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# Women's longitudinal social media behaviors and experiences during a global pandemic

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## ABSTRACT

This longitudinal mixed-methods study explored women's ( $n = 124$ ) lived experiences with social media in the United States during the COVID-19 pandemic. Women completed surveys at two points in time (March 2020 and April 2021). Follow-up interviews were also conducted with 33 women in April 2021. A longitudinal qualitative approach was used to identify three themes: (a) social media "works as an echo chamber," (b) connection and community, and (c) information and misinformation overload. Women significantly decreased their social media behaviors focused on connecting with others, active engagement with COVID-19 content (e.g., creating a personal post, liking a post), and passive engagement with COVID-19 content (e.g., reading a post) between March 2020 and April 2021.

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## 1. Introduction

COVID-19 was declared a national health emergency in March of 2020 (The White House, 2020). By the end of March 2020, most states (84%) had state-wide stay-at-home orders (Mervosh et al., 2020) and the lifting of these orders varied by state (Staddart et al., 2020). The pandemic resulted in many adults being unable to work (i.e., employer closed, employer lost business) and this decreased over time (e.g., 49.9 million in May 2020, 40.4 million in June 2020, and 31.3 million July 2020) (Bureau of Labor Statistics, 2022). Over the first year of the pandemic in the U.S., COVID-19 infection rates regionally changed (Ramos & Chiwaya, 2020), states took different approaches to reopening schools (Education Week, 2021), and vaccines became available (57% of adults vaccinated by May 2021; Diesel et al., 2021). By 2022, over a million people had died of COVID-19 in the United States (Donovan, 2022).

Due to embedded structural gender inequalities, women are disproportionately influenced by global crises (Kushi & McManus, 2018). During the COVID-19 pandemic, women experienced more job loss, work disruptions, virus exposure, psychological stress, and increased caregiving responsibilities than men (Carli, 2020). Further, "... with the gradual re-opening of the economy, women lag behind men in the recovery of jobs. Also, telecommuting has posed gender-related work and productivity challenges, particularly for mothers, in the absence of institutional childcare support" (Yavorsky et al., 2021, p. 8). Specifically representing women's voices and perspectives through research during the COVID-19 pandemic is important to make equitable and effective decisions for current and future global health crisis planning (Simba & Ngcobo, 2020).

Adults (90%) in the United States reported that the internet was essential or personally important to them during the pandemic (McClain et al., 2021), and social media became a key source for

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connection and information (Mikal et al., 2021). While most adults in the U.S. use at least one social media site (72%), more women (78%) are users than men (66%) (Pew Research Center, 2021). Different than men, “women are motivated to stay on SNSs [social networking sites] because they can maintain ties with close friends and gain social information on these close connections” (Krasnova et al., 2017, p. 273). Among adult users, “. . . women emphasize social ties and commitment more than men on SNSs” (Lin & Wang, 2020, p. 52). Women are also more likely to engage with news on social media than men (Pollard & Kavanagh, 2019). Most of the research on social media use during the pandemic has been cross-sectional and centered on the early weeks and months (see Tsao et al., 2021).

The current exploratory study aimed to understand women’s experiences with social media over the first year of the pandemic (March 2020 and April 2021). The study rests on the following assumptions: (1) women were disproportionately impacted by the COVID-19 pandemic; (2) women tend to use social media to a greater extent for connection and social information; and (3) Uses and Gratifications theory may be a helpful framework to unpack women’s social media choices during the pandemic.

## 2. COVID-19 pandemic and social media

Systematic reviews related to social media and the COVID-19 pandemic are emerging (Gabarron et al., 2021; Gunasekeran et al., 2022; Pian et al., 2021; Rocha et al., 2021; Tsao et al., 2021). In their review of 81 articles (published between November 2019 and 2020), Tsao et al. (2021) concluded that social media has been used as a surveillance tool during the pandemic (i.e., public attitudes, mental health, detection and prediction), as a contagion and vector (e.g., too much information and misinformation), and as a method of providing education to promote disease control (i.e., providing quality information, government communication). Fake news, misinformation, and infodemics (i.e., “too much information including false or misleading information in digital and physical environments during a disease outbreak” (World Health Organization [WHO], 2022, para. 1) on social media have been of empirical focus during the pandemic (Gabarron et al., 2021; Kim et al., 2021; Pian et al., 2021; Rocha et al., 2021; Su, 2021). Researchers have concluded that social media usage can increase exposure to misinformation which is possibly related to higher psychological distress (e.g., anxiety) (Rocha et al., 2021; Xiong et al., 2020).

