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# Social media as a modern Emergency Broadcast System: A longitudinal qualitative study of social media during COVID-19 and its impacts on social connection and social distancing compliance

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## ABSTRACT

In the wake of COVID-19 social distancing recommendations, social media assumed a central - if unofficial - role in ensuring that individuals remained informed and connected throughout the pandemic. Yet while research shows that social media can be an effective platform for connecting individuals socially and fostering social support exchanges, both the platforms and the support exchanged therein have been mired in considerable controversies regarding their use as a tool for positive social engagement. The goal of this study is to qualitatively evaluate longitudinal changes to social media engagement during social distancing recommendations and orders to shelter-in-place. To do this, we collected longitudinal, qualitative survey data from a group of adults over the eight weeks during which most states had issued orders to shelter-in-place. We analyze data for evidence of social connection, stress reduction, and support exchange, and evaluate the impact of online social ties on staying informed and on compliance with CDC recommendations and shelter-in-place orders. Results showed a clear longitudinal evolution of users' online social engagement. Early use was characterized by agentic purposeful engagement, information sharing, and community resource mobilization. However, over time these patterns gave way to more passive use characterized by listlessness, contentiousness and misinformation as the pandemic wore on in weeks. As social media comes to occupy an increasingly important role in the exchange of information (and misinformation) this study has important implications for the health of users and the role of social media in future disasters, including how social media impacts both stress and health related behaviors.

## Introduction

Almost overnight, the COVID-19 reshaped the nature of social interaction around the world. Global fear and uncertainty about the virus sparked an unprecedented need for up-to-the-minute information, expert recommendations, and virtual engagement with family, friends, clients, students, and teachers. Risk reduction in the form of school, business, and workplace closures resulted in fewer opportunities for individuals to engage in face-to-face informational and support transactions. As individuals sheltered at home for days, weeks, and then months, computer-mediated communication assumed a central role in keeping individuals informed, connected, and safe. As these new forms of connection took hold, their long-term impact on perceived stress and other hardships was uncertain.

Research shows that stress stemming from societal disasters can lead to a host of negative outcomes, including anxiety, depression, role

overload, isolation, fear, and substance misuse (Freedly et al., 1994; Galea et al., 2005; Psychological and Emotion, 2001; Weems et al., 2007). Stress following disasters is exacerbated by disrupted social ties and loss of access to social supports like family, church, and neighborhood (Kaniasty et al., 1990; Kaniasty & Norris, 1993; Weems et al., 2007). Moreover stress resulting from disaster can be exacerbated by mitigation strategies, including quarantine. One study conducted in 2004 following the SARS outbreak in Toronto, found that quarantine increased rates of depression and posttraumatic stress disorder (Hawryluck et al., 2004).

When faced with stressful life events, supportive interactions can help to reduce stress and bolster health by providing access to information, advice and resources, as well as access to a broader sense of community connection (Cohen & Wills, 1985; Kaniasty et al., 2020; Kaplan et al., 1977; Uchino, 2004, 2006). Early on in the internet era, research pointed to the value of online support groups for improving

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coping with that stress (White & Dorman, 2001). Subsequently, many studies demonstrated the value of health information and support shared via the internet (Cline & Haynes, 2001; Coulson, 2005; Sendra et al., 2020; Shaw & Gant, 2004).

Extensive research shows that computer-mediated communication via social media intermediaries can be an optimal way for people to transfer advice, information, and resources in response to stressful events (see e.g. (Baker & Yang, 2018; De Choudhury & Kiciman, 2017; DeAndrea et al., 2012; Haslam et al., 2017; Myrick et al., 2016)). Online social engagement can also provide an important sense of continuity when face-to-face routines and social networks are disrupted (Mikal et al., 2013), and boasts several advantages over face-to-face support including diminished barriers to support access (Wellman et al., 2001), increased control and privacy (Malik & Coulson, 2008; Rains & Keating, 2011), better fitting support (Rainie & Wellman, 2012), and reduced reciprocal obligations (Walther & Boyd, 2002). Nevertheless, there are notable drawbacks to social media-enabled support, including the inadvertent sharing of false information (Zannettou et al., 2019) and issues of social media fatigue and anxiety (Dhir et al., 2018).

