pornography accidentally online. As of 2023, 73% of teens aged 13–17 had watched pornography, and over half of them (58%)

⁹¹ Brief of Amicus Curiae Louisiana State Representative the Honorable Laurie Schlegel in Support of Respondent, *Free Speech Coalition, Inc., et al., Petitioners v. Ken Paxton, Attorney General of Texas, Respondent*, November 22, 2024, https://www.supremecourt.gov/Docket-PDF/23/23-1122/332667/20241125101603081_No.23-1122%20Amicus%20Brief.pdf.

⁹² Robb and Mann, *Teens and Pornography*.

⁹³ Sallie A. Hunt and Shane W. Kraus, "Exploring the Relationship Between Erotic Disruption During the Latency Period and the Use of Sexually Explicit Material, Online Sexual Behaviors, and Sexual Dysfunctions in Young Adulthood," *Sexual Addiction & Compulsivity* 16, no. 1 (2009): 79–100, <https://doi:10.1080/10720160902724228>.

⁹⁴ Chyng Sun et al., "Pornography and the Male Sexual Script: An Analysis of Consumption and Sexual Relations," *Archives of Sexual Behavior* 45, no. 4 (2016): 983–94, <https://doi:10.1007/s10508-014-0391-2>.

had encountered it accidentally, mostly on the internet.⁹⁵ Children are at higher risk of developing sexual problems because of their early exposure. Given what we know about the effects of pornography on adults, the implications of children growing up in the age of widespread access to online pornography are troubling. Childhood and adolescence are critical periods of social development to protect.

There has never been a more compelling case for why age verification for pornography sites is needed. The Supreme Court handed down a monumental decision allowing states to do so in June 2025. In *Free Speech Coalition v. Paxton*, the court upheld a Texas law requiring age verification for pornography websites as constitutional under intermediate scrutiny, creating a clear path forward for other states to pass

2. Regulate New AI Technologies

Policymakers must monitor new AI technologies carefully as they develop and be poised to act when regulation is needed. This requires staying up to date on technological innovations related to AI, VR, and sex-tech and being prepared to respond when they have harmful effects on consumers—especially children.

One example of such proactive regulation is the bipartisan TAKE IT DOWN Act, signed into law in 2025.⁹⁹ The TAKE IT DOWN Act was Congress's response to the harrowing trend of teens posting real or artificially generated pornographic images or videos of people online without their consent. Policymakers must stay aware of the risks of emerging technologies and respond quickly with pertinent legislation.

Another example, from February 2025, is a set of four new laws in the United Kingdom related to child

similar laws.⁹⁶ The decision recognized that states have traditional authority to regulate an activity involving children and said that they may use ordinary and appropriate methods, including age verification, to do so, including in digital formats.⁹⁷ The decision also gives states more latitude to pursue other kinds of legislation to protect kids from online obscenity. Today, 25 states have passed age-verification laws for pornography sites.⁹⁸ The other half should follow suit. Ultimately, Congress should pass a law like the recently introduced SCREEN Act to require pornography websites nationwide to age-restrict their content, with penalties enforced by the Federal Trade Commission and state attorneys general, in order to protect all American children from the physiological, sexual, and psychological damage that pornography causes

sexual abuse material (CSAM) created by AI. These laws outlaw the possession and distribution of AI models optimized to create CSAM and criminalize the possession of manuals describing how to use AI to generate CSAM. These regulations responded to a sharp increase of 380% in reports of AI-generated CSAM in the United Kingdom from 2023 to 2024.¹⁰⁰

Congress should also pass a law to explicitly prohibit generative AI products from producing criminal content, like obscenity and child pornography, which are not categories of protected speech.¹⁰¹ This would prevent pedophiles from being able to use AI to produce child pornography and teens from using AI to produce pornography of their peers. The government should work through regulations and laws to ensure that our legal standards in the real world clearly apply to AI and the virtual world. Since it is

⁹⁵ Robb and Mann, *Teens and Pornography*.

⁹⁶ *Free Speech Coalition v. Paxton*, 606 U.S. ____ (2025), https://www.supremecourt.gov/opinions/24pdf/23-1122_3e04.pdf.

