
A TECHNOLOGICAL CURSE: SOCIAL MEDIA

Effects and Disorders Caused by the Advent of Online Social Media

Avante Edge Research

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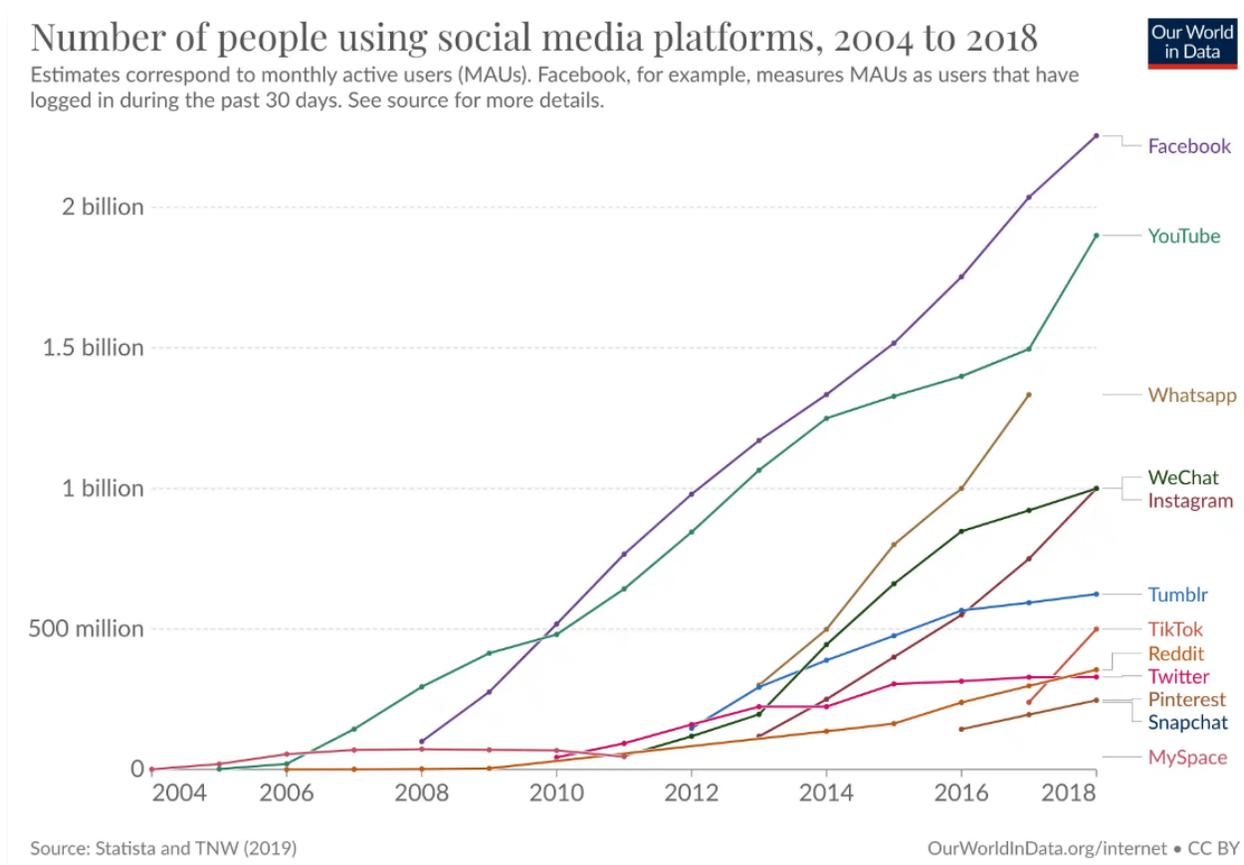
Correlation or Causation

In 2021-2023 multiple studies of the “suicidality” (meaning suicidal thoughts, plans, and attempts) of high school students were conducted; the results I believe will be shocking to most of us not of Generation Z. 30% of girls in high school had ‘highly considered’ suicide with 24% having ‘made a plan’ to kill themselves, and a final 16% having ‘attempted suicide.’ Actual successful suicides of persons aged 10 – 24 saw a 60% increase from 2007 to 2023 reaching ~11 deaths per 100,000 persons. A Center for Disease Control (CDC) study from 2021 showed that 57% of high school girls reported persistent feelings of hopelessness and sadness. High school boys are not nearly as affected but it is still concerning that 14% of them reported seriously considering suicide. Problems with happiness or suicide attempts for boys/men aren’t as sharp of jump, it is seemingly a slower gradual rise as time goes on, as males currently make up 80% of all suicides. Since 2015, diagnosed depression has reached 30% of the population.

