



2021

COPING WITH COVID-19:

HOW YOUNG PEOPLE USE DIGITAL MEDIA
TO MANAGE THEIR MENTAL HEALTH



HOPELAB



California
Health Care
Foundation

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**HOW YOUNG PEOPLE USE DIGITAL MEDIA
TO MANAGE THEIR MENTAL HEALTH**

COMMON SENSE IS GRATEFUL FOR THE GENEROUS SUPPORT
AND UNDERWRITING THAT FUNDED THIS RESEARCH REPORT:

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Carnegie Corporation of New York

A LETTER FROM OUR FOUNDER

March 2021 marks one year since the start of the coronavirus pandemic in the United States. One full year of lockdowns, remote school and work, and social distancing. One full year of illness, constant fear of what might be next, and anxiety about when things might go back to normal. Today there is certainly light at the end of the tunnel, as cases have begun to drop and vaccination efforts are rolling out around the world. Progress is slow, of course, but one year later we are in a better position to begin thinking about recovery. How do we return to an in-person world after a year of isolation and disruption? The first step is understanding the scale and scope of the toll the pandemic has taken on all of us, but especially young people.

To do that, we partnered with our friends at Hopelab and the California Health Care Foundation to review how young adults age 14 to 22 are leveraging social media and digital tools to support their mental health during the coronavirus pandemic. The report gives us a unique look inside the minds and actions of young people during the pandemic, as they navigated the loss of their social norms, their classrooms, and their connections with friends while also coping with the effects of a dangerous virus.

The findings of this report put the pandemic's impact on young adults into stark relief. First, the number of teens and young adults who report they are depressed has grown significantly since 2018. Nearly four in 10 (38%) teens and young adults report symptoms of moderate to severe depression, up substantially from 25% just two years ago. Among LGBTQ+ young people, depression rates remain at near-crisis levels, with 65% reporting these symptoms. Half (51%) of young people who had COVID-19 infections in their families also report symptoms of depression more often than those who have not. Contributing to this growth could be the increase in their exposure to hate speech on social media. One in four respondents reported they see hate speech "often" when they're online.

But there is a bright side: Social media and online tools have proven to be the lifeline that many young people needed to get through this last year. Teens and young adults are actively turning to online sources for information about their mental health during the pandemic. They're connecting with health professionals, finding communities for support, and researching tools and tips to help them cope. And overall, while social media continues to play a complex role in their lives, they report that using social media in this way makes them feel better, giving them hope and inspiration in a dark time.

Guiding our young people to the other side of this pandemic requires that we support them in their mental health journeys. From providing more digital tools to making online spaces as safe as possible, it's up to all of us to create a healthy digital ecosystem for young people. At Common Sense, we are committed to continuing to work with leaders in health, technology, business, and government to ensure all kids are ready for a post-pandemic world.



James P. Steyer, founder and CEO

A handwritten signature in black ink that reads "Jim Steyer". The signature is written in a cursive, slightly slanted style.

H O P E L Δ B

Hopelab is delighted to have partnered with Common Sense and the California Health Care Foundation on this important report, *Coping with COVID-19: How Young People Use Digital Media to Manage Their Mental Health*. The past 12 months have been nothing short of tumultuous. The pandemic, along with its corresponding stressors limiting vital human interactions, have had a significant impact on our collective mental health and well-being, and young people are no exception.

Young people are especially challenged because adolescence is a critically important time for developing identity and engaging in safe exploration as they transition from childhood to adulthood. During this time, younger adolescents are exploring and developing the skills they need to make good decisions and build their resilience. This is a period of intense learning about who they are and who they want to be, and they need space for positive interactions with peers to fully develop these skills.

Many of the findings in this report update the results of our own **national survey results**, *Digital Health Practices, Social Media Use, and Mental Well-Being Among Teens and Young Adults in the U.S.*, published in 2018. This allows us to examine the evolution of the meaning and role of technology in the lives and well-being of young people during this unprecedented period in history. Exploring the role that digital health tools and social media play in young people's mental well-being during a pandemic and contentious election has been extraordinary.

Understanding how young people respond to challenges, such as isolation, loneliness, depression, anxiety, and other mental health concerns, will allow us to adapt and create strategies to address the needs of young people more effectively. The data in this report also adds to the important conversation happening about how young people manage their mental health and well-being through online support systems.

At Hopelab, we believe wholly in the promise of adolescence and the power of young people as the innovators and creators of our collective future. The amplification of young people's voices and experiences found in this report gives funders, co-creators, developers, and partners a glimpse into the potential of Gen Z to leverage the powers of technology and improve well-being for their generation and generations to come.

If we are to fully support this vision, we have important work to do. This research suggests the need for even greater investment in the digital mental health space to support the development and equitable distribution of more evidence-based tools and therapies. At Hopelab, we are committed to supporting and improving the lives of young people through technology that supports positive behavior change, and we invite our partners and the many organizations supporting young people to continue this journey with us, as we work to preserve the promise of adolescence and the well-being of future generations.

Sincerely,

Margaret Laws

President & CEO

Hopelab



California Health Care Foundation

The United States is experiencing three upheavals simultaneously. The first is a pandemic that has claimed far too many lives and continues to threaten the health of too many others. The second is a mental health crisis, as people deal with the personal, social, and economic consequences of that public health crisis. And the third is an awakening on matters of race—one that has featured an inspiring movement for justice as well as a backlash that was sometimes violent.

These events are taking a particular toll on the well-being of teens and young adults, who already faced substantial mental health challenges. Their schooling and social connections have been radically disrupted. Those seeking work face a volatile and highly diminished job environment. Many are afraid and anxious about the lives and livelihoods of their loved ones. At the same time, they cannot—and often do not—rely on traditional ways of getting help for their health or social needs.

Many of us have found ourselves relying even more heavily on digital media during these times. That has had major implications, both positive and negative, for teens and young adults. *Coping with COVID-19: How Young People Use Digital Media to Manage Their Mental Health* finds that nearly four in 10 teens and young people show symptoms of moderate or severe depression, up dramatically from just two years ago. It also presents alarming statistics and heartbreaking personal testimonials about young people's online experiences of racism and homophobia.

Yet the report also reveals how young people are using online health information, social media, apps, and other digital tools in innovative ways to connect with one another, stay informed, access services, and cope with depression and isolation. In their own voices, they share thoughtful and inspiring insights.

We all have a shared responsibility for creating the societal conditions that help young people thrive. I hope you find the rich insights in this report as meaningful, motivating, and compelling as I have.

Sandra R. Hernández, MD

President and Chief Executive Officer
California Health Care Foundation

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INTRODUCTION

THE PAST YEAR HAS been a tumultuous one in our country. The coronavirus pandemic killed hundreds of thousands of people and sickened millions more. It shut down schools and workplaces, cost millions of people their jobs, and put strict limits on in-person socializing. An especially bitter presidential election stoked acts of deadly violence, and police killings led to impassioned national protests for racial justice. Even before this challenging time, there was deep concern about the impact of the internet and social media on the health and well-being of young people in this country—both positive and negative. But in this unique situation in particular, those concerns are paramount. This report attempts to add data to an important conversation about how young people interact with mental health supports online.

This survey documents the results of a nationally representative survey of more than 1,500 teens and young adults (age 14 to 22) in the United States. It was conducted during the coronavirus pandemic and presidential election season, from September to November 2020. Many of the findings update the results of a survey (Rideout & Fox, 2018) conducted two years earlier on behalf of Hopelab and Well Being Trust, allowing us to directly compare the results between the two cross-sectional samples and explore the evolution of the role of technology in young people's well-being during this extraordinary period.

The purpose of the report is to amplify young people's voices and experiences. We use a unique methodology that includes extensive use of open-ended questions, allowing teens and young adults to share their experiences in their own words. We received thousands of personal responses. We are then able to put those individual experiences within the context of the national quantitative data. The survey also includes a series of items that allow us to identify and take an even closer look at four distinct populations, for whom we have a special concern:

- First, those who are currently experiencing symptoms of depression, as indicated on the PHQ-8 depression scale (Kroenke et al., 2009).
- Second, those who have been most directly affected by COVID-19, in particular those who have either been ill themselves or had an illness in their family.
- Third, young people who are at risk for problematic substance use, as assessed by the CRAFFT screener (Winters & Kaminer, 2008).
- And finally, LGBTQ+ youth, who our previous research (Rideout & Fox, 2018) indicated have extraordinarily high rates of depression and are especially active in using digital health resources.

Our survey is not a longitudinal study designed to understand any causal relationship between technology use and mental well-being. Instead, it is an effort to uncover how young people themselves experience social media, including:

- How it affects them when they are feeling depressed, stressed, or anxious.
- How they use social media to facilitate and support their own well-being.
- How they use other digital tools for health purposes, including using mobile apps, researching health topics online, taking advantage of telehealth services to connect to health providers, and seeking out peer health advice online.
- How they have used social media and digital health resources during the coronavirus pandemic in particular.

We hope that this data—and the personal experiences of teens and young adults as shared throughout the report—will shed light on how young people are navigating their own health challenges, the role that technology is playing, and how the adults and providers in their lives can best help meet their needs.

Summary of Methodology

- Nationally representative survey of 1,513 14- to 22-year-olds in the United States
- Conducted by the National Opinion Research Center (NORC) at the University of Chicago
- Data collected from September to November 2020
- Offered online or by phone, in English or Spanish
- Included extensive open-ended questions for respondents to share personal experiences
- Findings were compared to separate cross-sectional surveys conducted in 2018
- Data was analyzed by age, gender, race/ethnicity, and LGBTQ+ identity
- Screeners were included in the survey to identify levels of depressive symptoms (PHQ-8) and risk for problematic substance use (CRAFFT)
- Changes over time and differences between subgroups were tested for statistical significance at the level of $p < .05$
- For additional details, please see the Methodology section of this report

1. Nearly four in 10 (38%) teens and young adults report symptoms of moderate to severe depression, up substantially from 25% just two years ago.

The survey used the PHQ-8 scale (Kroenke et al., 2009) to assess symptoms of depression among respondents. Mirroring the findings of other studies (e.g., Czeisler et al., 2020), our survey finds that depression among 14- to 22-year-olds has increased significantly in a short period of time (see Table A). Symptoms of moderate to severe depression have nearly doubled among teens (from 13% to 25% among 14- to 17-year-olds) and have increased substantially among young adults (from 34% to 48% among 18- to 22-year-olds).

2. Fully half (51%) of all young people who report a COVID-19 infection in their family also report symptoms of moderate to severe depression (compared to 36% of those who have not experienced COVID-19-related illness in their families).

The young people most directly affected by COVID-19—those who say that they themselves or someone in their family have gotten ill from the virus—are significantly more likely to manifest moderate to severe symptoms of depression than those who have not been affected in this way (see Figure A). One in seven (14%) young people in the survey said they or a family member had gotten sick from the virus. (The survey was conducted from September to November 2020; the rate is likely much higher now.) Black and Hispanic/Latinx teens and young adults were more than twice as likely as their White peers to say that they or

TABLE A. Depressive symptom levels, 2018 and 2020

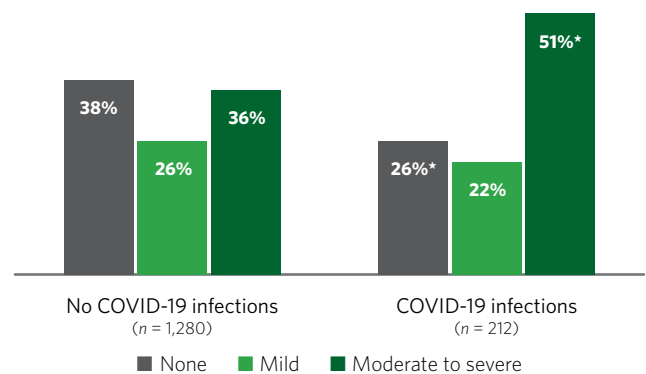
Proportion of 14- to 22-year-olds with each level of symptoms

Level of depressive symptoms (PHQ-8 score, 0 to 24)	2018 (n = 1,334)	2020 (n = 1,492)
None (0 to 4)	52%^a	37%^b
Mild (5 to 9)	23%	25%
Moderate to severe (10 to 24)	25%^a	38%^b
• Moderate (10 to 14)	17% ^a	23% ^b
• Moderately severe (15 to 19)	5% ^a	9% ^b
• Severe (20 to 24)	3% ^a	5% ^b

Notes: Items with different superscripts differ significantly across rows ($p < .05$). A score of 10 or higher on the scale is considered a yellow flag warranting further attention.

FIGURE A. Depressive symptom levels, by COVID-19 infections in family, 2020

Proportion of 14- to 22-year-olds with each level of symptoms



*Significantly different than among those without COVID-19 infections in the family, at the level of $p < .05$.

a family member had gotten sick with the virus (see Figure B). In addition to having the illness directly in their families, many young people have been affected in other ways, such as loss of income for themselves or their family (25%, as of Fall 2020) or having to take on additional family responsibilities (18%), such as getting a job or taking on new child-care duties.

3. Exposure to hate speech on social media is up substantially over the past two years.

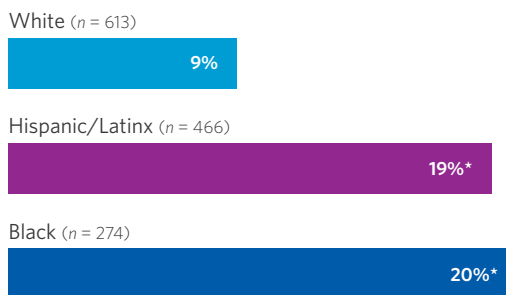
About one in four 14- to 22-year-olds say they “often” encounter body shaming (29%), racist (27%), sexist (26%), or homophobic (23%) comments on social media (see Figure C). Those in the targeted groups (e.g., Blacks for racist comments, or LGBTQ+ for homophobic ones) are more likely than others to be exposed to such comments. For example, three in 10 young women are “often” exposed to sexist comments, more than a third of young Black people are “often” exposed to racist comments, and more than four in 10 LGBTQ+ youth “often” encounter homophobic posts online.

Among 14- to 17-year-olds, the frequency of encountering such content on social media has increased significantly since 2018 (see Figure D; this item was not asked of 18- to 22-year-olds in 2018). For example, the percent of teens who say they “often” see racist content on social media has nearly doubled in the past two years (from 12% to 23%). We can’t know from this survey whether these changes are due to a greater amount of negative content online, the increasing frequency of young people’s social media use, an increase in young people’s awareness of the negative content they are exposed to, or some other reason.

FIGURE D:
Note: 2018 trend data from the Common Sense Media survey *Social media, social life: Teens reveal their experiences*, conducted among 14- to 17-year-olds (Rideout & Robb, 2018). Differences between 2018 and 2020 in each category are statistically significant at the level of $p < .05$.

FIGURE B. COVID-19 infections in the family, by race/ethnicity, 2020

Percent of 14- to 22-year-olds who say they or a family member have gotten ill from the virus



*Significantly higher than among White youth, at the level of $p < .05$.

FIGURE C. Exposure to hate speech, 2020

Among 14- to 22-year-old social media users (n = 1,442), percent who say they encounter each type of content

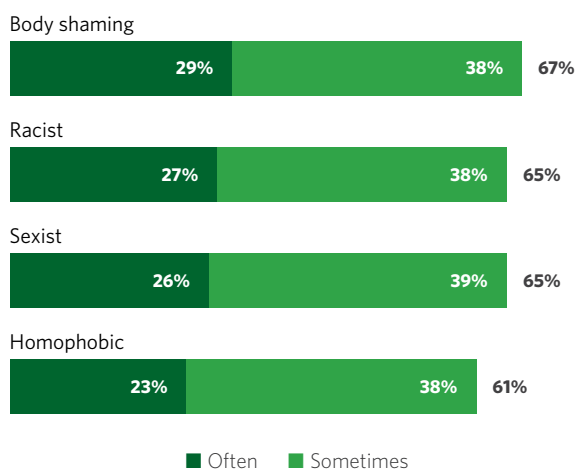
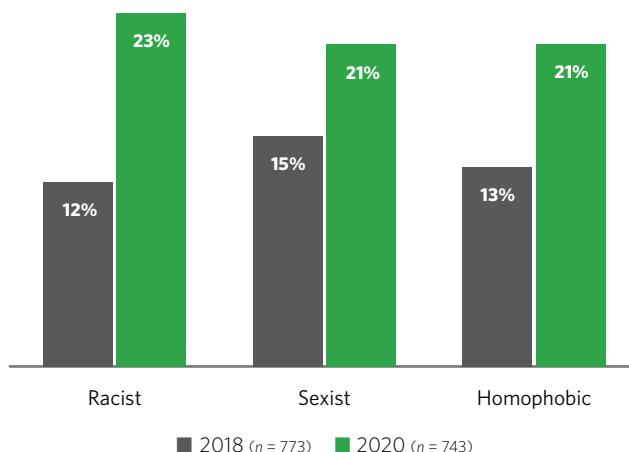


FIGURE D. Exposure to hate speech, 2018 and 2020

Among 14- to 17-year-old social media users, percent who say they “often” encounter each type of comment on social media



4. Social media has played an important role in keeping young people informed and connected during the coronavirus pandemic, especially for those most directly affected by the virus.

About half (53%) of young people say social media has been “very” important to them during the pandemic for staying connected to friends and family, and about a third say it has been “very” important for keeping themselves informed about current events (34%) and learning how to protect themselves against the virus (31%) (see Table B). Those who say that they or a family member have been infected by the virus are more likely than their peers to consider social media “very” important in keeping up with current events (47% vs. 32%) and learning how to protect themselves from the virus (43% vs. 29%). When compared to their peers, it is clear that social media has played an especially important role in helping those who have been directly impacted by COVID-19.

“By connecting with other people, social media has helped me feel less isolated, and therefore less depressed.”

—22-year-old woman

TABLE B. Importance of social media during the coronavirus pandemic, among all and by COVID-19 infections in the family, 2020

Among 14- to 22-year-old social media users, percent who say using social media during the coronavirus pandemic has been “very” important to them for ...	All (n = 1,442)	COVID-19 infection in the family	
		No (n = 1,231)	Yes (n = 211)
Being informed about current events	34%	32% ^a	47% ^b
Learning how to protect against the virus	31%	29% ^a	43% ^b
Staying connected to family and friends	53%	53%	57%

Note: Items with different superscripts differ significantly across status of COVID-19 infection in family ($p < .05$).

5. Young people make extensive use of a variety of digital health resources; those with depression are even more likely to do so.

More than eight in 10 (85%) young people have gone online to look for health information on a wide variety of topics, and nearly seven in 10 (69%) have used mobile apps related to health issues (see Table C). The health topics researched most frequently include COVID-19 (58%), fitness (47%), anxiety (42%), stress (39%), and depression (38%). The most commonly used health apps relate to fitness (39%), sleep (27%), menstruation (24%), nutrition (22%), and meditation (17%). Forty percent of young people have looked online for “health peers,” or people with similar health concerns to their own.

