

# The Biggest Psychological Experiment in History Is Running Now

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The impact of COVID-19 on the physical health of the world's citizens is extraordinary. By mid-May there were upward of four million cases spread across more than 180 countries. The pandemic's effect on mental health could be even more far-reaching. At one point roughly one third of the planet's population was under orders to stay home. That means 2.6 billion people—more than were alive during World War II—were experiencing the emotional and financial reverberations of this new coronavirus. “[The lockdown] is arguably the largest psychological experiment ever conducted,” wrote health psychologist Elke Van Hoof of Free University of Brussels-VUB in Belgium. The results of this unwitting experiment are only beginning to be calculated.

The science of resilience, which investigates how people weather adversity, offers some clues. A resilient individual, wrote Harvard University psychiatrist George Vaillant, resembles a twig with a fresh, green living core. “When twisted out of shape, such a twig bends, but it does not break; instead it springs back and continues growing.” The metaphor describes a surprising number of people: As many as two thirds of individuals recover from difficult experiences without prolonged psychological effects, even when they have lived through events such as violent crime or being a prisoner of war. Some even go on to grow and learn from what happened to them. But the other third suffers real psychological distress—some people for a few months, others for years.

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Faced with potentially traumatic events, “about 65 percent of people are going to show minimal psychological symptoms,” says clinical psychologist George Bonanno of Teacher's College at Columbia University. Bonanno, who is an expert on resiliency, studies the aftermath of hurricanes, terrorist attacks, life-threatening injuries and epidemics such as the 2003 SARS outbreak. His research and that of others consistently show three common psychological responses to hardship. Two thirds of people follow a resilience trajectory and maintain relatively stable psychological and physical health. About 25 percent struggle temporarily with psychopathology such as depression or post-traumatic stress disorder and then recover—a pattern known as the recovery trajectory. And 10 percent suffer lasting psychological distress. These results hold true across diverse populations and socioeconomic statuses. “We're talking about everybody,” Bonanno says. On the other hand, the risk of psychiatric disorders is twice as high for people on the lowest economic rungs.

But the mental health effects of a crisis so sweeping and insidious may not adhere to this paradigm. Studies show that strict quarantine can lead to negative psychological effects such as PTSD, although few of us have been under true quarantine, which refers to isolating after a possible exposure to infection. Instead much of the world is living with restrictions that Bonanno suspects amount to something more like managing constant stress. “This is the first time in living history we've had a global lockdown that's gone on for such a long time,” says epidemiologist Daisy Fancourt of University

College London. “We simply don’t know how people are going to react to this.”

The potential scope of the impact is considerable. “This is different from other forms of stress because it’s not just one domain of your life,” says health psychologist Nancy Sin of the University of British Columbia. “People are dealing with relationship or family challenges, with financial and work challenges, with health.”

Early reports are already showing clear effects. The first nationwide large-scale survey in China, where the crisis hit earliest, found that almost 35 percent reported psychological distress. In the U.S., rising fear and anxiety about COVID have been found in people who already suffer from anxiety. Another study captured worrisome findings in older adults. This is surprising because previous research shows that, for the most part, older adults have better emotional well-being. “During this pandemic, older adults don’t have those age-related strengths in emotions that we would typically expect,” says Sin, who studies aging and is collaborating with DeLongis in an ongoing COVID-19 study of 64,000 individuals worldwide. “They are reporting just as much stress as middle-aged and younger people.”

Sin is still analyzing the causes of the stress but suspects it is caused by older adults’ higher likelihood of getting sick and of losing loved ones. Older people are coping with their stress better than younger people, however, and reporting less depression or anxiety. They may be benefiting from the perspective that comes with having lived through more than younger people, Sin says. Adults older than 65 have also had more time to develop skills for dealing with stress, and many have retired and so are less likely to be concerned about work.

Fancourt began a study in mid-March that grew to include more than 85,000 U.K. residents. It is tracking depression, anxiety, stress and loneliness week by week. “We need to know in real time what’s happening,” Fancourt says. Six weeks in, they found that levels of depression were significantly higher than before the pandemic.

Generally, those with previously diagnosed mental health illnesses, those who live alone and younger people were reporting the highest levels of depression and anxiety. On the positive side, there was a slight decrease in anxiety levels once the lockdown was declared. “Uncertainty tends to make things worse,” Fancourt says. Some are frozen by not knowing what is to come, whereas others find ways to carry on.

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Most people’s coping skills can be strengthened. Several of the new studies are designed to identify successful strategies that buffer the effects of the stress. So far, Fancourt says, people are encouraged to follow classic mental health strategies: getting enough sleep, observing a routine, exercising, eating well and maintaining strong social connections. Spending time on projects, even small ones, that provide a sense of purpose also helps.

In previous work, DeLongis has shown that those who are high in empathy are more likely to engage in appropriate health behaviors such as social distancing and to have better mental health outcomes than people who are low in empathy. But her earlier studies of diseases such as SARS and West Nile were cross-sectional and captured only a moment in time. Her COVID-19 study will follow people’s behavior

and attitudes for months to capture changes in empathy and coping over time. “This isn’t just about a trait of empathy,” DeLongis says. Empathetic responses can be learned and encouraged with proper messaging, and her hunch is that increases or decreases in empathetic responding over weeks and months will be associated with shifts in health behaviors and coping mechanisms.

As part of DeLongis’s study, Sin is having people record their daily activities and emotions for a week. “So far the picture is that life is really challenging, but people are finding ways to meet that challenge,” she says. Many report a great deal of positive social interactions, many of them remote. Older adults are reporting the highest levels of positive experiences in their daily lives, often through providing support to others.

It is striking that remote connections are proving satisfying. Previous research on the effects of digital technology and media focused on the association between time spent on screens and psychological well-being but revealed little about the worth of different kinds of online interaction. Now that the world is relying on the Internet to socialize, investigating those nuances is crucial. Should social media closely mimic face-to-face interaction or can less intense forms of communication leave people feeling connected? We do not know yet, but it is likely those studies will now get funded when previously they weren’t. “I think we just skipped a decade of conversation in a month,” says psychologist Amy Orben of the University of Cambridge, who studies adolescent mental health and technology use.

Social media is a factor in other kinds of research as well. Psychologist Roxane Cohen Silver of the University of California, Irvine, is assessing the impact of media exposure on people’s well-being. “Those who consume a great deal of news about a community-wide crisis are more distressed,” she says. Computational social scientist Johannes Eichstaedt of Stanford University is combining large-scale analyses of Twitter with machine learning to capture levels of depression, loneliness and joy during the pandemic.

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