Suicide and depression increase since the mid 2010’s are not solely in the US but in Western Europe as well. This would lead us to believe that there must be some commonality between the two regions. Usually, the long-standing customs and family dynamics of the varying European cultures produce a resilience against depression and anxiety. Strong familial and societal dynamics increase the feeling of belonging which greatly reduces the rates of depression, suicide, or other debilitating mental illnesses. So, what is this common ailment driving rates to new levels?

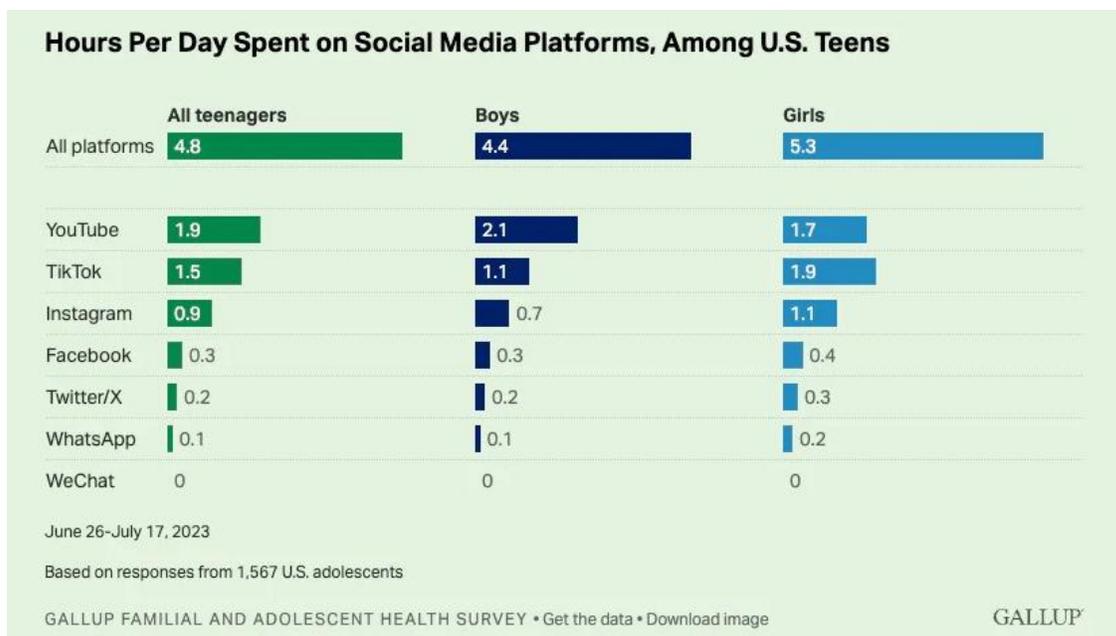
At first glance, one may blame the COVID lockdowns and the pandemic fear mongering that propelled our society into fractious squabbling. Another may blame that

younger generations have become “too soft” or some other denigratory phrase, but myself and many others, according to the sheer amount of research on the topic, believe that it is actually social media. Many studies that will be used in this paper have linked social media with increased anxiety, depression, loneliness, dissatisfaction, frustration, self-loathing, self-harm, suicidal ideations and actions, along with a plethora of other mental and even physical illnesses. The increase of these effects lines up with the release of smartphones and widespread adoption of intentional and unintentional addictive social media platforms that stormed the modern age. Social Media consumption exploded after 2012, going from 970 million users to 5 billion users in 2023. That is over 60% of the world’s population.