The COVID-19 infodemic has also been related to decreased public trust, use of inappropriate protective measures, panic purchasing, and social problems (e.g., xenophobia, racism) (Pian et al., 2021). One qualitative longitudinal study collected open-ended feedback from adults ( $n = 32$ ) once a week for eight weeks beginning March 23, 2020 (Mikal et al., 2021). They found that in the early weeks of the pandemic participants used social media for connection, community building, and social support, but in the later weeks (4–7) participants began to lose interest and became frustrated with social media.

Some women (25%) in the United States reported that social media kept them connected with family and friends during the pandemic (McClain et al., 2021), but most research on social media use during the pandemic in the United States has not focused on women or potential gender differences. International cross-sectional research has highlighted that women spent more time on social media (Alshare et al., 2023) and used social media more to cope (Prowse et al., 2021) during the pandemic than men. Women were also more likely to follow health news on social media (Lelisho et al., 2022) during the pandemic when compared to men, but less likely than men to share COVID-19 information on social media that they had not verified (Alshare et al., 2023). It appears that women may be choosing social media to build community, get information, and for coping during the pandemic. It is unclear if these needs were present or met at different points of the pandemic because, to date, no longitudinal studies on women’s social media experiences during the pandemic have been published.

### 3. Uses and gratifications

Uses and Gratifications theory (U&G) seeks to explain why active, purposive, and goal directed media users are motivated to choose specific media and what needs media gratifies (Sundar & Limperos, 2013). Wang et al. (2012) explain that the distinguishment between gratifications sought by media and gratifications received by media is important to understand changes in media behavior. A user selects a media source to meet specific gratifications, and the media source may meet all, some, or none of the desired gratifications, which could determine continued, altered, or discontinued use of a medium. Sundar and Limperos (2013) theorized that with the emergence of media with new affordances (e.g., social media allowing content creation and communication) there will also likely be new gratifications that emerge. The MAIN (i.e., *modality*: varied methods of presentation of media content that appeal to human perceptual system, *agency*: ability to be a source or agent of information on media, *interactivity*: users ability to “interact with and through the medium” [p. 515], and *navigability*: ability to browse, scaffolding aids provided, and potential for play/fun) model was proposed to account for these newer gratifications under four main technology affordances. A U&G perspective was selected for this study to identify the women’s potential gratifications sought by social media during the pandemic and how use over the first year of the pandemic may have influenced their self-reported social media behaviors and experiences.

### 4. Purpose of the current study

At present, most published studies on social media and the COVID-19 pandemic have focused on analyzing existing social media posts or profiles, relied exclusively on quantitative approaches, have been cross-sectional, and have not focused on gender. This limits the understanding of the lived experience with social media use during the pandemic over time. Women have been disproportionately impacted by the COVID-19 pandemic (Carli, 2020), and research during the pandemic should center on understanding their experiences and needs. The current exploratory, longitudinal, and mixed-methods study was designed to understand women’s specific social media behaviors and lived experiences from March 2020 to April 2021 of the COVID-19 pandemic in the United States.

This mixed-methods research was guided by one quantitative and one qualitative research question. The quantitative research question is:

**RQ1:** Did women’s COVID-19 specific social media experiences and behaviors (i.e., emotional and personal experiences, active content engagement, or passive content engagement) change between March 2020 and April 2021?

There were a number of changes over the course of the first year of the pandemic (e.g., from mass stay-at-home orders in March 2020, to over half of adults being vaccinated in May 2021) and documented dissatisfaction with social media experienced in a matter of weeks during the early pandemic (Mikal et al., 2021). The following hypothesis was based on these changes:

**H1:** Women’s COVID-19 specific social media experiences and behaviors will have decreased between March 2020 and April 2021.

