Women-Focused Nonprofit Organizations and Their Use of Twitter During the COVID-19 Pandemic: Characterizing a Gendered Pandemic Through Information, Community, and Action

Charlotte Nau, Anabel Quan-Haase (ID),
and Riley McLaughlin

Abstract

This study investigates how gender-focused nonprofit organizations used Twitter to advocate on behalf of women and girls during the initial stage of the COVID-19 pandemic. We collected tweets from five nonprofits including Canadian Women's Foundation, Anova, UN Women, National Organization for Women, and Planned Parenthood. Through thematic analysis, we identified nine gender-related themes: safety, physical health, mental health, labor, economic situation, intersectional concerns, leadership, the role of gender in pandemic response and recovery plans, and supporting women's organizations. A subsequent content analysis revealed that women's safety, labor, and economic situation were the most prominent themes. It was also revealed that safety and intersectional concerns were raised by all organizations. We applied the theoretical framework of microblogging functions which distinguishes between information-, community-, and action-oriented tweets. Most of the tweets in our study were informational, much fewer were associated with calls to action and community engagement. Our analysis also revealed relationships between the microblogging functions and the tweets' content themes. We found that informational tweets addressed women's safety, physical health, economic situation, and the role of gender in pandemic response and recovery plans, while community-oriented tweets addressed women's labor, leadership, and supporting women's organizations. Finally, each microblogging function elicited different levels of user engagement on Twitter, with the community-oriented function receiving the largest number of "likes" compared with the information- and action-oriented functions. Our study adds to the growing body of research on social media use by feminist groups and provides novel theoretical insights by expanding the microblogging framework.

Keywords

Twitter, gender inequality, COVID-19 pandemic, public outreach

Introduction

The COVID-19 pandemic has impacted many domains of everyday life, yet the impacts are unequally distributed (Robinson et al., 2020). Across the world, one social group that has been disproportionately affected is women, with the pandemic exposing and exacerbating existing gender inequalities across countries (Lewis, 2020). For example, work inequalities were exposed globally, showing that women were more likely than men to become unemployed due to COVID-19 related job cuts (Madgavkar et al., 2020). Across nations, those women who maintained their employment had a higher infection risk because they comprised

about 70% of health care and social service workers (World Economic Forum, 2020). Work inequalities during the pandemic were also present in invisible labor globally: many women experienced an increase of unpaid care work because schools and care facilities across the globe were closed (Lewis, 2020). Globally, women reported an increase

Western University, Canada

Corresponding Author:
Anabel Quan-Haase, Western University, 1151 Richmond Street, London, Ontario N6A 3K7, Canada.
Email: aquan@uwo.ca
Twitter: @anabelquanhaase

in domestic violence (Piquero et al., 2021), with public health measures limiting their ability to get social support. Women's health was also impacted across the world, as many lost access to critical health services and mental health support (Henriques, 2020). Despite these numerous and unprecedented gender-based challenges, policymakers initially neglected to consider gender and associated inequalities when designing pandemic relief measures internationally (World Economic Forum, 2020).

Considering the many hardships faced by women during the COVID-19 pandemic, nonprofit organizations can play a significant role. While all nonprofits can make a difference, of particular relevance are those whose mandate consists of supporting women and girls and driving gender equality. We refer to them as women-focused nonprofit organizations because of their focus on gender equality, and women's and gender-diverse individuals' rights and concerns. We argue that these types of organizations are uniquely positioned to expand their role during a time of crisis like the COVID-19 pandemic because they have already established social ties with women, have developed trust through their long-term relationships, and have the necessary expertise to address social problems that concern women (Edwards et al., 2020). Previous work suggests that women-focused nonprofit organizations can advocate on women's behalf and foster a supportive community (Fotopoulou, 2017). Most importantly, these organizations could provide emotional support to women as well as provide resources related to the COVID-19 pandemic that are targeted to the specific social problems that women face. Another important role of these organizations could be to raise public awareness of what challenges women face and stress the need for policy that takes gender inequality into consideration.

