


# Older Adults' Computer-Mediated Communication (CMC) Engagement Following COVID-19 and Its Impact on Access to Community, Information, and Resource Exchange: A Longitudinal, Qualitative Study

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## Abstract

Following COVID-19, the CDC asked individuals to social distance and state and local authorities nationwide began issuing curfews and recommendations to “shelter-in-place.” Known to be more susceptible to the negative effects of COVID-19 and often coping with higher levels of social isolation, many worried that older adults’ mental health would suffer. While computer-mediated communication (CMC) is on the rise among older adults, whether and how older adults leverage the social benefits of CMC remains underexplored. This study assesses older adults’ CMC use after COVID and the impact of CMC engagement on access to connection, information, and resources. We follow 22 older adults over 6 weeks, using longitudinal qualitative surveys to study CMC use patterns and mental health outcomes. Results revealed that while older adults exhibited purpose-driven CMC engagement, limited integration into larger online communities restricted access to up-to-the-minute information, notably early in the pandemic. Longitudinal findings show progressively less engagement with online news and information, withdrawal from online social engagement, and a progressive relaxing of social distancing. This study sheds light on how best to reach older adults following disaster, and where older adults may be disadvantaged as social media becomes a modern “emergency broadcast system.”

## Keywords

Technology, aging, communication, community, mental health

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## Introduction

The scope and impact of the SARS-CoV-2 (COVID-19) pandemic has created widespread psychological distress (Pfefferbaum & North, 2020). Sweeping public lockdowns shuttered cities and communities to protect residents and mitigate the spread of the virus. However, use of social distancing to mitigate spread has had mental health fallout, including increased rates of depression and general anxiety disorders (Kämpfen et al., 2020; Marroquin et al., 2020), and leading to reports of sleep disturbances and increased suicidal ideation (Lewis, 2020).

Many studies have explored the psychosocial consequences of societal disasters (Bei et al., 2013; Centers for Disease Control and Prevention (CDC), 2002; Freedy et al., 1994; Galea et al., 2005) and have attributed the negative

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psychological after-effects of disasters to a loss of material belongings, coupled with the interruption of important social relationships and community structures (Cherry et al., 2015; Weems et al., 2007; Hawryluck et al., 2004). For older adults, disasters may have more severe mental and physical health implications due to both higher levels of social isolation and loneliness at baseline (Grossman et al., 2021; Ong et al., 2016), as well as chronic health conditions, mobility restrictions, cognitive issues and diminished sensory awareness that may inhibit their ability to ensure their safety following an event (Aldrich & Benson, 2008; Brockie & Miller, 2017).

Supportive social relationships can buffer against the ill-effects of stress, providing both reassurances and resources to promote health and sustained well-being through the transfer of health promoting advice, information and resources (Cohen, 1988; Cohen & Wills, 1985; Uchino, 2004, 2006). Nevertheless, in times of distress, supportive relationships are often disrupted and support may be unavailable (Mikal et al., 2013). Yet when access to face-to-face support is restricted, computer-mediated communication (CMC) provides access to unobstructed networks of support (Malik & Coulson, 2008; Mikal, 2010; Rains & Keating, 2011; Walther & Boyd, 2002).

The health-promoting and stress-buffering effects of online social engagement have also been consistently demonstrated in older adult populations (Chopik, 2016). Online communities provide older adults with opportunities to give and to receive social support, particularly in the wake of stressful life events, and correlate with an overall reduction in stress and loneliness and an increase in health related knowledge and cognitive engagement (Beacker et al., 2014; Derksen et al., 2015; Eriksson, 2016; Leist, 2013; Sinclair & Grieve, 2017).

Moreover, older adults are increasingly availing themselves of online social engagement. Currently, more than two-thirds of US adults aged 65 or older have regular access to the Internet, over half have home broadband, and nearly 40% have at least one social media account (Anderson & Perrin, 2017). While social media penetration rates hover close to one-third of older adults, that number climbs to 58% for the youngest older adults (ages 65–70 years), and older adults now represent the fastest-growing demographic among social media users (Anderson & Perrin, 2017).

Despite a general upward trend in online social engagement among older adults, disaster studies still report that older adults are concerned about the migration of disaster notifications toward tech-based messaging platforms and social media (Bardach et al., 2021; Brockie & Miller, 2017; Gibson et al., 2020) that may leave them without access to critical and timely information. Nevertheless a qualitative study by Bardach et al. (2021) found that most older adults were *not* interested in technology training, reporting that they had met a level of technology proficiency that met their needs.