To focus on the lived experiences with women and social media, the qualitative research question is:

**RQ2:** What were women’s lived experiences with social media between March 2020 and April 2021?

Quantitative and inductive qualitative results will be discussed using the U&G MAIN model to understand women's specific gratifications and how these were influenced by the COVID-19 pandemic. Understanding women's experiences with social media over time during a global health crisis may improve the ability to make recommendations to promote women's well-being in future public crises.

## 5. Method

### 5.1. Participants

Women ( $n = 124$ ) between the ages of 18–35 (50.81%), 36–55 (36.29%) and 56+ (12.90) ( $m_{age} = 37.59$ ,  $sd = 12.53$ ) participated in this study. Most of the women identified as White (92.74%), with the remaining identifying as Latina (2.42%), Asian American (2.42%), Black (0.81%), or other (1.62%). Highest education attainment was reported as: 0.81% high school, some college (no degree) (10.48%), and bachelor's degree or higher (88.7%). Most of the participants reported that they were married (78.23%). Participants' political affiliation was as follows: Democrat (27.42%), Republican (26.61%), or other (e.g., independent, unaffiliated) (45.98%). All participants (100%) reported using at least one social media platform. Participants used Facebook (96.77%), YouTube (81.45%), Pinterest (62.90%), Instagram (53.23%), Marco Polo (41.13%), Snapchat (41.13%), Twitter (29.84%), Reddit (16.13%), and TikTok (16.13%).

### 5.2. Procedures

Study procedures were approved by a university Institutional Review Board. Participants in this study are a subsample from a study on well-being during the pandemic and includes secondary analysis of qualitative (see Vaterlaus et al., 2022) and quantitative (see Vaterlaus et al., 2021) data collected in March 2020. Participants were initially recruited through snowball sampling in March 2020 via posts on social media sites and completed online surveys hosted on Qualtrics (see [www.qualtrics.com](http://www.qualtrics.com)). Participants indicated willingness for further participation by providing their email address. In April 2021, 258 emails were sent to invite female participants to complete a follow-up survey also hosted on Qualtrics. In sum, 140 women completed the survey (54.26% response rate) in April 2021, but 16 were removed from the study due to incomplete information. Incentives included a \$3 gift card for survey completion and being entered into a raffle for one of three \$20 gift cards.

Additionally, in April 2021, participants were invited to complete in-depth interviews (30–45 minutes; \$10 gift card incentive) and over half (61.29%) volunteered. Interviews ( $n = 33$ ) occurred/were recorded on Zoom ([www.zoom.us](http://www.zoom.us)) and were conducted until data saturation (Creswell & Plano Clark, 2018) was reached. Interviews were transcribed verbatim. All participants' 2020 and 2021 responses (including interviews) were matched using participant codes.

### 5.3. Measures

Vaterlaus et al. (2021) used 15 items to measure specific social media experiences and behaviors related to the COVID-19 pandemic with a five-point Likert scale (*Never, Almost never, Occasionally, Almost every day, and Every day*). Participants in the current study completed the 15 items in March 2020 and April 2021. Consistent with Vaterlaus et al. (2021), the items in the were organized into three scales ( $\alpha = .79-.83$ ): (a) emotions and personal connections (e.g., using social media to connect, to check on someone, and having emotional reactions), (b) passive engagement with COVID-19 content (e.g., reading posts about COVID-19, but not liking, commenting, or sharing), and (c) active engagement with COVID-19 content (e.g., creating personal posts on COVID-19 or liking/commenting on COVID-19 posts). The current study used these three scales.

Participants responded to open-ended items in the survey. In March 2020, participants were asked four items: (a) *Have you used social media the same or differently during the Coronavirus (COVID-19) Pandemic? Please explain*, (b) *What, if any, have been the benefits of using social media during the Coronavirus (COVID-19) Pandemic? Please explain*, (c) *What, if any, have been the challenges of using social media during the Coronavirus (COVID-19) Pandemic? Please explain*, and (d) *How do you think social media has influenced peoples' experience with the Coronavirus (COVID-19) Pandemic?* In 2020, participants had overlapping (e.g., discussed challenges and successes in one item and then on the next item would write “see previous item”) or redundant responses (e.g., restating what they said in the previous item). The research team reviewed the overlaps and redundancy and determined that reducing the items to two would still provide equivalent open-ended data in 2021. The following two open-ended questions were asked in April 2021: (a) *What, if any, have been the benefits or challenges of using social media during the Coronavirus (COVID-19) Pandemic? Please explain*, and (b) *How do you think social media has influenced peoples' experience with the Coronavirus (COVID-19) Pandemic?* Interview questions aligned with survey questions.

