

## Kids adopt different ways of coping in wake of the pandemic

For young people weathering lockdowns and isolation, mental health outcomes have been mixed. Schools and communities are trying to glean lessons learned.

Amy McDermott, Science Writer



Like many parents, Nikki Chapman worried about what the pandemic would mean for her teen daughter, who was just starting high school in the fall of 2020. Chapman was concerned not only as a mom but also as a former teacher and the leader of parent support groups in her hometown of Liverpool, England.

As COVID-19 swept across Italy and surged toward the UK in spring 2020, parents in Chapman's support group, which focuses on kids with mental health challenges, wrung their hands. Schools and workplaces were closing and dire headlines warned that children and teens, isolated from their friends and classrooms, would experience horrendous mental health consequences. What if their children, already struggling in school, fell irreparably far behind? What if they slipped deeper into crisis during isolation?

The support group went digital. Chapman braced for a storm of panicked Zoom calls. Yet, as lockdown set in, the calls didn't come. "Well, maybe people are just finding their feet," she remembers thinking. When days turned to weeks, Chapman and other group leaders began checking on parents. "The feedback we kept getting," Chapman says, "is, 'Actually my kids are doing better at the moment, now that they don't have to go to school.'" Their most anxious kids were suddenly happier and more academically driven than before.

Chapman contacted dozens of similar parent support groups across the UK. "The experiences we were having in Liverpool were the same across the country,"

**Some did better, some did worse, some did much worse—recent research shows that children and teens ran the gamut in their responses to the pandemic, with personality traits and social isolation implicated in the varied responses. Image credit: Hananeko\_Studio/Shutterstock.**

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she says. Anecdotally, she found that about half of the parents she spoke to saw their kids doing better in lockdown. “As a former teacher and parent,” Chapman says, “this is something of an indictment of our education system.”

Although the mental health of children and teens seemed bound to suffer in the pandemic, the reality was mixed. Certainly, some kids did worse, some much worse: Emergency department visits for eating disorders and tic disorders spiked in US teen girls, and clinical depression became more common in US college students. In Europe and worldwide, calls to helplines for crisis intervention surged after the outbreak of the pandemic.

**From an emotional mental health perspective, I think it's entirely unclear what's happened longterm.**  
—William Copeland

But many young people also experienced mental health improvements. After learning that so many support group families did better, Chapman paired up with researcher Emma Soneson to ask what proportion of kids across the UK had seen wellness improvements in general. In 2021, Soneson, a doctoral student who studies mental health at the University of Cambridge, UK, led a study, coauthored with Chapman, analyzing self-reported mental health data from thousands of students, attending more than 200 primary and secondary schools across the UK. About a third of the kids said their mental health improved during lockdown (1). Of these, about half also reported less loneliness and better relationships, and some 92% reported less bullying compared with before lockdown.

Whether these effects will be lasting remains unclear. What is clear, Chapman says, is that “we need a system that works for all children.” As pandemic restrictions have eased, she’s continued offering digital support groups alongside face-to-face groups, and she hopes to open a telephone helpline for parents in the future. Next, she and Soneson are developing a workshop, to be held at Oxford University this October, titled “Design Your Dream School for Good Mental Health.” They hope to bring parents, students, educators, health professionals, researchers, and policymakers together to discuss solutions for better well-being in school, aided by the lessons of lockdown. Conventional education often falls short by overemphasizing academic achievement, at the expense of relationships, Soneson notes.

Similar lessons have played out over and over again across the US and elsewhere. In the wake of more acute phases of the pandemic, studies underscore just how critical social belonging and community are for the mental health of children and teens. Schools, though, are still grappling with how to provide that in the months and years ahead.

### Three Paths

At first, most people were scared— feelings of fear and loneliness increased more than suicidality, depression, substance abuse, domestic violence, and a host of other mental health issues early in the pandemic, according to a 2021 article by economist Marius Brühlhart (2). Based at the University of Lausanne in Switzerland, Brühlhart served on a scientific task force advising the Swiss government early