Use of technology to transmit critical disaster-related information coupled with some older adults' stated reluctance to learn new tech skills highlights the need to better understand older adults' current CMC engagement.

Unfortunately, our understanding of the engagement patterns of older adults following disasters is underdeveloped—with most studies of older adults' Internet use treating social media as a single monolith (Hunsaker and Hargittai, 2018), and most studies of technology use following disaster use focusing uniquely on concerns over the transmission of timely information, rather than on broader constructs of social support that include resource and socio-emotional supports.

COVID-19 has been an unprecedented disaster in terms of scope, scale and duration. Models of technology acceptance among older adults suggest that technology adoption among older adults is based on ease of use, motivations, perceived usefulness, technological lock in, and self-concept (Berkowsky et al., 2018; Wang et al., 2017). As curfews and orders to shelter-in-place wore on, restricting in-person social interaction, we anticipated changes to motivations, perceived usefulness, and access to social support would move older adults from more limited to broader engagement.

Our study aims to provide new and nuanced insights into the use patterns of older adults Internet users, notably following disasters when the need for informational, emotional and resource support is high. Study findings help to pinpoint where older adults can be reached online and how early adopters effectively leveraged CMC to access varied types of support. Further, by following participants over multiple weeks of shelter-in-place, we are able to provide insights into whether prolonged social isolation impacted the groups' willingness to broaden their online engagement.

## Methods

Selection of qualitative methods was guided by the exploratory nature of our work (Hammarberg et al., 2016) which focuses predominantly on mechanisms and motivations guiding older adults' Internet use following disaster. Our sampling techniques followed a *judgment sampling method*: a method by which participants are sought based on a pre-determined set of characteristics (Marshall, 1996). To be eligible, older adults had to be over the age of 65, had to speak English, had to have a social media account (defined as Facebook, Twitter, and/or Instagram) and home Internet access, and had to live in an area of the United States impacted by COVID-19 and mitigation strategies. As in all qualitative research, the “in depth” nature of the data collected precludes a representative sample and is designed to identify potential pathways and hypotheses for later development in larger-scale quantitative studies (Roland, 2016).

Our judgment sample was recruited using a combination of key community members and snowball sampling. An older participant in a separate study (Mikal et al., 2021) agreed to recruit through an older adult community group. In addition, researchers supplemented these recruitment efforts with paper flyers posted at two retirement communities. Participants were also invited to recruit friends and family over the age of 65 who met the eligibility requirements.

To explore older adults' CMC use immediately following the pandemic and to evaluate changes to CMC engagement over the 6 weeks during which most states had issued curfews or orders to shelter-in-place, we opted for a qualitative, longitudinal study design. To ensure confidentiality and participant safety, and to accommodate older adults without easy access to Zoom or other video conferencing technology, we designed open-ended surveys which were distributed via email with a link to an online survey questionnaire hosted on Qualtrics.

Survey distribution began March 25, 2020 and ran through May 6, 2020. Survey questions (see [Appendix](#)) consisted of 6–8 open-ended items. Three open-ended items were featured on each survey and assessed weekly changes to daily routines, mood, and CMC engagement. The remaining questions changed weekly and were designed to assess participants' attitudes toward computer-mediated communication, as well as their own social engagement online and their compliance with social distancing recommendations. Open-ended responses were reviewed each week by author JM and patterns were used to modify the questions for the following week.

Following 6 weeks of data collection, as many states were beginning to lift curfew restrictions and orders to shelter-in-

place, author JM downloaded all survey responses to an Excel spreadsheet. The spreadsheet was then organized by individual respondents, allowing for observation of not only patterns in engagement, but any longitudinal changes from one week to the next in either routine, well-being or CMC engagement. Using a general inductive approach through which detailed observations of the world are synthesized into larger, more abstract generalizations ([Thomas, 2006](#)), author JM hand-coded the data for themes and notable examples of lived experiences profiling coping in an emergent pandemic. These themes were then reviewed by all authors, who participated in a top down coding to validate and to look for additional examples of each theme.

Internal Review Board approval was obtained from the [authors' university] IRB office (STUDY00009336).