#### 5.4. Data analysis

A longitudinal convergent mixed-methods design (Creswell & Plano Clark, 2018) was selected to examine women's experiences with social media between March 2020 and April 2021 of the COVID-19 pandemic. Paired *t* tests were used to compare women's social media experiences and behaviors between March 2020 and April 2021. A longitudinal trajectory qualitative analysis approach was implemented to identify the experience of the same participants over time (Grossoehme & Lipstein, 2016). Within this analytic approach researchers first use an initial theoretical approach to identify qualitative themes and then determine how time influenced participant experiences within each theme. In line with qualitative longitudinal research, data (open-ended survey responses and interview responses) were time ordered by participant.

A phenomenological qualitative approach (van Manen, 1984) was selected as the initial approach to identify the lived experiences of women related to the phenomenon of using social media during the COVID-19 pandemic in the United States. Consistent with van Manen (1984), two researchers independently immersed themselves in the data—highlighting key words, phrases, and ideas and examining how each sentence related to the lived experience with the phenomenon. Through discussion, researchers identified three themes and a coding scheme was developed.

Matrices are used for coding within longitudinal trajectory analysis (Grossoehme & Lipstein, 2016). To begin, three matrices were created for each theme (i.e., Y-axis included participants, X-axis included two columns—one for March 2020 and one for April 2021) to code participants' contributions to each theme at both time points. To document the trajectory of experience for each participant over time (Grossoehme & Lipstein, 2016), a third column was included in each of the three matrices. For instance, if a participant explained that they used social media to connect with people during social distancing in March 2020, but no longer used it for connection in April 2021, a statement about the change in use for connection was recorded in this added column. Table 1 provides a partial example of a coding matrix. The process of creating the matrices was identical in that two researchers began coding 20 participants together to refine the coding scheme, then divided the remaining participants and coded separately, the researchers checked each other's work, and disagreements were resolved through discussion and consulting the raw data.

To increase the trustworthiness of the data, member checking was employed (Creswell, 2013). Eight volunteering participants were selected at random, sent the full qualitative results via email, and asked to assess the accuracy of results in relation to their own/their peer's experience and if they recommended any changes. Participants replied through email and reported that the results were representative of their experiences.

**Table 1.** Longitudinal trajectory analysis: Example of coding matrix.

Theme: Information and Misinformation Overload			
Participant	Time 1 contributions	Time 2 contributions	Trajectory of Experience Over Time
1	Increased anxiety from viewing social media posts about pandemic.	Expressed that the content on social media about the pandemic increased feelings of anxiety.	Similar experience at both time points (increased anxiety and misinformation concern)
	Too much misinformation on social media.	Was concerned about the amount of misinformation on social media.	
2	Found helpful updates about the pandemic on social media from reputable sources	Social media is problematic because too much misinformation. Difficult to identify what is accurate.	Change in experience from time one to time two: initially social media was helpful (reputable updates) but became problematic (misinformation; difficult to judge accuracy)

This example includes only one theme and two participants. A separate matrix was completed for each theme and all participant responses were coded in each matrix.