Just less than half (47%) of 14- to 22-year-olds have connected with a health provider online, including more than one in four (27%) who have had a video appointment with a provider, and one in seven who have texted (15%) or used an online messaging system (14%) to connect with a health provider. The vast majority (86%) of those who have connected with a provider online say they found it helpful, including 37% who said “very” helpful (see Figure E). Of those who have not yet connected with a provider online, almost half (46%) are at least “somewhat” interested in doing so.

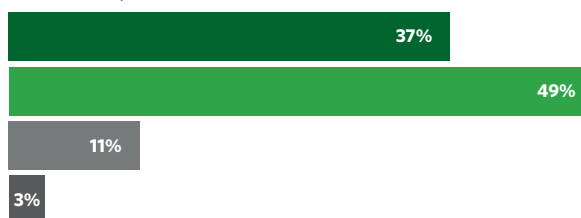
Digital health activity is even more common among young people with depression. Three out of four (75%) of those with moderate to severe depressive symptoms have used mobile apps related to

health, nearly six in 10 (58%) have connected to health providers online, and half (51%) have looked online for people with health concerns similar to their own.

FIGURE E. Connecting to a health provider online: Attitudes and experiences, 2020

Among 14- to 22-year-olds who ...

Have connected to a health provider online, percent who say doing so was ... helpful (n = 673)



Have not connected to a health provider online, percent who say they are ... interested in doing so (n = 832)

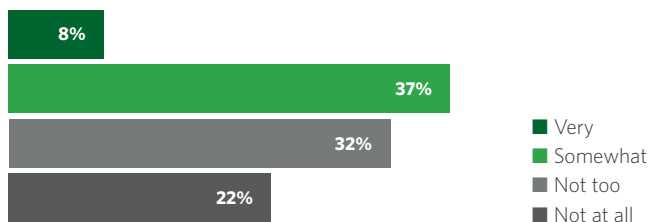


TABLE C. Online health resource use, by depressive symptom levels, 2020

Percent of 14- to 22-year-olds who say they have ...	Among all (N = 1,513)	Level of depressive symptoms		
		None (n = 643)	Mild (n = 339)	Moderate to severe (n = 510)
• Gone online for health information	85%	80% ^a	91% ^b	86% ^b
• Used mobile apps related to health	69%	61% ^a	73% ^b	75% ^b
• Connected with a health provider online	47%	37% ^a	46% ^b	58% ^c
• Video appointment	27%	23% ^a	24% ^a	33% ^b
• Text messaging	15%	9% ^a	15% ^b	20% ^b
• Online messaging	14%	7% ^a	10% ^a	21% ^b
• An app	12%	7% ^a	11% ^{ab}	18% ^b
• Looked for people with similar health concerns online	40%	28% ^a	39% ^b	51% ^c

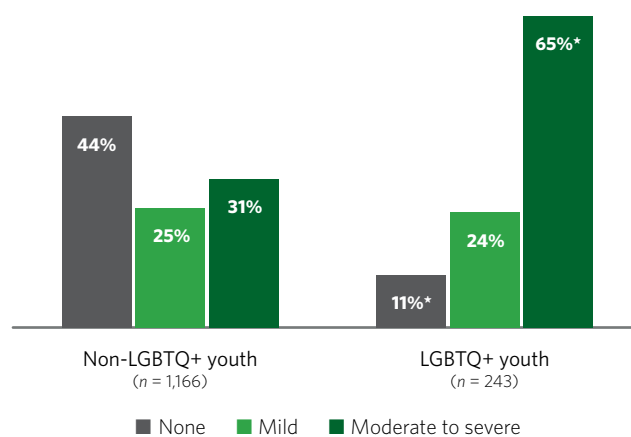
Note: Items with different superscripts differ significantly by level of depressive symptoms (p < .05).

6. Nearly two out of three LGBTQ+ youth report moderate to severe symptoms of depression, twice the rate among non-LGBTQ+ young people.

Sixteen percent of the respondents in our survey identify as gay, lesbian, bisexual, transgender, nonbinary, or “other” sexual orientation or gender identity, and are therefore identified in this report as LGBTQ+. Among these young people, fully two out of three (65%) report moderate to severe symptoms of depression, twice the rate among non-LGBTQ+ youth (31%) (see Figure F). LGBTQ+ teens and young adults make extensive use of digital health resources for both physical and mental health purposes, including looking up health information online, using health-related mobile apps, connecting to health providers online, and trying to find people online with similar health concerns (see Table D).

FIGURE F. Depressive symptoms, by LGBTQ+ identity, 2020

Percent of 14- to 22-year-olds with each level of depressive symptoms



*Significantly different than non-LGBTQ+ youth at the level of $p < .05$.

TABLE D. Online health seeking, by LGBTQ+ identity, 2020

Among 14- to 22-year-olds, percent who say they have ever ...	Non-LGBTQ+ (n = 1,179)	LGBTQ+ (n = 248)
Looked for health information online	83% ^a	92% ^b
Used a mobile health app	68%	74%
Connected to health providers online	45% ^a	57% ^b
Tried to find people online with similar health concerns to their own	38% ^a	53% ^b

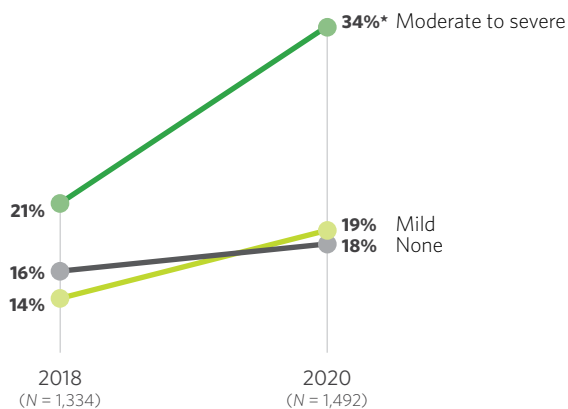
Note: Items with different superscripts differ significantly across rows ($p < .05$).

7. Young people with moderate to severe depressive symptoms are nearly twice as likely as those without depression to say they use social media almost constantly (34% vs. 18%).

It is not possible to say whether social media use is driving depression or whether people who are depressed are using social media more frequently (see Table E). But we do know that over the past two years, young people with moderate to severe depressive symptoms have begun using social media more frequently: In 2018, 21% said they used social media “almost constantly,” and in 2020 34% did (see Figure G). Whether this is a permanent increase or an artifact of the pandemic, only future research will tell. Overall, one in four (25%) young people say they are on social media “almost constantly,” up from 17% in 2018.

FIGURE G. Frequency of social media use, by depressive symptom levels, 2018 and 2020

Percent of 14- to 22-year-olds who say they use social media “almost constantly”



*Significantly higher than 2018, at the level of $p < .05$.

TABLE E. Frequency of social media use, by depressive symptom levels, 2020

Percent of 14- to 22-year-olds who say they use social media ...	Level of depressive symptoms		
	None (n = 643)	Mild (n = 339)	Moderate to severe (n = 510)
Almost constantly	18% ^a	19% ^a	34% ^b
Daily, but not constantly	64% ^a	64% ^a	44% ^b
Less than daily	13%	12%	18%
Never	5%	5%	4%

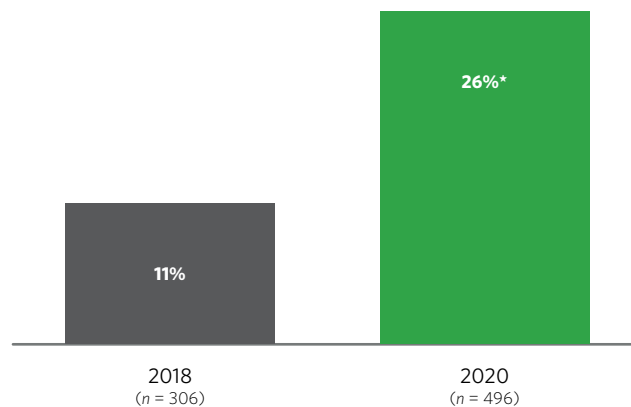
Note: Items with different superscripts differ significantly across rows ($p < .05$).

8. Social media platforms have become even more important to young people for support, community, and self-expression over the past two years, especially for those experiencing depression.

More than one in five teens and young adults say social media is “very” important to them for getting support or advice when needed (20%), feeling less alone (21%), getting inspiration from others (23%), and expressing themselves creatively (25%), all of which are substantial increases from 2018 (see Table F). Young people with depression are even more likely to consider social media “very” important than those without depression. For example, 28% of those with moderate to severe depressive symptoms say social media is “very” important for feeling less alone, compared to 13% of those without depression. The proportion of young people with depression who say social media is “very” important for getting support or advice when they need it has more than doubled in the past two years, up from 11% in 2018 to 26% today (see Figure H).

FIGURE H. Importance of social media, among those with depression, 2018 to 2020

Among 14- to 22-year-olds with moderate to severe depressive symptoms, percent who say social media is “very” important to them for getting support and advice



*Significantly higher than 2018, at the level of $p < .05$.

TABLE F. Importance of social media, by year of data collection and depressive status in 2020

Percent of 14- to 22-year-old social media users who say social media is “very” important to them for ...	Data collection		Level of depressive symptoms		
	2018 (n = 1,242)	2020 (n = 1,422)	None (n = 609)	Mild (n = 317)	Moderate to severe (n = 496)
Getting support/advice when needed	12% ^a	20% ^b	15% ^a	19% ^{ab}	26% ^b
Expressing themselves creatively	18% ^a	25% ^b	20% ^a	27% ^{ab}	27% ^b
Getting inspiration from others	18% ^a	23% ^b	17% ^a	20% ^a	29% ^b
Feeling less alone	15% ^a	21% ^b	13% ^a	20% ^b	28% ^c

Note: Items with different superscripts differ significantly across rows within each category ($p < .05$).

9. Young people are far more likely to say that using social media makes them feel better rather than worse when they're depressed, stressed, or anxious, and that rate has gone up substantially since 2018.

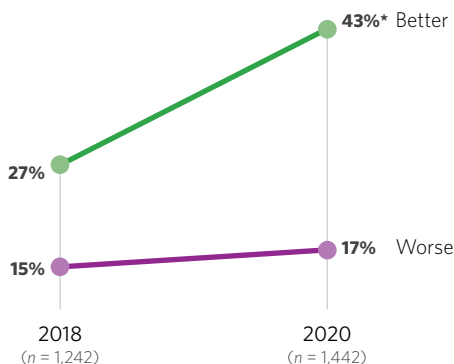
Forty-three percent of 14- to 22-year-old social media users say that when they feel depressed, stressed, or anxious, using social media usually makes them feel better, compared to just 17% who say it makes them feel worse (see Figure I). (The rest say it makes no difference either way.) In 2018, 27% said using social media at these times made them feel better, compared to the 43% who say so now. However, for those who have severe depression (PHQ-8 score of 20 to 24, 5% of our total sample), social media plays an outsized role—more important for inspiration, support, and connection, but also more likely to make respondents more anxious, lonely, and depressed. Because the sample size of respondents with severe depression is so small, findings among this group should be viewed with caution. But whether we're considering the positive or the negative effects of social media, its impact on those experiencing the highest levels of depression deserves special consideration.

10. About one in 10 (9%) young people in the survey is at risk for problematic substance use, and 46% of those respondents say they have sought information about drug and alcohol abuse online.

In this survey, the CRAFFT screener (Knight et al., 2002; Winters & Kaminer, 2008) was used to identify those at risk of problematic substance use. These young people were more likely than their peers to have engaged in a number of online health-seeking activities, including looking up information on drug and alcohol abuse, trying to find others online with similar health conditions, and using digital tools to connect to providers (see Table G).

FIGURE I. Effect of social media when feeling depressed, stressed, or anxious, among all, 2018 to 2020

Among 14- to 22-year-old social media users, percent who say using social media when they are depressed, stressed, or anxious usually makes them feel ...



*Significantly higher than 2018, at the level of $p < .05$.

TABLE G. Digital health use, by risk for problematic substance use, 2020

Among 14- to 22-year-olds, percent who have ...	Risk for problematic substance use	
	No (n = 1,358)	Yes (n = 143)
Looked up online information about drug and alcohol abuse	15% ^a	46% ^b
Tried to find others online with the same health issues	38% ^a	57% ^b
Connected with health providers online	46% ^a	60% ^b
Used a mobile app related to drug and alcohol abuse	2% ^a	13% ^b

Note: Items with different superscripts differ significantly across rows ($p < .05$).

DIGITAL HEALTH PRACTICES AMONG TEENS AND YOUNG ADULTS

WHEN WE THINK ABOUT young people and digital media, it is easy to focus on the use of technology for entertainment and socialization, such as watching funny videos, playing games, following celebrities, and chatting with friends online. But in addition to these activities, the vast majority of teens and young adults are also using digital media for health-related purposes, including looking up information about various health issues online, using mobile apps to promote their well-being, connecting with health providers by text or video, and seeking advice from peers with health concerns similar to their own.

As indicated in Table 1 below, more than eight in 10 (85%) young people have gone online to look for health information, and nearly seven in 10 (69%) have used mobile apps related to health issues. Nearly half (47%) have connected with a provider online and four in 10 (40%) have looked online for “health peers” (people with health concerns similar to their own).

There is some variation in the use of online health resources by age, gender, and race/ethnicity. Young adults (age 18 to 22) are more likely than teens (age 14 to 17) to use health-related mobile apps, connect to health providers over the internet, and look for people online with similar health concerns. Female teens and young adults are more likely than males to look for health information online and use mobile apps related to health; and White young people are more likely than their Black peers to look for health information online.

Searching for health information online. As mentioned above, a total of 85% of young people have searched for health information online. Not surprisingly, given that the survey was conducted from September to November 2020, COVID-19 was the most common health topic researched online (58% of teens and young adults looked for information on COVID-19), followed by searches for information on fitness and exercise (47%). Anxiety (42%), stress (39%), and depression (38%) round out the top five health issues that young people searched online (see Table 2 on page 12).

“I looked at several depression and anxiety subreddits, found good advice and different ways to look at the problem.”

—22-year-old man

While the total percentage of youth who search for health information online has held steady since 2018, there have been some interesting changes over the past two years in the types of topics young people are researching. Fewer young people are searching

TABLE 1. Online health resource use, by year of data collection, and by age, gender, and race/ethnicity in 2020

Among 14- to 22-year-olds, percent who say they have ever ...	Data collection		Age		Gender		Race/Ethnicity		
	2018 (N = 1,337)	2020 (N = 1,513)	14 to 17 (n = 796)	18 to 22 (n = 717)	Male (n = 695)	Female (n = 778)	White (n = 613)	Black (n = 274)	Hispanic/ Latinx (n = 466)
Searched for health information online	87%	85%	85%	84%	82% ^a	88% ^b	86% ^a	77% ^b	86% ^{ab}
Used mobile apps related to health	64% ^a	69% ^b	65% ^a	72% ^b	61% ^a	77% ^b	68%	70%	67%
Connected to health providers online	20% ^a	47% ^b	42% ^a	51% ^b	45%	50%	49%	44%	43%
Looked for people with similar health concerns online	39%	40%	36% ^a	43% ^b	37%	42%	39%	39%	39%

Note: Items with different superscripts differ significantly across rows within each category ($p < .05$).

for information about fitness or nutrition (down 16 and 14 percentage points, respectively), and searches related to sexual activity have also dropped substantially, including birth control (down 10 percentage points), pregnancy (down 10 percentage points), and sexually transmitted diseases (down 7 percentage points).

There are several notable differences between demographic groups in terms of their health information searches. Young adults are more likely than teens to search for health information on a variety of topics, including anxiety, stress, depression, sleep disorders, STDs, and pregnancy. Female teens and young adults are more likely than their male peers to search for health information online (88% vs. 82%), with quite substantial differences when it comes to mental health issues such as anxiety (a difference of 21 percentage points), stress (15 percentage points), depression (17 percentage points), and eating disorders (18 percentage points). Not surprisingly, female teens and young adults

are also more likely than males to search for information on pregnancy (a difference of 19 percentage points) and birth control (23 percentage points).

Black teens and young adults are less likely than either Hispanic/Latinx or White youth to look for health information online (overall, 77% of Black young people have done so, compared to 86% of those who are Hispanic/Latinx and White). There are a number of topical differences by race/ethnicity as well. For example, 49% of Black young people have looked online for information related to COVID-19, compared to 60% of White youth. The differences are most stark between Black and White young people on a variety of specific topics, including anxiety (a difference of 19 percentage points), stress (15 percentage points), and depression (16 percentage points), with Black young people less likely to research each topic online.

TABLE 2. Online health information searches, by year of data collection, and by age, gender, and race/ethnicity in 2020

Among 14- to 22-year-olds, percent who have ever searched online for information about ...	Data collection		Age		Gender		Race/Ethnicity		
	2018 (N = 1,337)	2020 (N = 1,513)	14 to 17 (n = 796)	18 to 22 (n = 717)	Male (n = 695)	Female (n = 778)	White (n = 613)	Black (n = 274)	Hispanic/ Latinx (n = 466)
COVID-19	NA	58%	57%	58%	56%	60%	60% ^a	49% ^b	54% ^{ab}
Fitness and exercise	63% ^a	47% ^b	45%	48%	45%	49%	48%	41%	49%
Anxiety	42%	42%	35% ^a	47% ^b	31% ^a	52% ^b	46% ^a	27% ^b	39% ^a
Stress	44% ^a	39% ^b	35% ^a	42% ^b	31% ^a	46% ^b	42% ^a	27% ^b	37% ^a
Depression	39%	38%	33% ^a	42% ^b	29% ^a	46% ^b	41% ^a	25% ^b	36% ^a
Diet and nutrition	52% ^a	38% ^b	35%	40%	33% ^a	43% ^b	40% ^a	28% ^b	37% ^a
Sleep disorders	27%	25%	21% ^a	29% ^b	20% ^a	30% ^b	26% ^a	16% ^b	28% ^a
Smoking or vaping	20%	24%	22%	25%	23%	24%	23%	23%	25%
Birth control	30% ^a	20% ^b	15%	24%	8% ^a	31% ^b	21%	16%	20%
Sexually transmitted diseases	26% ^a	19% ^b	16% ^a	21% ^b	17%	20%	17%	23%	17%
Drug or alcohol abuse	24% ^a	19% ^b	18%	19%	16%	21%	20%	15%	18%
Pregnancy	28% ^a	18% ^b	13% ^a	23% ^b	9% ^a	28% ^b	17%	16%	21%
Eating disorders	19% [*]	18%	17%	19%	9% ^a	27% ^b	20% ^a	11% ^b	15% ^{ab}
Cancer	24% ^a	17% ^b	15%	18%	13% ^a	20% ^b	18%	15%	14%
Diabetes	17% ^{*a}	12% ^b	8% ^a	14% ^b	9%	13%	11%	10%	11%
Heart disease	14% ^a	7% ^b	5% ^a	9% ^b	8%	7%	6%	9%	6%
Any other mental health issue	6%	8%	5% ^a	9% ^b	6%	9%	7%	6%	7%
Any other physical health issue	6%	6%	5%	6%	5%	6%	8% ^a	2% ^b	4% ^b
Any health topic	87%	85%	85%	84%	82%^a	88%^b	86%^a	77%^b	86%^a

*The 2018 report erroneously listed these findings 1% lower.