## Results

Twenty-five participants completed the intake evaluation and the first survey in week one, and 22 participants completed all six survey questionnaires. One participant withdrew from the study and two others were lost to follow-up. The average age of participants was 69 years old, with a range of between 65 and 78 years old. The population was predominantly women ( $n = 17$ ), and was nearly all White ( $n = 21$ ). Demographics primary themes are summarized in [Tables 1](#) and [2](#). All participants were retired. All respondents had home Internet access and reported regularly engaging in computer-mediated communication before and during the survey period.

Reactions to the COVID-19 pandemic outbreak and social distancing recommendations varied between respondents and between weeks. In the first week of observation—during the first weeks of social distancing recommendations across the country—respondents' reactions were roughly evenly split, with nearly half reporting that their moods were either stable or better than they had been before the pandemic. These respondents reported having time to slow down, to pursue home projects, and to spend time with partners or extended family. By week four, however, only a third of respondents reported stable moods, and nearly two-thirds were reporting diminished well-being.

**Table 1.** Demographic characteristics of participants.

Age in yrs	Avg	69
	Min	64
	Max	78
Sex	Male	5
	Female	17
Education	High school	2
	Some college	6
	College grad	6
	Grad degree	8
Income	Below 50,000	4
	\$50–100,000	11
	\$100,000–150,000	5
	Over \$150,000	1
	Decline to state	1

**Table 2.** Results themes and descriptions.

Theme	Description
Risk factors for social isolation	Demographic and other individual characteristics that participants felt increased isolation, including <i>advanced age, health/mobility issues, providing care to a spouse or child, and limited tech use</i>
Characteristics of online social engagement	Features of older adult social engagement online. Includes limited use of large social media, limited <i>broadcasting</i> , and more one-to-one or small group engagement
CMC and access to resources and information	Older adults exhibited active, agentic CMC use in news and entertainment-seeking. Limited integration into online social networks <i>limited access to resources and up-to-date information</i>
Pitfalls and drawbacks of CMC engagement	Engagement via CMC platforms negatively impacted individuals via communication <i>exclusivity, disengagement difficulties, information saturation, and political disagreements</i>
<b>Longitudinal changes in social engagement</b>	Results indicated that respondents' moods shifted over time but were characterized by an increasing pandemic fatigue and exhausted coping resources.

While respondents reported feeling preoccupied with their own health and safety as well as the health and safety of others due to COVID, restrictions and closures exacerbated other health stressors. Pre-existing diagnoses of cancer or other serious illness—either in the participant or in someone they were caring for, and non-COVID-related deaths of loved ones were reported by many of the participants.

The various impacts of COVID-19 were not equally distributed among survey respondents, and respondents provided key insights into the risk and protective factors that impacted the degree to which older adults experienced stress as a result of official social distancing recommendations. In survey items prompting respondents to evaluate the unique impacts of social distancing recommendations on older adults, respondents reported that several features of older adulthood and retirement mirrored life under quarantine and had provided an opportunity to exercise coping skills that were effective in warding off the negative impacts of quarantine. Notably, respondents reported that older adults were well-versed in establishing routines to structure otherwise unstructured time. According to one participant, older adults are more accepting, resilient, and self-reliant, used to spending considerable amounts of time alone.

...this social distancing is way harder on young adults who are used to “hanging out” with friends all the time. I have a 20-year-old nephew who is going stir crazy and really doesn’t see the point of social distancing at all even though his wife has been diagnosed (but not tested and confirmed) to have had Corona virus and they have had to quarantine at home... I think most seniors are a lot more accepting, resilient and self-reliant than the 20-somethings (Marietta, wk 2, question 7)

### *Themes in the Use of CMC*

Overall, study respondents reported measured, agentic, purpose-driven online engagement which enabled them to stay informed and socially connected. Nevertheless, failure to integrate more fully into online communities had deleterious mental and physical health implications for some of the respondents, and resulted in a further decrease in ability to activate support in online settings.