## 6. Results

### 6.1. Quantitative results

Participants were asked to report their social media behaviors and experiences specifically related to COVID-19 in March 2020 and April 2021. Participants did report that between March 2020 ( $m = 21.81, sd = 4.47$ ) and April 2021 ( $m = 17.62, sd = 5.83$ ) there was a significant decrease ( $t[123] = 7.55, p < .001, d = 0.678$ ) in engaging in social media behaviors related to emotional and personal connection (e.g., reaching out to someone they were concerned about) among participants. Participants also reported that their specific social media behaviors related to passively engaging with COVID-19 content (e.g., reading someone's post about COVID-19 or a news update about the virus) on social media decreased significantly between March 2020 ( $m = 16.79, sd = 2.79$ ) and April 2021 ( $m = 11.96, sd = 4.34$ ),  $t(123) = 12.40, p < .001, d = 1.110$ . Further, participants' active engagement with COVID-19 content (e.g., making a personal post about the pandemic or liking someone else's post about COVID-19) via social media between March 2020 ( $m = 7.78, sd = 3.01$ ) and April 2021 ( $m = 5.04, sd = 2.61$ ) also significantly declined,  $t(123) = 9.11, p < .001, d = 0.818$ .

### 6.2. Qualitative results

Three themes were identified through qualitative longitudinal analysis: (a) Social media "works as an echo chamber," (b) Connection and community, and (c) Information and misinformation overload. Themes are presented in order of prevalence. Participants' ages are presented parenthetically with direct quotes for context.

#### 6.2.1. Theme 1: Social media "works as an echo chamber"

Participants (87.1%; [90.5% young adults, 86.7% middle-aged adults, and 75.0% older adults]) reported social media use during the pandemic was initially a source for news and stress relief but became a place of polarization and reinforcement of one's own ideas (e.g., "The echo chamber continues to get louder" [39]). In March 2020, women (27.4%) stated that they were spending more time than was typical on social media, but in April 2021 only 8.9% shared this perspective. Reports of using social media as a source of coping (e.g., "stress relief," "comic relief") during the pandemic were also higher in March 2020 (21.8%) and lower in April 2021 (3.2%). A participant (44) shared in March 2020 she was using social media much more than typical during stay-at-home orders and she found it to be a way to stay "connected to the people that I can no longer see often. . . . and to find funny things that help me keep perspective." In April 2021 she stated:

I have witnessed people feeding off each other's negative energy on social media. . . . So much fear and divisiveness. People bullying each other to think like they do. . . . I got sick of it. I have spent VERY little time on social media in the past few months.

Women explained that the “echo chamber” was amplified after March 2020 because there were multiple events on people’s minds—“the country has been very divisive on topics like COVID, [the presidential] election, and social justice issues [i.e., Black Lives Matter protests against police brutality]” (26). Some (10.5%) expressed concerns about political polarization via social media during the early weeks of the pandemic (March 2020), while a year later (April 2021) more (41.9%) explained that this was occurring. The experience of political polarization on social media in April 2021 was shared by participants identifying as other (e.g., independent/unaffiliated) (50.0%), Republican (24.0%), and Democrat (24.0%). Participants explained that public health measures (e.g., “masking,” “vaccinations,” “social distancing”) became politicized and social media created these:

echo chambers . . . tailored to give you the information that aligns with your views . . . contributed a lot to the divisiveness that we have now of mask or no mask or vaccine or no vaccine, racial divisions, or whatever divisions you can think of . . . [social media] helped to exacerbate that. (33)

These divisions have harmed relationships with “family and friends.”

A participant (34) explained that in March 2020 that she saw the value of using social media for “spreading awareness” about COVID-19 and helping people take the pandemic more “seriously.” In April 2021 she shared:

I definitely think that the way the algorithms work, social media feeds you what you want to see. I think it reinforces people’s beliefs or tendencies, like especially within their groups and kind of their common ideas and ideologies. Anyway, so if you know they’re prone to conspiracy theories and things like that, I think [social media] just gives them more of that. That’s how those programs work. . . . The hardest thing is watching the political division between people. It’s also difficult to watch my own friends/family promoting harmful behavior.

To decrease the negativity experienced with the social media echo chamber some participants (20.5%) stated they made efforts to end, restrict, or restructure their social media use. More young adults (12.9%) reported this than middle-aged adults (7.3%) or older adults (0.01%). Most of the efforts to manage social media use occurred during April 2021 (12.1%), while some made efforts in March 2021 (6.5%) or at both time points (1.2%). The efforts specifically involved “blocking” people on their accounts, setting “time limits” on use, removing apps from the phones, taking extended “social media breaks,” or deactivating social media accounts permanently. A participant (31) shared that she used social media more than typical early in the pandemic because she felt “isolated from friends.” As the pandemic progressed, she recognized the politicized content was harming her well-being and in April 2021 she reported that she “had to distance [herself] when it comes to social media” and “I’ve had to make sure I do technology free hours.”