Note: Items with different superscripts differ significantly across rows within each category ($p < .05$).

Use of health-related mobile apps. Nearly seven out of 10 (69%) young people have used mobile apps related to health, up slightly from 2018 (64%). Fitness tops the list of health-related apps used by young people (see Table 3), with about four in 10 (39%) saying they have used one. More than one in four (27%) young people have used apps related to sleep, and nearly one in five (17%) have used meditation or mindfulness apps. The use of apps related to fitness and nutrition has declined somewhat since two years ago, but apps related to sleep, meditation, stress reduction, and depression are up. Still, fewer than one in 10 (9%) young people say they have ever used an app specifically related to depression.

Young adults are more likely to use health-related apps than teens, and female teens and young adults are more likely to use them than their male peers. The biggest differences by age are in the use of apps related to sleep (a difference of 8 percentage points) and stress reduction (7 percentage points). Unsurprisingly, female teens and young adults are more likely to use apps related to menstruation (47% female vs. 2% male), but they are also more likely to use meditation or mindfulness apps (23% vs. 10%), and mood trackers (15% vs. 5%). There are no racial or ethnic

differences in the overall proportion of young people who use health-related apps, but there are a handful of differences by topic area: Whites are more likely than others to use apps related to fitness, sleep, and meditation, and Black teens and young adults are more likely than White or Hispanic/Latinx young people to use apps related to depression (14%, compared to 8% of White and Hispanic/Latinx).

“I was having trouble sleeping since the virus outbreak, so I talked to a doctor and this gave me the courage to try meditation which soon allowed me to relax during those periods.”

—15-year-old girl

TABLE 3. Health-related mobile app use, by year of data collection, and by age, gender, and race/ethnicity in 2020

Among 14- to 22-year-olds, percent who have ever used apps related to ...	Data collection		Age		Gender		Race/Ethnicity		
	2018 (N = 1,337)	2020 (N = 1,513)	14 to 17 (n = 796)	18 to 22 (n = 717)	Male (n = 695)	Female (n = 778)	White (n = 613)	Black (n = 274)	Hispanic/ Latinx (n = 466)
Fitness	45% ^a	39% ^b	41%	37%	36%	43%	41% ^a	39% ^{ab}	34% ^b
Nutrition	26% ^a	22% ^b	21%	24%	22%	24%	23%	23%	19%
Sleep	20% ^a	27% ^b	22% ^a	30% ^b	25%	28%	30% ^a	20% ^b	22% ^b
Period/menstruation	20% ^a	24% ^b	23%	24%	2% ^a	47% ^b	26%	21%	20%
Meditation/mindfulness	11% ^a	17% ^b	16%	19%	10% ^a	23% ^b	20% ^a	13% ^{ab}	12% ^b
Stress reduction	9% ^a	14% ^b	10% ^a	17% ^b	10% ^a	17% ^b	14%	11%	13%
Medication reminder	7%	7%	6%	7%	3% ^a	10% ^b	7%	6%	8%
Birth control	7%	6%	4% ^a	8% ^b	1% ^a	11% ^b	6%	9%	6%
Mood tracker	6% ^a	10% ^b	8% ^a	12% ^b	5% ^a	15% ^b	11%	10%	7%
Depression	5% ^a	9% ^b	7% ^a	11% ^b	7%	11%	8% ^a	14% ^b	8% ^a
Quitting smoking/vaping	4% ^a	2% ^b	3%	2%	2%	2%	2%	4%	3%
Drug or alcohol abuse	2% ^a	3% ^b	3%	3%	4%	3%	2% ^a	5% ^b	4% ^{ab}
COVID-19 tracker	NA	11%	12%	11%	12%	11%	10%	13%	10%
Any other health issue	1%	1%	1%	1%	1%	1%	1%	0%	1%
Any health app	64%^a	69%^b	65%^a	72%^b	61%^a	77%^b	68%	70%	67%

Note: Items with different superscripts differ significantly across rows within each category ($p < .05$).

Connecting with health providers online. Nearly half (47%) of all young people have used digital tools to connect with health providers, and the vast majority found it helpful. As indicated in Table 4, more than one in four (27%) have had a video appointment with a provider, and one in seven have texted (15%) or used online messaging (14%). All represent increases from two years ago. The largest increase in telehealth has been in video appointments, but it is possible that some of this change is the result of a difference in question wording from 2018 to 2020: In 2018, the survey asked whether respondents had connected to providers via “video chat,” whereas in 2020 it asked about “video appointments.” In addition, of course, the closure of many medical facilities during shelter-in-place orders also likely affected the use of video appointments.

The vast majority (86%) of those who have connected with a provider online say they found it helpful, including 37% who said “very” helpful (see Table 5 on page 15). Only 14% said the experience was not helpful. Of those who have not yet connected with a provider online, 45% are either “very” (8%) or “somewhat” (37%) interested in doing so. The main reasons most young people offer for not wanting to connect with providers online are that they either don’t have any health issues that need attention (48%) or that they simply prefer to meet their providers face to face (52%). Only small proportions report being worried about confidentiality or privacy.

There are only a few differences by age, gender, or race/ethnicity when it comes to 14- to 22-year-olds’ interest in taking advantage of telehealth opportunities. Young adults are more likely than teens to have connected with a health provider online (51% vs. 42%), and they are more likely to be concerned about cost and security issues. Female young people are more interested than males in connecting with a provider online (51% vs. 40%); and White youth are more concerned than Hispanics/Latinx about the security and confidentiality of their health information online (14% vs. 5%).

Looking for health peers online. Four in 10 (40%) young people say they have gone online to seek out people who have similar health concerns as their own, nearly the same rate as two years ago (see Table 1 on page 11). This could be through watching video testimonials, reading blogs, listening to podcasts, or joining social media groups. Young adults are more likely than teens to have done this (43% vs. 36%); male and female young people, and White, Black, and Hispanic/Latinx young people are all equally likely to have tried to connect with health peers online. (See quotes on page 16.)

TABLE 4. Connecting to health providers online, among all, 2018 and 2020

Percent of 14- to 22-year-olds who have connected to online health providers via ...	2018 (N = 1,337)	2020 (N = 1,513)
Video appointment*	4% ^a	27% ^b
Text messaging	8% ^a	15% ^b
Online messaging	10% ^a	14% ^b
An app	5% ^a	12% ^b
Other	NA	4%
Any of the above	20%^a	47%^b

*In 2020, question wording changed from video “chat” to video “appointment.” Therefore differences over time may not be comparable.

Note: Items with different superscripts differ significantly across rows ($p < .05$).

“I prefer in-person sessions, but due to COVID, it has been helpful to safely talk with my therapist on the phone. I always have the option to do video conferencing, but I don’t have internet in a place I can privately communicate with my therapist.”

—21-year-old woman

TABLE 5. Connecting to a health provider online: Attitudes and experiences, by age, gender, and race/ethnicity, 2020

Among 14- to 22-year-olds, percent who have ...	All (N = 1,513)	Age		Gender		Race/Ethnicity		
		14 to 17 (n = 796)	18 to 22 (n = 717)	Male (n = 695)	Female (n = 778)	White (n = 613)	Black (n = 274)	Hispanic/ Latinx (n = 466)
Connected to a health provider online	47% (n = 673)	42%^a (n = 317)	51%^b (n = 356)	44% (n = 288)	50% (n = 363)	49% (n = 270)	44% (n = 121)	43% (n = 207)
Among those who have connected to a health provider online, percent who say doing so is generally ...								
• Very/somewhat helpful	86%	90%	83%	88%	86%	84%	88%	89%
• <i>Very helpful</i>	37%	45% ^a	31% ^b	41%	35%	35%	42%	36%
• <i>Somewhat helpful</i>	49%	45%	52%	48%	51%	49%	46%	53%
• Not too/at all helpful	14%	10%	17%	12%	15%	16%	12%	11%
• <i>Not too helpful</i>	11%	7%	13%	10%	11%	11%	9%	9%
• <i>Not at all helpful</i>	3%	3%	3%	2%	3%	4%	3%	2%
Have not connected to a health provider online	52% (n = 832)	57%^a (n = 474)	48%^b (n = 358)	55% (n = 404)	49% (n = 410)	51% (n = 341)	54% (n = 151)	57% (n = 258)
Among those who have not connected to a health provider online, percent who say they are ... in doing so								
• Very/somewhat interested	46%	43%	48%	40% ^a	51% ^b	43%	50%	50%
• <i>Very interested</i>	8%	9%	8%	8%	9%	7%	14%	10%
• <i>Somewhat interested</i>	37%	34%	40%	32% ^a	43% ^b	35%	36%	40%
• Not too/at all interested	54%	56%	52%	59% ^a	48% ^b	57%	50%	49%
• <i>Not too interested</i>	32%	33%	32%	37% ^a	27% ^b	35%	26%	28%
• <i>Not at all interested</i>	22%	23%	20%	22%	21%	22%	24%	21%
Among those who are not interested in connecting with a health provider online, percent who ...	(n = 439)	(n = 258)	(n = 181)	(n = 237)	(n = 194)	(n = 201)	(n = 68)	(n = 123)
Would rather meet or talk to health providers in person	52%	48%	56%	53%	50%	55%	+	45%
Don't have any health issues to see a provider about	48%	56% ^a	39% ^b	50%	46%	52%	+	47%
Worry about the security or confidentiality of their health information online	10%	4% ^a	17% ^b	8%	14%	14% ^a	+	5% ^b
Worry about the cost	10%	5% ^a	16% ^b	10%	11%	11%	+	7%
Worry about being overheard	5%	4%	5%	5%	5%	5%	+	4%
Worry about family finding out	5%	4%	6%	1% ^a	9% ^b	6%	+	2%
Other	6%	6%	5%	4%	7%	4%	+	7%

+ Cell size too small for reliability.

Note: Items with different superscripts differ significantly across rows within each demographic category ($p < .05$).

We asked respondents to share their experience about a time they connected online with a clinician, including whether it was helpful. Young people shared what worked well and what could be improved.

Some examples:

"It was helpful because I felt as though I was talking to her in person."

—14-year-old boy

"It was a great experience with the stress of COVID. It was safe to communicate with my provider without actually going to the hospital. It was also fast. Everything was great with this connection."

—15-year-old boy

"It was an OK experience, but it was not the same as speaking with them in person. I didn't feel comfortable expressing myself online."

—16-year-old girl

"I got ideas ... stress coping and anxiety reducing strategies I can use on an everyday basis."

—17-year-old boy

"She was distracted and unhelpful."

—21-year-old woman

"Me meeting with my doctor online was about my depression, we had to do it online because COVID struck and everything was locked down. It was kind of nice not having to leave the house to talk to a doctor, but it was less personal than if you actually went to the doctors. You could train the doctors to look at the camera more to seem like they are looking at you."

—20-year-old man

"I like seeing someone in person and humanizing them a bit before I open up to them. To have a counselor online was not my cup of tea."

—21-year-old woman

We asked respondents who had gone online to try to find health peers to share more about the situation and how it turned out.

Here are some of their stories:

“Once I was searching on the internet to find what other people have and found someone who surprised me as he has almost the same health concerns as me.”

—14-year-old boy

“Sometimes I get depressed or anxious about certain things that I deal with, and I wanted to know if other teens felt the same way I do. I found others who sometimes feel like I do, and what they do to overcome it.”

—16-year-old girl

“Wanted to find other people my age that are overweight.”

—16-year-old girl

“I found friends in my city who were experiencing the same things. I felt understood after messaging them.”

—17-year-old boy

“I just went out looking for people that are in the same position I am, and we were able to connect and understand that we weren't alone like we thought we were.”

—19-year-old man

“I looked through those forums and found people with my same issue. It helped me find out how to control it.”

—19-year-old woman

“It was great, I wanted to see if I could relate to others and turns out I did—ended up having an online friend whom I call almost every day.”

—20-year-old man

“I went on Facebook and found a few people that had the same issues as I did. I was pregnant and needed help, and they ended up being super super nice.”

—22-year-old woman

“I am in a Facebook group for lactose intolerance and one for anxiety. It's nice to have a space to vent with people who understand and to share resources.”

—22-year-old woman

“I used to find others on social media who struggled with the same issues I did by joining group pages. It was nice to not feel alone and I made a few friends even.”

—22-year-old woman

DEPRESSION AND COVID-19 AMONG TEENS AND YOUNG ADULTS

THIS SURVEY INCLUDED A widely used scale for measuring depressive symptoms, the PHQ-8 scale (Kroenke et al., 2009). We were also interested in documenting the varying degrees to which young people’s lives have been affected by COVID-19, and exploring any links between COVID-19 and depression. Therefore we also included in our survey a series of questions about various types of impacts young people may have experienced due to COVID-19. This section of the report provides an overview of the results concerning levels of depression, COVID-19-related impacts, and the relationship between the two.

Depression. Disturbingly, the survey finds that nearly four out of 10 (38%) young people between 14- and 22-years old report symptoms of moderate to severe depression (see Table 6).

Mirroring the findings of other studies (e.g., Czeisler et al., 2020), our survey finds a substantial increase in depression among this age group, from 25% in 2018 to 38% in 2020. Depression levels are substantially higher among 18- to 22-year-olds (48% report moderate to severe symptoms) than among 14- to 17-year-olds (25%). But the increase among the younger group has been substantial, with the proportion reporting moderate to severe symptoms nearly doubling from 13% in 2018 to 25% today (see Table 7). Among young adults, the rate went from 34% to 48% over that same time period. With respect to gender, the percent of females reporting symptoms of moderate to severe depression significantly increased from 30% in 2018 to 39% in 2020; among males, it significantly increased from 18% to 35%.

TABLE 6. Depressive symptom levels, by year of data collection, and by age, gender, and race/ethnicity in 2020

Among 14- to 22-year-olds, percent who score in each level of depressive symptoms (PHQ-8, score of 0 to 24):	Data collection		Age		Gender		Race/Ethnicity		
	2018 (N = 1,334)	2020 (N = 1,492)	14 to 17 (n = 789)	18 to 22 (n = 703)	Male (n = 687)	Female (n = 766)	White (n = 606)	Black (n = 269)	Hispanic/Latinx (n = 458)
None (0 to 4)	52% ^a	37% ^b	50% ^a	27% ^b	42% ^a	34% ^b	34% ^a	46% ^b	40%
Mild (5 to 9)	23%	25%	26%	25%	23%	27%	30% ^a	16% ^b	24%
Moderate to severe (10 to 24)	25% ^a	38% ^b	25% ^a	48% ^b	35%	39%	36%	37%	37%
• Moderate (10 to 14)	17% ^a	23% ^b	14% ^a	31% ^b	22%	25%	22%	24%	25%
• Moderately severe (15 to 19)	5% ^a	9% ^b	6% ^a	12% ^b	8%	9%	9%	8%	9%
• Severe (20 to 24)	3% ^a	5% ^b	5%	6%	5%	5%	5%	5%	4%

TABLE 7. Depressive symptom levels, by age, 2018 and 2020

Proportion of 14- to 22-year-olds with each level of depressive symptoms (PHQ-8, score of 0 to 24):	Teens, age 14 to 17		Young adults, age 18 to 22	
	2018 (n = 620)	2020 (n = 789)	2018 (n = 714)	2020 (n = 703)
None (0 to 4)	67% ^a	50% ^b	40% ^a	27% ^b
Mild (5 to 9)	20% ^a	26% ^b	27%	25%
Moderate to severe (10 to 24)	13% ^a	25% ^b	34% ^a	48% ^b
• Moderate (10 to 14)	9% ^a	14% ^b	23% ^a	31% ^b
• Moderately severe (15 to 19)	3% ^a	6% ^b	7% ^a	12% ^b
• Severe (20 to 24)	1% ^a	5% ^b	5%	6%

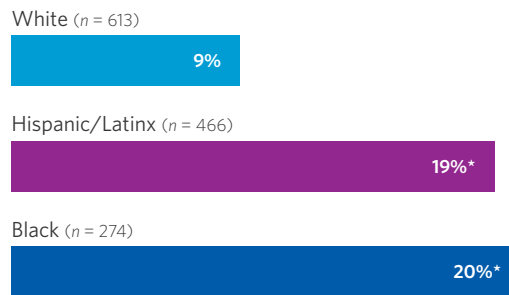
TABLES 6 AND 7:

Notes: Items may not sum exactly due to rounding. Items with different superscripts differ significantly across rows within each category ($p < .05$).

Direct and indirect impacts from COVID-19. As of the time period in which this survey was conducted, from September to November 2020, many U.S. teens and young adults had already been affected by the coronavirus pandemic: One in seven (14%) said they or a family member had gotten sick from the virus, and one in four (25%) said they or a family member had lost their job or income due to COVID-19. Black and Hispanic/Latinx young people were twice as likely as their White peers to say that they or a family member had gotten sick with the virus (20% and 19% vs. 9%).

FIGURE 1. COVID-19 infections in the family, by race/ethnicity, 2020

Percent of 14- to 22-year-olds who say they or a family member have gotten ill from the virus



*Significantly higher than among White youth, at the level of $p < .05$.

TABLE 8. COVID-19-related impacts, by age, gender, and race/ethnicity, 2020

Among 14- to 22-year-olds, percent who have experienced the following during the coronavirus pandemic:	All	Age		Gender		Race/Ethnicity		
	(N = 1,513)	14 to 17 (n = 796)	18 to 22 (n = 717)	Male (n = 695)	Female (n = 778)	White (n = 613)	Black (n = 274)	Hispanic/Latinx (n = 466)
In-person school was cancelled due to the coronavirus	55%	66% ^a	46% ^b	51% ^a	59% ^b	58% ^a	43% ^b	54% ^a
Have gotten more sleep	42%	46% ^a	39% ^b	40%	44%	40%	41%	45%
Have felt emotionally closer to their family members	29%	35% ^a	24% ^b	24% ^a	34% ^b	26% ^a	27% ^{ab}	33% ^b
Have gotten more exercise	28%	31%	25%	29%	27%	28%	26%	28%
Have felt less anxious with no school and other activities	26%	30% ^a	22% ^b	22%	28%	26%	24%	25%
They or a family member have lost a job or income due to the virus	25%	22% ^a	28% ^b	20% ^a	29% ^b	24%	26%	26%
Have had to take on more family responsibilities due to coronavirus, such as getting a job or taking care of children	18%	17%	18%	17%	18%	14% ^a	13% ^a	24% ^b
Haven't been able to get needed physical or mental health care due to the coronavirus	15%	11% ^a	18% ^b	13%	15%	15%	11%	14%
Household has become more crowded due to the coronavirus	14%	13%	15%	14%	15%	16% ^a	6% ^b	10% ^b
Have been separated from their family due to the coronavirus	14%	12% ^a	17% ^b	12%	17%	13%	13%	17%
They or someone in their family became ill from the coronavirus	14%	16%	13%	13%	15%	9% ^a	20% ^b	19% ^b

Note: Items with different superscripts differ significantly across rows within each demographic category ($p < .05$).