While the term “social media” may be evocative of juggernaut platforms like Facebook, Twitter and Instagram, the term social media is broadly defined as mobile and web-based technologies that allow users to engage socially or to create and share content (Dictionary & Street, 2019; Kietzmann et al., 2011; Mikal, 2021). This broad definition means that the term includes not only the web giants above, but smaller content-, video- or image-sharing platforms or online discussion boards - each with different features and affordances. Given the focus of this study is online platforms that can be leveraged to bridge social distance, we use the broad definition of social media.

In this study, we surveyed a group of adults weekly during the first months of COVID-19 spread in the United States to assess the role of social media as a social distance bridge, to look for evidence of connection, stress reduction, and support exchange, and to weigh the impact of online social ties on compliance with CDC recommendations and state shelter-in-place orders.

**Methods**

In the first two weeks of widespread of COVID-19 in the United States (3/8/2020–3/22/2020), we recruited individuals to participate in a weekly survey on social media use. Individuals were recruited via snowball sampling with announcements posted to several Facebook groups used in prior research studies (Mikal et al., 2016, 2017, 2019, 2020a, 2020b).

Individuals who were interested in participating were asked to message study personnel directly to assess eligibility. To be eligible, participants had to be over the age of 18 with an active social media account, and reside in a location where SARS coronavirus-2 was spreading.

The survey was constructed in Qualtrics and consisted of 6–8 open-ended questions each week (see Appendix). Questions 1–3 were designed to assess changes to circumstances, mood or social media use in the preceding week. The remaining questions changed weekly, based on the findings of the week before and current events, and were designed to assess participants’ attitudes towards social media use, in general as well as during the pandemic, the degree to which participants were complying with social distancing recommendations, and their attitudes towards COVID and COVID response.

Survey distribution began on March 23, 2020 and continued for eight weeks; the last survey was distributed on May 18, 2020. A link to the survey was distributed via email each Monday morning at 11:00 a.m. CT, and reminder emails were sent to those who had not completed survey responses on Wednesday, Friday, and Sunday evening. Participants created a unique username to respond to the survey; these names were linked to email addresses but the responses were otherwise anonymous. A general inductive qualitative analysis approach was used

by authors JM and RW to evaluate responses (Thomas, 2006) and identify themes. Those themes were subsequently revised, adapted, and used to conduct a top-down coding (MOSTYN, 1985).

Internal Review Board approval was obtained from the University of Minnesota IRB office (STUDY00009336). The IRB application specified that all data would be collected remotely via open-ended survey questionnaires, and that study personnel would have no in-person contact with study participants.

**Results**

Thirty-five participants began the study; three dropped out in week one. The 32 participants who remained completed 100% of the surveys, for a total of 256 completed surveys. Participants’ demographic characteristics can be found in Table 1. Participants in our study tended to be young to middle aged adults, with a median age of 43 years (range = 18–79), women (n = 29) and White (n = 27). These results are consistent with the demographic characteristics of social media users, more generally (Demographics of social media users and adoption in the United States, 2020).

Although the pandemic unfolded in different localities in different ways, by week 3 of the survey, all participants lived in areas significantly impacted by school closures and/or work from home transitions and/or governmental stay-at-home orders. By week 8, most lived in areas where mandatory stay-at-home orders, if imposed, were being lifted (CDC; Moreland et al., 2020).

Results showed a clear arc to participants’ social media use over the eight weeks of study. In the first weeks of the pandemic outbreak participants used social media to seek information about the virus, to connect socially, and to determine their own behaviors by “peeking” at neighbors’ compliance with CDC recommendations. By the middle weeks (3–6), participants continued to look for connection, and now sought relief from boredom, educational resources for children, and more nuanced information about the pandemic. In the final weeks of the survey, participants sought information about safely emerging from their homes, were beginning to become frustrated with news as portrayed on their usual social media outlets, and were increasingly displaying and observing social “policing” about safe behaviors.

General inductive qualitative analysis of participants’ answers to survey questions yielded four principal themes: (1) COVID and COVID-mitigation were characterized by unique stresses, notably around health, finances and daily hassles; (2) social media’s emergence early-on as a modern Emergency Broadcast System, (3) drawbacks of social media engagement that included promoting different interpretations of social distancing recommendations; and (4) diminishing returns from social media engagement as social isolation persisted. Note that all quotes are included verbatim, directly from surveys.