Because of the difficult circumstances surrounding the COVID-19 pandemic—from closures to social distancing measures—unique challenges emerged for nonprofit organizations to fulfill their mandate. Under these circumstances, social media can function as an effective tool due to its speed, reach, and low cost (Malik et al., 2021; Pinar Özdemir, 2012). As many nonprofit organizations already have social media accounts set up and a substantial number of followers and connections to other key organizations, they could repurpose these accounts for messaging directly linked to the pandemic. While studies have demonstrated the usefulness of social media for public outreach during the COVID-19 pandemic (Malik et al., 2021), no study has examined yet how nonprofit organizations have utilized this tool for communicating about gender-related themes.

The purpose of this research is to fill this gap by investigating how four women-focused nonprofit organizations used Twitter during the early stage of the COVID-19 pandemic. While different approaches exist for delimiting the initial stage, we followed the framework outlined by the Centers for Disease Control and Prevention (CDC; Veil et al., 2008) and collected data from January 1 to September 30, 2020. Thereby we include the time period before the

World Health Organization (WHO) officially announced the pandemic on March 11, 2020 as well as the early restrictions in many parts of the world. Studying the pre-crisis, initial event, and maintenance phases is important because these were characterized by a lack of understanding of the COVID-19 virus and its transmissibility, uncertainty about how the pandemic would unfold, and early public health measures that were unexpected and restricted people's movement. We selected five organizations—Canadian Women's Foundation, Anova, UN Women, National Organization for Women, and Planned Parenthood—for our study based on their diverse advocacy focus (e.g., economic equality, reproductive health, and political lobbying), Twitter presence, and level of operation (local, national, and global). To learn more about the function of the Twitter activity during the initial stage of the pandemic, we draw on Lovejoy and Saxton's (2012) theoretical framework of microblogging functions. While the framework was not developed specifically for feminist research, it allows us to examine microblogging functions at the organizational level. Our research fills a gap in the existing crisis literature by addressing the use of Twitter by women-focused nonprofit organizations. We also fill a gap by showing what functions tweets can fill during a global crisis such as the COVID-19 pandemic. The findings can provide a roadmap for developing data-driven, gender-based communication strategies during times of crisis.

Literature Review

Social Media and Public Outreach During a Crisis

Social media has been described as a Swiss-army-knife because of its versatility in functions ranging from contact with friends, access to news, and e-commerce (Nau, Quan-Haase, & McCay-Peet, 2022). It is this versatility that has led to unprecedented growth in users globally (Statista Research Department, 2022). This growth opens novel opportunities for organizations to engage in public outreach during times of crisis such as natural disasters, financial crisis, or health crisis. A crisis is described as an event that can dramatically change a social system (Stoddart et al., 2021). As Stoddart et al. (2021) stress, the changes are not limited to one sphere of life, but rather have multiple repercussions including political, economic, and social. Because of the upheaval and rapid change associated with a crisis, there is a heightened level of uncertainty that results in increased public concern. This creates a need for the wide and rapid dissemination of accurate and relevant information. Because of its features, social media can function as an important communication tool in combination with other media during a crisis and help nonprofit organizations reach a significant proportion of the population in real-time (Gruzd & Mai, 2020; Malik et al., 2021).

Social media has been used as a tool in a wide range of crisis events for public outreach, with varying degrees of success, with barriers existing especially for vulnerable populations (Eckert, 2018; Fu & Zhang, 2019). Nonprofit

organizations are often involved in public outreach during a crisis because their work typically revolves around representing the public's interest and advocating for public support of various causes and for marginalized groups (Eslen-Ziya, 2013; Pinar Özdemir, 2012). Topics that are raised are often associated with creating awareness of the crisis, informing the public on what they should do, and providing recognition or empathy to individuals (Malik et al., 2021). For example, nonprofit organizations used social media during the HIV/AIDS crisis to promote education, raise policy awareness, and provide support for those affected (Fu & Zhang, 2019). These organizations were able to engage the public in discussions about the HIV/AIDS crisis as well as advocate for and protect the rights of those affected by the disease who were experiencing stigmatization due to their sexual orientation and other misconceptions surrounding the disease (Fu & Zhang, 2019). Mainstream media sources often exclude the perspective of those who have been marginalized, this makes social media an important component for their inclusion in conversations (Eslen-Ziya, 2013).

The COVID-19 pandemic has been defined by a high degree of uncertainty, concern, and urgency. Nonprofit organizations have had the unique opportunity to address some of this uncertainty and concern by using social media. Malik et al.'s (2021) work found that Instagram was used by health organizations to share information with the public about government and public health protocols, to inform about how to protect against the virus, and to acknowledge the efforts of specific groups such as frontline workers. Research has also found that there was a significant opportunity for organizations to do more to combat disinformation by, for example, clarifying misconceptions (Malik et al., 2021).