COVID-19 and depression. The young people most directly affected by COVID-19—those who say that they themselves or someone in their family have gotten ill from the virus—are significantly more likely to manifest moderate to severe symptoms of depression than those who have not been affected in this way. Fully half (51%) of all 14- to 22-year-olds with a family member who became sick with COVID-19 exhibit moderate to severe symptoms of depression, compared to 36% of others in their age group.

TABLE 9. Depressive symptom levels, by COVID-19 infections in family, 2020

Proportion of 14- to 22-year-olds with each depressive symptom level (PHQ-8, score of 0 to 24)	COVID-19 infection in the family	
	No (n = 1,280)	Yes (n = 212)
None (0 to 4)	38%^a	26%^b
Mild (5 to 9)	26%	22%
Moderate to severe (10 to 24)	36%^a	51%^b
• Moderate (10 to 14)	23%	25%
• Moderately severe (15 to 19)	8% ^a	16% ^b
• Severe (20 to 24)	4% ^a	11% ^b

Notes: Items may not sum exactly due to rounding. Items with different superscripts differ significantly across rows ($p < .05$).

DIGITAL HEALTH PRACTICES AMONG YOUNG PEOPLE WITH DEPRESSION

A PARTICULAR CONCERN OF this research team has been to explore the use of digital health tools by the large—and growing—proportion of young people who are experiencing depression. In this section we document the degree to which 14- to 22-year-olds with moderate to severe depressive symptoms, as defined by the PHQ-8 scale (Kroenke et al., 2009), use an array of digital health resources. We also explore how their practices compare with those who do not have depressive symptoms, and whether their use of digital health tools has changed over the past two years.

Digital health activity is more common among teens and young adults with depression than among other people their age. Fully 86% have gone online to look for health information, three out of four (75%) have used mobile apps related to health, nearly six in 10 (58%) have connected with health providers online, and more than half (51%) have tried to find people online with health concerns similar to their own (see Table 10). They are far more likely than young people without depressive symptoms to have connected with providers online (58% vs. 37%) and to have tried to connect online with others facing similar health concerns (51% vs. 28%).

Health information searches. Aside from COVID-19, the top health issues researched online by those with depression are anxiety (55%), depression (53%), and stress (51%; see Table 11). There are clear and substantial differences between those with moderate to severe depression and those without depressive symptoms in terms of the topics they look up online. For example, there is a difference of 36 percentage points between the two groups in searching for information on depression, a 34-point gap on

TABLE 11. Health information searches, by topic and depressive symptom levels, 2020

Among 14- to 22-year-olds, percent who have searched online for information about ...	Depressive symptoms	
	None (n = 643)	Moderate to severe (n = 510)
COVID-19	54%	55%
Anxiety	21% ^a	55% ^b
Depression	17% ^a	53% ^b
Stress	24% ^a	51% ^b
Fitness and exercise	44%	46%
Diet and nutrition	30% ^a	40% ^b
Sleep disorders	15% ^a	36% ^b
Smoking or vaping	17% ^a	30% ^b
Eating disorders	9% ^a	26% ^b
Birth control	14% ^a	26% ^b
Drug or alcohol abuse	11% ^a	25% ^b
Sexually transmitted diseases	13% ^a	24% ^b
Pregnancy	13% ^a	22% ^b
Cancer	13%	18%
Diabetes	9% ^a	14% ^b
Heart disease	5% ^a	9% ^b
Any other mental health issue	2% ^a	14% ^b
Any other physical health issue	6%	6%
Any health topic	79%^a	86%^b

TABLE 10. Online health resource use, by depressive symptom levels, 2020

Percent of 14- to 22-year-olds who say they have ...	Level of depressive symptoms		
	None (n = 643)	Mild (n = 339)	Moderate to severe (n = 510)
Gone online for health information	80% ^a	91% ^b	86% ^b
Used mobile apps related to health	61% ^a	73% ^b	75% ^b
Connected to health providers online	37% ^a	46% ^b	58% ^c
Looked for people with similar health concerns online	28% ^a	39% ^b	51% ^c

TABLES 10 AND 11: Items with different superscripts differ significantly across rows ($p < .05$).

anxiety, and a 27-point gap in searches for information about stress. By comparison, we don't find substantial differences on other topics less related to mental health, such as COVID-19 or cancer. Clearly, young people with depression are reaching out for information on their condition online.

While a substantial number of young people with depression are looking for information about their condition online, the proportion who do so has decreased since two years ago: In 2018, 82% of respondents with moderate to severe depressive symptoms had looked for information on either depression, stress, or anxiety, and today 70% have done so. Unfortunately, we can't tell from this survey why they are less likely to look for such information online today, but in reading young people's experiences in their own words, it is clear that the need for online resources on mental well-being remains strong.

For example, when we asked respondents to give us an example of a time they went online to get health information about depression, stress, or anxiety, many were seeking information to better understand or help with a friend or family member's situation. Another significant group needed quick advice for an acute situation, like the anxiety provoked by a big interview or exam. Young people also go online for screening tools, and often that prompts them to seek help offline.

“I looked up how to know if you're depressed. I had been thinking I was depressed for a long while (a couple years). I wanted to make sure that I was before I saw a doctor. I took a quiz and it said yes, I was and should seek immediate help. I ended up seeing a doctor a couple days later and got help.”

—22-year-old woman

Here are quotes illustrating some of the benefits young people derive from using online resources:

"Just wondering why I get sad or mad for no reason sometimes. I found out that it happens to a lot of people. I'm not the only one."

—15-year-old boy

"I was experiencing symptoms of anxiety and I wanted to confirm. I found what I was looking for, and it definitely helped me seek therapy I needed."

—16-year-old girl

"I went online to find out about depression because I was going through a hard time and I found out that other people have gone through this also and gave me a few good ideas about exercising and meditating and talking to my parents about it and it did help."

(In a later response, he wrote: "I went online to find other people who have similar problems with depression, and it helped me realize that there were other people with similar problems. And I made a new friend who I talk with now frequently.")

—16-year-old boy

"Every night I would cry really bad and I wasn't happy, so I looked up depression to [see] if it describes what I'm going through. It helped so I was able to change my life around a little and explain to others what was wrong with me."

—20-year-old woman

"I was stressed and felt like I needed an objective view. Online I was able to find a teenager help line. It gave me comfort knowing there was someone to talk to besides my mom."

—17-year-old boy

"I went online when my dad left. I was stressed. I still am, but it is not as bad as it was. I didn't know if I needed medication or what. I found some stuff. It helped me. Just knowing that my feelings were normal and that I wasn't crazy and that it would get better."

—17-year-old girl

"I just wanted to see how other people dealt with their stress, especially with school and how they balance it all. It helped me to see that I wasn't alone in my anxiety and that there are better ways to deal with anxiety rather than just pushing it to the back burner."

—17-year-old girl

"When the virus became a big deal, I looked online to better understand ways to deal with anxiety. I found some good relaxing techniques that helped me calm down."

—21-year-old man

Not everyone finds what they need—or likes what they find:

“Friend tried to commit suicide and I was wonder[ing] what I could have done to help. No, it didn’t [help].”

—14-year-old boy

“Lots of conflicting details ... made me more confused and no specific answers.”

—14-year-old boy

“I wanted to not be as scared to go out with people and no, it did not help.”

—15-year-old girl

“I have been stressed and anxious recently and looked up remedies. They did not help.”

—17-year-old girl

“I go online to research things and usually make myself worry more.”

—17-year-old boy

“Online didn’t seem to help. I got the help I needed from close family members being there for me.”

—21-year-old woman

“I did find what I was looking for, but it scared me to death.”

—21-year-old woman

The stories shared by respondents with moderate to severe depression reflect their overall positive impression of telehealth:

“During quarantine I was given the opportunity to meet with a therapist via phone call, which helped me out a lot.”

—18-year-old woman

“Connecting with my health provider was helpful because they informed me that what was happening was normal. [A]lthough there was nothing that could stop it, knowing it wasn’t going to hurt me helped.”

—19-year-old woman

However, negative comments also came through in the open-end responses:

“They could not truly see how I felt and properly diagnose me.”

—17-year-old girl

“Basically was told to call again another time and they couldn’t help me with anything. Waste of \$60.”

—17-year-old nonbinary person

Mobile apps related to mental health. More than a third of young people with moderate to severe depressive symptoms (36%) say they have used apps related to sleep (see Table 12). Nearly one in four (24%) have tried apps related to stress, and one in five (21%) have used apps for meditation or mindfulness. All told, nearly half (46%) of young people with moderate to severe depressive symptoms have used mobile apps related to their mental well-being (up from 38% in 2018); this is more than twice the proportion of young people without depression who have tried apps on these topics (19%).

Connecting with health providers online. Given that this survey was conducted during the coronavirus pandemic, it is perhaps not surprising that many young people with depression were taking advantage of online ways of connecting to health providers (see Table 13). Nearly six in 10 (58%) young people with moderate to severe depression have connected with a health provider online, primarily through video appointments (33%), but also by text (20%), with an online message system (21%), or through an app (18%).

Young people with depression who haven't yet connected with a provider online express more interest in doing so than others their age (52% are interested, compared to 40% of those who are not depressed; see Table 14 on page 28). Among young people with depression who have connected with a provider online, the vast majority (79%) say that doing so was "very" (34%) or "somewhat" (46%) helpful. However, despite their interest and desire to connect, they have significantly lower satisfaction with telehealth than their nondepressed peers: 79% of those who have connected with a provider online say they are very or somewhat satisfied with the experience, compared to 92% of those without depression.

All methods of connecting with providers online have increased since two years ago among those with depression. Unfortunately, we cannot be sure whether the apparent increase in video connections is due in part to a change in questionnaire wording (from video "chat" to video "appointment").

"I miss the in-person connection with the provider, but the virtual appointment still gets the job done."

—18-year-old man

TABLE 12. Health-related mobile app use, by degree of depressive symptoms, 2020

Among 14- to 22-year-olds, percent who have used a mobile app related to ...	Depressive symptoms	
	None (n = 643)	Moderate to severe (n = 510)
Sleep	18% ^a	36% ^b
Stress	8% ^a	24% ^b
Meditation/mindfulness	12% ^a	21% ^b
Depression	2% ^a	18% ^b
Mood tracker	5% ^a	17% ^b
Alcohol or drug abuse	1% ^a	6% ^b
Any mental health topic*	19%^a	46%^b

*Includes stress, meditation/mindfulness, depression, mood tracker, and alcohol or drug abuse.

TABLE 13. Connecting with health providers online, among those with depression, 2018 and 2020

Among 14- to 22-year-olds with moderate to severe depressive symptoms, percent who have connected via ...	2018 (n = 322)	2020 (n = 510)
Video appointment*	8% ^a	33% ^b
Text message	15% ^a	20% ^b
Online message system	11% ^a	21% ^b
An app	9% ^a	18% ^b
Any digital connection	32%^a	58%^b

*In 2018 this item was worded as video "chat." Therefore, changes over time may not be comparable.

TABLES 12 AND 13:

Items with different superscripts differ significantly across rows ($p < .05$).

TABLE 14. Connecting with health providers online, by degree of depressive symptoms, 2020

Among 14- to 22-year-olds, percent who have connected via ...	Level of depressive symptoms		
	None (n = 643)	Mild (n = 339)	Moderate to severe (n = 510)
Video appointment	23% ^a	24% ^a	33% ^b
Text message	9% ^a	15% ^b	20% ^b
Online message system	7% ^a	10% ^a	21% ^b
An app	7% ^a	11% ^{ab}	18% ^b
Any digital connection	37%^a	46%^b	59%^c
Among those who have connected with a provider online, percent who say it was very/somewhat helpful	92%^a	92%^a	79%^b
Among those who have not connected with a provider online, percent who are interested in connecting digitally	40%^a	47%^{ab}	52%^b

Note: Items with different superscripts differ significantly across rows ($p < .05$).

SOCIAL MEDIA AND DEPRESSION AMONG TEENS AND YOUNG ADULTS

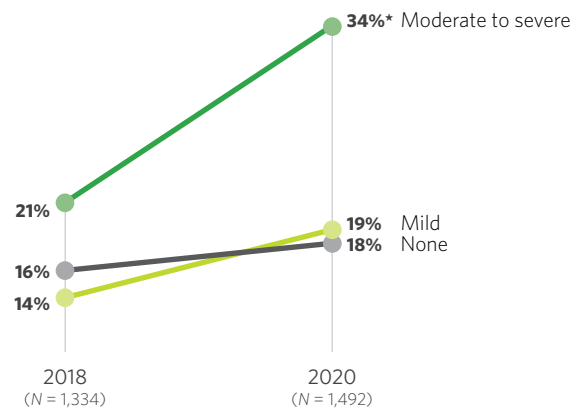
IN THIS SECTION OF the report, we explore the role of social media in young people’s lives, with a special focus on those living with depression. We look at the frequency of their use of social media, and its importance to them across a variety of realms including creative expression, inspiration, feeling less alone, and getting support and advice from others. We also listen to young people’s perspectives about how using social media makes them feel when they are already feeling depressed, stressed, or anxious.

Frequency of social media use. Not surprisingly, almost all (95%) young people say they use social media (see Table 15). Over the past two years, the frequency of social media use has crept up. Today one in four (25%) 14- to 22-year-olds say they are on social media “almost constantly,” an increase of eight percentage points since 2018. Whether this is a permanent increase or an artifact of being stuck inside during the pandemic, only future research will tell.

Relationship between depression and frequency of social media use. Those suffering from moderate to severe depressive symptoms are nearly twice as likely as those without depression to say they use social media almost constantly (34% vs. 18%, see Figure 2). Therefore, in this survey we do see a relationship between social media use and depression, although it is not possible to know if there is a causal relationship between these two measures, and if so, in which direction it runs.

FIGURE 2. “Almost constant” use of social media, by level of depressive symptoms, 2018 and 2020

Percent of 14- to 22-year-olds who say they use social media “almost constantly”



*Significantly higher than 2018 at the level of $p < .05$.

TABLE 15. Frequency of social media use, by year of data collection, and by degree of depressive symptoms in 2020

Percent of 14- to 22-year-olds who say they use social media ...	Data collection		Level of depressive symptoms		
	2018 (N = 1,337)	2020 (N = 1,513)	None (n = 643)	Mild (n = 339)	Moderate to severe (n = 510)
• Almost constantly	17% ^a	25% ^b	18% ^a	19% ^a	34% ^b
• Daily but not constantly	64% ^a	56% ^b	64% ^a	64% ^a	44% ^b
• Multiple times a day	54% ^a	48% ^b	55% ^a	58% ^a	36% ^b
• Once a day	10% ^a	8% ^b	9%	6%	8%
• Less than daily	11% ^a	15% ^b	13%	12%	18%
• Weekly	9%	11%	2% ^a	1% ^a	5% ^b
• Less than weekly	2% ^a	4% ^b	4%	4%	3%
• Never	7% ^a	5% ^b	5%	5%	4%
Use social media	93%^a	95%^b	95%	95%	95%

Note: Items with different superscripts differ significantly across rows ($p < .05$).

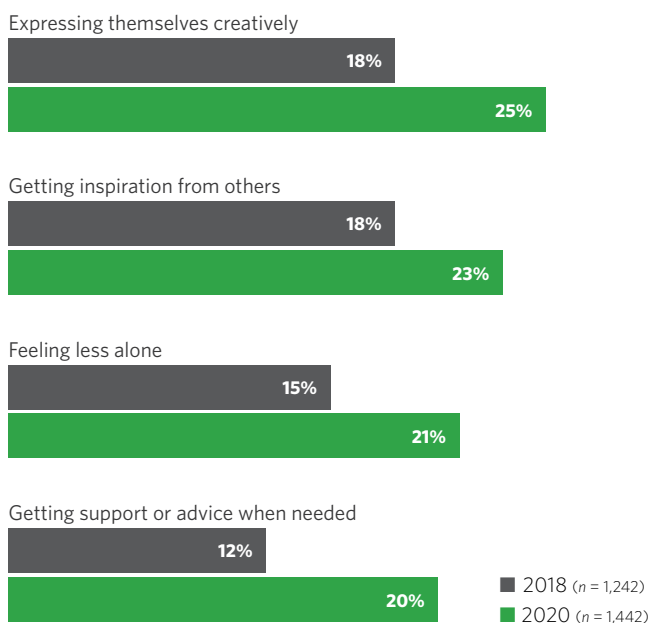
It is particularly intriguing that the increase in social media use between 2018 and 2020 has been almost entirely among those who are currently displaying symptoms of depression (the surveys were not longitudinal—separate cross-sectional samples were taken in each wave). It may be that as social media use increased, those who used it more frequently began experiencing greater levels of depression. But based on the totality of our findings, it appears equally possible that as more young people began experiencing symptoms of depression (whatever the cause) they also began turning to the internet and social media for help.

Importance of social media. While some may dismiss young people’s social media use as nothing more than the posting of selfies and a venue for gossip and celebrity tracking, it is clear that social media also fills important functions, perhaps especially during this time of isolation due to the coronavirus pandemic. At least one in five teens and young adults say that social media is “very” important to them for expressing themselves creatively (25%), getting inspiration from others (23%), feeling less alone (21%), and getting support or advice when needed (20%). Young people are significantly more likely to say social media is “very” important to them for these purposes today than they were in 2018 (see Figure 3). For example, the percent saying that social media are very important for getting support or advice is up by eight percentage points, from 12% to 20%; and the percent saying social media is very important for creative expression is up by seven percentage points, from 18% to 25%. We can’t know at this point whether this is a permanent increase in social media’s importance or a function of the coronavirus pandemic.

Importance of social media for those with depression. Social media play an outsized role in the lives of teens and young adults suffering from depression. These young people are significantly more likely than their peers to say that social media are “very” important to them for all the reasons cited above (see Table 16). For

FIGURE 3. Importance of social media, among all social media users, 2018 and 2020

Percent of 14- to 22-year-old social media users who say social media is “very” important to them for ...



Note: Differences between 2018 and 2020 are statistically significant at the level of $p < .05$.

TABLE 16. Importance of social media, by depressive symptom levels, 2020

Percent of 14- to 22-year-old social media users who say social media is “very” important to them for ...	All (n = 1,442)	Level of depressive symptoms		
		None (n = 609)	Mild (n = 317)	Moderate to severe (n = 496)
Getting support/advice when needed	20%	15% ^a	19% ^{ab}	26% ^b
Expressing themselves creatively	25%	20% ^a	27% ^{ab}	27% ^b
Getting inspiration from others	23%	17% ^a	20% ^a	29% ^b
Feeling less alone	21%	13% ^a	20% ^b	28% ^c

Note: Items with different superscripts differ significantly across rows ($p < .05$).

example, 28% of those with moderate to severe depressive symptoms say social media is “very” important for feeling less alone, compared to 13% of those without depression.