### **6.2.2. Theme 2: Connection and community**

Women (84.7%) explained that throughout the pandemic social media has “brought a sense of community” (24) and “been a good way to stay connected to others” (42). This included connection to “friends and family,” colleagues in the same profession (e.g., “[social media] was good for me to know I wasn’t the only one struggling” [49]), and local and community “resources.” The open-ended responses indicated that nearly half (46.8%) of the participants shared that connection was a key outcome of social media use during the pandemic in both March 2020 and April 2021. This was true for young adults (50.8%), middle-aged adults (42.2%), and older adults (43.8%). A participant (70) explained in March 2020 she was “connecting through social media” and saw it was used to build community as people were “putting calls out for things” people needed. In April 2021, she explained that social media use during the pandemic allowed, “people sharing their day-to-day lives and getting to know others more easily,” that it allowed her to “connect with others in my neighborhood,” and that she “reconnected this year especially, with a lot of people that I didn’t have time to in the past and had



really good intense conversations and just shared things that I probably might not have or taken the time to.”

Those (24.2%) who only reported the benefits of connection and community in March 2020 (and not in April 2021) emphasized that initially social media allowed them to “stay connected . . . even when we can’t be physically together” (25), but upon reflection overtime they saw “there’s a small amount of good that comes from [social media], but I think it is more bad than good” (34). Some (8.9%) of the participants even reported in April 2021 that social media use contributed to more feelings of isolation or disconnection. They explained as some public health restrictions were lifted their friends began documenting social activities on their accounts and they felt left out. Although, this was shared more by young adults ( $n = 9$ ) than middle-aged ( $n = 1$ ) or older ( $n = 1$ ) adults.

### **6.2.3. Theme 3: Information and misinformation overload**

During the COVID-19 pandemic, participants (85.5% [81.0% young adults, 91.1% middle-aged adults, and 87.5% older adults]) reported that social media platforms were ripe with rapidly disseminated information and misinformation. In the open-ended responses and interviews, many (50.4%) of the participants commented on the information and misinformation on social media in March 2020 and April 2021. In March 2020, participants found social media to be a place to find reputable up-to-date information from “the CDC” or “local health department.” Initially, participants indicated this was helpful but explained that it was “overwhelming to consume so much media about a stressful topic” (23). Across both time points participants (49.2%) explained that being flooded with information about COVID-19 on social media increased their feelings of “fear,” “anxiety,” and “depression.” A participant (30) explained in March 2020, “I have been able to get valuable statistical information [about COVID-19 through social media] . . . It’s difficult at times to figure out what is false information,” and in April 2021 she stated, “There has been a flood of information that while it can be helpful, can also be false and overwhelming.”

Participants (63.7%) were specifically concerned about the spread of misinformation on social media. In April 2021, 53.2% reported that social media use had become more negative than in March 2020 because of misinformation. Participants were concerned that social media users lacked the digital literacy to critically evaluate the truthfulness of content. In March 2020 a participant (62) explained she had several positive experiences getting information from the “local county health department” and saw “very few challenges” related to social media use during the pandemic. In April 2021 she shared:

I think too often we listen to stuff that comes across Twitter, Facebook, TikTok, YouTube, any of the things that people listen to, and it’s not always accurate, but people look at it and they believe it because it’s there it must be fact. Not always, and not everyone does, but I think that some of that is very dangerous . . . I don’t think we have done a good job of teaching our students to be critical thinkers, and to think for themselves, and to listen to something and say, “This doesn’t sound quite right, hmm. How can I find out whether it’s true or not?” and then they don’t go exploring any further. “So and so said this, so it must be true.” And there’s many adults that do too. . . . I guess [social media use during the pandemic] has revealed to me which of my friends and family are easily led by falsehoods and dangerous rhetoric. Social media could be such a positive tool, but in many ways, it has been misused and abused for the purposes of spreading misinformation and fear to those who are not critical thinkers.