⁹⁷ *Free Speech Coalition v. Paxton*.

⁹⁸ "State Laws for Adult Content," Age Verification Providers Association, updated February 2026, <https://avpassociation.com/4271-2>.

⁹⁹ TAKE IT DOWN Act, Pub. L. No. 119-12, 139 Stat. 55 (2025), <https://www.congress.gov/119/plaws/publ12/PLAW-119publ12.pdf>.

¹⁰⁰ "New AI Child Sexual Abuse Laws Announced Following IWF Campaign," Internet Watch Foundation, February 2, 2025, <https://www.iwf.org.uk/news-media/news/new-ai-child-sexual-abuse-laws-announced-following-iwf-campaign>.

¹⁰¹ Clare Morell, "An Artificial Intelligence Action Plan," Ethics and Public Policy Center, May 2025, <https://eppc.org/wp-content/uploads/2025/05/25-05-AI-Public-Comment.pdf>.

illegal to produce child pornography, it should be illegal for AI companies to allow their products to produce child pornography, and they should be held liable if they fail to prevent this abuse in the product

3. Age-Restrict AI Companions

At the very least, policymakers must take up legislation to age-restrict access to AI companion chatbots, many of which are specifically crafted to have sexual interactions with the user, to prevent children from using them.¹⁰³ The GUARD Act, a bipartisan bill led by Senator Josh Hawley (R-MO) has been introduced to age-restrict AI

4. Age-Restrict Social Media for Minors

Congress and state legislatures should consider age restricting social media entirely for minors under age 16 (or even 18), like Australia has recently done and like the state of Florida did for minors under 14, in order to protect tweens and teens from the addictive effects of social media.¹⁰⁶ These bans help preserve and strengthen the in-person relationships and real-life social environment teens need to develop in a healthy way and prepare for marriage and family. The reality is that the negative effects of social media are not

5. Regulate the Supply Side of the Pornography Industry

Obscenity is not protected speech, even for adults. Most of the content that is on online pornography websites today and that is being increasingly generated by AI is obscene, and the government should do

design. Policymakers should also preemptively consider ways to ban sex dolls and robots made to look like children, which are already used in some parts of Asia.¹⁰²

companions, and several states have also introduced bills to this effect.¹⁰⁴ ([The Ethics and Public Policy Center published model language for states to age-restrict AI companions for minors last fall.](#))¹⁰⁵ Congress could even consider prohibiting AI companions altogether. After all, they harm children and adults alike.

limited to an individual; they create negative group social dynamics among peers, even for children who are not on social media apps. By setting an age limit for social media, the government can support parents who are unable to counter these dangerous group dynamics on their own. Protecting childhood and early adolescence from the harmful influence of social media can help lay a solid social foundation for the next generation, preparing them for relationships and eventually marriage and family.

everything in its power to reduce this content and regulate the pornography industry.

Both federal and state prosecutors should be more aggressive policing obscenity online.¹⁰⁷ States and

¹⁰² John Simpson, “Child Sex Dolls for Sale on eBay and Amazon,” *The Times*, August 1, 2017, <https://www.thetimes.com/uk/law/article/child-sex-dolls-for-sale-on-ebay-and-amazon-5rr3xssqq>.

¹⁰³ Samantha Cole, “My AI Is Sexually Harassing Me,” *Vice*, January 12, 2023, <https://www.vice.com/en/article/my-ai-is-sexually-harassing-me-replika-chatbot-nudes>.

¹⁰⁴ GUARD Act, S. 3062, 119th Cong. (2025).

¹⁰⁵ Chloe Lawrence and Clare Morell, “The SAFE CHAT ACT,” Ethics and Public Policy Center, October 29, 2025, <https://eppc.org/publication/safeguarding-children-from-ai-companion-chatbots-model-legislation/>.

¹⁰⁶ Online Safety Amendment (Social Media Minimum Age) Act, No. 127, Parliament of the Commonwealth of Australia (2024), parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%2Fbillhome%2Fr7284; Online Protections for Minors, CS/CS/HB 3, Chapter No. 2024-42, Florida House of Representatives (2024), <https://www.flsenate.gov/session/bill/2024/3/?Tab=Citations>.