In fact, the increase in the importance of social media in young people’s lives has occurred primarily among those with depression. For example, the proportion of young people with depression who say social media is “very” important for getting support or advice when they need it has more than doubled over the past two years, up from 11% in 2018 to 26% today (for those without depression, the change has been from 11% to 15%, not a statistically significant difference; see Figure 4). It is possible that the efforts of providers and peers to provide support have improved, and therefore that there is more supportive content today.

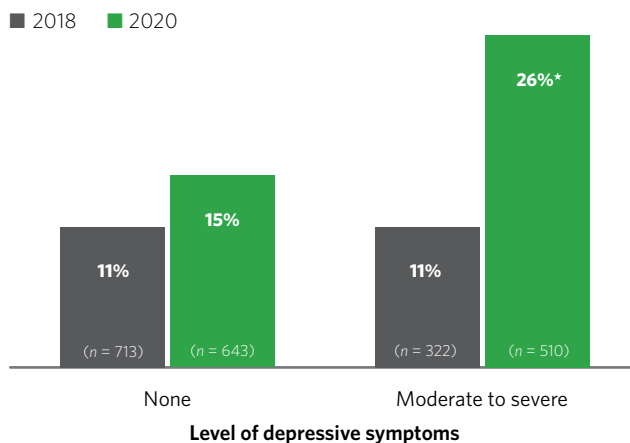
How social media makes young people feel when they are depressed, stressed, or anxious. Many adults are concerned that using social media may make teens and young adults feel worse about themselves, especially for those who are already feeling depressed, stressed, or anxious. There are any number of reasons why this could be the case; for example, comparing oneself to others who may seem more popular or attractive, or being on the receiving end of more frequent and visible negative feedback (Odgers & Robb, 2020). But there are also reasons to suppose that using social media could help young people feel better when they are feeling poorly, such as getting support from their friends, inspiration from others who have gone through similar situations, or simply distracting themselves with humorous or relaxing content.

We asked all young people in the survey how using social media affects them when they are feeling depressed, stressed, or anxious. (This was asked of all respondents, not just those with high PHQ-8 scores, on the assumption that everyone has such feelings once in a while.) Overall, young people are far more likely to say that using social media makes them feel better (43%) rather than worse (17%). The rest say it makes no difference either way. Since 2018, the number of young people who say social media helps them feel better during such times has grown substantially (see Figure 5): Two years ago, 27% said it made them feel better, while 43% say so now.

It is quite striking that such a large proportion say social media helps them to feel better during difficult periods. We asked respondents to share an example of how they used social media during such times, and how it made them feel (see page 32 for survey responses).

FIGURE 4. Importance of social media for support and advice, by depressive symptom levels, 2018 and 2020

Among 14- to 22-year-olds, percent who say social media is “very” important to them for getting support and advice



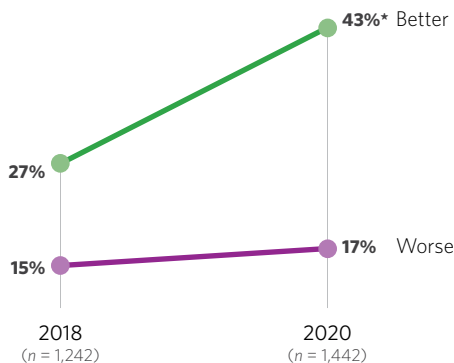
*Significantly higher than 2018 at the level of $p < .05$.

“I had been stressed out and quarantining because of COVID-19. I was suffering from extreme anxiety and depression due to the isolation and homeschooling.”

—17-year-old boy

FIGURE 5. Effect of social media when feeling depressed, stressed, or anxious, 2018 and 2020

Among 14- to 22-year-old social media users, percent who say using social media when they are depressed, stressed, or anxious usually makes them feel ...



*Significantly higher than 2018 at the level of $p < .05$.

Here is a sample of those who shared stories about the positive effects of social media:

"Social media has made me feel less depressed because I have been able to make new online friends. I have started a small business through social media during the pandemic and have been able to communicate with customers and other small business owners very easily."

—16-year-old girl

"I was able to keep in touch with my friends, we could game together online or watch TV shows or movies together online so it was almost like hanging out with them in person."

—17-year-old boy

"I use Discord, Twitter, Snapchat, and Instagram to talk to friends, share my art with others, and see my friend's art and other projects."

—19-year-old woman

"It helps to talk to other kids who are feeling the same kind of isolation from doing school remotely and basically having everything change about our high school experience as seniors this year."

—17-year-old girl

"Social media has made me feel less depressed during the coronavirus pandemic because I was able to follow inspirational accounts and connect with friends that I could not see in person. Of course, video chats helped a lot as well."

—18-year-old woman

On the other hand, some young people felt that social media had a negative effect on their mood:

"Having a constant stream of negative news directly to your phone is bound to have a negative impact on mood and outlook. It makes me concerned for my health and future. For me though it is more about the local social element of social media. It can make you feel isolated and alone from everyone else."

—16-year-old boy

"The constant barrage about deaths and other travesties that are happening across the country and the world is exhausting. I scroll through Instagram, I learn about people dying in the Middle East, I'm reminded of the wildfires that are consuming the West Coast. I see every issue in the world, and I am literally just on my phone, helpless to fix any of them. Social media connects you to the world, but it also has connected me to the world's problems, which have started to feel like my own."

—16-year-old boy

"I am tired of hearing about all of the political junk and the pandemic, and it makes me wish the state of the world would be better."

—19-year-old woman

"I saw mostly just celebrities who could afford to do whatever they wanted with their time in quarantine, and that greatly depressed me since I was struggling to pay my bills/manage small children in my household for months."

—21-year-old woman

The severely depressed. There is reason to believe that for those young people experiencing the most serious episodes of depression, social media may pose greater concerns. The number of respondents in this survey who indicate symptoms of “severe” depression is, thankfully, quite low (about 5%, or one in 20), which means that findings among this small group should be viewed with caution. However, there appear to be clear indications that for those who have severe depression, social media plays an outsized role—more important for inspiration, support, and connection, but also more likely to make respondents more anxious, lonely, and depressed. One thing that can be missed when lumping these “severely” depressed young people into the broader category of “moderate to severe” depression is how steep the differences are for some items, based on the degree of depression. The small sample size means that we can’t draw firm

conclusions about the effects of social media on young people with severe depression, but we do think the findings are worth highlighting here for further exploration in future research.

One example is the frequency of social media use. As reported above, 34% of young people in the moderate to severe depression group say they are on social media “almost constantly” (see Figure 6). But this rate increases from 31% of those in the “moderate” category and 30% of those in the “moderately severe” group, up to 56% of the “severely” depressed respondents. This high rate of social media use by the most depressed young people seems worth special consideration.

Similarly, the proportion of teens and young adults who say social media is “very” important to them across a variety of realms also rises steeply among the most highly depressed (see Figure 7). It

FIGURE 6. “Almost constant” use of social media, by three and five depressive symptom levels, 2020

Percent of 14- to 22-year-olds who say they use social media “almost constantly”

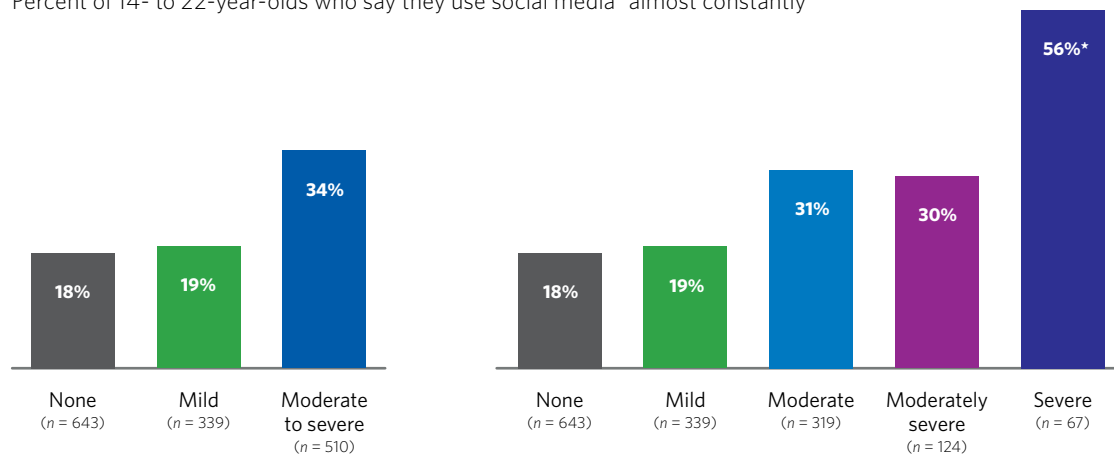
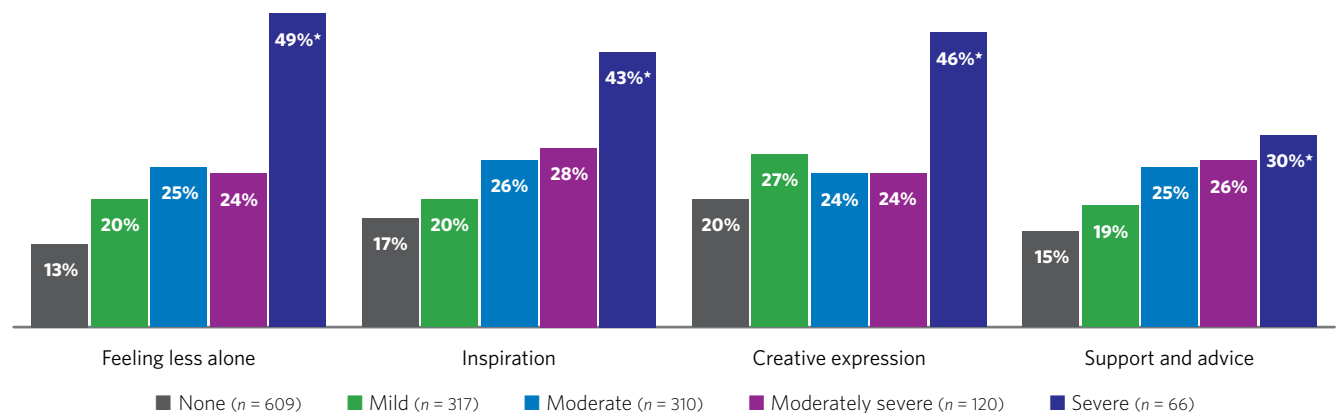


FIGURE 7. Importance of social media, by five depressive symptom levels, 2020

Percent of 14- to 22-year-old social media users who say “social media is VERY important to me for ...”



FIGURES 6 AND 7:

*Results among the “severe” group should be interpreted with extreme caution due to the small sample size.

is also worth noting the high proportion of respondents among the severely depressed group who say that using social media during the coronavirus pandemic has made them feel more anxious, depressed, and lonely (see Figure 8 and the quotes below).

Those with the highest levels of depression are much more likely to have used online health resources about their condition. Nearly two-thirds (62%) of those with severe depression say they have tried to find people online with the same health concerns. As one 19-year-old man wrote, “I just went out looking for people that are in the same position I am, and we were able to connect and understand that we weren’t alone like we thought we were.” Another respondent with severe depression, age 22, shared, “My brother had been diagnosed with anxiety and when he mentioned his symptoms, I realized I had the same ones constantly. I never went to the doctor to check it out, but online, I saw it as a possibility.”

More than three out of four (76%) young people reporting symptoms of severe depression have searched for information about depression online. When asked to share an example of a time they looked online for information about emotional well-being, one 18-year-old woman wrote, “I self-diagnosed myself with depression and anxiety and it did help because I went to the

doctor to get medicine.” And a 19-year-old man shared, “When I was first diagnosed with depression and anxiety, I wanted to learn more. I did find what I was looking for. It helped because then I was able to talk to my therapist more about it with a better understanding.” Not everyone found what they needed. As a 20-year-old nonbinary person wrote, “I have a mix of all three [depression, stress, anxiety] and it affects my personal life. I did not find what I was looking for, and it did not help.”

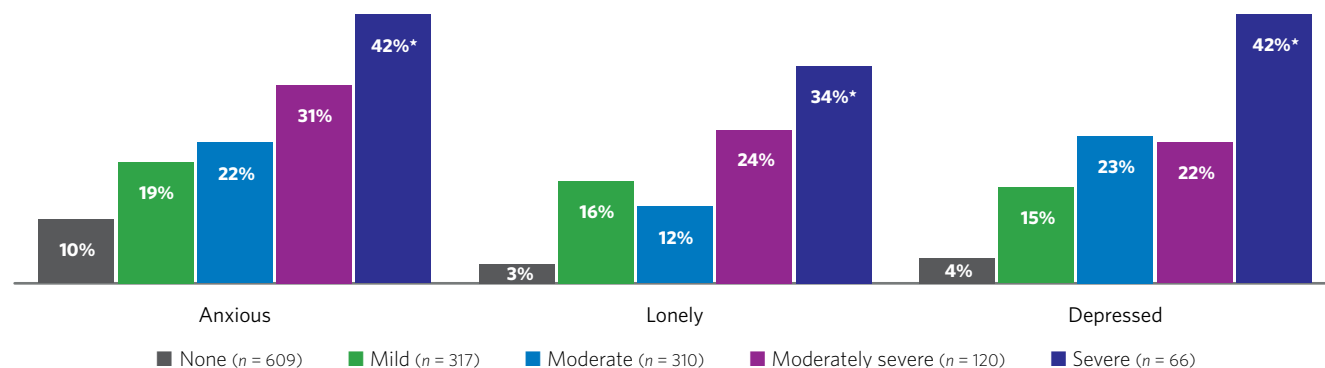
This survey shows that online health resources and social media are being used extensively by teens and young adults most profoundly affected by depression; and that social media plays a decidedly complex role in their lives, offering connection and support as well as—for some—contributing to their anxiety and depression. Clearly, whether we’re considering the positive or the negative role of digital media use in young people’s lives, those who are most severely depressed deserve special consideration. Adults should approach the issue of social media use among this population carefully.

Not surprisingly, people in this group shared colorful and intense responses to our question related to social media’s role in making them feel more or less depressed during the coronavirus pandemic.

“It’s made me feel more depressed because I look at people doing stuff, and realize all I do all day is play Minecraft, and I think about how I could do actual stuff, but I still just play Minecraft instead.”

—15-year-old boy

FIGURE 8. Effect of social media on user’s anxiety, loneliness, and depression, by five depressive levels, 2020
Percent of 14- to 22-year-old social media users who say using social media during the pandemic has made them feel MORE ...



*Results among the “severe” group should be interpreted with extreme caution due to the small sample size.

On the positive side, here are some comments from respondents with severe depression:

"I'm able to connect with my friends still which is what I need the most. I hate being alone."

—15-year-old girl

"It has things that inspire me to be more creative, it makes me feel less alone when I am, funny things lift my mood and make me happier when I'm upset."

—16-year-old girl

"It makes me feel more connected to people when I can't see them due to social distancing."

—18-year-old woman

"There will be times when quarantine made me depressed and a funny video on Instagram or TikTok helped lighten my mood."

—19-year-old woman

"I was able to see positive posts that people put up. I was also able to stay in contact with my friends."

—22-year-old woman

On the negative side:

"I feel like I don't matter and I'm losing myself."

—14-year-old girl

"The world is going to crash and burn."

—14-year-old girl

"Seeing those who do not social distance both makes me mad and makes me lonely because I will not risk my family's health to hang out with my friends."

—17-year-old girl

"I'm lonely all the time. Can't go anywhere or do anything. I didn't have friends even before, but now it's worse considering the pandemic. I get sad a lot."

—19-year-old woman

"Right now, the world is at a point of no return. No matter what anyone does, nothing will ever get better."

—19-year-old man

"There are people out there that are seemingly having a great time most of the time, leaving me in my brain wishing people would just understand what a pandemic really is."

—20-year-old man

SOCIAL MEDIA IN TROUBLED TIMES: THE CORONAVIRUS PANDEMIC AND ONLINE HATE

THE SURVEY ALSO ASKED young people about using social media during the coronavirus pandemic in particular, including how important social media has been to them for being informed about current events, learning how to protect themselves against the virus, and staying connected to family and friends.

Not surprisingly, more than half (53%) of all respondents said that during the coronavirus pandemic, social media has been “very” important for staying connected to friends and family members (see Figure 9). About a third say social media has been “very” important as a way of being informed about current events (34%) and for learning how to protect themselves against the virus (31%).

Because the survey included a series of questions about how respondents have been affected by COVID-19, we are able to look at the importance of social media during the pandemic for those who have been most directly affected. One in seven respondents said that either they or a family member had become ill from the coronavirus (as of early fall 2020). For these young people, social media has played an even more important role in helping them stay informed about current events and learn how to protect themselves against the virus. More than four in 10 said social media has been “very” important for these purposes (see Table 17). When compared to their peers, it is clear that social media has played a significant role in helping those who have been directly impacted by COVID-19.

FIGURE 9. Importance of social media during the coronavirus pandemic, 2020

Among 14- to 22-year-old social media users ($n = 1,442$), percent who say using social media during the pandemic has been important to them for ...

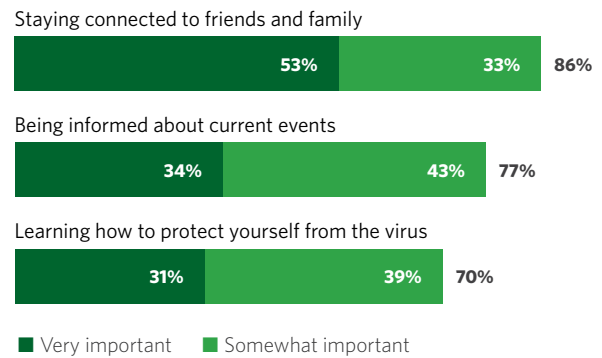


TABLE 17. Importance of social media during the coronavirus pandemic, by COVID-19 infections in the family, 2020

Among 14- to 22-year-old social media users, percent who say using social media during the coronavirus pandemic has been “very” important to them for ...	COVID-19 infection in the family	
	No ($n = 1,294$)	Yes ($n = 219$)
Being informed about current events	32% ^a	47% ^b
Learning how to protect against the virus	29% ^a	43% ^b
Staying connected to family and friends	53%	57%

Note: Items with different superscripts differ significantly across rows, across status of COVID-19 infection in family ($p < .05$).

The survey also explored the impact of social media on young people's emotional health specifically during the pandemic. Some respondents noted that the barrage of negative news online made them even more anxious or depressed (see Figure 10). But respondents overall were more likely to say that using social media during the pandemic actually made them feel less anxious (28% vs. 19% who said more) and less depressed (25% vs. 15% who said more). And they were overwhelmingly more likely to say it helped them feel less lonely during this time (41% vs. 12% who said more).

Hate speech and social media. While exposure to hate speech online is certainly not a new phenomenon, in 2020 the amount of vitriol spewed on social media felt overwhelming at times. In an effort to document young people's exposure to such content, this year's survey included measures of how often they come across various types of hate speech on social media.