**Theme 1. COVID-related stresses: health, finances, and logistic toxicity.** Respondents reported increased stress and decreased well-being throughout the study period, but especially in the early weeks of the survey. Although several respondents reported feeling liberated

**Table 1**  
Study population demographic characteristics.

Age	Median (range)
Gender	29 F: 3 M
Race	27 White: 2 Black: 2 Asian: 1 other
Partner in the household	23 lived with partner: 9 did not
Children in the household	12 had no children living at home The median number of children in the remaining 20 households = 2 (Range 1–6 or more)
Household income	Under \$50,000 = 5 \$50,000 - \$99,999 = 12 \$100,000 - \$149,000 = 5 \$150,000 or more = 9 (1 declined to state)

from the “tyranny of a schedule” (secondalto, Week 1), nearly two-thirds of respondents (n = 20) reported increased stress and anxiety in weeks 1 and 2.

*My level of irritability is definitely increasing, some days more than others. I start out each day feeling discouraged, eventually move past that and start the day. I feel a higher level of stress, just trying to navigate the world ... I also feel good about the contact I do have via social media/messenger. I find Zoom annoying and don't plan on fully embracing it though I have it. (paloma7727, Week 2)*

Sources of stress generally fell into three categories: (1) physical health concerns for oneself, family, and friends; (2) stability and finances; and (3) logistics and household management. *Physical health concerns and COVID risks* were characterized by fears of contracting the disease, monitoring of oneself and of family members for COVID symptoms, preoccupation with COVID spread and monitoring COVID-tracking websites, and, later in the 8 week study, concerns over others' failure to adhere to shelter-in-place recommendations or mandates.

*Anxiety and unusual chest pain /tightness this week. This causes me to ruminate over whether I have a mild case of C19 or if I'm having unusual allergies ... Incidentally, I live in nyc -the epicenter, and I work in health care -which means lots of exposure/ higher risk of having been affected (slothsrule, Week 1)*

*Stability and finance* concerns reflected both concern for personal financial well-being and broader concerns that the pandemic response was resulting in wide-spread economic damage.

*I've lost my work income. Perhaps my university retirement will decrease with the precipitous drop in the stock market. Will my tiny investments yield enough to continue to provide at least some income? I have a tenant who is self-employed. Will she be able to pay her rent? Over everything looms the existential question: will this virus kill me if I get it? (secondalto, Week 1)*

The most commonly-reported stressors fell into the *logistic toxicity* category, characterized by balancing the new demands associated with sheltering-in-place. This included changes to daily routine and, depending on family situation and occupation, could include issues related to working from home, obtaining groceries and other supplies, managing increased childcare responsibilities, and the stress consequences of spending more time at home indoors with family.

*Seeing the grocery store empty, especially around TP and hand sanitizer makes me quite upset. The signal is hard to miss. People are behaving irrationally. This can lead to bad things. (dante1863, Week 1)*

For many, increases in family conflict were compounded by difficulties finding respite in cramped quarters.

*Because we are in close quarters and all together for much of the day, there is very little space to process emotions and maintain good boundaries especially after disagreements or tension. This makes some moments very uncomfortable and often the best place to 'cool off' is in the bathroom. (Sugarfoot, Week 1)*

By the third week of observation the novelty of the quarantine had worn off and many participants reported having established routines adapted to the current health climate

*Social distancing is becoming harder, much harder. It's the tedium, the lack of personal interaction and the fact that I don't work right now. I love to work. This is like a vacation, not too bad at first, nice to have all the free time, but now, please give me something to do! (paloma7727, Week 3)*

In the latter half of the eight weeks, stress was more often attributed to the stress around making decisions about venturing out into the

world.

*More stressed. More apt to tell clients to shove it. Less caring. More burned out. More confrontational with strangers. Way more tense. I think it is because I am so angry about the re-opening, the pressure to do more when it still is not safe. Under the anger is fear. I am afraid of catching it. (brad1170, Week 8)*

*I get the feeling that people are letting their guards down too soon and the virus will continue to spread or re-emerge later in the fall. (Seamonkeydo, Week 8).*

**Theme 2. Social media as a modern Emergency Broadcast System: access to community, connection, and information.** During the first weeks of the study, two-thirds of study respondents (n = 20) reported increased social media use and nearly all (n = 28) reported using the Internet and computer-mediated communications to boost their mood. When asked, “Have you used the Internet this week to boost your mood, to connect socially ... ?”