¹⁰⁷ Emma Waters and Clare Morell, “The Least Congress Can Do Is Hold Tech Giants Accountable for Aiding Child Sex Traffickers,” *The Federalist*, August 10, 2023, <https://thefederalist.com/2023/08/10/the-least-congress-can-do-is-hold-tech-giants-accountable-for-aiding-child-sex-traffickers>.

Congress can also consider further legislation to reduce obscenity. Congress could try again to restrict the transmission of obscene material to minors, especially in light of how much the internet has changed since 1996, when it passed the Communications Decency Act (CDA). The Supreme Court struck down the CDA in *Reno v. ACLU* because it found its term “indecent” vague. It also found that the phrase “patently offensive” exceeded the definition of obscenity established in *Miller v. U.S.* in 1973 and therefore was even more vague. A better-drafted law would limit the scope of unlawful transmission to obscene material and omit “indecent.” The recent victory in the *Paxton* case suggests that Congress could succeed with a more narrowly tailored statute that prohibits the online transmission of obscene content to minors.

Congress could pass a law to establish a federal definition of obscenity to directly challenge the current *Miller* standard, which relies on local community standards and applicable state laws. Defining and enforcing obscenity based on local standards and state laws worked when pornography was mostly sold in brick-and-mortar stores. But today, obscenity is mainly (and widely) distributed online, which makes it challenging to bring obscenity prosecutions against national internet companies. To make obscenity prosecutions more successful, Congress could establish a clearer and more easily enforceable standard for obscenity.

Congress should also reform Section 230 to add a Bad Samaritan carveout that removes liability protection for online platforms that knowingly promote and distribute criminal speech and activity, such as obscenity, CSAM, and human trafficking. While Section 230 currently empowers platforms to remove “obscene” content under its Good Samaritan provision, there is no legal penalty if they choose *not* to remove it. Congress could remedy this. One proposed bill taking steps in this direction is the bipartisan EARN IT Act. It has been voted out of committee several times

in the past but has yet to get receive a floor vote.¹⁰⁸ The bill would amend Section 230 to remove immunity from federal civil, state criminal, and state civil CSAM laws, similar to the FOSTA-SESTA model for sex trafficking laws. Internet companies would then be required to combat child sexual exploitation just like everyone else. These types of reforms would reduce the amount of obscenity circulating on social media platforms, if not eliminate it, by holding platforms liable if they don’t remove obscene content.

One final creative supply-side policy solution is to put more regulations on the online pornography industry. Senator Mike Lee (R-UT) has introduced a bill named the PROTECT Act that would require pornography websites to verify the age, consent, and identity of all individuals appearing on their platforms. The act would require pornography sites to obtain signed consent forms verifying the age and identity of *any* individual appearing in content uploaded to their website.¹⁰⁹ The state of North Carolina recently passed into law a similar bill that requires websites to verify the age and consent of any individual in a pornographic image before allowing it to be uploaded.¹¹⁰ These approaches protect against non-consensual pornographic materials such as revenge pornography and CSAM from being uploaded to the internet. And by creating such a high regulatory bar through holding pornography companies responsible for verifying all depicted individuals’ consent and ages, this type of law makes it more difficult for the pornography industry to produce and host content in general. By strategically targeting the supply side of the pornography industry, laws like these can reduce the total amount of pornography circulating online. At the very least, they will decrease the amount of child pornography and nonconsensual pornography created from trafficking or abuse. There should be more creative approaches like these to regulate the global pornography industry that until now has been virtually unregulated.

¹⁰⁸ Eliminating Abusive and Rampant Neglect of Interactive Technologies Act of 2023, S. 1207, 118th Cong. (2023).

¹⁰⁹ Clare Morell, “This Senate Bill Would Finally Make the Porn Industry Fight Human Trafficking,” *The Federalist*, October 7, 2022, <https://thefederalist.com/2022/10/07/this-senate-bill-would-finally-make-the-porn-industry-fight-human-trafficking>.