We identified five themes:

1. Risk factors for Social Isolation.
2. Characteristics of online social engagement
3. CMC and access to resources and information
4. Pitfalls and drawbacks of CMC engagement
5. Longitudinal changes in social engagement

### *Risk Factors for Social Isolation*

Because participants need to have a social media account to participate in the study, all had some knowledge of and familiarity with CMC. When asked who they thought would

struggle most with social distancing, the predominantly younger-older adults in our sample suggested risk of social isolation was associated with more advanced age (older-old adults), health or mobility issues, providing care to a spouse or loved one, limited engagement with online or mobile social engagement technology,

I have a friend in her 90s who has had trouble getting out of the house for about a year. I used to visit her once a week, one of our eucharistic ministers came from St. Mary’s once a week to give her communion, and she lives in an assisted living building with community activities and dining. All of that is shut down. She doesn’t know how to use the Internet and doesn’t have a phone or computer. Her son usually does all of that for her and I doubt he can visit. I think she’s pretty lonely (gracernote, wk 4, question 6)

Respondents raised further concerns about older adults who were not comfortable with CMC.

Many older adults are not the most comfortable with technology and therefore once face-to-face contact is eliminated may feel more isolated than the young generations. (mwh8751, wk 2, question 7).

I think [social isolation among adults 65 and older] is a reasonable concern. My peers are connected by media, but I know some of my older neighbors are not. Those are the people that call a couple times of the week or tell them to come outside and we talk across the street with one another. They are really cut off except for their phones (Coronaquestions, wk 2, question 7).

...a friend that I play bridge with is in her late eighties. She is quite frail and uses a walker but can drive. She has a handyman who may be helping her I hope. She has children but they are living elsewhere in the state. She is also experiencing a bit of dementia. Her sister lives about 20 miles away but can no longer drive. She has a cell phone but doesn’t use the internet much (liz.h, wk 4, question 6).

Some of the respondents in our sample viewed themselves as more comfortable with technology and more socially engaged online than their contemporaries,

I spent a good portion of my career with technology, even teaching computer use, participating in development of proprietary software, maintaining, updating computer operating systems and software. Therefore, I am quite possibly more comfortable with computers than others (mwh8751, wk 2, question 7).

### *Characteristics of online social engagement*

While participants described social media as a key conduit for social engagement during stay-at-home orders, their replies revealed unique features of respondents’ online social engagement. The social media juggernauts—Facebook, Twitter

or Instagram—were commonly used platforms that allowed participants to stay engaged with friends and family throughout the pandemic, and that engagement provided reassurance, comfort, and improved mood.

It brings me joy to see my family on media and share stories and solve problems with friends and professionals (mountain mamma, wk 2, question 5)

However, while nearly all respondents reported having an account with a social media giant and using it to engage with friends and family, these sites represented only a small proportion of respondents' reported online social engagement.

I check FB once a week to check on family members I don't see or communicate with on a regular basis (1952red, wk 2 question 4).

Respondents generally demonstrated a preference for private or one-on-one communication platforms and Internet communication technologies over *broadcasting* technologies like Facebook, Twitter, and Instagram: technologies that allowed for simultaneous communication with a large network of social contacts. When talking about social engagement, most participants listed platforms that enabled one-to-one engagement like Zoom, Facetime, Email, text and other SMS or Messenger. For example, liz.h used private communication channels,

My grandson has an artificial heart valve replaced in Jan. But had a tear in the stitches and had to go back to surgery again Friday. He's doing well now. But we used messenger a lot letting relatives know progress setting up prayer chains. Very helpful when phone calls can't be made (liz.h, wk 6, question 3).

Few respondents reported the actual amount of time they spent on social media, but those who did reported very limited time interfacing with the most popular social media sites.

My heaviest use is email, which is primarily business-related. If I were to take all of my digitally connected time, it probably looks like this: email, 60%. Zoom, 10%, game 1 10%, game 2 10%, FB, 5%. Instagram, 5% (ScoWo, wk 1, question 6).

According to my iPhone usage has gone up 12.5%. Yesterday my phone recorded 28 pickups, 31m on phone, 16 m on Safari, 14 m on google, 13 m on camera, 8m on Facebook, 6m on Settings. Ih 31 m on Social networking, 18 Creativity, 14 Reading and Reference (mountain mamma, wk 4, question 3)

Others who did not provide information on the amount of time they spend on larger social media sites reported predominantly passive patterns of engagement via Facebook or Instagram, characterized by less content generation, and more "...scrolling, reading, and liking [with] very few comments (Grammy, wk 5, question 5)."