The Cost of Addiction

If you saw a dog constantly staring at the ground waiting for the moment a laser would be flashed, or that same dog digging for hours and hours per day in search of a bone, you would most likely think that there is something wrong with dog or that its sick. Multiple studies have been conducted over the previous decades using rats and an idea that animals will starve or die of thirst if given the choice between sustenance or “self-stimulation,” which was electrodes implanted into the Medial Forebrain Bundle and Posterior Hypothalamus or intravenous injection of cocaine or heroin. In the studies with the electrodes, 60% of the rats ignored food and would spend their sessions self-stimulating and starving. With the intravenous narcotics experiments mortality rates reached 90% of rats as they would choose the narcotics over food. Yes, I know we aren’t all choosing to inject drugs or press a lever that stimulates our brain on command, but what if



I told you that’s essentially exactly what you are doing. Humans obviously have a larger mental capacity to be disciplined to eat or drink food, but 50% of teenagers are spending 8.5 hours a day using a computer or phone and when filtered out for solely social media, its

nearly 5 hours each day on the apps. As technology becomes more available, more and more jobs, instruction, and activities are moving to screens. It is inevitable to have increased screen time in modern society, but mitigating the time spent or attempting to

“Social media platforms drive surges of dopamine to the brain to keep consumers coming back over and over again. The shares, likes and comments on these platforms trigger the brain’s reward center, resulting in a high similar to the one people feel when gambling or using drugs.” – Dr. Deangelis, CRNP
Director of Behavior Health

enforce constructive time will be an important skill to manage as children grow into adults. Why is Social Media addictive? Because it is designed to be so to put it bluntly. Social media is generally marketed as ‘free’, I would beg to differ, you pay with your time, our most precious commodity, and mental health. It is marketed to the user as this fun friendly place to keep up with your family and friends, but for an unfortunate majority, it is destructive to their self-esteem, happiness, and self-worth. Algorithms are designed to feed you what you interact with, hover over, and even **collect your facial biometric data** to judge how you physically respond to products you are seeing. Your faceprint, voiceprint, personal behavior, and expressions are captured through your phone by social media apps and stored to be analyzed and sold to companies. These apps use your front-facing camera (which was marketed for ‘better selfies’...) to record and distinguish your race, gender, and ethnicity for ad

targeting. These are true and written in the ‘terms of agreement’ when you download apps

such as TikTok. Social media was not designed out of some moral good to provide people the ability to share events across the country, it was a framework designed to exploit the individuals who occupy its pages and accounts, it is to make money. In order to make that money, the engineers must keep one using the phone or computer. Time spent on the applications boosts number of ads that are able to be pushed to the user. These designers ensure that sounds, colors, animations, and so on activate brain regions that are part of the mesolimbic dopamine system.

Attention Engineering as it's called, is the fulcrum driving employees to study, research, and develop addictive principles to the applications. Leveraging deep human emotions of connection, survival, competition, reproduction, and social relationships, companies create mechanisms that play off or feed into these innate activities in the human brain. Some examples.

- **Gamifying:** Such as Snap-chat streaks, as users message each other they will gain these public icons to their avatar, this denotes varying levels of connectivity or "friendship." Currently, the streak drives daily use and engagement, with the current record holders holding over 3000 chats to each other, pursuit of these streaks highly incentivizes young users to go for attention seeking records.
- **Validity:** The number of followers and "Like" button, provides social validation. In much of modern society, more followers and likes not only makes one feel accepted among friends, but also in a dangerous sense more "correct" when arguing topics. If someone has 10,000 followers vs 100 followers in an online debate, social pressure of conformity, size of the audience supporting the

individual, and large crowd approval will push more people to believe something is truthful, regardless of the facts supporting the statement. That conformity also is physical, if there are thousands of women that are popular that have implants and makeup receiving retweets, shares, and tens of thousands of likes, impressionable teenagers or even adults are likely to act on getting surgery or surgeries to look like those famous influencers. This comparison of beauty also drives the depression and self-loathing mindset when they aren't as pretty, popular, or having as much fun.

- **FOMO (Fear of Missing Out):** Considered one of the most successful strategies is playing on this sense of missing out. Push notifications alert you that your friends or family members are doing or saying something, yet you don't know until you open the message, driving you to open the app. This FOMO also comes in another form of use during the app, you see friends and family, or complete strangers showcasing themselves in a perfect (perceptively) world. This façade drives people to reflect on their current situation and possibly feel bad that they don't have the fast car, the bougie apartment, or the perfect outfits for all the parties.
- **Endless Search:** This is the intermittent reinforcement of rewards. Humans crave to find patterns and will work hard and persistently to find them. For more information on the variable reward process look up the "Skinner's Box" experiment. These rewards are wired into the brain for self, tribe, and the hunt. Individual impulses to search and learn kept us solving problems for sustenance. This has been manipulated via attention grabbing texts, colors, and images to

drive an intrigue to continue the search, related to the slot machine effect of addiction.