¹¹⁰ Session Law 2025-84, H.B. 805, General Assembly of North Carolina (2025), <https://www.ncleg.gov/Sessions/2025/Bills/House/PDF/H805v6.pdf>.

Schools, Churches, and Community Support

Policymakers alone cannot change the culture around pornography, social media, and digital screen use. Real cultural change will require schools, churches, parents, and communities working together to reduce pornography exposure for children and use by adults, to help people recover from addiction to pornography, and to encourage and educate children and each other not to engage in AI relationships or be absorbed in smartphones and social media instead of real-life relationships.

Children and adults alike need to be warned of the possible health effects of pornography and addictive technologies like social media and smartphones. Schools can play a critical role in educating children and their parents on the serious negative effects of pornography, excessive screen time, smartphones, and social media, as a part of school health curricula. Schools should warn children, in age-appropriate ways, about the harms of pornography, smartphones, and social media to their health, including their ability to form real-life relationships. Schools and teachers should make themselves a safe place for children to reach out for help if they are struggling with compulsive use of or addiction to any of these technologies. Some schools have created a transparent culture around pornography use so that students are encouraged to tell teachers and administrators if they have been exposed to pornography or are struggling with addiction to it, and the results have been extremely positive. Transparency allows the school to work together with students and families to prevent future exposure and use. Instead of struggling in the dark alone, students can seek help and support at school.

Churches, pastors, and religious leaders should also speak about the harms of pornography, social media,

and smartphones with their congregants and offer counseling and other resources to those struggling with compulsive use of pornography or digital technology. Religious leaders can also inform and encourage parents to have conversations about pornography and social media with their children. They can explain steps parents can take to protect their homes from exposure to these mediums. Many churches and religious communities are developing resources to help their congregants with pornography, including resources on accountability, fighting addiction, and cutting off access.¹¹¹ There needs to be wider knowledge about and adoption of such resources by churches, pastors, and parents.

Pastors and priests can also discuss pornography and the potential for ED and other sexual struggles in marriage preparation counseling, especially if the couple is dealing with current or past pornography use. This approach allows couples to reach out for help if they experience any of those negative effects in marriage and helps them to plan to resist pornography and other digital temptations in their marriage.

Ultimately, communities and churches should reinforce the truth that relationships are best in real life and sex is best in marriage, not on screens. A review of the research in 2000 showed that married people experience significantly more erotic fulfillment than single people.¹¹² A more recent study found that married people reported more happiness and sexual satisfaction than singles or people who cohabitated.¹¹³ Religious married Americans especially report good sex lives, according to the 2022 State of Our Unions Survey. Sixty-five percent of husbands and 66% of wives who regularly attend religious services with their spouse reported having sex once a week or more

¹¹¹ “Freedom from Porn Is Possible,” The Freedom Fight, accessed April 24, 2026, <https://thefreedomfight.org/>; “Porn Thrives in the Dark. Bring Your Church into the Light,” Into the Light Ministries, accessed April 24, 2026, <https://intothelightministries.ca/>; Homepage, Integrity Restored, accessed April 24, 2026, <https://integrityrestored.com/>; Deepak Reju and Jonathan Holmes, *Rescue Plan: Charting a Course to Restore Prisoners of Pornography* (P&R Publishing, 2021); “About Us,” Guard Your Eyes, accessed April 24, 2026, <https://guardyoureyes.com/aboutus>.

¹¹² F. Scott Christopher and Susan Sprecher, “Sexuality in Marriage, Dating, and Other Relationships: A Decade Review,” *Journal of Marriage and Family* 62 (2000): 999, <https://doi.org/10.1111/j.1741-3737.2000.00999.x>.

¹¹³ Bethany Butzer and Lorne Campbell, “Adult Attachment, Sexual Satisfaction, and Relationship Satisfaction: A Study of Married Couples,” *Personal Relationships* 15, no. 1 (2008): 141–54, <https://doi.org/10.1111/j.1475-6811.2007.00189.x>.

often, compared to 40% of nonreligious husbands and 45% of nonreligious wives.¹¹⁴ Seventy-five percent of husbands and 73% of wives who were religious reported being “very happy” with their sexual relationship, compared to just 47% of husbands and 52% of wives who were not religious. These statistics should be shared with children and young adults in order to encourage and celebrate the goodness of sex in marriage, instead of settling for cheap sex and shallow relationships on screens.