In sum, there is a growing body of literature examining the role of social media in public outreach during a crisis, but less is known about its role during the COVID-19 pandemic. Examining the COVID-19 pandemic is relevant because of its global impact, its extended duration, and the uncertainty around prevention measures, vaccination, and treatment. In addition, nonprofit organizations globally faced significant challenges during the COVID-19 pandemic that impacted their engagement in public outreach such as staffing, work from home, and the ability to transfer complex and rapidly changing scientific knowledge. This necessitates a better understanding of the role of social media for public outreach during this global crisis.

Social Media as a Tool for Feminist-Based Public Outreach and Community Building

Social media can play an important role in feminist activism and facilitate the organization of feminist campaigns that promote discussions of gender issues and counter misogynistic attitudes and behaviors (Eckert & Steiner, 2016). Much research around social media feminist organizing has examined grassroots activism, like the work by Mendes (2015) on the Slutwalk movement. Studies have also focused on

hashtag campaigns (Jackson et al., 2020) such as #MeToo (Quan-Haase et al., 2021) or #BringBackOurGirls (Rivers, 2017), feminist blogging and content curation (Eckert, 2018; Mendes et al., 2019; Shaw, 2012), and private social media groups (Pruchniewska, 2019). This type of grassroots activism can shape public discourse by raising mainstream awareness of important concerns such as gender-based and sexual violence (Fileborn & Loney-Howes, 2019), helping women and girls build communities and support networks (Rentschler & Thrift, 2015), and creating counterpublics where alternative interpretations of current events circulate (Trott, 2021).

Much fewer studies have investigated how women-focused nonprofit organizations have taken up social media for their advocacy work. Some studies have looked at organizations that work with and promote the rights of sex workers. For example, Sanders et al. (2017) found that all sex worker rights organizations in the United Kingdom were active on social media and used it to engage with their members and allies as well as the public. Similarly, Duke et al. (2018) in their study of Canadian sex work organizations found that they used social media to communicate primarily with those who accessed their services, providing critical information on a range of concerns such as "bad date" reports concerning abusive clients. These studies show how social media can be a key component of providing support for women who may be vulnerable to stigmatization and occupational hazards associated with sex work.

In sum, our review of the literature shows that past research has examined how women-focused nonprofit organizations use social media for public outreach. These studies together show that social media serves many purposes and has an important role to play in political advocacy and building a network of activists, funders, local leaders, and community members who are invested in feminist movements. What is notable about their findings is the diverse array of communicative strategies that organizations employ and how they depend on the types of stakeholders and characteristics of the populations served. However, a comprehensive assessment of their diverse communicative strategies is still lacking. There has also been no systematic study of how nonprofit organizations focused on gender concerns during the COVID-19 pandemic. This research is much needed because of the ongoing impacts of the pandemic on the political, economic, and social landscapes in which women and girls live and experience oppression.

Theoretical Framework: Microblogging Functions

The study purpose necessitates a theoretical framework that examines the functions of tweets at the organizational level while integrating a feminist approach. None of the frameworks we identified in our review of the literature fit our study purpose. The closest we identified was Lovejoy and Saxton's (2012) theoretical framework of microblogging functions. One key strength of the framework is that it is empirically based, as it was developed through a tweet-level

analysis of the 100 largest US nonprofit organizations' engagement on Twitter. The framework proposes that nonprofit organizations' tweets have three main functions: information, community, and action. Central to their framework is how the functions relate to one another as they represent a hierarchy of social media engagement. In this hierarchy, information refers to tweets that allow nonprofit organizations to communicate quickly and effectively. By contrast, the community function is a much deeper form of social media engagement, and aims to promote dialogue, connectivity, and a sense of belonging. Lovejoy and Saxton see the community function of tweets as critical to building strong engagement from followers and integral to fomenting an imagined community. The last function, action, is broader in scope and encompasses marketing, promotion, and collective action. Action can happen online or offline and includes a range of activities such as signing an online petition, donating, or organizing an event. For Lovejoy and Saxton, nonprofit organizations that can move their followers to action are not only fully engaging their followers, but also fulfilling the core mission of nonprofits, namely mobilization.