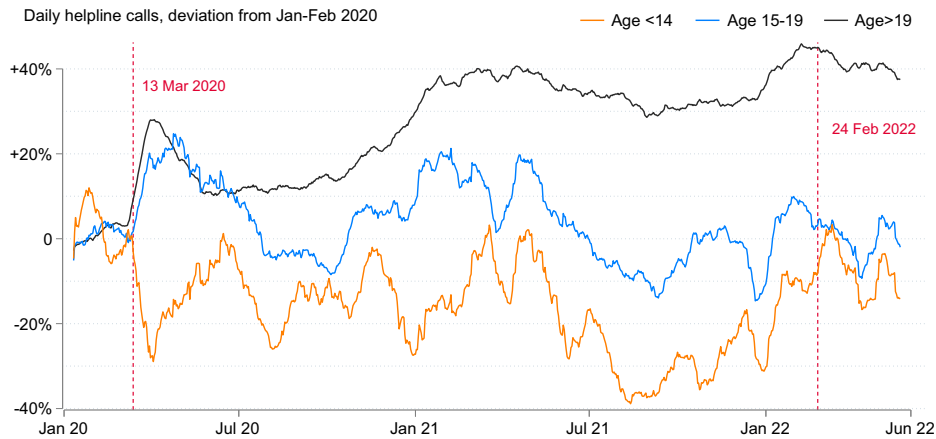
in the crisis. Members of the task force combed through economic data, hospitalization rates, and a variety of other stats to get a handle on the trajectory of the pandemic in Switzerland. They realized that when it came to the population’s mental health during the initial lockdown, including how many people had become suicidal or depressed since 2020, they were in the dark. “We had no data,” Brühlhart says. He and another member of the task force put together this study using worldwide helpline records starting in Switzerland, asking “Do you monitor how many people call, and what they’re concerned about?” Brühlhart says. “Turned out they had great data and were willing to help.”

He and collaborators ended up collecting data from 23 helplines in 19 countries, totaling 8 million calls between 2019 and early 2021. They found that call volumes spiked by 35% in the first 6 weeks of the pandemic then fell and rose again with the second wave. But the discussion topics that increased between 2019 and 2021, Brühlhart says, were not “those heavy items,” such as suicide, substance abuse, and domestic violence. As a share of total calls, those topics actually declined. The uptick was mainly driven by people calling to talk about their fears: fear of the virus, fear of infection, and fear of loved ones getting sick. Conversations about loneliness and lack of social contact increased too. Although he’s not sure of the reasons behind the trends he saw, Brühlhart suspects that the surprise of a global crisis spurred by a deadly virus diverted people from their usual concerns.

This particular study looked at callers of all ages, from young children to seniors. Eighty-four percent of calls came from adults over age 30. The researchers are now repeating the analysis for young people up to age 29 using data from youth helplines in Germany, which had long school closures, Brühlhart says. Preliminary findings suggest that, unlike for adults, youth helplines did not show a sharp spike in calls when lockdown began. And to the researchers’ surprise, the volume of calls by kids and teens hasn’t increased since before the pandemic. What has changed, he says, is the composition of call topics. Chats about bullying and relationship problems at school declined, whereas concerns over family issues and more severe mental health problems increased as the pandemic wore on.

In other words, kids’ reactions have been mixed. “We have basically three roads,” says Yann Poncin, a child and adolescent psychiatrist at the Yale Child Study Center and the Yale New Haven Children’s Hospital in Connecticut. Some have “suffered quite a bit.” Some—such as the kids Chapman and Soneson focused on—did fine in lockdown. And some occupied what Poncin calls a “middle ground.” They’re burnt out, dealing with decreased social skills after years in isolation, but don’t have diagnosable behavioral or mental issues. Many may be stunted, he cautions, in ways that could lead to depression and anxiety down the road.

For those kids who had the hardest time, struggles include an uptick in eating disorders, suicidal thinking, depression, and anxiety, Poncin notes. According to the CDC’s *Morbidity and Mortality Weekly Report* published in late February 2022, mental health conditions now account for a larger proportion of pediatric emergency department



Based on more than 2.1 million calls into two major national helpline services in Germany, the number of daily conversations with callers below age 20 is quite volatile but flat overall since early 2020. Conversations with adult callers (ages 20 and older), however, have increased sharply over the course of the pandemic. Image credit: Marius Brühlhart and Rafael Lalive (University of Lausanne, Lausanne, Switzerland), and Valentin Klotzbücher (University of Freiburg, Freiburg, Germany).

visits across all kids under 17 years of age, compared with 2019 (3).

Teen girls struggled in particular. Emergency department visits for eating disorders and tic disorders became more frequent in girls, ages 12 to 17, in 2020, 2021, and early 2022, which, the authors write, may “represent an overall increase in distress among females during the pandemic.” Emergency visits also increased in teen girls for depression and obsessive-compulsive disorder (OCD) in 2021 and anxiety, trauma, and stressor-related disorders by 2022. At Yale children’s hospital, there had never before been a waitlist for outpatient services, Poncin says. Now the waitlist is 3 to 6 months.

Around college campuses, there’s evidence that morale plunged as well—at least in the first year of the pandemic. At the University of Vermont in Burlington, for example, first-year students reported lower mood in 2020 than the previous year. When the pandemic first set in, students away on spring break found they weren’t coming back to school, not even to pick up their stuff, notes clinical psychologist William Copeland, a professor in the psychiatry department there. His lab offers annual surveys to incoming first-year students to understand how their moods and behavior interact during the transition to college.