Many respondents reported multifaceted online social engagement. Participants continued engagement in online group activities, remaining active in bridge and other card-playing clubs, Bible study, or study groups for online classes. Three participants also noted participation in World of Warcraft, a massive multiplayer online role playing game, with acquaintances around the world. One reported playing World of Warcraft for upwards of 4 hours per day of active engagement. When asked about sites she visited most often, she listed

Passive news reading, playing more World of Warcraft (my God, maybe up to 4 hours a day, what a hoot!), cat and music videos, some comedy. Except for WOW, [my engagement is] very passive (gracernote, wk 3, question 5)

### CMC and Access to Resources and Information

Respondents' proficiency in using CMC to engage socially may have masked a more limited integration and facility with some of the unique communication features that facilitate access to information and resources, such as social media's assemblage of varied information from an array of sources or remote access to consumer goods. Our research found that while purposeful and agentic, older adults' limited CMC engagement may have restricted access to resources and information. Nevertheless, our population exhibited considerable creativity in using CMC for cognitive engagement and entertainment.

### Limited Use of CMC for News Gathering

Where older adults were comfortable and confident engaging with official websites to find information on disease spread and health policy, evidence suggested that respondents' use of CMC and social media platforms to gather and share information was limited. According to one participant, "I don't get my information online...I watch news and read (5432, wk 2, question 8)." From very early in the observation period, respondents reported selectively engaging with news stories, putting time brackets around their news consumption, engaging with familiar, reputable sources, building in news-free days or days on which they purposefully avoided information related to COVID, and largely avoiding news shared via social media. According to mwh8751,

Social media can lead to information overload, causing many to either withdraw entirely from social media or significantly reduce the people on their friends list... (mwh8751, wk 2, question 8)."

Many avoided news articles shared online, which they characterized as unreliable, inaccurate, and under-sourced. When asked about using CMC to access and gather information, the majority of respondents listed news apps and

other online mainstream media sources such as the New York Times, Reuters, PBS, the Wall Street Journal, and the Washington Post. Further, many respondents reported relying on printed newspapers, alongside television news, press briefings, and prominent infotainment channels for local and national news updates.

Some respondents reported supplementing more traditional news articles with information on health and policy changes accessed via official CDC and COVID-tracking websites,

I remain a printed newspaper reader with 2 daily home-delivered subscriptions and 1 weekly. As a result I don't plug into digital media very often and am certainly not online browsing for stuff. I appreciate the morning dive into news that is considered by reporters and editors, rather than the immediate hit of breathless and unsourced online stuff. I use online access to get direct feed of some portions of some press conferences by that idiot Trump, or governor Cuomo, or Washington State Gov. Jay Inslee (ScoWo, wk 2, question 8)

Respondents also reported using the Internet to vet information using both fact-checking websites like [Snopes.com](https://snopes.com) and reputable media sources.

### *Limited Use of CMC for Consumer Activities*

Conspicuously absent from respondents' reports of how they used social media was gathering information on business closures or changing hours of operation. Only 4 participants reported using online shopping sites, including purchasing both groceries and books. One participant explains her reluctance,

I don't really like to order things on line, as I'm not sure of the security. I think that this is one area that I wish I could be in close contact with someone to help me understand what I'm doing right or what I'm doing wrong. Our library was such an excellent source on tech Tuesday (liz.h, wk5, question 6).

Our results also showed that, even when prompted regarding use of Internet technology to access resources, very few reported using online grocery or meal delivery.

### *Innovative and Creative Use of CMC for Entertainment and Education*

While respondents may not have used CMC for shopping and only limitedly for news, they did use it to access entertainment resources. This included watching television, movies, and infotainment news, downloading and reading books, and watching documentaries and performances by musicians.

My husband's Amazon account has provided us with a few really good movies which we have streamed. I have watched

documentaries about musicians and performances by musicians I like, and new ones recommended to me (2MangFloral5\*7).

Respondents also reported innovative and creative uses of CMC to stay engaged and entertained. Notably, one respondent reported taking virtual museum tours, another reported both virtual tours of homes designed by architect Frank Lloyd Wright and riding on virtual roller coasters at Disneyland.

Respondents also showed a considerable track record of engagement with educational resources available online. This included online searches for recipes and other instructional materials, but also examples of resources to promote cognitive engagement and physical health. For example, several respondents reported using online technology to access exercise classes to promote movement and physical activity. In addition, two respondents reported taking Spanish classes and one respondent took an online course to learn crochet and signed her partner up for an online guitar class. In addition to didactic and passive instruction, participants reported using online resources to supplement those courses - either in the form of virtual, one-on-one study groups or in accessing additional instructional materials. One participant noted,

I took an online crochet class that wasn't easy to follow because I believe the instructor wasn't completely comfortable with Zoom. After the class I went online and used youtube to get a better instruction (Love My Life, wk 4, question 3).