The general sentiment among participants was, while social media was initially viewed as a place to “stay connected with updates or announcements happening in my local community” (38) related to the COVID-19 pandemic, overtime social media ultimately “heightened people’s fear and [has] taken away people’s abilities to think for themselves” (37).

## 7. Discussion

Much of the social media related COVID-19 studies have relied on cross-sectional, quantitative methods, and did not consider gender (Gabarron et al., 2021; Gunasekeran et al., 2022; Pian et al., 2021; Rocha et al., 2021; Tsao et al., 2021). The current mixed-methods longitudinal study highlights women's social media behaviors and experiences at two time points (March 2020 and April 2021) during the pandemic. The hypothesis for the quantitative research question was supported, with women reporting a significant decrease in their COVID-19 specific social media experiences and behaviors from March 2020 to April 2021. Within the qualitative results women explained that social media was a tool for information, news, and stress relief at the beginning of the pandemic, but by 2021 had become a place of negativity and echo chambers. Nearly half of the participants felt social media facilitated connection at both time points. Although nearly a quarter felt connected through social media in March 2020, but then felt disconnected in April 2021 or even isolated because of it. Many of the women shared that it was difficult to sift through amount of information and misinformation on social media over the course of the first year of the pandemic.

From a U&G perspective, active media users are motivated to select media to gratify their needs (Sundar & Limperos, 2013), and a media source can meet some, all, or none of the user's needs (Wang et al., 2012). By applying results from this study to a U&G framework, it is possible to understand what gratifications were/were not met in the context of the first year of a global pandemic. Using the U&G MAIN model perspective (Sundar & Limperos, 2013), the results focused on gratifications made possible by the affordances of *Navigability* (i.e., play/fun) and *Agency* (i.e., community building, agency-enhancement, and filtering/tailoring)—the results of this study are discussed in the context of these gratifications below.

### 7.1. Navigability

Under the affordance of navigability, play/fun is a gratification that represents users' ability to explore, play, and escape through media (Sundar & Limperos, 2013). Women described using media for a sense of escape through comic relief or funny content, highlighting that the play/fun gratification was met. This use for play/fun sharply decreased in April 2021, which was related to another gratification not being met—filtering/tailoring.

### 7.2. Agency

#### 7.2.1. Filtering-tailoring

Filtering/Tailoring allows users to set their own preferences, avoid content they do not want to see, and sort through and share information (Sundar & Limperos, 2013). Participants in this study described how this need was not met as they described how social media algorithms amplified, repeated, and reinforced ideas (i.e., echo chamber). The concept of echo chambers on social media is not new and a clear definition has not emerged. The term usually represents "people's exposure to pro-attitudinal communication" (Boulianne et al., 2020, p. 686) and has been studied in relation to phenomena such as populism and racism (Criss et al., 2021). Women in this study conceptualized echo chambers as social media algorithms that reinforce existing views that then results in divisions (e.g., political, racial, healthcare decisions).

From a U&G perspective, after a person selects a media source to meet a specific gratification, the media may meet all, some, or none of the desired gratification, which can alter the person's future use of the media (Wang et al., 2012). Studying social media experiences over time highlighted that some women were frustrated that the filtering/tailoring gratification was not met and decided to take breaks, block users, or permanently delete the app. Women are uniquely positioned to be gatekeepers of social media as they take on more caregiving roles and represent most professionals in primary/secondary education (Guggisberg & Dobozy, 2020). Social media companies should consider ways to challenge echo chambers in order to build confidence among gatekeepers who may determine youth's future access and use of social media.

### 7.2.2. *Community building*

Community Building can include the formation of social connections, interacting with others, and being a part of a community (Sundar & Limperos, 2013). Prior to the pandemic, social connection and relationships were key reasons women used social media (Krasnova et al., 2017; Lin & Wang, 2020). Mikal et al. (2021) reported social connection was also a key reason for use in the early weeks of the pandemic, but eight weeks later social connection waned on social media. The present study highlighted that women used social media significantly more for connection in March 2020 than April 2021.