Some 600 first-year students signed up for the autumn 2019 survey, filled out nightly through the second semester in spring. Almost 500 of them kept up with the survey through the school year, despite the transition to remote learning. Students reported their behavior and mood nightly through an Apple Watch app. Questions included how many hours of sleep they’d had the night before, whether they’d socialized with peers, whether they’d exercised or taken care of themselves in other ways, such as meditation, and how they’d rank their stress levels, focus levels, mood, and overall well-being (4). After the abrupt campus closures in March, “we saw precipitous and immediate drop-offs in terms of their mood levels and wellness behavior,” Copeland says; moods didn’t rebound by the end of the school year.

But in Vermont, as elsewhere, reactions varied. Although mood scores dropped, average stress levels and focus

scores didn’t notably change. And across the group, some students suffered more than others; a minority even reported feeling better when classes went digital. “COVID cut both ways,” Copeland says.

To explain the disparity, Copeland’s research group followed up by analyzing survey responses in relation to personality scores (5). Highly extroverted students had the lowest morale, suggesting that separation from peers was one source of variability in the findings. “Introverts saw less of a hit,” Copeland says. In general, students who scored high on personality traits, including openness, agreeableness, and conscientiousness, and who scored low on neuroticism, maintained the highest spirits and sustained wellness behaviors, such as eating nutritious meals and exercising, throughout the study period.

Copeland has offered two more rounds of first-year student surveys since the pandemic began, one beginning in fall 2020, and one beginning in fall 2021 which ended this spring. Although the three cohorts are not directly comparable, he says that unpublished data show that the remote cohorts in fall 2019 and fall 2020 had relatively low mood scores, compared with in-person learners in the latest first-year class. The newest incoming students have mood scores similar to first-year students before the pandemic. “I’m increasingly convinced,” he says, alluding to his work and the larger literature, “that at this point college students are doing better.” But whether those students who were most affected in 2020 will experience long-term consequences is still unclear, he adds. His surveys haven’t followed up with sophomores, juniors, and seniors. “From an emotional mental health perspective,” he says, “I think it’s entirely unclear what’s happened long-term.”

## Disparate Outcomes

Tearing up as she talks over Zoom from Liverpool, Chapman recalls a young man she spoke to in the first week of lockdown. He’d been asking for remote learning options since 2018 to cope with his severe anxiety. Again and again, he’d heard online learning wasn’t an option; he’d stopped coming to school. Then March 2020 arrived, and classes went suddenly, completely digital. “In the last

seven days,” he told Chapman in mid-March, “I’ve watched you turn the entire nation’s children into home learners. But you told me it couldn’t happen for me.”

Although not typical, the young man’s experience highlights how poorly school worked in some cases before the pandemic. In a 2022 study, child and adolescent psychiatrist Daphne Korczak at The Hospital for Sick Children (SickKids) in Toronto, Canada, reported the mental health impacts of lockdown on children and teens in the first weeks of the pandemic (6). She and collaborators surveyed 1,013 kids to assess changes in mental health, including depression, anxiety, irritability, hyperactivity, ability to pay attention, and obsessions or compulsions. They found that 19% to 31% of respondents reported improvements in at least one domain. Now, Korczak says, “what we need to understand, is why.”

The answer, perhaps unsurprisingly for teenagers, seems to boil down to fitting in. Surveys of teens in south-west England found that kids who’d felt excluded, bullied, or generally lacked a sense of community at school in 2019 coped the best in lockdown (7, 8). Emily Widnall, a postdoctoral public health researcher at the University of Bristol, UK, led the work, surveying 603 UK teens. She happened to have mental health data from surveys at 17 schools in 2019, and so repeated the surveys in May and October 2020, asking a range of questions about mood (including changes in anxiety and depression), as well as how safe students felt at school, how connected they felt to the school community, and their sense of belonging among peers. Then Widnall used regression analysis to test for associations between changes in mood and the students’ sense of community. “As you might expect,” she says, the students “who felt least connected did best in lockdowns.”

In Korczak’s 2022 work, upwards of 19.5% of students ages 6 to 18 reported mental health improvements in lockdown, and some 70% said they’d experienced negative changes. Among preschoolers ages 2 to 5, 66.7% fared worse in at least one domain of mental health and 31.5% fared better in at least one domain, says lead author Katherine Cost, a researcher at SickKids. Regression analysis revealed that the strongest predictor of mental health declines was stress, specifically stress from social isolation, Cost says.

Such results suggest that kids need opportunities to build community by seeing each other face to face, Widnall says. Although social media also help teens connect, it’s not the same—and not every student has access to a smartphone or even the internet at home.