*ABSOLUTELY! Humans were created for community and connection. I have used the internet to not only boost my mood, but to hopefully boost the moods of others. I have connected with friends, family, church groups and I notice a positive mental & physical response when I do so. The effect trickles over into how I engage and interact with my family as well. (Coco#1031, Week 1)*

As workplaces, gyms, bars, restaurants, and other physical spaces for interaction became increasingly unavailable, social media emerged as a key player in establishing a sense of community. According to one respondent

*In addition to socializing, I have used Facebook to connect and check in on friends - if only to share in our experience of this strange time we are in. I have been asking if there is anything I can do for them. It helps me to feel not so helpless to offer my help. (rocknroll, Week 1)*

Social media was integral in fostering community connection—either directly or indirectly. Direct connections included participation in ongoing support groups and increased opportunities for “getting to know each other” games and scavenger hunts posted to Facebook and Instagram. For example, one respondent reports

*My high school friend has a daily challenge on Facebook: show me something that's purple or show me something that's made of wool. That's a lovely non-virus-related way to communicate and we're supposed to go outside if possible to find it (beecejr, Week 2)*

Facebook and other sites were used to both read and to share information on pandemic spread, lockdown and other policies in place throughout the US, and information on logistical aspects meeting basic needs, including which businesses were open, and at what hours. Indirectly, social media also allowed individuals to find opportunities to volunteer or donate resources. Resource exchange appeared focused on education and instruction, including resources aimed at supporting the education of children at home. Notably, nearly one-third of all participants (n = 9) reported using social media to stream workout videos, including both weight training classes and yoga.

The benefits associated with social media engagement, including increased engagement, community building, and social support exchange, seemed to be short-lived and respondents began to lose interest in the content being shared.

*[I am on social media] a bit less, actually. I find I'm getting tired of all the poor “boo-hoo poor me”-type posts on Facebook. (beecejr, Week 4)*

Other participants shared similar fatigue with virtual engagement and the content being generated via social media,

*I'm still checking in on things but I'm tired of all the videos, the video workouts, the drive-by birthdays, the singing. I am becoming a cynic! So I'm intentionally stepping away from social media use because frankly, it's getting boring and repetitive. (paloma7727, Week 4)*

Later, in Week 6, Dillydog responded with notes of frustration

*I have turned off many notifications on my phone or laptop so I choose when/when I get news or go to websites. I have also blocked some "friends" who have the tendency to post sensational or questionable news. (Dillydog, Week 6)*

And in week 7, coc0#@1031 noted an increased animosity in the social media space,

*I think the more this has been going on, the less I am on social media because of the differing opinions and how nasty people are being towards each other. (coco#1031, Week 7)*

Finally, a novel role of social media during the pandemic was as a window into the lives of others. In addition to allowing participants to check in with targeted individuals such as friends and family, multiple participants noted that social media provided a broad landscape image of how individuals were responding to the pandemic. According to two respondents

*I really look for stories of how people are making the most of this situation: how they spend time and how they help each other. It reminds me that crazy things bring out the best in many of us and that we will be OK (serenar, Week 1)*

*It feels better to see other struggle with me. (474866, Week 4)*

**Theme 3. The role of social media in promoting different interpretations of social distancing guidance and in monitoring compliance.** Recommendations and requirements for sheltering at home, mask-wearing, and social distancing changed rapidly over the 8 weeks the survey was conducted. In week four, respondents were asked to identify their primary sources of information on measures to safeguard against COVID transmission. Sources were ubiquitous and varied, including government websites and news media but also articles and videos shared via social media.

*I'm not sure where I learned the social distancing guidelines in the first place. I know I've seen them in emails from the school district & on notices posted on Facebook from the governor & the county. (rocknroll, Week 4)*

Many commented on their reliance on their social networks to evaluate official guidelines.

*I have visited the CDC website a couple of times ... I'm actually not sure if there is anything new being recommended ... Most information was gathered earlier, many details were shared and discussed ... articles exchanged, etc with my husband and sister in law. (Sunshine, Week 4)*

Formal government communications got mixed reviews.