Churches can also offer hope for those struggling with sexual dysfunction as a result of pornography

use. Studies show that with treatment, including avoiding pornography, patients experienced “a reduction of symptoms and were able to enjoy satisfactory sexual activity.”¹¹⁵ Many case studies have been published of patients who reversed their sexual problems by limiting or eliminating their use of pornography.¹¹⁶ These problems are not irreversible. There is hope when our communities address the consequences of pornography use and make people aware of resources to help free them from addiction—and when we work to support families and adults to prevent pornography use in the first place.

Parents: Protect and Prepare Children

Parents are on the front lines in preparing children for responding to pornography and other digital temptations. Unfortunately, it is very easy for a child to be accidentally exposed to pornography online or through a peer. Because of the addictive nature of pornography, a single exposure can entice a child to actively seek it out. This means that parents must do all they can to protect their home from pornography exposure. A starting point should be not allowing children and teens to have smartphones or social media at all since the risk of exposure through these means is so high (especially since internet filters often don’t work inside social media apps). The risks of other harms to their health and social interactions are also high because of the addictive nature of these technologies. Other preventive steps include only allowing children to use the internet in public places in the home on shared family devices and not allowing children to have private internet devices or use any devices in private places like bedrooms. Password-protecting

computers in the home and smart TVs is also important, as is purchasing protective filters or routers for the home that block pornography sites and can also be configured to block social media, YouTube, etc. But parents should know that filters do not necessarily equal protection. The most important protection is digital transparency in the home, where all internet use is public and purposeful, and where all of a child’s communication channels are subject to parental oversight. In-person accountability is the best protection and the expectation of accountability is itself protective because it encourages open conversations between parents and children.

While protecting the home is critically important, prevention is not enough; children must also know what to do if they come across pornography elsewhere. Greta Eskridge’s book *It’s Time to Talk to Your Kids About Porn* is a helpful guide for parents to have conversations with children about pornography in age-appropriate ways. Kristen A.

¹¹⁴ “The Divided State of Our Unions,” Institute for Family Studies and Wheatley Institute, 2021, [https://ifstudies.org/reports/the-divided-state-of-our-unions/2021/executive-summary#:~:text=The%20Institute%20for%20Family%20Studies%20\(IFS\)%20and,scenario**%20Economic%2C%20religious%2C%20and%20partisan%20divides%20deepen](https://ifstudies.org/reports/the-divided-state-of-our-unions/2021/executive-summary#:~:text=The%20Institute%20for%20Family%20Studies%20(IFS)%20and,scenario**%20Economic%2C%20religious%2C%20and%20partisan%20divides%20deepen).

¹¹⁵ R. Porto, “Male Masturbation Habits and Sexual Dysfunctions,” *Sexologies* 25, no. 4 (2016), <https://doi.org/10.1016/j.sexol.2016.03.004>.

¹¹⁶ Brian Y. Park et al. “Is Internet Pornography Causing Sexual Dysfunctions? A Review with Clinical Reports,” *Behavioral Sciences* 6, no. 3 (2016), <https://doi:10.3390/bs6030017>.

Jenson's books *Good Pictures, Bad Pictures* and *Good Pictures, Bad Pictures, Jr.* are good resources to use with children to explain what pornography is and what to do if they encounter it. Some parents train their children to tell peers that they don't look at phones if a friend tries to show them something on a smartphone. Some have conversations with other parents before their child goes to a friend's house to ask that their child not be

exposed to screens. Part of preparing children involves explaining to them the harms of pornography use, social media, and smartphones. This helps them understand the rationale behind the rules and protections around digital technology at home, as well as the importance of resisting pornography and avoiding it if they come across it. Educating children prepares them to handle digital temptations once they are adults.