Educational resources also included spiritual education, as numerous participants reported attending virtual church groups and Bible studies, while churches were closed and unable to hold in person services.

### *Pitfalls and Drawbacks of CMC Engagement*

There were also notable drawbacks of online social engagement and its impacts on both psychological well-being and off-line personal relationships. Virtually all participants reported that social media was a poor substitution for in-person engagement in its lack of physical engagement and physical touch, especially as it pertained to children and grandchildren. Participants further reported discomfort with social media given the exposure it represented—both of the participant to friends and family, and of friends and family to the participant. In other words, for some participants, showcasing accomplishments, finished products felt like showing off. Other participants noted that being on social media involved learning more about friends and family than they would otherwise care to know,

[Social media] enables you to learn things about your acquaintances and friends that you may never have learned in the normal, one-to-one course of friendships. This can be good and bad and in-between. I learned that some people I spend time with

are so different from me, and think in ways so foreign to me, that they are almost a different species. In normal life, people don't discuss theory, politics, or religion, or have "cleverness" or "emotional intelligence" contests. They simply communicate about what they are doing together...For me, personally, social media is isolating (2MangFloral5\*7).

Most respondents restricted their online social engagement and they reported varied reasons for limiting participation. Participants seemed to restrict participation in an attempt to avoid negativity or politically based conflict; to make more time for outdoor activities like walking, gardening, exercising, or socially distanced visits with neighbors, friends and family; or simply because being stuck at home meant that they had fewer activities to report on social media. For some, this more public forum for sharing felt conspicuous and boastful.

I have not used it as much. I have disengaged from the discussions. My participation has been to show off the completion of my projects, Show off, being the feeling I got from posting it (2MangFloral5\*7, wk 3, question 3).

Another respondent reported being more reluctant to engage on social media websites due to concerns that his data was being harvested and tracked by commercial entities.

Not active, not posting or discussion; instead I read some stuff and check a couple other people. I don't go very far. Aware that all my steps are being tracked by commercial entities. I hate that and don't want to give them much data (ScoWo, wk 5 question 5).

One respondent worried about her own tendency to become a voyeur.

[I use] Facebook to see the posts my friends put up, share Springtime photos, opine about politics, see damage from the most recent tornado or storm and "check in with acquaintances" (electronically gawk at someone's misfortune) (2MangFloral5\*7, wk 2, question 4).

Some respondents expressed concern about the tone of CMC.

There is too much on the internet and the local social site, Neighborhood, is filled with negativity. I suppose people are getting frustrated. I avoid the negativity people are spewing and focus on the positive things people are doing and saying (Hammocks, wk 2, question 8).

To avoid negativity, respondents reported "pruning" their friend lists or "snoozing" or censoring an individuals' posts when negative, uncomfortable, or counter to their own values.

On Facebook I have friends that are extremely radical or should I say radical in my opinion. If I feel overrun by their rants or messages then I will stop following them for a short period of time. I still want to see pictures of their grandchildren, etc. So I follow them again when I can deal with their politics (Love My Life, wk 2, question 8).

I have disengaged from the discussions. I have "snoozed" or "unfriended" some people whose postings I did not like (2MangFloral5\*7).

While research on older adults has previously found that being married can serve to bolster well-being and to protect against loneliness and social isolation, respondents from our survey reported that the impact of having a co-resident spouse or partner was less straightforward. For some respondents, a co-resident spouse was a significant source of companionship. Notably individuals in partnerships reported engaging in physical activity with spouses, taking on household projects together, and delegating responsibilities. By the same token, some respondents with spouses who had died prior to social distancing restrictions reported feeling lonely or anxious. Yet when spouses struggled emotionally with COVID, exhibited anger or frustration, or when there was conflict in a partnership, CMC negatively impacted well-being.

[My husband] is watching too much news and it angers and depresses him. I am quite worried about him. Now he thinks we have marital problems because i will not "enable" his ranting all day (Grace2020#, wk 4, question 6).

Partners could also be disengaged and exclusive. Over the 6-week observation period one respondent frequently reported feeling as though she was being shut out or ignored by her disengaged partner, and about the impact of this disengagement on her mental health and her ability to weather the isolation associated with social distancing.