*I take my recommendations off social media. The CDC website is too boring. Actually, every government website is too boring. (Serenar, Week 4)*

Another participant reflected skepticism writing,

*I have not visited the CDC, NIH, nor any other "expert" website since the first week of this mess. (Maeb618995, Week 4)*

Several respondents reported implementing more extensive precautions than those recommended by public health authorities. One participant described her process for ensuring safe produce upon returning from the grocery store

*I came home [from the grocery store], and wiped off each item with a bleach-soaked paper towel. Produce came out of the plastic bags and were washed and refrigerated in jars of water. (brad170, Week 4)*

According to some, social media played a key role in fostering different interpretations of social distancing recommendations, and in undermining more rigid adherence.

*I think the internet provides whatever you're looking for—I tend to have a more liberal outlook on my social media pages so I'm seeing people post memes and information which reinforces our perspective, ie. lets trust the experts and shelter for as long as we need to. When I go to family pages, I see the exact opposite on the conservative/let us free view point. (Jessica, Week 7)*

And also in Week 7, Sunshine commented on the flexibility of "facts" on social media,

*I do not see people using the internet to find reliable, factual information. I see them reading shared Facebook news articles and going "oh ok, that's what my friend shared and it is news so I'll get on board with whatever direction it's going." I bet more people watch the news and read just the biased, perhaps unfounded articles that their friends share ... than read the news. (Sunshine, Week 7)*

Evidence of such differential interpretations across individuals and across settings led to the assessment that social distancing was ultimately discretionary and, "recommendations were fluid." (Kahouette, Week 2).

CMC quickly took on a compliance monitoring role. According to respondents, the ability to check in on neighbors and contacts served an important function, to establish and enforce normative behaviors.

*Social pressure is helpful for everyone. I wonder what people would be doing right now if they weren't being fully shamed every time they posted something on social media saying they were going to the office, or whatever. Instant, incredulous shaming shall save us all. (Sunshine, Week 2)*

When asked about behaviors in week 7 compared to week 1, lasa responded

*I don't wear one [a mask] while walking in the early a.m. and some have complained on Next Door postings. (lasa, Week 7)*

The ability to monitor behavior also resulted in irritation with both social media network members and the broader community. In week 6, when participants were asked "How clear are ... rules with regards to masks, gloves, 6-feet of distance or social gatherings?" almost all said the rules were clear, but when asked about their experience in their communities, almost all had an example of poor adherence. Most attributed lack of adherence to defiance rather than misunderstanding.

*Those who refuse to comply with regulations make me angry and stressed, whether friends or strangers. I've lost friends over our different reactions to the guidelines, and I think I've lost my favorite pub: the management is not following the laws and is saying (via FB) "we don't want the state to tell us what to do". Well, if they won't adhere to the guidelines, they've lost my patronage. But confrontational, no. I'm not going to change their mind. More like avoidance. (beecejr, Week 8)*

According to one participant,

*I am spending less time reading the news on social media during the day. I am increasingly annoyed with the posts on Facebook from my very conservative, and often misinformed, family about the virus and politics surrounding it. I am also frustrated with negative posts from some Facebook groups and neighborhood groups, like NextDoor, shaming others for not social distancing enough or spreading negativity (Seamonkeydo, Week 3)*

Different levels of concern and compliance frustrated individuals who were adhering tightly to social distancing requirements.

*I'm ... cranky every time I hear about how family members are behaving. Grandpa is still going to the grocery store despite grandma having zero immune system ... My husband's grandma staying with aunt and uncle but apparently they have not been very careful, and their kids just drop by all the time (Sunshine, Week 3)*

**Theme 4. Diminishing returns from social media engagement as isolation persisted.** Relatively quickly, participants began limiting their social media interactions. In week 3, the majority of participants described their social media engagement as primarily passive ( $n = 22$ ), using words like “aimlessly scrolling,” “zoning out,” or “distraction.” People began to note the consequences of too much CMC information.

*Being overrun with information encourages my mind to run wild with speculation & conspiracy theories, causing negative feelings of worry, anxiety, sadness & fear, all for things that are out of my control. (rocknroll, Week 3)*

By week 4 of the study, there were almost no mentions of “connecting” via social media and more than one-third of participants reported that they had begun stepping away from Facebook due to involuntary exposure to unwelcome information or to politically divisive content. One participant reported,

*I notice that social media is making me more irritated (Hugh2009, Week 4)*

Another reported that social media content exacerbated “anxiety” and “feelings of helplessness” (*brad170, Week 4*).