About one in four young people say they "often" encounter racist, sexist, homophobic, or body shaming comments in the social media they use (see Figure 11). Sadly, but not surprisingly, the teens and young adults who are most likely to be affected by such content are most likely to encounter it—or recognize and remember it. For example, Black young people are more likely than Whites to say they "often" see racist comments (34% vs. 23%), LGBTQ+ youth are far more likely than non-LGBTQ+ youth to encounter homophobic comments (44% vs. 18%), and female young people are more likely to encounter sexist (30% vs. 21%) and body shaming (35% vs. 23%) social media posts than males. The fact that three in 10 young women often encounter sexist comments, more than a third of young Black people often encounter racist comments, and more than four in 10 LGBTQ+ youth often encounter homophobic posts online is a sad commentary on the state of social media today.

Our findings indicate that the frequency with which young people encountered hate speech on social media in 2020 was substantially higher than it was just two years earlier. Questions about hate speech in social media were included in a 2018 Common Sense Media survey of teens (Rideout & Robb, 2018), so we are able to compare results for 14- to 17-year-olds between 2018 and 2020. In 2018, 12% of 14- to 17-year-olds said they often came across racist comments on social media; in the current survey that rate has nearly doubled to 23% (see Figure 12). The proportion of teens who say they often come across homophobic content has gone from 13% in 2018 to 21% today, and for sexist content the rate has gone from 15% to 21%.

FIGURE 10. Effect of social media on mental health, 2020

Among 14- to 22-year-old social media users ($n = 1,442$), percent who say using social media during the coronavirus pandemic makes them feel "more" or "less" ...

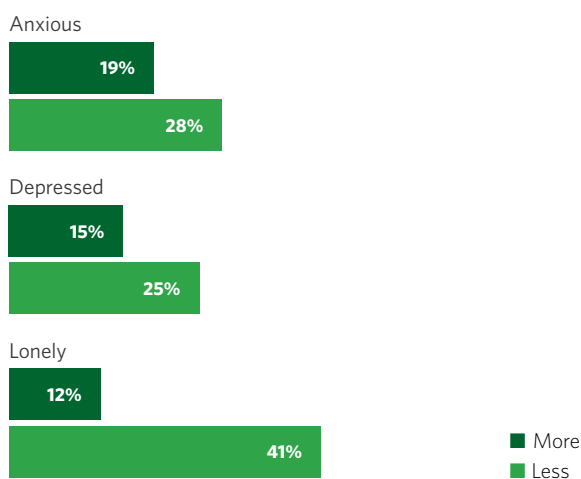


FIGURE 11. Exposure to hate speech on social media, 2020

Among 14- to 22-year-old social media users ($n = 1,442$), percent who say they encounter each type of content

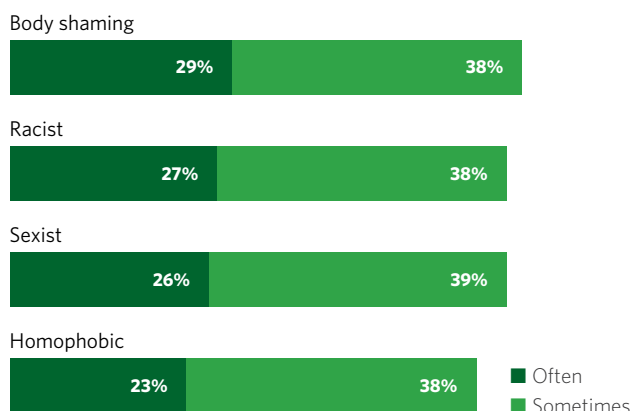
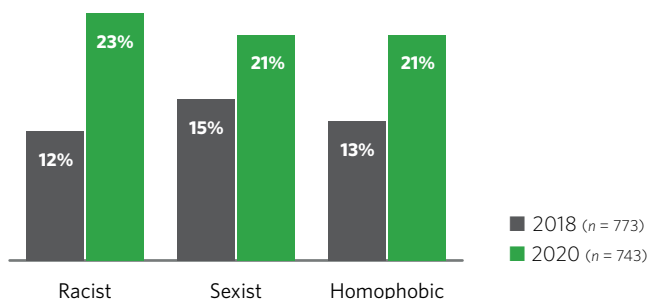


FIGURE 12. Exposure to hate speech on social media, 2018 and 2020

Among 14- to 17-year-old social media users, percent who say they "often" encounter each type of comments on social media



Note: 2018 trend data from the Common Sense Media survey *Social media, social life: Teens reveal their experiences*, conducted among 14- to 17-year-olds. Differences between 2018 and 2020 in each category are statistically significant at the level of $p < .05$.

DIGITAL HEALTH, SOCIAL MEDIA, AND PROBLEMATIC SUBSTANCE USE

IN THIS SURVEY, THE CRAFFT screener was used to identify young people at risk for problematic substance use. CRAFFT is a validated screening tool designed for use with young people age 12 to 21 to help providers identify patients in need of counseling or other interventions (Knight et al., 2002). In analyzing the survey findings, we used respondents' age-adjusted CRAFFT scores to compare the digital health and social media behaviors of those at risk for problematic substance use to those not at risk. This survey is not intended as a comprehensive assessment or analysis of the extent and severity of substance use problems among teens and young adults, nor is it designed to explore any causal relationships. Rather, the purpose of conducting these analyses is to better understand the online health behaviors of young people most at risk for problematic substance use.

Based on this screener, 9% of respondents were identified as "at risk" for problematic substance use. In this section of the report, we take a closer look at the digital health and social media practices of these young people. Are they in fact seeking relevant information online, using relevant apps, and connecting to providers through telehealth? And is their social media use different than others their age?

Digital health use. The findings indicate that many young people at risk for substance use problems are seeking out online health resources on relevant topics. These youth are more likely than their peers to have engaged in a number of online health-seeking activities, including looking up information on drug and alcohol abuse, trying to find others online with similar health conditions, and using digital tools to connect to providers. These data clearly indicate that young people at risk for substance use problems are turning to the internet for relevant information and support (see Table 18).

Online health information. Aside from COVID-19, the health issues young people at risk for problematic substance use are most likely to have investigated online include depression (66%), anxiety (57%), and stress (58%) (see Table 19). More than four in 10 (46%) have searched for information about substance use problems online, compared to just 15% of their peers. Providers or advocates wishing to reach young people at risk of substance use problems could target any of those topic areas with related content.

TABLE 18. Digital health use, by risk for problematic substance use, 2020

Among 14- to 22-year-olds, percent who have ...	Risk of problematic substance use	
	No (n = 1,358)	Yes (n = 143)
Looked up online information about drug and alcohol abuse	15% ^a	46% ^b
Tried to find others online with the same health issues	38% ^a	57% ^b
Connected with health providers online	46% ^a	60% ^b
Used a mobile app related to drug and alcohol abuse	2% ^a	13% ^b

TABLE 19. Top online health information searches, by risk for problematic substance use, 2020

Among 14- to 22-year-olds, percent who have searched online for information about ...	Risk of problematic substance use	
	No (n = 1,358)	Yes (n = 143)
Depression	35% ^a	66% ^b
COVID-19	57%	62%
Anxiety	40% ^a	57% ^b
Stress	36% ^a	58% ^b
Smoking or vaping	19% ^a	63% ^b
Fitness and exercise	46%	52%
Diet and nutrition	37%	43%
Sleep disorders	23% ^a	46% ^b
Alcohol or drug abuse	15% ^a	46% ^b
Sexually transmitted diseases	16% ^a	41% ^b

TABLES 18 AND 19:

Note: Items with different superscripts differ significantly across rows ($p < .05$).

Mobile apps for health. Thirteen percent of young people at risk for problematic substance use say they have tried mobile apps directly related to drug and alcohol abuse (see Table 20). Much larger proportions have used apps on other health topics, including fitness (42%), sleep (41%), meditation (27%), and stress reduction (28%). Incorporating relevant messaging on drugs and alcohol into apps on these other topics may be an effective way to reach at-risk youth.

Telehealth. More than two in five (41%) young people at risk for problematic substance use have had a video appointment with a health provider, while others have connected to providers via an online messaging system (27%), text (17%), an app (15%) or some other means (3%). Of those who have engaged in some form of telehealth, the vast majority (81%) say it was either very (41%) or somewhat (40%) helpful. Of those who have not yet connected with a provider online, a majority (54%) are at least somewhat interested in doing so (11% are very interested, 44% somewhat).

Social media use. Social media consumes a great deal of attention from those teens and young adults at risk for problematic substance use, with 37% saying they use it “almost constantly” (compared to 24% for those without substance use issues). Unfortunately, when they are feeling depressed, stressed, or anxious, using social media is not as likely to have a positive effect as it is for other young people for whom substance use is not an issue. Thirty-five percent of those at risk for problematic substance use say using social media at such times makes them feel worse, compared with just 15% of those without substance issues (see Table 21).

“A friend of mine started having alcohol abuse issues that began to affect him at work. He started missing work so much they actually fired him. I found what I was looking for online, but my friend didn’t want my help.”

—18-year-old man

TABLE 20. Health-related mobile app use, among those at risk for problematic substance use, 2020

Among 14- to 22-year-olds, percent who have ever used a mobile app related to ...	Risk of problematic substance use	
	No (n = 1,358)	Yes (n = 143)
Fitness	39%	42%
Sleep	25% ^a	41% ^b
Period/menstruation	23% ^a	35% ^b
Nutrition	22% ^a	32% ^b
Meditation/mindfulness	16% ^a	27% ^b
Stress reduction	12% ^a	28% ^b
Depression	8% ^a	21% ^b
Mood tracker	9% ^a	19% ^b
Medication reminder	6% ^a	16% ^b
Birth control	6% ^a	11% ^b
Alcohol or drug abuse	2% ^a	13% ^b
Quitting smoking/vaping	2% ^a	8% ^b

Note: Items with different superscripts differ significantly across rows ($p < .05$).

TABLE 21. Effect of social media when depressed, stressed, or anxious, by risk for problematic substance use, 2020

Among 14- to 22-year-old social media users, percent who say using social media when they are depressed, stressed, or anxious usually makes them feel ...	Risk of problematic substance use	
	No (n = 1,319)	Yes (n = 114)
Better	43%	43%
Worse	15% ^a	35% ^b
Neither	42% ^a	22% ^b

Note: Items with different superscripts differ significantly across rows ($p < .05$).

Young people among the 9% of respondents at risk for problematic substance use described examples of times they had sought online information related to drug or alcohol abuse:

"I did find resources to help combat addiction and withdrawals."

—18-year-old man

"My stepdad at the time was abusing alcohol, and I wanted to find resources to help my family deal with him. I found some information but not much."

—20-year-old woman

"I have known multiple people who have died from overdoses or other drug abuse complications, and know quite a few folks who haven't gone that far into it but want to be able to help if they need."

—22-year-old woman

"Wondering if me or my friends were abusing alcohol. Yes, it helped me clarify what constitutes alcoholism."

—22-year-old woman

Drug and alcohol problems are a concern for lots of teens and young adults, even those not directly at risk themselves. We asked respondents who do not report any signs of problematic substance use to share a time they went online to get information about drug or alcohol abuse and if they found helpful information.

A sample of stories they shared:

"I went on to Google to see the side effects of many drugs, such as marijuana, Percocet, and Xanax. Yes, I found what I was looking for, and [it] helped me understand why taking such drugs isn't so smart and not for me."

—14-year-old boy

"I was looking for how to help a friend who is possibly hiding from their problems through the use of drugs and alcohol. Yes, I was able to find what I was looking for. It did not help that much because the friend would not listen to me about their overuse of alcohol."

—18-year-old woman

"I had a friend that appeared to be addicted to vaping. I looked up information on this possibility. It helped me figure a way to scare her into quitting."

—16-year-old girl

"I thought my brother was on drugs. Yes, I found everything I needed. Yes, it helped a lot. I got my brother into a rehab to get him off drugs."

—20-year-old man

"I have a friend who is a drug user. I wanted to know the negative effects of the drug that she was using. I went online to find information that would help me understand her situation. Having some input on what she was dealing with gave me a new perspective of what she was going through."

—16-year-old girl

"Just wanted to learn more about it and how it affects different people. It's a huge crisis in this country, and more has to be done to help anyone suffering from it."

—22-year-old man

"Someone wanted to get treatment and no, I didn't find it."

—19-year-old woman

"I wanted to know more about it because I found out that my friend was struggling with it and I wanted to help."

—22-year-old man

DIGITAL HEALTH, SOCIAL MEDIA, AND LGBTQ+ YOUTH

SIXTEEN PERCENT OF RESPONDENTS in the survey identified as lesbian, gay, or bisexual, or as transgender or nonbinary. We refer to these respondents as LGBTQ+. In this section of the report, we take a closer look at the use of online health resources and social media among this population, and at issues of mental well-being.

Depression and LGBTQ+ youth. The rate of depression among LGBTQ+ youth is profoundly alarming. Nearly two-thirds (65%) report moderate to severe symptoms of depression, more than twice the rate among non-LGBTQ+ youth (31%) (see Table 22). This is similar to the difference in levels of depression found in 2018 (59% among LGBTQ+ youth vs. 20% among others).

Risk of problematic substance use and LGBTQ+ youth. Based on the CRAFFT screener used in the survey to identify risk of problematic substance use (Knight et al., 2002; Winters & Kaminer, 2008), LGBTQ+ youth are at higher risk than their non-LGBTQ+ peers. About one in five (19%) LGBTQ+ young people are considered at risk, compared to 8% of non-LGBTQ+ youth (see Table 23).

Online health resources and LGBTQ+ youth. Almost all (98%) LGBTQ+ respondents have made use of digital health tools in some form or another, including nine out of 10 (92%) who have looked for health information online, three out of four (75%) who have used a mobile app related to health, and more than half who have connected with health providers online (58%) or tried to find people online with similar health concerns (54%) (see Table 24).

“I am part of a teen depression Facebook group that offers mutual support and lets people post when they need encouragement.”

—15-year-old boy

TABLE 22. Depressive levels, by LGBTQ+ identity, 2020

Proportion of 14- to 22-year-olds with each level of depressive symptoms (PHQ-8)	Non-LGBTQ+ (n = 1,166)	LGBTQ+ (n = 243)
None	44% ^a	11% ^b
Mild	25%	24%
Moderate to severe	31% ^a	65% ^b

TABLE 23. Risk for problematic substance use, by LGBTQ+ identity, 2020

Proportion of 14- to 22-year-olds at risk for problematic substance use (CRAFFT screener)	Non-LGBTQ+ (n = 1,174)	LGBTQ+ (n = 246)
Not at risk	92% ^a	81% ^b
At risk	8% ^a	19% ^b

TABLE 24. Online health resource use, by LGBTQ+ identity, 2020

Among 14- to 22-year-olds, percent who say they have ever ...	Non-LGBTQ+ (n = 1,179)	LGBTQ+ (n = 248)
Gone online for health information	84% ^a	92% ^b
Used mobile apps related to health	68%	75%
Connected to health providers online	45% ^a	58% ^b
Looked for people with similar health concerns online	38% ^a	54% ^b
Any of the above	93%^a	98%^b

TABLES 22-24

Note: Items with different superscripts differ significantly across rows ($p < .05$).

Health information searches. Huge numbers of LGBTQ+ youth are going online to seek information on mental health issues, including 77% on anxiety, depression, and stress alone (compared to 51% of non-LGBTQ+ youth, see Table 25). Forty-three percent have searched for information on sleep disorders (vs. 21% of others), and a third (34%) on eating disorders (vs. 14% of non-LGBTQ+ youth). One in five have searched for information on other mental health issues, compared to 5% of their non-LGBTQ+ peers.

Mobile apps. Nearly three in four (75%) LGBTQ+ youth have used a mobile app related to health promotion (see Table 26 on page 45); the most common type of health app used among this population is for sleep (39% say they have used at least one). App use has increased over the past two years among LGBTQ+ youth on several topics related to mental well-being, including sleep (from 22% to 39%), meditation (from 20% to 30%), stress reduction (from 15% to 28%), and mood trackers (from 11% to 23%) (see Table 27 on page 45).

Telehealth. More than half (58%) of LGBTQ+ youth have connected to health providers online (see Table 28 on page 45), including one in three (34%) who have met with a provider through a video appointment, and one in five who have connected via text messaging (23%) or some other type of online messaging system (19%). It is worth noting that LGBTQ+ youth who have connected to providers online are less satisfied with those experiences than their non-LGBTQ+ peers (see Table 29 on page 45). Twenty-seven percent say it was “very” helpful, compared to 41% of non-LGBTQ+ youth. At the same time, the vast majority report it being at least “somewhat” helpful (a total of 78% say very or somewhat helpful). As with non-LGBTQ+ youth, many of those who haven’t yet connected with providers online say they are “somewhat” interested in doing so (43%), although only 12% say they are “very” interested (see Table 30 on page 45).

Connecting to health peers online. Just over half (54%) of LGBTQ+ youth say they have gone online to look for people with similar health concerns as their own (compared to 38% of non-LGBTQ+ youth). This is about the same rate found in 2018 (50%).

TABLE 25. Online health information search topics, by LGBTQ+ identity, 2020

Among 14- to 22-year-olds, percent who have gone online for information about ...	Non-LGBTQ+ (n = 1,179)	LGBTQ+ (n = 248)
COVID-19	57%	63%
Anxiety	36% ^a	63% ^b
Depression	32% ^a	62% ^b
Stress	35% ^a	55% ^b
Fitness and exercise	46%	50%
Diet and nutrition	35% ^a	48% ^b
Sleep disorders	21% ^a	43% ^b
Eating disorders	14% ^a	34% ^b
Birth control	17% ^a	34% ^b
Sexually transmitted diseases	16% ^a	31% ^b
Smoking or vaping	23%	30%
Pregnancy	16% ^a	26% ^b
Drug or alcohol abuse	17% ^a	27% ^b
Cancer	15% ^a	22% ^b
Diabetes	11% ^a	16% ^b
Heart disease	6% ^a	11% ^b
Any other mental health issue	5% ^a	20% ^b
Any other physical health issue	5%	8%
Depression, stress, or anxiety	51%^a	77%^b
Any health topic	84%^a	92%^b

Note: Items with different superscripts differ significantly across rows ($p < .05$).

“I was experiencing symptoms of anxiety and I wanted to confirm. I found what I was looking for and it definitely helped me seek therapy I needed.”