These are but a few of the techniques used, mixing all of these into the apps creating an incredibly addictive medium and the results of such an addictive substance is detrimental on varying degrees to most every user. In 2017, research done by several individuals at the University of Chicago discovered that even the mere presence of a smart phone leads to a phenomenon coined "Brain Drain," the reduction of focus and cognitive capacity in the presence of a smart phone. The Recovery Center of Niagara studies show that not only are addictions increasing, but even a fear of not having their cellphone affects 40% of respondents. A Study of Baylor University discovered that 60% of their college students self-admitted to being addicted to their cellphones. Lists of reports and studies go on, yet it is seemingly not considered as big of a threat as it should be.

The Two-Faced Rectangle

If there was a window that you could hang in your teenage daughter's room that anyone at anytime could look into... would you install it? Or if that same window projected grotesque displays of perverted actions and ideas, would you hang it? I'm assuming not. These rectangles offer endless stimulation and information, especially for increasingly explicit and sexualized materials that have overtaken modern society. Young people (Gen Z) have a difficult time limiting social media use as it has been woven into every aspect of their lives, they were born into it. Millennials received social media into their lives generally after their highly impressionable teenage years. With Gen Z, their parents,

teachers, friends, babysitters, everyone has been using it since their hippocampus started firing. As they grow its used to for fun, romance, tragedy, learning, news, and more. It is easy to see why 90% of Gen Z (ages 12 – 27) use social media and when directly asked, 72% of them even reported they use it too much. Reaching back to conformity, though it may seem like a good idea to ensure your child is up to date with technology and social media, it can be highly detrimental opening them up to horrifying images or being pressured into sexualizing themselves online.

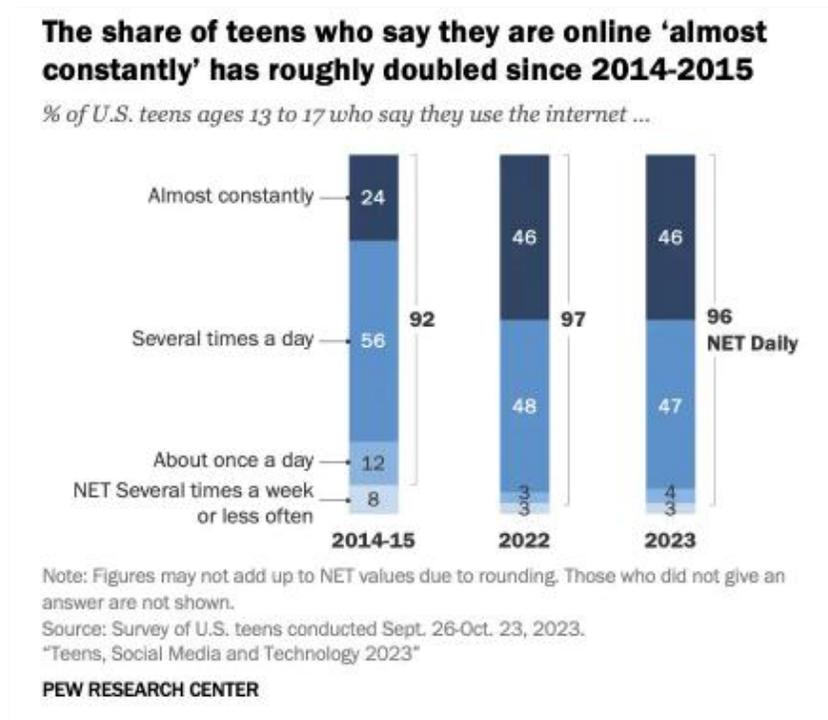
Social media also opens a two-way street of perverted consumption or projection. For example, 80% of Gen Z is on TikTok, 6 of the 15 years of that generation are under the legal age of adulthood, equating to ~40%. We can also just look to TikTok for the answers as it reports that 21% of its users are of the ages 13-18, as you “can’t” use TikTok if you are under 13. Though the age limit is set, TikTok stated in 2021 they banned 7.1 million accounts for being under the age of 13. A disgusting trend that is spreading on TikTok started with their “Monetized Emojis.” Young girls, under the age of 18, are doing dances or tasks while live streaming on the app for these emojis that are traded in to TikTok for real money. Predators also attempt to lure the users away from TikTok telling them they could make hundreds of dollars quickly. That is a deep topic that you should research on your own, but this is part of the extreme sexualization plague on not only Gen Z, but society as a whole.