As users perceived social media content to be more annoying or divisive, participants reported that time spent on social media was associated with more negative outcomes. According to one respondent,

*I think that social media can improve a person's well-being only if they limit the amount of time they spend on it and the level of engagement. It is true for me [that social media can improve my mood] ONLY if I don't spend too much time on it and I don't engage in emotionally charged interactions. (rocknroll, Week 3)*

Another reports physical manifestations of stress associated with active engagement on social media,

*I know when I'm active, I heart beats a little faster and I can hear it. Like when I post something or have a conversation, I can feel the blood pumping. Unsure if that it fear or anticipation of conflict (Will5000, Week 4)*

More individuals reported suffering from information overload and involuntary exposure to politicized or simply unwelcomed, anxiety-inducing or traumatizing information.

*In the beginning, I was consumed with stalking the news sites, Johns Hopkins CV tracker website, etc, but I have had to step away from the constant checking because it just doesn't serve me well. (Coco#1031, Week 6)*

## Discussion

The COVID-19 pandemic has had profound social consequences. One of the most meaningful has been the impact of social distancing on social connection. In contrast to past disasters resulting in displacement and distancing, the internet and social media are now fully developed tools for social engagement and information gathering. This study was conducted to understand the use of computer-mediated communication and social media tools in the first months of enforced social isolation. Our results revealed that social media assumed a central role in pandemic

response as a modern-day Emergency Broadcast System - not only empowering individuals to quickly access and share information on disease spread and emergent health policy changes, but providing access to resources and community engagement. Yet despite the pivotal role played by social media in managing both the pandemic and pandemic mitigation strategies, longitudinal patterns indicate that this purpose-driven social media engagement is short-lived with increasing evidence of negative engagement patterns as the pandemic wears on.

In her book, “A Paradise Built in Hell: The extraordinary communities that arise in disaster,” author Rebecca Solnit describes a pattern of nimble, responsive, and democratized response to societal disaster in which communities come together to provide resources, information and support. Our results echo the pattern observed in Solnit's book - at least in the beginning - showing clear evidence of individuals using social media platforms to engage in information and resource exchange, to check in on the health and safety of family and friends across the over long distances, and to track COVID spread and policy response.

COVID-19 called into question several aspects of social engagement previously thought to be immutable. When social distancing made it impossible for individuals to connect socially and to recreate a new social contract through daily interactions and through “small talk” (Coupland, 2003; Coupland et al., 1992, 1994) our study suggests that social media played an important role in providing continued access to “small talk” to recreate a social cohesion. In addition, providing an observation window into the lives of others social media provided both the reassurance of co-coping with common stressors (Thoits, 1986) as well as an opportunity to model one's own behavioral and emotional response off of the behavioral and emotional responses of other social ties (Bandura, 1969).

Nevertheless, similar to other studies on the longevity of support availability (Mikal et al., 2019, 2020a, 2020b), our study showed that social media platforms were very useful immediately following the transition to staying at home, but became less useful over time. Relatively quickly—by weeks three and four—social media exchanges once viewed as motivational and community-building began to wear thin for some users. This thinning of enthusiasm for support via social media models observations drawn from social support deterioration processes (Norris & Kaniasty, 1996). Moreover, findings demonstrate that participants engaged more passively over time. In other words, findings here point to a rather short-lived community. The role of CMC shifted to one of social observation, small talk, and whiling away time.

Early engagement with social media as a mechanism for engaging in small talk and modifying one's own behavioral response to COVID progressively morphed into political derision and policing others' compliance with social distancing recommendations. Participants reported simultaneously resenting the behavioral pressures exerted by sharing experiences via social media and also often engaging in those same behaviors to exert influence over the behavior of others. Over time, social media platforms, including *NextDoor* and *Instagram* displayed more combative and divisive posts, leading to an increase in stress and conflict for some participants. (Note that the eight weeks covered by this study occurred before the civil unrest following George Floyd's murder, and well in advance of the turmoil cause by the US presidential election.)

**Limitations.** Our data are qualitative and “noisy”, reflecting the rapid evolution of a chaotic situation. Our sample size was relatively small and subjects were recruited non-randomly. Nonetheless, clear patterns emerged in the nature of the responses, as organized in the four themes noted above. It is also noteworthy that, despite asking about participants' engagement with a variety of social media platforms with varied features and affordances, we did not ask users directly about their rationale for selecting the different social media platforms. This would be a worthwhile question for future research studies.