[Before COVID] I was mostly alone much of the time, but around others doing their thing. Now, I am alone most of the time, and even when my husband is home, he is not a companion. His head is elsewhere; he's reading the news or writing or looking up something on his computer or sending/receiving messages on his phone with all the people he keeps in touch with via these "personal and private" communiques. To me, his constant electronic communication with his friends, dependents, and adult kids feels like notes passing around in school, that deliberately leave me out. When we watch a movie together, the pings of the messages of his pickleball buddies go non stop, trying to pick the place and time where they can get a "foursome" together, and — though I also like to play— I am not included except as an afterthought condescension, because I am not tournament level, even if the spot discussed is my own court at my own house (2MangFloral5\*7, wk 2, question 2)

Others noted this difficulty logging off to engage in person with their partner, “*My use was already high. My wife is using it much more. Each of us has difficulty disengaging when the other wishes to talk in person in real time (tenorguy, wk 6, question 9).*” Another participant reported feeling as though social media and CMC enabled her partner to be physically close but mentally distant.

### *Longitudinal changes to social engagement*

Longitudinal evidence suggests that respondents’ moods shifted over time and that the burden of social isolation fluctuated from week to week, characterized by increasing pandemic fatigue and exhausted coping resources. While respondents’ moods shifted positively or negatively based on the weather and other life events, by week 5 many respondents reported feeling “teary”, “crabby” and depressed. One respondent reported a constant sense of worry as the reality of the pandemic set in, Worried about a son who is stuck in NYC and who in turn feels stuck there, and is depressed. Worried about friends in the business community whose small businesses seem to be inalterably damaged.

Worried about all the younger people laid off. And now it seems like this is going to be a longterm thing, many months, even a couple of years, and with permanent changes. (ScoWo, wk 4, question 2)

While models of technology acceptance suggest that changing social support needs may prompt an increase in technology adoption, we saw no evidence that decreases in mood were associated with increased CMC engagement or increased integration into online social networks. Conversely, our findings suggest that as time wore on and reports of depression or worry among participants began to increase, many older adults reported stepping back from online news and other social media engagement. According to participants,

I have gotten off social media more and more and am spending more time cleaning and reading. I’m really tired of the “blame game” and the convoluted stories in the news. I am doing writing and proofreading for the museum, which means that I am on the computer about the same amount of time, but not on social media. (Marietta, wk 4, question 3)

I have not listened to the national news in over 2 weeks. I have little new information about what is happening. The Facebook time is not as great as before. I am tired of the doom and gloom. (Hammocks, wk 4, question 3)

Not following the news or press briefings just receive one or two tweets a day. Not following as closely as before. It seems like there is nothing to be gained by spending my time listening to the news. (Mountain momma, wk 5, question 6)

Following this withdrawal from online social or informational engagement, many respondents reported increased engagement in hobbies or small group or one-on-one activities facilitated by CMC. However, it was also followed by a progressive easing of the social distancing protocols still in place in most states. By week six, 16 of 22 respondents reported having eased social distancing practices and openly expanding in-person engagement to include family and friends outside of their households. Easing social distancing was often to see extended family and grandchildren. According to participants, My son, daughter in law and 2 beautiful grandchildren came yesterday for a “distance” visit! We sat on patio and the kids enjoyed their favorite, my homemade scones! A little brunch on a beautiful morning. 2nd visit in 7 weeks and I dare say the distance may have been a bit less than 6 feet at times (watercolor week 6, question 1)

I visited with my daughter and her family in my back garden while wearing a face mask. I hadn’t seen them since the SIP order. I even hugged my “babies” (2 and 4) who weren’t wearing masks. They have been strictly abiding by the SIP regulations so I threw caution to the wind. I needed the contact having recently lost my husband. (Mountain Momma, wk 6, question 1)

## **Discussion**

Marked by the unprecedented shuttering of schools, businesses, and spaces for community engagement, the early aftermath of the pandemic saw individuals turning to computer-mediated communication as a make-shift emergency broadcast system (Mikal et al., 2021). Yet the ability to engage in—and to benefit from—such democratized networks of support exchange were predicated on notions of equitable access to both technological hardware and online platforms and communities where support is being exchanged. While research shows important strides in the former (Anderson & Perrin, 2017), the latter remains under-examined both in disaster studies and by social gerontologists despite the important role played by social media following disasters. Our study provides important insights into those patterns of engagement and their impact on user preparedness and safety.