—16-year-old girl

TABLE 26. Health-related mobile app use, by topic and LGBTQ+ identity, 2020

Among 14- to 22-year-olds, percent who have ever used a mobile app related to ...	Non-LGBTQ+ (n = 1,179)	LGBTQ+ (n = 248)
Sleep	24% ^a	39% ^b
Fitness	41%	35%
Period/menstruation	21% ^a	35% ^b
Meditation/mindfulness	14% ^a	30% ^b
Stress reduction	11% ^a	28% ^b
Mood tracker	8% ^a	23% ^b
Nutrition	23%	21%
Depression	7% ^a	16% ^b
Medication reminder	5% ^a	13% ^b
Birth control	5% ^a	12% ^b
COVID-19 tracker	12%	7%
Quitting smoking/vaping	2%	5%
Drug or alcohol abuse	3%	3%
Any other health issue	1%	1%
Any mental health issue*	28%^a	48%^b
Any health issue	68%	75%

TABLE 27. Health-related mobile app use, by topic, among LGBTQ+ youth, 2018 to 2020

Among 14- to 22-year-old LGBTQ+ youth, percent who have ever used a mobile app related to ...	2018 (n = 157)	2020 (n = 248)
Sleep	22% ^a	39% ^b
Fitness	39%	35%
Period/menstruation	35%	35%
Meditation/mindfulness	20% ^a	30% ^b
Stress reduction	15% ^a	28% ^b
Mood tracker	11% ^a	23% ^b
Nutrition	28%	21%
Depression	10%	16%
Medication reminder	6% ^a	13% ^b
Birth control	7% ^a	12% ^b
COVID-19 tracker	NA	7%
Quitting smoking/vaping	3%	5%
Drug or alcohol abuse	4%	3%
Any other health issue	1%	1%
Any mental health issue*	27%^a	48%^b
Any health issue	66%	75%

TABLE 28. Connecting to health providers online, by LGBTQ+ identity, 2020

Percent of 14- to 22-year-olds who have connected to online health providers using ...	Non-LGBTQ+ (n = 1,179)	LGBTQ+ (n = 248)
Text messaging	13% ^a	23% ^b
Online messaging	12% ^a	19% ^b
Video appointment	26%	34%
An app	12%	12%
Other	3% ^a	7% ^b
Any of the above	45%^a	58%^b

TABLE 29. Satisfaction with connecting to health providers online, by LGBTQ+ identity, 2020

Among 14- to 22-year-olds who have connected to online health providers, percent who say it's been ...	Non-LGBTQ+ (n = 502)	LGBTQ+ (n = 141)
Very helpful	41% ^a	27% ^b
Somewhat helpful	49%	51%
Not too helpful	9%	15%
Not at all helpful	2% ^a	7% ^b

TABLE 30. Interest in connecting to health providers online in the future for the first time, by LGBTQ+ identity, 2020

Among 14- to 22-year-olds who have not connected to online health providers, percent who say they are ... in doing so	Non-LGBTQ+ (n = 677)	LGBTQ+ (n = 107)
Very interested	8%	12%
Somewhat interested	37%	43%
Not too interested	32%	26%
Not at all interested	23%	19%

TABLES 26 AND 27:

*Any mental health topic includes depression, meditation/mindfulness, mood tracker, stress reduction, and alcohol or drug abuse.

TABLES 26-30:

Note: Items with different superscripts differ significantly across rows ($p < .05$).

We asked respondents to tell us about times that they had gone online to seek information about emotional well-being or to look for people who share the same health concerns.

Here is a sample of answers from LGBTQ+ young people:

"I follow accounts on social media of people who have similar health concerns to be surrounded by support and ideas [for] how to cope."

—14-year-old girl

"I once went to an online chat room thing for teens with anxiety, but I got nervous and left."

—14-year-old nonbinary person

"I was depressed and always angry and wanted to hurt and make other people feel the same feelings I did, so they actually knew how it felt. They said they knew how it was to be sad, but I don't think they know." (In a later response they shared that they had been able to connect online with a therapist and it helped with their "depression, stress, and anger.")

—14-year-old person who self-describes their gender as "I am whatever I want to be"

"I was going through tough times, and I wanted to find ways to help."

—15-year-old boy

"I am transgender and felt back pain due to chest binding. I was able to find tips to reduce my pain, from other trans people through online forums."

—16-year-old boy

"There are some moments where I may feel feelings of despair, or loneliness, or jealousy. So I read articles written from other individuals who feel these same emotions and how to best cope [with] them."

—22-year-old woman

Social media and LGBTQ+ youth. LGBTQ+ teens and young adults are avid users of social media; indeed, 37% say they use social media “almost constantly,” compared to 23% of non-LGBTQ+ youth (see Table 31). And, as with young people in general, this is a substantial increase over just two years (in 2018, 24% of LGBTQ+ youth said they were “almost constant” users of social media).

Homophobic content in social media. Nearly half (44%) of all LGBTQ+ youth say they “often” encounter homophobic comments on social media, with another 30% saying they do so “sometimes” (see Table 32).

Importance of social media. LGBTQ+ youth are also more likely than their non-LGBTQ+ peers to consider social media “very important” to them for creative expression, inspiration, feeling less alone, and getting support and advice when needed (28% say social media is very important for support and advice, compared to 19% of non-LGBTQ+ youth, see Table 33). As is the case with young people suffering from depression, LGBTQ+ youth are more likely in this survey wave to say social media is “very” important for support and advice than they were just two years ago (28% in 2020 vs. 12% in 2018).

Social media and depression. Given the importance of social media to so many young people who are part of a sexual or gender minority, whether for inspiration or connection or support, it is not surprising that LGBTQ+ youth are even more likely than non-LGBTQ+ youth to say that using social media helps them feel better when they are depressed, stressed, or anxious. More than half (52%) of LGBTQ+ youth say that using social media makes them feel better in such circumstances, compared to just 13% who say it makes them feel worse (see Table 34). This is an increase of 17 percentage points from just two years ago, in 2018, when 35% of LGBTQ+ youth said using social media made them feel better. For many LGBTQ+ youth, having a platform to connect with others, share feelings, get advice, and find inspiration is perceived as a positive force in their lives.

TABLE 31. Frequency of social media use, by LGBTQ+ identity, 2020

Percent of 14- to 22-year-olds who say they use social media ...	Non-LGBTQ+ (n = 1,179)	LGBTQ+ (n = 248)
Daily	81%	81%
<ul style="list-style-type: none"> • Almost constantly • Multiple times a day • Once a day 	23% ^a	37% ^b
A few times a week	9%	9%
Weekly	2%	3%
Less than weekly	3%	3%
Never	5%	4%
Use social media	95%	96%

TABLE 32. Exposure to hate speech on social media, by LGBTQ+ identity, 2020

Among 14- to 22-year-old social media users, percent who encounter homophobic comments ...	Non-LGBTQ+ (n = 1,119)	LGBTQ+ (n = 239)
Often	18% ^a	44% ^b
Sometimes	39% ^a	30% ^b
Hardly ever	25% ^a	17% ^b
Never	18% ^a	8% ^b

TABLE 33. Importance of social media, by LGBTQ+ identity, 2020

Percent of 14- to 22-year-old social media users who say social media is “very” important to them for ...	Non-LGBTQ+ (n = 1,119)	LGBTQ+ (n = 239)
Expressing oneself creatively	23% ^a	36% ^b
Getting inspiration from others	21% ^a	31% ^b
Getting support/advice when needed	19% ^a	28% ^b
Feeling less alone	20% ^a	28% ^b

TABLE 34. Effect of social media when feeling depressed, stressed, or anxious, by LGBTQ+ identity, 2020

Among 14- to 22-year-old social media users, percent who say using social media when they are feeling depressed, stressed, or anxious makes them feel ...	Non-LGBTQ+ (n = 1,119)	LGBTQ+ (n = 239)
Better	42% ^a	52% ^b
Worse	17%	13%
Neither	42%	34%

TABLES 31-34: Items with different superscripts differ significantly across rows ($p < .05$).

Here is a sample of stories shared by LGBTQ+ youth about how they are using social media:

"I was curious about what celebrities have gone through/currently go through similar situations regarding their mental health. It was a sort of way to boost my confidence a bit, assuring myself that even great people like them go through similar things."

—14-year-old girl

"I guess just seeing people expressing themselves the way they want makes me happy because I can't really do that."

—14-year-old nonbinary person

"It helps me keep in contact with my high-risk friend who is always there for me, and it means the world that he's there for me to talk to."

—15-year-old girl

"Social media has made me feel less depressed because I can connect with people. When I feel alone because of the pandemic, I can go onto Instagram or Snapchat and talk with friends and see what they are doing. Then I see that we are all in this together and everyone is having a hard time, not just me."

—15-year-old boy

"By connecting with other people, social media has helped me feel less isolated, and therefore less depressed."

—22-year-old woman

CONCLUSION

THE CONFLUENCE OF EVENTS that occurred over the past year has vividly highlighted the contradictions inherent in the internet. These events include a very contagious deadly virus, a powerful movement for racial justice, a highly contested and bitter election, economic turmoil, closed schools, limited or prohibited social interactions, and orders to stay at home. In each case, the internet played a dual role—spreading terrifying news *and* sharing life-saving health guidance; sowing misinformation and hate *and* empowering people to participate in the political process from their dining room tables; bringing the horrors of police shootings onto devices in the palms of our hands *and* providing the tools to help build the movement for racial justice; connecting us to family and friends while reminding us of everything we're missing.

This survey explored the role of technology in the lives of adolescents and young adults during this tumultuous period. Adolescence is a critical developmental stage, and this past year disrupted it as never before, even as concerns about young people's mental health were already on the rise. Young adulthood is always a time of significant transitions, but during the pandemic those transitions were made exponentially more difficult. And for both age groups, technology was smack in the middle of it all.

How young people move forward from multiple societal and personal crises may depend on the extent to which their mental health needs can be met effectively in online spaces. In the 12 months since shelter-in-place orders were first imposed in the United States, millions of young people have turned to the internet for health information on COVID-19, but also on depression, anxiety, stress, and sleep. They used technology to connect to doctors, nurses, and therapists. They downloaded apps to meditate and track their moods. They searched out and found other young people who had struggled with and perhaps even overcome health challenges similar to their own.

For those most directly affected by COVID-19, the internet was an even more important lifeline. Depression has increased among young people across the country, but for those who have had family members actually get sick or die, depression is—not surprisingly—even higher. And for them, social media, online health information, and mobile apps have been a safety net in a time of need.

Because we conducted a baseline survey just two years ago (Rideout & Fox, 2018), it is possible to see how quickly certain things have changed in young people's lives. There have been substantial increases in both depression and social media use among teens and young adults—and the increase in social media use is most pronounced among those with depression. It is not the purpose of this research to attempt to identify a causal relationship between social media use and depression, in either direction. Rather, our purpose is to give voice to the millions of teens and young adults whose mental well-being is at stake in these challenging times, to explore the *how* and *why* of their social media use when they are depressed, and to add texture and depth and color to our understanding of their online lives.

Some experts argue that young people's use of social media is adding to their depression; others that their depression leaves them so uninterested in other activities that they turn to social media by default. This research suggests a third possibility: that many young people who are experiencing depression—whatever the cause—are purposely and proactively using social media and other digital tools to protect and promote their own well-being.

Young people themselves are far more likely to say that social media plays a positive rather than a negative role in their emotional lives, and since 2018 the scale has tipped even more toward the positive side of the ledger. Is this due to better content and more effective interventions online? A growing sophistication among young people at how to curate their online lives? Or are young people misinterpreting the effect of social media on their emotional health, mistakenly believing that it has a positive effect? Or could it be that different young people, with different levels of depression and different circumstances in their lives, respond to social media differently?

We hope this research helps bring to life the impressive degree to which young people are using social platforms to express their creativity, seek inspiration from others, maintain some semblance of a social life, boost their moods with humorous or inspirational content, and connect with others who are experiencing similar challenges. At the same time, there are indications that for young people suffering from the most severe level of depression, social media can be more challenging to navigate.

This dovetails with existing research that shifts the focus from young people as a monolithic group to individuals who have unique risks online and varying degrees of vulnerability (Odgers & Robb, 2020). The number of individuals in this survey who reported severe depression was small, so more research on this group is needed. A cookie-cutter approach to tackling the relationship between social media and depression is not likely to work; one size does not fit all.

It is encouraging news for telehealth advocates—including psychiatrists and therapists working to promote mental health—that nearly half of young people have connected with providers online. Most of those who have done so are quite satisfied with the experience, a fact that augurs well for the use of telehealth services in the future. Young people with depression, and those at risk of substance use problems, are especially interested in pursuing online connections with providers. It may have taken a pandemic to jump-start the use of telehealth services, but now that it has done so, it seems likely it could lead to permanent changes in the delivery of care. This development has the potential to benefit young people by making appointments with therapists and other providers more convenient, and by increasing access to the types of culturally competent care that may not be available in their own communities.

Given the rise in exposure to hate speech online, one clear recommendation is for social media companies to take a much more active role in blocking hate speech and misinformation online. As hate speech is generally aimed at populations who are already vulnerable, and is likely exacerbating negative mental health outcomes, it is the responsibility of tech companies to do much more to protect young people during sensitive developmental points in their lives, even as they tackle questions of free speech and expression.

And lastly, the findings here clearly suggest we need much more investment in the digital mental health space, with mental health professionals, industry leaders, and young people themselves working together to design and develop better evidence-based tools and therapies. Especially at a time when traditional supports are unavailable, having high-quality digital services can clearly be an important part of young people's mental health portfolios, particularly given how many welcome them.

Issues to track as we go forward into 2021:

- Will this age group's rates of depression continue to rise, or can we find a way to stem the tide?

- Will the digital mental health safety net adapt to serve the wave of teens and young adults who report symptoms of moderate to severe depression, particularly those who have been directly affected by COVID-19?
- Will policymakers, clinicians, and health care payers work together to ensure that telehealth services, so popular among this age group, become a permanent feature of care delivery?
- Will social media companies and technology developers find new ways to empower young people to express themselves, find connection, and access useful information?
- Will providers, advocates, and tech companies develop ways to help young people choose among thousands of health apps of varying quality?
- Will expressions of online hate continue to grow, or will we as a society find ways to transform the public conversation?

Several limitations of our study are worth noting: First, as the study is cross-sectional, we do not attempt to make any claims about causality. Rather, we can look at the numbers in tandem with young people's own words to generate ideas about how tech use is affecting mental health, and vice versa. Second, poverty status has been identified elsewhere as a major factor in mental health (Odgers & Robb, 2020), so it is possible that knowing more about respondents' socioeconomic status would help us better understand depression status, and any policy recommendations for addressing mental health would likely have to tackle young people's economic conditions as well. And lastly, the questions in our depression scale, the PHQ-8, could potentially assess physical symptoms caused by COVID-19 (depending on when a respondent who had COVID-19 took the survey), and that may complicate the relationship between depression and COVID-19 status.

In closing, it is hard not to be struck by how many young people are coping with depression, and how quickly rates of depression have increased. Among certain groups of young people—those in the LGBTQ+ community and those most directly affected by COVID-19—rates of depression are heartbreakingly high. Yet it is very moving to see the degree to which young people are proactively participating in their own well-being, using digital tools to look for information, connect with providers, and seek inspiration. If we aren't meeting them in online spaces with high-quality, relevant digital tools, we are failing them at a time when they need support the most.

METHODOLOGY

THIS REPORT PRESENTS THE results of a survey of 1,513 teens and young adults, age 14 to 22, conducted in September, October, and November 2020. Interviews were offered in English or Spanish, and were conducted either online or by telephone, depending on respondent preference. A total of 46 respondents took the survey in Spanish, and none chose to complete the survey by phone.

The survey was designed by Victoria Rideout of VJR Consulting and Susannah Fox of Internet Geologist LLC, with support from Michael Robb of Common Sense, and with funding from California Health Care Foundation, Common Sense Media, and Hopelab. A first wave of the survey was conducted in 2018; the original questionnaire was designed by Rideout and Fox in collaboration with Jana Haritatos and Emma Bruehlman-Senecal of Hopelab, with funding from Hopelab and Well Being Trust. Comparative data from that wave of the survey are included in this report. Both waves of the survey were fielded by the National Opinion Research Center (NORC) at the University of Chicago. Data analyses were conducted by Alanna Peebles of Common Sense. A copy of the complete questionnaire is included in the Appendix.

Sample. The 2020 sample includes U.S. residents age 14 to 22. Parental permission was obtained for all 14- to 17-year-old participants. Oversamples of Black and Hispanic/Latinx respondents were conducted sufficient to generate a total unweighted sample of 275 Black and 460 Hispanic/Latinx respondents. For analyses among the general population, Black and Hispanic/Latinx respondents were weighted down to their representative proportion, according to the most recent Census. Participants were offered the cash equivalent of \$10 for completing the survey.

The majority of participants were recruited from NORC's AmeriSpeak® Panel ($n = 865$). AmeriSpeak® is a probability-based panel designed to be representative of the U.S. household population. Randomly selected U.S. households are sampled using area probability and address-based sampling, with a known, nonzero probability of selection from the NORC National Sample Frame. These sampled households are then contacted by

mail, telephone, and in-person field interviewers (face-to-face). The panel provides sample coverage of approximately 97% of the U.S. household population. While most AmeriSpeak households participate in surveys by web, noninternet households can participate in AmeriSpeak surveys by telephone.

All eligible panelists were selected for invitation to this study. In addition, NORC reached out to all active panelists who were identified as parents of a teen age 14 to 17 (regardless if the child was part of the AmeriSpeak Panel) or living with a nonempaneled 18- to 22-year-old adult. The parent panelists were provided with general information about the study and given the opportunity to provide consent for AmeriSpeak to contact their teen(s), both empaneled teens and any potential teens not currently empaneled.

The AmeriSpeak panel sample was supplemented with respondents from Dynata's nonprobability online opt-in panel ($n = 648$). Dynata provided access to 18- to 22-year-old respondents by sending the Dynata respondent directly into the AmeriSpeak survey. Dynata prescreened parents on their panel for permission to survey their 14- to 17-year-old children, who then connected to the survey hosted by AmeriSpeak. To reduce potential bias in the nonprobability sample, Dynata attempted to balance the nonprobability respondent sample by age, race and ethnicity, geography, and education.

Weighting. NORC calculated panel weights for the completed AmeriSpeak Panel and nonprobability online interviews. In order to incorporate the nonprobability sample, NORC used TrueNorth calibration services, an innovative hybrid calibration approach developed at NORC, based on small area estimation method and designed to explicitly account for potential bias associated with the nonprobability sample. The purpose of TrueNorth calibration is to adjust the weights for the nonprobability sample so as to bring weighted distributions of the nonprobability sample in line with the population distribution for characteristics correlated with the survey variables. Such calibration adjustments help to reduce potential bias, yielding more accurate population estimates.

Data cleaning. NORC applied cleaning rules to the survey data for quality control by removing respondents who provided responses indicative of speeding through the survey, skipping survey questions, and/or answering open-ended questions with gibberish. Respondents were considered speeders if they completed the interview in less than one-third the median duration. Respondents were considered skippers if they skipped more than 50% of questions asked.

Margin of error and response rates. The study design effect is 1.81, and the margin of sampling error for the survey is +/- 3.64%. The margin of sampling error may be higher for subgroups.