Women have traditionally taken the role of family kinkeepers in the physical world and online (Abel et al., 2021; Braithwaite et al., 2017; Randall et al., 2015). In this role, they often engage in family caregiving, initiating contact, and facilitating family rituals. Many use social media to facilitate connection with family members (Braithwaite et al., 2017). In the open-ended responses, participants did report that they used social media to connect with family at both time points. Further, women specifically described the development of a “sense of community” via social media through deeper conversations with friends and neighbors and seeing people use social media to gather donations.

Some participants did not mention community building as a need that was met or only mentioned it in March 2020. McCubbin and Patterson (1983) theorized that individuals and families typically experience more than one stressor at a time, and women indicated that advocacy against police brutality, coping with a global pandemic (including navigating public health measures, vaccination decisions), and experiencing a contentious presidential election contributed to increased negativity on social media. These women highlighted that the political divisiveness prevented their community building need from being met. Bode (2017) indicated that women typically have less political interest, knowledge, and engagement when compared to men. This makes women likely to engage “... in less visible political behaviors on social media. Rather than posting themselves about politics, they are more likely to comment or like others’ political postings” (Bode, 2017, p. 598). Typically, women can move beyond political discourse on social media because of their preeminent need for social connection met by the media. However, for some, it appears that in April 2021 less social connection was felt via social media.

### 7.2.3. *Agency-enhancement*

Agency-enhancement focuses on the ability of people and groups to be sources of content (Sundar & Limperos, 2013). “While the role of gatekeeping has historically been the domain of a privileged few, now anybody can serve as a gatekeeper of content on the Internet” (Sundar & Limperos, 2013, p. 515). Tsao et al. (2021) concluded that social media was used as an informational and educational tool during the COVID-19 pandemic. Women in the current study reported that they did use social media to passively view or actively create, share, and interact with COVID-19-related content during the pandemic, but their active and passive interactions with COVID-19 content significantly declined over the first year of the pandemic.

Describing their experience with an infodemic (WHO, 2022), women in this study were concerned about the prevalence of misinformation on social media, perceived social media had become more negative over the course of a year, and believed people lacked digital literacy skills. This could mean that their need for agency-enhancement was not met because there was too much agency for social media users, generally. Alternatively, it may mean a new gratification has emerged; agency-accountability—the need for digital literacy education and regulation/consequences of misuse of agency in content creation/sharing via media.

## 8. Limitations

This study did have limitations. The quantitative measure was self-report versus an objective measure of social media behaviors. The snowball sampling procedure resulted in low educational and racial diversity. Increased racism spread all over the world in tandem with the coronavirus pandemic (Pleyers, 2020). The majority White sample did acknowledge that there was racism prevalent on social media. White women's exposure to sexism and racism online has been predictive of activism on social media (e.g., sharing a post), but not in-person activism (e.g., attending a protest) (Hynes et al., 2022). Racism and xenophobia on social media (in addition to physical spaces) would likely have direct deleterious impacts on women of color's safety, overall well-being, and social media behaviors. Research specific to women of color's experience with social media during the COVID-19 pandemic is needed.

## 9. Conclusions

Despite the limitations, the longitudinal, mixed methods, and U&G framework elements of this study were strengths. The present study highlights that these women used and experienced social media differently from the beginning of the pandemic (March 2020) to one year later (April 2021). From a U&G perspective, results indicated that navigability and agency were affordances of social media for women to a point. Over the course of a year of the pandemic these affordances soured for most women in the study. More women started to restrict their social media use in April 2021 due to the challenges they experienced on the platforms. Social media breaks have been positively associated with increases in meaningful interactions within close relationships, but some have felt out of the loop regarding viral internet content (Pennington, 2021). To promote women's well-being in future global crises, it may be prudent to recommend limiting social media time early in the crisis and then share potential benefits of social media breaks as the crisis continues. However, women experienced increases in caregiving responsibilities, work disruptions, and psychological stress during the COVID-19 pandemic (Carli, 2020) and social media potentially could have been a more hospitable place for stress relief and social support throughout the pandemic. The onus may be better placed on social media companies to better manage misinformation, echo chambers, and negativity within their applications during global crises.

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