**Practical Recommendations.** The present study has practical implications for both social media and public health messaging strategies. Notably, maintenance of online peer networks of support does seem to buffer against stress during transitions. However, misinformation and

politically charged posts undermined public health messaging and promoted stress and conflict, leading to deliberate attempts to engage less on social media websites. To lessen this, it may be prudent for social media websites to run banners on all newsfeeds and groups with up-to-date formal public health recommendations. In addition, social media platforms may consider allowing individuals to **opt in** to allowing news articles and political op eds in their news feeds. And finally, social media could be used more pro-actively to promote specific mental health activities, such as exercise and hobbies that provide alternatives to non-productive engagement with social media.

**Conclusion.** Our findings provide key insights into how computer-mediated communication on social media platforms provided opportunities for connection, frustration, and exchange of information—and misinformation. The positive effects of CMC appeared to lessen over time.

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## Appendix. Questions

### Week 1

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Describe changes to your own daily routine resulting from COVID-19 or new policies to stop the spread of COVID-19? Examples may include family members who are out of work or school, information on logistical challenges like grocery shopping, or anything else you can think of.

Stress is a very general term and can include health concerns over COVID-19 spread, social isolation, or even daily hassles like entertaining children who are home from school, or grocery store items that are out-of-stock. Discuss any changes in your level of stress over the past week.

In general, what proportion of your day do you spend online? How does this compare to a typical week? What sites were you visiting most often? And why?

How have you used the Internet to help you comply with CDC recommendations for social distancing? Explain why or why not.

Have you used the Internet this week to boost your mood, to connect socially, or find resources, or to find information? Explain why or why not.

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### Week 2

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In many areas, recommendations for social distancing and “shelter in place” have gotten progressively more stringent. Describe any changes to your own daily routine that have occurred over the past week.

Describe any changes to your mood over the past week. Have you experienced any changes in your level of depression, social isolation, anxiety, stress or overall well-being?

What activities have you engaged in over the past week to improve your mood or to stay engaged socially?

Think back over the past week. In general, what proportion of your waking hours each day were you online or at a computer?

In general, what sites were you visiting most often? And why?

Have you used the Internet to gather information about a topic, to engage socially, to ask for resources (e.g., money, time, help, or educational resources), or to pass time (watch TV or seek entertainment)? Describe.

Are there ways that you have observed OTHER PEOPLE using social media to exchange support or information or to engage socially in creative ways? Describe.

Do you feel as though having access to social media helps you to comply with CDC recommendations for social distancing? Why or why not?

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### Week 3

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Describe a typical weekday under current orders to social distance. And how does this compare to a typical (pre-COVID) weekday?

Have there been any changes to your mood between this week and last week? In what ways is social distancing becoming harder over time - and in what ways is it becoming easier?

Describe any changes to your social media use over the past week?

Think back over the past week. In general, what proportion of your waking hours each day were you online or at a computer?

What are the sites that you visit most often? Would you characterize your engagement as typically active (posting, commenting, discussing) or more passive (scrolling, reading, liking)?

There is a lot of research showing how social media engagement can improve a person’s well-being (reducing depression, anxiety and isolation). Why do you think that might be the case? Is that true for you personally?

If you had a friend who was struggling with feelings of social isolation, depression or boredom during the shelter in place, what would you advise them to do? Is the solution likely more social media engagement - or are there other ways to connect socially?

What is the difference between staying informed and being overrun with information? How do you stay informed? And how do you avoid being overrun?

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### Week 4

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Describe a typical weekday under current orders to social distance. And how does this compare to a typical (pre-COVID) weekday?

This is a time characterized by a lot of uncertainty. Can you give an example of a moment this week when you felt particularly anxious? What was causing you stress? How did you cope?

Describe any changes to your social media use over the past week?

Think back over the past week. In general, what proportion of your waking hours each day were you online or at a computer?

What are the sites that you visit most often? Would you characterize your engagement as typically active (posting, commenting, discussing) or more passive (scrolling, reading, liking)?

Do active and passive engagement impact your mood differently? How so?

Think of the last time you left your house. Why did you leave? From the time you left through until you returned - did you take any precautions to protect your health? Be as specific as possible. As an example, "I left to go to the grocery store. I went to the car, drove to the market and before leaving my car, I put on a mask. In the market, I stayed away from other patrons by avoiding crowded aisles. I also went to the self check out aisle. When I got home, I ... "

If you took any additional precautions to protect your health or to avoid spreading COVID-19, where did you hear of these recommendations? Did you visit the CDC website, or did you hear of them through the news or other media/social media? Please be as specific as possible.