The American Association for Public Opinion Research (AAPOR) defines several component rates used to calculate final response rates. It is not possible to calculate response rates for nonprobability samples. Using the AAPOR definitions, the response rates for the AmeriSpeak portion of the sample are:

- Weighted AAPOR RR3 recruitment rate: 20.4%
- Weighted household retention rate: 80.7%
- Screener completion rate: 43.6%
- Eligibility rate: 84.7%
- Survey completion rate: 38.2%
- Weighted AAPOR RR3 cumulative response rate: 2.7%

Statistical significance. Where relevant, differences among subgroups and/or over time have been tested for statistical significance. Unless otherwise noted, these findings are only described in the text in a comparative manner (e.g., “more than,” “less than”) if the differences are statistically significant at the level of $p < 0.05$. In tables where statistical significance has been tested, superscripts (using letters such as a, b, or c) are used to indicate whether results differ at a statistically significant level ($p < 0.05$) within a set of columns or rows (e.g., by age groups or by year). Means that share a common superscript and means that have no superscript at all are not significantly different from each other.

For example, in Row 1 below, none of the items differ in a statistically reliable way. In Row 2, each item differs from the other significantly. In Row 3, the items in the first and third columns differ from the item in the second column, but not from each other. And in Row 4, items in Columns 1 and 3 differ from each other, but not from Column 2.

Examples of statistical significance:

	Column 1	Column 2	Column3
Row 1	70%	75%	65%
Row 2	20% ^a	35% ^b	50% ^c
Row 3	43% ^a	60% ^b	37% ^a
Row 4	13% ^a	17% ^{ab}	23% ^b

Analyses. Data presented in this report include descriptive findings for the sample population as a whole and the results of bivariate analyses by demographics (age, gender, race/ethnicity, and sexual orientation) and by other variables of interest (level of depressive symptoms and likely risk for problematic substance use). Because the economic and educational circumstances of respondents in the different age groups included in this survey are not directly comparable to one another (for example, living with parents while attending high school, or working a first job out of college), data were not analyzed by household income or level of education.

Comparisons over time. Many items in the survey repeat questions that were administered to a separate cross-sectional sample in 2018 titled *Digital Health Practices, Social Media Use, and Mental Well-Being Among Teens and Young Adults in the U.S.* (Rideout & Fox, 2018). Where possible, results are compared to explore changes over time. Where question wording was changed sufficient to render comparisons unreliable, a note has been included. In addition, one series of questions in the current survey repeats an item from a 2018 Common Sense survey *Social Media, Social Life: Teens Reveal Their Experiences* (Rideout & Robb, 2018). This trend data is also presented in this report.

Changes over time have been tested for statistical significance. In the surveys conducted in 2018, the sample was not supplemented with nonprobability participants, as this year’s survey was. The use of TrueNorth calibration in 2020 was designed to reduce any possible bias from the inclusion of opt-in respondents (see Weighting, above). Nonetheless, changes over time should still be interpreted with caution.

Open-ended responses. The survey included several open-ended questions in which we invited respondents to describe, in their own words, their experiences and how they felt about them. In total, more than 2,500 substantive open-ended responses were received, including:

- More than 650 participants who shared experiences looking for information about depression, stress, or anxiety online.
- 125 who shared about looking for information on drug and alcohol abuse online.
- More than 500 who described their efforts to connect with health peers online.
- More than 550 who shared their experiences connecting with health providers online.
- 489 who discussed how using social media has made them feel either “more” or “less” depressed during the coronavirus pandemic.

These open-ended questions yielded a substantial amount of qualitative data and many valuable insights.

The responses were read and hand-coded to look for patterns and themes. All statistical findings presented in the report are from the quantitative items, but insights gained from the review of open-ended responses are included in the text. Throughout the report, a selection of verbatim quotes from those open-ended questions is included. These quotes have been lightly edited to correct misspellings, punctuation, capitalization, and typos. In the sections of the report devoted to specific topics (e.g., LGBTQ+ youth, young people with severe levels of depression), quotes were selected from young people with those attributes.

Subgroups. Findings are analyzed by various subgroups throughout the report. Unweighted *n* values are provided for each group in the tables. Definitions of groups are provided below. We were not able to include a consistent and accurate measure of household income because of the disparate circumstances in this age group (e.g., living with their parents, at college, working and supporting families of their own).

Age. The survey was conducted among 14- to 22-year-olds. Throughout the report, we refer to this population as “teens and young adults.” We occasionally use the terms “youth” or “young people” as shorthand to refer to this 14- to 22-year-old age group.

We also discuss two developmentally distinct subpopulations as part of this broader group: “teens” (14 to 17 years old) and “young adults” (18 to 22 years old).

COVID-19 impact. The survey included an item asking respondents whether they or anyone in their family had become ill or died from the coronavirus. Fourteen percent indicated they had. These respondents are classified as “COVID-19 in family” and those who replied “no” to that question are referred to as “no COVID-19 in family.” Respondents who skipped this question were excluded from these analyses (*n* = 33).

Depressive symptoms. The survey employed a previously validated scale for assessing depressive symptoms: The Patient Health Questionnaire Depression Scale (PHQ-8). The PHQ-9 (with an additional question about suicide that was omitted from this survey) has been validated for use among adolescents, and the PHQ-8 has been validated among the general population as a measure of current depression (Allgaier et al., 2012; Kroenke et al., 2009; Richardson et al., 2010). In accordance with the scale protocol, responses were coded numerically and summed, so that each respondent was given a total score between 0 and 24 points. Respondents who were missing data on scale items were excluded from these analyses.

The scale identifies cut-points of levels of depressive symptoms: none (0 to 4), mild (5 to 9), moderate (10 to 14), moderately severe (15 to 19), and severe (20 to 24). The scale protocol indicates that a score of 10 or greater is considered a “yellow flag,” drawing attention to a possible clinically significant condition warranting further attention.¹ Therefore, for purposes of data analysis, in this report respondents were classified into three groups by level of depressive symptoms: none (0 to 4), mild (5 to 9), and moderate to severe (10 or higher).

Throughout the report, we occasionally refer to respondents who score 10 or higher on the scale as “depressed” or as individuals “with depression.” However, it should be recognized that there is an important difference between a score of 10+ on the PHQ-8 and a clinical diagnosis of depression, which is a diagnostic assessment made by a trained, licensed medical or mental health practitioner.

This survey is not intended as a comprehensive assessment or analysis of the extent and severity of depressive symptoms among teens and young adults. The primary purpose of including such measures is to explore how those young people who report

1. Instructions for Patient Health Questionnaire (PHQ) and GAD-7 Measures:
https://www.ons.org/sites/default/files/PHQandGAD7_InstructionManual.pdf

current depressive symptoms describe a wide range of digital health and social media behaviors and experiences, and whether their experiences are different than among those without current depressive symptoms. The findings presented are descriptive and cross-sectional only; they cannot be interpreted as implying causality. Indeed, the purpose of this particular survey is not to assess what is causing depression, but rather to give voice to young people's experiences, and provide data that can help those working with or providing services to teens and young adults to better meet their needs.

LGBTQ+. The LGBTQ+ category includes respondents who identify their sexual orientation as lesbian, gay, bisexual, or "something else," or who consider themselves to be transgender or nonbinary, or who prefer to self-describe their gender. Participants were excluded from analyses related to LGBTQ+ identity if they answered "I don't know" or skipped any of the survey questions on sexual orientation, transgender identity, or gender identity.

Race/ethnicity. The survey used the standard U.S. Census measures for identifying respondents' race and ethnicity. In the report, the term Hispanic/Latinx is used to refer to anyone who self-identified as "Hispanic." The term "White" refers to any respondents who identified as "white, non-Hispanic." The term "Black" refers to respondents who self-identified as "black, non-Hispanic." Where findings are broken out by race/ethnicity, results are presented only for White, Black, and Hispanic/Latinx respondents. Respondents in other categories, such as Asian, Pacific Islander or Native American, are included in all findings based on the total sample, but not in the results that are broken out by race/ethnicity, due to smaller sample sizes.

Problematic substance use. The survey included the CRAFFT screener to identify young people at risk for problematic substance use. CRAFFT is a screening tool designed to identify those age 12 to 21 at risk for problematic substance use, so that they can receive counseling or other interventions. The screener consists of six items; each "yes" response equals one point, and therefore scores range from 0 to 6. The CRAFFT manual states that a person is considered "high risk" if they have a total score of 2 or more (Center for Adolescent Behavioral Health Research, 2020). However, other research has identified higher cut points as optimal in identifying those most at risk, especially among older teens and young adults. Specifically, this research suggests a cut point of 3 or higher for 12- to 17-year-olds (Harris et al., 2016; Mitchell et al., 2014) and 4 or higher for 18- to 25-year-olds (Kelly et al., 2009). Therefore in this report, we used these higher,

age-adjusted scores in all analyses comparing those at risk for problematic substance use to those not at risk. Nine respondents did not complete the CRAFFT screener and are excluded from these analyses.

This survey is not intended as a comprehensive assessment or analysis of the extent and severity of substance use problems among teens and young adults. Rather, the purpose of conducting these analyses is to better understand the online health behaviors of young people most at risk for problematic substance use. The findings presented are descriptive and cross-sectional only; they cannot be interpreted as implying causality.

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APPENDIX: QUESTIONNAIRE

Q1. Have you ever gone online, whether through a website, a search engine, an app, or any other means, to look for information on any of the following health topics? Please select all that apply.

[RANDOMIZE]

- a. Depression
- b. Drug or alcohol abuse
- c. Diet and nutrition
- d. Fitness and exercise
- e. Eating disorders (such as anorexia or bulimia)
- f. Pregnancy
- g. Birth control
- h. STDs (sexually transmitted diseases, such as herpes or HIV/AIDS)
- i. Stress
- j. Anxiety
- k. Sleep disorders
- l. Smoking or vaping
- m. Cancer
- n. Diabetes
- o. Heart disease
- p. COVID-19 (the coronavirus)
- q. Any other mental health issue [SPECIFY]
- r. Any other physical health issue [SPECIFY]
- s. None of the above

[IF Q1=a, i, or j]

Q2A. Please give us an example of a time you went online to get health information about depression, stress, or anxiety. What was the situation? Did you find what you were looking for? Did it help? If so, how? [OPEN END]

[IF Q1=b]

Q2B. Please give us an example of a time you went online to get information about drug or alcohol abuse. What was the situation? Did you find what you were looking for? Did it help? If so, how? [OPEN END]

Q3. Have you ever gone online to find other people who might have health concerns similar to yours?

Yes

No

[IF Q3=Yes]

Q4. Please give us an example of a time you went online to try to find other people with health concerns similar to yours. What was the situation? How did it turn out? [OPEN END]

Q5. Have you ever used a mobile app related to any of the following? Please select all that apply. [RANDOMIZE]

- a. Fitness
- b. Period/menstruation
- c. Nutrition
- d. Depression
- e. Meditation/mindfulness
- f. Mood tracker
- g. Sleep
- h. Stress reduction
- i. Medication reminder
- j. Quitting smoking or vaping
- k. Alcohol or drug abuse
- l. Birth control
- m. COVID-19 (such as a symptom tracker)
- n. Any other health-related topic
- o. None of the above

Q6. Have you ever connected to a health provider (such as a doctor, nurse, therapist, or counselor) through: Please select all that apply. [RANDOMIZE]

- a. Text messaging
- b. Online messaging
- c. Video appointment
- d. An app
- e. Other [SPECIFY]
- f. None of the above

[SHOW IF Q6=a,b,c,d,e]

Q7. You mentioned that you have connected with a doctor, nurse, therapist, or counselor online. In general, how helpful has it been for you to connect with a health provider online?

- a. Very helpful
- b. Somewhat helpful
- c. Not too helpful
- d. Not at all helpful

[SHOW IF Q6=a,b,c,d,e and Q7=a,b,c,d]

Q8. Please give us an example of how connecting with a health provider or therapist online [IF Q7=a,b: was, IF Q7=c,d: was not] **helpful.** [IF Q7=a,b: What worked well?] **What could be improved?** [OPEN END]

[SHOW IF Q6=f]

Q9. How interested are you, if at all, in being able to connect with a health provider online, such as video appointments, or text messaging them?

- a. Very interested
- b. Somewhat interested
- c. Not too interested
- d. Not at all interested

[SHOW IF Q9=c,d]

Q10. Why aren't you interested in being able to connect with a health provider online? Please select all that apply.

[RANDOMIZE]

- a. I don't have any health issues I need to see a provider about
- b. I'd rather meet or talk to health providers in person
- c. I'm worried about being overheard
- d. I'm worried about the security or confidentiality of my health information online
- e. I'm worried about my family finding out
- f. I'm worried about how much it costs
- g. Other [SPECIFY]

The next questions concern social media, such as Instagram, Snapchat, Twitter, or Facebook.

Q11. How often are you on social media?

- a. Almost constantly
- b. Several times a day
- c. Once a day
- d. A few times a week
- e. Once a week
- f. Less than once a week
- g. Never - I don't use social media

[SHOW IF Q11=a,b,c,d,e,f]

Q12. How important is social media to you for: [RANDOMIZE]

- a. Getting support or advice when you need it
- b. Expressing yourself creatively
- c. Getting inspiration from others
- d. Feeling less alone
 - 1. Very important
 - 2. Somewhat important
 - 3. Not too important
 - 4. Not at all important

[SHOW IF Q11=a,b,c,d,e,f]

Q13. Which of the following statements comes closest to the truth for you? When I'm feeling depressed, stressed, or anxious, using social media usually:

- a. Makes me feel better
- b. Makes me feel worse
- c. Neither

[SHOW IF Q11=a,b,c,d,e,f]

Q14. Do you agree or disagree with the following statements? [RANDOMIZE]

- a. I see so much bad news in social media that it makes me stressed and anxious
- b. I prefer to communicate with people through social media rather than in person
 - 1. Strongly agree
 - 2. Somewhat agree
 - 3. Somewhat disagree
 - 4. Strongly disagree

[SHOW IF Q11=a,b,c,d,e,f]

Q15. How often, if ever, have you encountered the following types of comments in social media? [RANDOMIZE]

- a. Racist comments, that is, someone putting people down based on their race or ethnicity such as for being Black, Hispanic, Asian or White, or using insulting words that refer to race
- b. Homophobic comments, that is, someone putting people down for being gay, or using insulting words about being gay
- c. Sexist comments, that is, someone putting people down in a way that calls attention to their gender, or using insulting words about women or men
- d. Body shaming comments, that is, someone putting people down for being overweight, underweight, or unattractive
 - 1. Often
 - 2. Sometimes
 - 3. Hardly ever
 - 4. Never

[SHOW IF Q11=a,b,c,d,e,f]

Q16. How important has using social media during the coronavirus pandemic been in:

- a. Keeping you informed about current events
- b. Helping you learn how to protect yourself and others from the virus
- c. Staying connected to friends and family
 - 1. Very important
 - 2. Somewhat important
 - 3. Not too important
 - 4. Not at all important

[SHOW IF Q11=a,b,c,d,e,f]

Please choose the answer that best applies to your experience using your main social media site, that is, the one you use most often.

Q17A. During the coronavirus pandemic, using my main social media site has made me feel:

1. More anxious
2. Less anxious
3. Hasn't made much difference one way or the other

Q17B. During the coronavirus pandemic, using my main social media site has made me feel:

1. More lonely
2. Less lonely
3. Hasn't made much difference one way or the other

Q17C. During the coronavirus pandemic, using my main social media site has made me feel:

1. More depressed
2. Less depressed
3. Hasn't made much difference one way or the other

[SHOW IF Q17C=1,2]

Q18. In what ways has social media made you feel [IF Q17C=1: more, IF Q17C=2: less] depressed during the coronavirus pandemic? Please give us an example of how you use social media at those times. [OPEN END]

Q19. Which of the following, if any, have happened to you since the start of the coronavirus pandemic: Please select all that apply. [RANDOMIZE]

- a. You or a family member have lost a job or income due to the coronavirus
- b. You have had to take on more family responsibilities due to coronavirus, such as getting a job or taking care of children
- c. Your in-person school was cancelled due to the coronavirus
- d. Your household has become more crowded due to the coronavirus
- e. You have been separated from your family due to the coronavirus
- f. You or someone in your family became ill from the coronavirus
- g. You haven't been able to get needed physical or mental health care due to the coronavirus
- h. You have gotten more sleep
- i. You have felt emotionally closer to your family members
- j. You have felt less anxious with no school and other activities
- k. You have gotten more exercise

This is the final section of the survey. These last few questions help us understand more about how people feel. Remember, all your answers are confidential.

(PHQ-8 – Depression)

Q20. Over the last 2 weeks, how often have you been bothered by the following problems?

- a. Little interest or pleasure in doing things
 - b. Feeling down, depressed, or hopeless
 - c. Trouble falling asleep, staying asleep, or sleeping too much
 - d. Feeling tired or having little energy
 - e. Poor appetite or overeating
 - f. Feeling bad about yourself – or that you are a failure or have let yourself or your family down
 - g. Trouble concentrating on things – such as reading the newspaper or watching television
 - h. Moving or speaking so slowly that other people could have noticed. Or, the opposite – being so fidgety or restless that you have been moving around a lot more than usual
- 1. Not at all
 - 2. Several days
 - 3. Over half the days
 - 4. Nearly every day

(GAD-7 Generalized Anxiety Disorder scale)

Q21. Over the last 2 weeks, how often have you been bothered by the following problems?

- a. Feeling nervous, anxious, or on edge
 - b. Not being able to stop or control worrying
 - c. Worrying too much about different things
 - d. Trouble relaxing
 - e. Being so restless that it's hard to sit still
 - f. Becoming easily annoyed or irritable
 - g. Feeling afraid as if something awful might happen
- 1. Not at all
 - 2. Several days
 - 3. Over half the days
 - 4. Nearly every day

Q22S. Do you ever use alcohol or drugs?

- Yes
- No

(CRAFFT Substance Use Disorder screener)

[SHOW IF Q22S=Yes]

Q22. The following questions concern alcohol and drug use. Please answer yes or no to each item.

- a. Have you ever ridden in a car driven by someone (including yourself) who was “high” or using alcohol or drugs?
- b. Do you use alcohol or drugs to relax, change your mood, feel better about yourself, or fit in?
- c. Do you ever use alcohol or drugs while you are by yourself, alone?
- d. Has any friend, family member, or other person ever thought you had a problem with alcohol or drugs?
- e. Do you ever forget (or regret) things you did while using?
- f. Have you ever got into trouble while using alcohol or drugs, or done something you would not normally do (break the law, rules, or curfew; engage in risky behavior to you or others)?

Q23. Does anyone in your household, not including yourself, suffer from a mental health problem like depression or anxiety?

Yes

No

Q24. What sex were you assigned at birth, on your original birth certificate?

Male

Female

Q25. How do you describe your gender?

- a. Male
- b. Female
- c. Nonbinary
- d. Prefer to self-describe [SPECIFY]
- e. Prefer not to say

Q25A. Do you identify as transgender?

Yes

No

Q26. This next question is about sexual orientation. Which of the following best represents how you think of yourself?

- a. Lesbian or gay
- b. Straight, that is, not lesbian or gay
- c. Bisexual
- d. Something else
- e. Don't know

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