The over sexualization of social media has increased negative emotions with self-image, self-objectification, and body dissatisfaction. For hours a day, young women are being bombarded with hypersexualized images of their peers and those they admire,

emphasizing the focus on physical appearance and harmful or unrealistic beauty standards. Studies have shown that objectification and sexualization of women is linked to increased harassment and violence towards women. UNICEF USA states that 18% of girls report they have been victims of sexual assault by the age of 17. Social media norms have created narratives and teenagers conform to for their sexualized society, not only have 35% of teenagers received sexual texts or photos, snapchat was actually designed from an app called picaboo which was marketed as the place to send nude photos as they “disappear,” which is not true, they are stored on snapchat databases. Overconsumption of these sexualized lifestyles have led to extreme disorders for anxiety, eating, shame, and of course the previously mentioned depression. Dove, the beauty product company, has done studies in the UK that revealed 60% of teenagers avoid going to “in life” activities because concerns over their “looks.” In the US 81% of ten-year-old girls stated they have a fear of being fat. A study in Australia found that 90% of teenagers had “some level” of body image concern, with 66% stating that their image “stops them from doing physical activities” such as going to the beach or playing with friends. Another 36% stated that their image stops them from giving their opinion or standing up for themselves, and another 50% stated it has even prevented them from raising their hand in class. These are girls 12 - 18 years old... absolutely shocking at how destructive social media has become, and most Millennials and Gen X don't fully appreciate or understand. Our school days are completely different than our children's.

This hyper-sexualization also damages young boys'/men's expectations and perspective towards women. More than just social media affects this, sexual objectification is a key mechanism on both sides for this. The self-objectification of young girls is increased

from social norms, increasingly sexual activities surrounding everyday interactions through any medium of information consumption negatively affect the women's ability to know that their male counterpart is objectifying or dehumanizing them, or the young women is so affected by such a perversion of culture that they believe the behavior must be carried out, as in, that's the expectation of them. The sexual objectification from males onto females has, even from early studies, been seen as a natural component of the sexual relationship of men and women. Men's drive is to find a partner that carries a sexual attraction for them to approach. The increased sexualization of all media forms leads to an even stronger form of objectification that leads to disrespect, harassment, and even violence. This is all coming forth from the extremes that young minds are being introduced to on a daily basis.



This two-faced rectangle blurs the lines between private and public life. These domains become intertwined on social media, once private thoughts, emotions, ideas, problems, etc. are increasingly aired to the masses. Users are regularly exposed to images and videos that should be private, these apps have become open diaries for the public to gaze into. There are great things that come from technology and the phone. The ability to call for help at anytime, to capture the perfect selfie on a bench with the one you love, to find sushi restaurants in a moment's notice, and even translate languages quickly. Learning occurs on these platforms as well but the rate of positive outcomes compared to the increasingly horrifying ones, makes me consider that social media is not worth it, especially for young teens and adults. Over 50% of young users state that the main positives are self-expression and social connectivity, yet simultaneously if asked about their mental health from social media, 30% of Gen Z will state it's poor or very poor. All these dangers are there for adults to fall into as well, though this paper focuses on the young. This is a world that young teens male or female should not be delving into for much time. It is a dangerous and destructive domain that preys on the young malleable minds that use the platforms.

Physical Dangers

Damages to user's bodies come from a few different reasons viral challenges, cyber bullying and adoption of physical tics. Challenges such as the Skull Breaker challenge, where two people kick the legs out from under another causing them to fall, has caused 82 deaths. The breath hold challenge, simply hold your breath until you pass out, has killed 15 kids under the age of 12. Others that have killed and seriously injured, chrome dance, one

chip, boat jump, condom snorting, tide pod challenge and the list goes on. These all have caused many injuries and deaths alike. The chance to go viral on social media is the drive for this pursuit.

