Democracy Dies in Darkness

Opinion

Could a social media detox improve our well-being?

We conducted the largest-ever experiment on social media and emotional health. Here's what we found.

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Depression and anxiety have worsened in the United States since about 2010, particularly for an "anxious generation" of younger people. Some researchers point to smartphones and social media as the cause, while others argue that evidence of a connection is weak. Over that same period, people have increasingly sourced their news from social media, and politics has grown as a source of stress.

These trends left us with a question: How is social media affecting our emotional states, particularly when politics are on our minds?

This week, we, along with a team of co-authors, are releasing results from the largest-ever randomized experiment speaking to this. We estimate that quitting Facebook or Instagram for the five weeks before the 2020 election, compared with using social media normally, modestly improved an index of people's self-reported happiness, anxiety and depression.

In the past, researchers have considered three other pieces of evidence on the effect of social media on psychological well-being.

First, overlapping trendlines: In the U.S., smartphones and social media were rapidly adopted around 2010 — exactly when surveys started to show worsening depression and anxiety, and when rates of self-harm and suicide started to rise among teens. The continuing trend doesn't seem to be explained by any single event such as the covid-19 pandemic, and it's not limited to the U.S. This is notably suspicious timing but not definitive causal evidence.

There are also hundreds of studies that correlate the amount of time people spend on social media with their emotional well-being. Researchers debate the direction of these correlations, but there is a more fundamental limitation: Correlation is not causation.

And third, mental health worsened at the colleges where Facebook became available in 2004 and 2005 compared with campuses the app hadn't yet reached. This measures a plausible causal link at that time, although social media have changed a lot since.

However, the gold standard way to test causation is to run a randomized experiment — for instance, recruit a group of participants, divide them randomly into treatment and control groups, and have the treatment group quit social media.

We did that in an earlier study with fellow economists Luca Braghieri and Sarah Eichmeyer. We recruited 1,661 Facebook users and paid a randomly selected treatment group to quit for the four weeks before the 2018 midterm elections. Leaving Facebook made people less informed about the news, less politically polarized — and happier, less anxious and less depressed.

Then, in early 2020, we and about 15 other academic researchers embarked on a collaboration with Meta's internal researchers that let us run a new experiment with roughly 20 times as many participants. Our group has published a series of papers over the past two years examining how Facebook and Instagram affected political outcomes during the 2020 election.

In our study released this week, we find that the treatment groups that quit Facebook or Instagram before the election improved on an index of self-reported happiness, anxiety and depression. The Facebook effect is highly statistically significant, while the Instagram effect is somewhat less so. Exploratory analysis suggests the effect of quitting Facebook was driven by people over 35, while the Instagram effect appears to be driven by women under 25. This latter result is consistent with concerns that Instagram may have particularly negative effects on young women.

The sizes of these effects are meaningful, but perhaps smaller than social media's fiercest critics might expect. When mapped onto our original survey questions, the estimated effects are equivalent to about 4 percent of people saying they felt happy "often" instead of "sometimes." The study found that quitting Facebook or Instagram was about one-fifth as effective as the average of psychological interventions such as mindfulness or cognitive behavioral therapy. The estimated effect of quitting Instagram on 18-to-24-year-olds was about one-sixth as large as the nationwide increase in psychological distress for that age group between 2008 and 2022.

Importantly, participants in our study only turned off their Facebook or Instagram accounts. Much of the freed-up time was shifted to other smartphone apps, including other social media. An experiment that restricted access to a wider set of apps could have had larger effects.

As with any empirical study, people should be careful not to overly generalize our findings. Indeed, even among our co-authors, there is some disagreement about how much we can extrapolate to other settings. We don't know for certain what the effects would be for people who would not participate in an experiment, for minors or in contexts outside of the 2020 election. The results could differ if people quit for more than five weeks, or if everyone quit together. And it's impossible to directly test how the world would have been different had social media never been invented.

But, in our own view, this study clearly demonstrates that taking a break from social media can improve our emotional states. It offers some of the best evidence to date that Instagram may have a particularly sizable impact on young women. And we think it adds to a collage of evidence pointing toward social media as a contributor to the broader decline of psychological well-being.

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