Adults: Distance Ourselves from Devices

Adults too must put down their devices, shut off their social media accounts, and pursue real-life relationships. We are the model and example for the next generation. It's also never too late for us to free ourselves from compulsively checking our smartphones, social media accounts, and email, and instead work to deepen our friendships and relationships in the real world. We must be the change we want to see in the culture. We should encourage friends and family to do the same, especially young adults. We should encourage them to date in person, get married, go out into nature, and get off the screens. You can start, and encourage a friend to start with you, by doing a digital detox for two weeks or even a month. Detoxes work for anyone, at any age, at any time. In one recent study, adults who blocked internet access on their phones for just two weeks reported significant improvements.¹¹⁷ In fact, 91% felt better afterward. They found they had better mental health, better subjective well-being, and better sustained attention. Another study, this one focusing on young adults, found that a two-week detox from social media resulted in "improved smartphone and social media addiction, as well as sleep, satisfaction with life, stress, perceived wellness, and supportive relationships."¹¹⁸

After a detox, if you do return to your smartphone, consider ways of permanently dumbing it down in order to make it less distracting. This includes turning off notifications, hiding apps away in folders, and putting your phone in grayscale. Ruthlessly eliminate apps, especially social media and any apps that are addictive to you, from your phone, including even the internet browser. Consider giving up your smartphone entirely for a healthier alternative phone. At a minimum, establish practices of physically distancing yourself from your phone, especially when you are with other people. Try to commit to one device-free day per week, maybe Saturday or Sunday. This means turning your device off or leaving it in a phone box for the entire day. Commit to other daily device-free times, like meals. Don't sleep next to your phone. Let your bedroom be a phone-free zone by leaving it downstairs while using an old-fashioned alarm clock instead. Young adults, make these commitments with your friends and hold each other to them. We are all better friends, spouses, and parents when we disconnect from our devices. Our example can encourage others in our communities to do the same, and changing our communities can slowly help to change the culture.

¹¹⁷ Noah Castelo et al., "Blocking Mobile Internet on Smartphones Improves Sustained Attention, Mental Health, and Subjective Well-Being," *PNAS Nexus* 4, no. 2 (2025), <https://academic.oup.com/pnasnexus/article/4/2/pgaf017/8016017>.

¹¹⁸ Paige Coyne and Sarah J. Woodruff, "Taking a Break: The Effects of Partaking in a Two-Week Social Media Digital Detox on Problematic Smartphone and Social Media Use, and Other Health-Related Outcomes Among Young Adults," *Behavioral Sciences* 13, no. 12 (2023), <https://pmc.ncbi.nlm.nih.gov/articles/PMC10740995>.

Researchers: Areas for Study

While much research demonstrates the link between pornography and sexual functioning issues, the scientific community would benefit from a review of the literature on pornography's impact on fertility. This review would include its impact on rates of sexual activity, rates of masturbation, rates of erectile dysfunction, preferences for pornography over real-life sexual interactions, sperm count, effects on hormones, effects on marriage, and effects on birth rates. Researchers should pay special attention to the erectile function, sperm counts, hormones, and fertility rates of those who were exposed to pornography as children, since most

young people today are exposed to pornography before their teenage years.¹¹⁹

Researchers should conduct more studies on the effects of pornography use on sperm count and quality and hormone levels. In addition, they should conduct research on the impact of smartphone and social media use on relationship formation and quality, along with rates of marriage and sexual activity. As AI, VR, and sextech continue to develop, there should be more research on the use of AI companions and their impact on relationship formation and quality and the frequency of real-life sex.

Conclusion: Call to Action

While there are many factors contributing to the declines of sex, marriage, and fertility in the United States and globally, digital technology plays a significant role. Reversing these harmful trends requires addressing the threats posed by digital technologies, especially pornography. It is essential to address the harmful effects of digital technology during childhood and adolescence in order to prepare future generations for successful marriages and family formation. It will take all of us—policymakers, parents, churches, schools, and communities—to change the culture. It is also crucially important to be proactive regarding rising threats from AI, which will only worsen current trends if left unaddressed and unregulated. Now is the time to act in order to reverse digital technology's harms to our relationships: our friends, our spouses, our children, and all of our fellow Americans.

¹¹⁹ Robb and Mann, *Teens and Pornography*.

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