Another result of social media use is the onset of tics and a Tourette like syndrome. These neurological disorders have been named “Functional Tourette-like Behavior” (FTB) is presented as an outbreak from the use of mass social media. There was a significant jump discovered from eight clinics in five countries, they posted their findings that before December 2021 FTB cases shot to 35% of caseloads in these clinics. Prior to that referrals for FTB were about 1-2%. Studies quickly found links with increased exposure to not only

Table 1: Clinical features differentiating between Tourette syndrome and functional tics		
	Tourette syndrome	Functional tics
Peak age of onset	4-6 years	Mid-teens
Gender predominance	Male	Female
Tempo of onset	Insidious onset from childhood, peaking at 10-12 then improving	Rapid onset in late adolescence/early adulthood
Simple tic history	Usually present	Rare but watch out for dual diagnosis
Bodily distribution	Usually facial at onset spreading caudally	More commonly arms and trunk
Prolonged tics	Rare	Common
Premonitory Urge	Common, although can be absent in simpler tics	Uncommon, although physiological arousal symptoms may occur which are relieved by the tic
Ability to Suppress tics	Present	Present in some patients
Interference with other voluntary actions	Rare	Common
Variability in direction and number of different behaviours	Rare	Common
Self-injurious behaviour from tics (e.g. head banging, body punching, biting)	Less frequent	Common
Injury to others from tics	Rare	Common
Presence of other functional symptoms or disorders including FND	Rare	Common

social media, but videos that focused on tics. TikTok had 5.2 billion searches for #tourettes which led researchers to study if there was an increased risk if teens consumed this media. It was discovered that they were four times as likely to cause FTB. Neuropsychiatric examinations have discovered enough individuals affected by this phenomenon it now has an adopted term named Mass Social Media-Induced Illness (MSMI). In Germany, a study of over 1000 adults and teens with similar symptoms seeking help at special Tourette centers globally, discovered their symptoms were linked to a German YouTuber titled “Gewitter im Kopf” (Thunderstorm in the brain). This study stated that merely by watching these videos, this channel’s host had a profound influence on its constituents as the overlap of symptoms was quoted as remarkable. This discovery led other to look into the trend, it was then discovered in the UK that “thistrippyhippie” had also been massively influential to individuals linked with MSMI FTB. These symptoms are head jerks, verbal profanity, or rapid, repetitive, and rhythmic or arrhythmic movements. Treatment of such illness is fairly simple, remove the person from accessing the site or platform. The physical and mental detrimental effects of social media may be far worse than we know as time goes on. Like the time when doctors recommended different cigarettes before the realization of the cancer they cause, unknown consequences may lay in wait for these young souls who have surged their brains with social media.

Conclusion

Social media is designed to soak up your time, it is designed to pump ads to you as fast as possible though continued use. It wants you to consume and uses its users to promote more advertising via influencers, advertisements and promoted posts. Social