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### Week 5

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Tell me about specific measures you are taking to socially distance. Is social distancing easier or harder over time? And are you more or less likely to comply strictly with social distancing as time goes on?

Describe any changes to your mood over the past week.

Describe any changes to your social media use over the past week?

Think back over the past week. In general, what proportion of your waking hours each day were you online or at a computer?

What are the sites that you visit most often? Would you characterize your engagement as typically active (posting, commenting, discussing) or more passive (scrolling, reading, liking)?

Compared to the beginning of the COVID-19 outbreak, how closely are you following news and updates related to COVID-19? Are you following the news as closely as before? Are you looking for the same types of information, or are you looking for different types of information?

Describe a moment this week when you felt lonely. Did you reach out to friends or family? And did you use Internet technology (videoconferencing, chat, social media) to reach out - or did you rely on non-technological communication?

Have you experienced any negativity this week from your online engagement?

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### Week 6

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Would you describe your social distancing this week as more cautious, less cautious, or about the same as when social distancing recommendations were put into place? In what ways have you become more relaxed? In what ways are you more strict in your social distancing?

Describe any changes to your mood in the past week.

In the past month, have you settled into a routine in your Internet or social media use? Or are you looking at different ways to engage socially to combat social isolation? Have you discovered any new sites, hobbies or activities that have made being homebound a bit easier?

Think back over the past week. In general, what proportion of your waking hours each day were you online or at a computer?

What are the sites that you visit most often? Would you characterize your engagement as typically active (posting, commenting, discussing) or more passive (scrolling, reading, liking)?

How clear are social distancing rules with regards to masks, gloves, 6-feet of distance or social gatherings? How clear do you think people are on how social distancing recommendations should be implemented? Can you give an example of poor understanding?

New developments are emerging daily regarding school and business closures. How do you keep updated on these developments for your state? To what extent does social media play a role in keeping you up-to-date? Do you receive information via social media? Do you share information?

Are there times when you avoid social media or particular websites? This could be particular times of day or days of the week when you feel overwhelmed - or maybe you avoid websites you feel are characterized by negativity or inflammatory or biased information.

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### Week 7

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This week was your social distancing more cautious, less cautious, or about the same as in week 1? Can you give an example of something you did this week that you would not have done when social distancing first started? Why do you think you made this change?

In what ways has social distancing had a negative impact on your well-being? Are there ways in which might social distancing has had a positive impact?

This week, would you say that being online has helped you to feel more connected? Explain why or why not.

Think back over the past week. In general, what proportion of your waking hours each day were you online or at a computer?

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What are the sites that you visit most often? Would you characterize your engagement as typically active (posting, commenting, discussing) or more passive (scrolling, reading, liking)?

What would you do to engage socially or to find information if your Internet all of a sudden stopped working today?

Research shows that the Internet can be really useful in sharing resources, including: setting up meal trains, crowdsourcing funding, educational videos, or even mental health resources. Have you seen evidence of "resource sharing" in response to COVID or social distancing?

Some controversy is emerging around COVID-19 and orders to shelter in place. In general, is the Internet a good resource for finding reliable, factual information that people can use to form opinions? Is this how you see people using the Internet?

## Week 8

Have you notice changes in the social distancing practices going on around you?

Thinking about your interactions with friends, family or even strangers, how have your interactions with others changed during the pandemic? Have you been more stressed, tense, or confrontational - or have you been more relaxed and easygoing? Why?

Based on what you're seeing online, how well are your friends and family managing social distancing? Are there certain characteristics or traits that cause some friends to struggle more than others?

Think back over the past week. In general, what proportion of your waking hours each day were you online or at a computer?

What are the sites that you visit most often? Would you characterize your engagement as typically active (posting, commenting, discussing) or more passive (scrolling, reading, liking)?

How do you imagine social distancing will change in the coming months? When will we return to more traditional work and school? Will we continue to socially distance once we have returned to work and school?

How has social distancing changed the ways we interact with one-another?

How has social distancing changed your work and working relationships?

This is our final survey. Is there anything I should know about you, or do you have any final thoughts to share? Is there anything you wish I'd asked about in the surveys?

If you would be interested in sitting for a 30 min Zoom interview to discuss social distancing, please provide your name and email address here.

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