While some research has focused on the communication preferences of older adults in offline environments (Yuan et al., 2016), very little work has looked at communication preferences in virtual communities. Our work echoes previous findings that not only are older adults increasingly engaging via CMC and social networking sites (Anderson & Perrin, 2017), but that they are also leveraging CMC to access social support networks and resources that play a key role in stress reduction and social connection following important life transitions (Gatto & Tak, 2008; Quan-Haase et al., 2017; Wright, 2000). Our results also provide compelling evidence that engagement was characterized by creative exploration of new environments and resources for social engagement and



entertainment seeking, that served as a springboard into offline activities to promote cognitive engagement and physical activities ranging from learning new languages to gardening and other home improvement projects. These findings may reaffirm theories that new demands and motivations for tech engagement may prompt older adults to seek out new settings through which to engage online (Berkowsky et al., 2018; Wang et al., 2017).

Nevertheless, the activities most frequently reported by older adult respondents in our study relied on one-to-one communication and virtual meet-ups with established friends and acquaintances. Respondents were reluctant to engage in broadcasting and were significantly less integrated into larger social media platforms, often citing concerns surrounding privacy and data mining (Quan-Haase and Elueze 2018; Xie et al., 2012). While limiting engagement in larger social media platforms may have helped to buffer respondents against the more passive consumption and mindless scrolling that characterized use among other groups (Mikal et al., 2021), this limited integration may have also restricted access to the exchange of support and resources that characterized use of those platforms very early in the pandemic, as social media emerged as an informal “emergency response system.”

Alongside exclusion from early exchanges of information, resources and support following the pandemic outbreak, respondents were also less likely to leverage Internet technology to stay apprised of changing mitigation strategies, health recommendations, and other breaking news. They were less likely to look to businesses’ social media pages to track open hours or to use ordering services to purchase the supplies they needed without leaving home. This meant that not only did older adults have to leave their houses more often, but there were reports of older adults leaving their houses only to find that businesses had been closed, had reduced operating hours or were only accepting remote orders. Missing this critical and timely information did not prompt older adults to increase their engagement in CMC, however. Results revealed that over time older adults *disengaged* from both informational and social engagement online. Rather, over time, respondents reported a progressive easing of social distancing practices.

Our results also revealed numerous “red flags” in older adults’ more limited engagement in social media and in computer-mediated communication, more generally. For example, social media allowed respondents to learn uncomfortable or annoying things about acquaintances they may not otherwise have known - thereby undermining personal relationships, to “gawk” at others’ misfortunes, or to “show off” their own accomplishments. For some, social media engagement allowed them to turn out—or to be tuned out—by members of their own, in-person networks of support, potentially representing another barrier to real life support exchange.

## Limitations

While the study is designed to generate hypotheses regarding older adults’ use of Internet and CMC in response to the pandemic outbreak, we note that our study sample was both small and non-representative with respect to race, sex, and gender. In addition, our sample skews slightly younger, and so may not have captured the unique experiences of older-old adults or those who have not engaged at all with social media or computer-mediated communication. That said, trends, characteristics, and challenges found in this adult population are likely to be even more pronounced as we begin to look at older-old adults among whom Internet and social media penetration rates are lower.

## Conclusions and Future Directions

Future research may consider assessing the generalizability of findings from our study to the larger population of older adults, especially in regards to use preferences and characteristics. Notably, despite demonstrating creative uses of CMC and social media technologies for engagement, entertainment, and education, our evidence shows more limited integration in larger social media communities that may restrict access to up-to-the-minute health and policy information, less comfort accessing resources online, a preference for one-to-one communication, and a more limited engagement with businesses’ social media pages for logistical operating information. Researchers may also consider assessing how the Internet and CMC engagement patterns of younger-older adults compare to those of older-old adults, who may be at a higher risk of both the negative impacts of infectious disease and mitigation strategies. As the younger-older continue to age into older adulthood, it is likely that we will see an older adult population characterized by increased but incomplete engagement in online social media, which may suggest important modes of communicating vital public health information to this cohort. Understanding those adults’ unique patterns of engagement can help to guide policies to keep those adults socially engaged and informed.

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## Informed consent

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## Supplemental Material

Supplemental material for this article is available online.

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