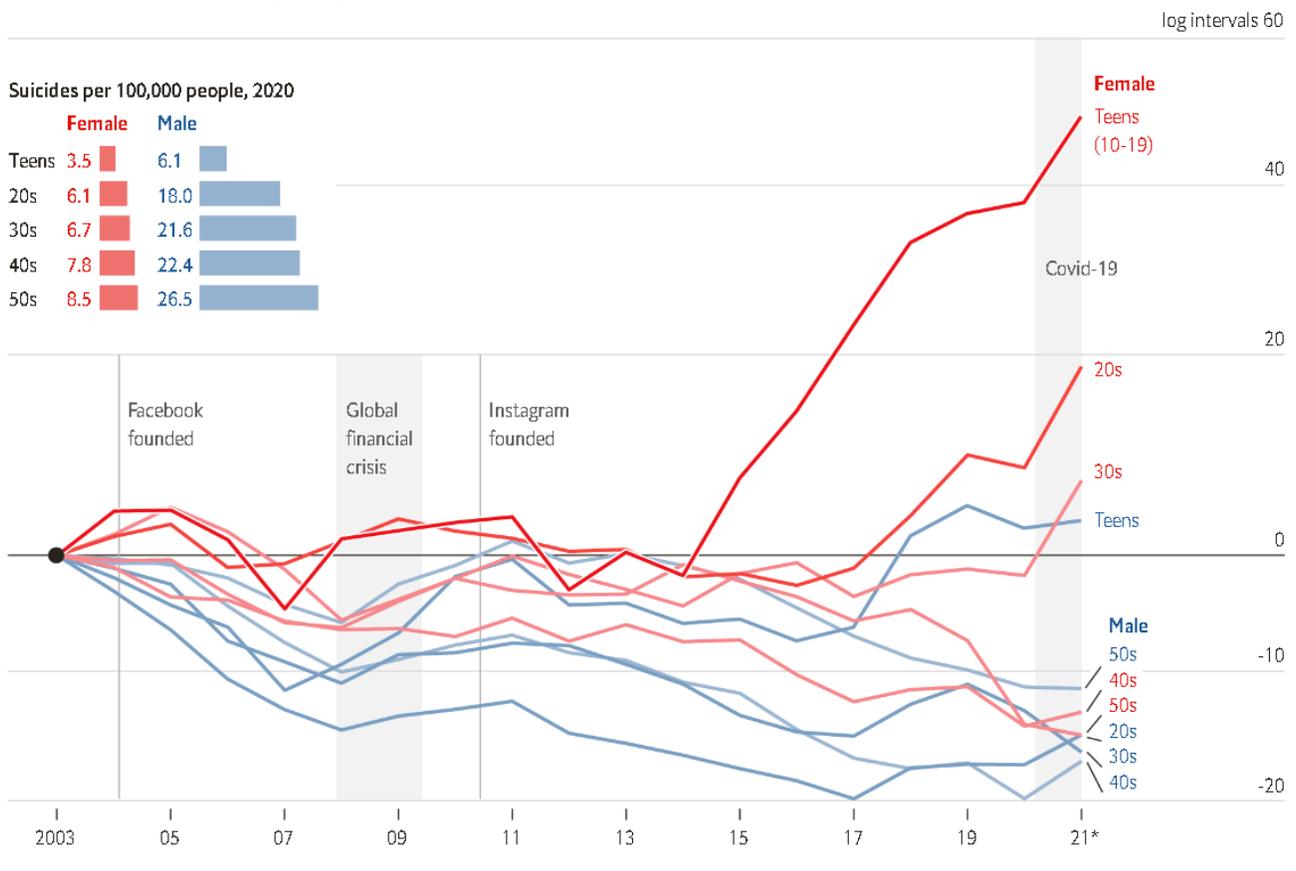
media is free because you pay with your time so that you are inclined to pay with your wallet on a commodity or luxury. There are seemingly definable and measurable sicknesses that are plaguing the young across regions developed enough to have the luxury of hours upon hours of social media consumption a day. There are very few positives coming from any of these studies. There were some revealing that during the pandemic it lessened that impact on separation from friend groups for the young, but that is an entire topic of its own. For the most part, there are serious issues that impact Gen Z. Test scores, retention of knowledge, and attention span are dropping considerably. The recent studies of standardized tests in school show that the recent years have shown an overall reduction in the intelligence of young adults for the first time in decades.

The suicide rate has increased profoundly and depression has eked its way into the minds of teenagers who should be enjoying their days, yet we are still allowing the degradation of entire generations to continue to the sound of 8-second music bites and odd dances recorded in public spaces for clout. Bullying is able to take on a whole new face as the abuser can now follow the victim home and comment on their every post. Being quirky and odd is definitely a part of growing up, to process ones own thoughts and ideas you need space to grow and develop. With no private space, out of compulsion or choice, the young adult is pressured to social media which makes them a target. As most of us know, the comment spaces on social media posts are cesspools. Anything you post will be or could be liked, hated, or made fun of at some point.

This constant stress of social acceptance in person and at home can lead to extreme mood swings and force a mimetic desire for objects, actions, and looks that could be

entirely different than you or your child. Looking at the data, it seems clear from an objective standpoint the harm that social media does to most of its users old and young alike. Though I was somewhat against social media as in I refrain from it as my decision, writing and studying this paper has led me to believe that there should be serious interdiction by parents or even laws for the use of young adults under at least 16 on the use of social media. I now encourage adults and children alike to remove themselves from all platforms.

Suicide rate, % change since 2003, by age and sex
 17 countries, three-year moving average



Resources

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