There is some question, however, as to whether one group of kids *actually* did better amidst lockdowns and isolation, notes Gonzalo Salazar de Pablo, a psychiatrist specializing in OCD at King’s College London, UK. In the short term, children with extreme anxiety may have felt relief by escaping uncomfortable situations, Salazar de Pablo says. Some patients with OCD, for example, might have had a

brief reprieve from obsessive worry when everyone was using hand sanitizer. But in the medium to long term, “I don’t think they’re doing better,” he says. Avoiding anxieties doesn’t cure them—and can even make them worse.

Regardless, now that most students have returned to classrooms, schools are grappling with the lessons learned from pandemic disruptions. A positive path forward is likely to come from students themselves, Widnall says. “We need to really monitor how well people feel connected to their school,” she notes, which could be as simple as a brief, regular questionnaire. Elected student groups could translate the results for school staff, for instance pointing out where bullying happens or areas where students feel unsafe, Widnall says. Peer-based interventions might be another option; students act as role models teaching each other about mental health, which in turn may increase peer connections in schools.

## Bigger Picture

No matter how one interprets the survey data and health statistics, there’s little doubt that the pandemic exacerbated mental health challenges for many kids and young adults—challenges that existed well before 2020.

Investing in childhood mental health care is “an essential and far cheaper strategy than the cost of inaction throughout life,” says Zeinab Hijazi, a senior mental health advisor for UNICEF. The organization’s annual flagship report, *The State of the World’s Children*, focused on mental health and well-being in 2021 (9, 10). An advisory group used a combination of literature reviews, data on hospital admissions for suicide, metrics on the global prevalence of mental disorders, and telephone interviews with approximately 20,000 people in 21 countries to prepare the report. New research commissioned for the report looked at the cost of inaction and return on investment in children and adolescent mental health, Hijazi says. Based on the analyses, UNICEF concluded that some \$380 billion is lost annually in human capital owing to mental health conditions in children and teens. Some \$47 billion is lost to suicide in the same group. And for every dollar invested in school-based interventions that address anxiety, depression, and suicide, UNICEF estimates a \$21.5 return on investment over the next 80 years. The biggest takeaway, Hijazi summarizes, “is acting early is the best investment governments and donors can make.”

The report also calls the mental health impacts of the pandemic “the tip of the iceberg.” In many ways, the last 2 years have been a tipping point, Hijazi says—an acute crisis that will hopefully shine a much-needed light on mental wellness in young people worldwide. “Prevention means programs to support parents in the home and community,” Hijazi says, noting the importance of “parenting and school programs that support children where they are.”

1. E. Soneson *et al.*, Happier during lockdown: A descriptive analysis of self-reported wellbeing in 17,000 UK school students during Covid-19 lockdown. *Eur. Child Adolesc. Psychiatry*, 10.1007/s00787-021-01934-z (2022).
2. M. Brüllhart, V. Klotzbücher, R. Lalive, S. K. Reich, Mental health concerns during the COVID-19 pandemic as revealed by helpline calls. *Nature* **600**, 121–126 (2021).
3. L. Radhakrishnan *et al.*, Pediatric Emergency Department Visits Associated with Mental Health Conditions Before and During the COVID-19 Pandemic – United States, January 2019–January 2022. *MMWR Morb. Mortal. Wkly. Rep.* **71**, 319–324 (2022).
4. W. E. Copeland *et al.*, Impact of COVID-19 pandemic on college student mental health and wellness. *J. Am. Acad. Child Adolesc. Psychiatry* **60**, 134–141.e2 (2021).
5. D. C. Rettew *et al.*, Personality trait predictors of adjustment during the COVID pandemic among college students. *PLoS One* **16**, e0248895 (2021).
6. K. T. Cost *et al.*, Mostly worse, occasionally better: Impact of COVID-19 pandemic on the mental health of Canadian children and adolescents. *Eur. Child Adolesc. Psychiatry* **31**, 671–684 (2022).

7. E. Widnall *et al.*, Impact of school and peer connectedness on adolescent mental health and well-being outcomes during the COVID-19 pandemic: A longitudinal panel survey. *Int. J. Environ. Res. Public Health* **19**, 6768 (2022).
8. E. Widnall *et al.*, Adolescent experiences of the COVID-19 pandemic and school closures and implications for mental health, peer relationships and learning: A qualitative study in South-West England. *Int. J. Environ. Res. Public Health* **19**, 7163 (2022).
9. United Nations Children's Fund, The state of the world's children 2021—On my mind: Promoting, protecting and caring for children's mental health (2021). <https://www.unicef.org/reports/state-worlds-children-2021>. Accessed 15 August 2022.
10. Johns Hopkins Bloomberg School of Public Health and United Nations Children's Fund, On my mind: How adolescents experience and perceive mental health around the world (2022). <https://www.unicef.org/media/119751/file>. Accessed 15 August 2022.