The framework was developed for studying nonprofit organizations' social media utilization and therefore is directly applicable to our study. While the framework is useful as a guide, it also has limitations. As Lovejoy and Saxton (2012) propose in their discussion, more research is needed to assess how Twitter users respond to tweets and engage in interactive exchanges with the organizations. They also acknowledge that their study only focuses on large US nonprofits and call for future studies to broaden the scope, for example, by investigating smaller samples and mid-sized organizations. The theoretical contribution of our work comes from addressing these gaps with a distinct emphasis on organizations that focus on women and girls. For our study, we selected nonprofits of different sizes, geographical scopes, and different organizational emphases within the realm of gender-focused work. We also investigate likes and retweets as an indicator of tweet engagement. Based on the gaps in the literature and the proposed framework by Lovejoy and Saxton, we propose three guiding research questions:

> *Research Question 1 (RQ1).* What gender-related themes did women-focused nonprofit organizations raise on Twitter during the initial stage of the COVID-19 pandemic?

> *Research Question 2 (RQ2).* What was the prominence of various gender-related themes in tweets posted by women-focused nonprofit organizations during the initial stage of the COVID-19 pandemic?

> *Research Question 3 (RQ3).* What were the microblogging functions of tweets posted by women-focused nonprofit organizations during the initial stage of the COVID-19 pandemic. How did the microblogging functions relate to gender-related themes and engagement in the form of likes and retweets?

Methods

We investigate how nonprofit organizations with a focus on women utilize Twitter. Twitter was selected as the focus of our study for three reasons. First, the original Lovejoy and Saxton (2012) framework of microblogging functions of nonprofits that motivates this study was developed based on Twitter. To keep the data consistent for comparison purposes in terms of the platform affordances, we also collected data from Twitter. Second, past studies have identified the platform as an important communication tool during a crisis—for example, Morstatter, et al. (2013). Finally, data collection from Twitter is facilitated through Twitter's API and Tweepy, an open-source Python package.

Our study focused on five accounts: the Canadian Women's Foundation (@cdnwomenfdn); Anova (@AnovaFuture); UN Women (@UN_Women); the National Organization for Women (@NationalNOW); and Planned Parenthood (@PPFA). Table 1 presents background information on the organizations, their accounts, and their Twitter activity. The organizations were selected to represent a variety of perspectives on public outreach advocating for gender equality. We included organizations that operate on a global level (UN Women), national level (National Organization for Women, Planned Parenthood, Canadian Women's Foundation), and local level (Anova). While all were nonprofit and women-focused, their goals differed, with some stressing the economic disparities and others gender-based violence, reproductive health, and political lobbying. Because local organizations are less visible on social media than national and international organizations, we selected one with which the research team was familiar. We also set out three inclusion criteria: (1) organizations had to have over 2,000 followers to ensure that they were established and had a wide reach; (2) English was their primary language; and (3) organizations had to be registered as nonprofits with the US Internal Revenue Service or the Canada Revenue Agency.

Data Collection

We collected Twitter data for each of the five organizations for the first 9 months of the COVID-19 pandemic from January 1, 2020 to September 30, 2020 to capture the initial stage, and no additional data were collected after the project ended in October of 2020. To capture the communication during the initial stage of the pandemic, we follow the CDC guidelines. For each account, we collected their handle, geolocation, and bio. We also examined their Twitter activity by collecting all tweets including each tweet's date and time of posting. In addition, we also collected audience engagement by recording the number of "likes," and "retweets" that each post received. Data collection took place via Twitter's API using Tweepy, an open source Python package. We used software code that is publicly available on the code sharing

Table 1. Overview of Organizations.

Name of organization	Organizational focus	Level	Main office	Active on Twitter since	Number of followers[a]	Number of tweets[a]	Number of tweets on COVID-19[a]	
						n	*n*	%
Anova	Gender-based and sexual violence, survivor counseling and resources, operates a women's shelter	Local	London, ON, Canada	February 10, 2012	3,736	215	14	6
Canadian Women's Foundation	Gender-based poverty and violence, confidence and leadership building	National	Toronto, ON, Canada	March 19, 2010	23,282	1,464	370	25
National Organization for Women	Reproductive, economic, and racial justice, LGBTQIA+ rights, constitutional gender equality in the United States	National	Washington, DC, USA	December 1, 2008	106,736	883	38	4
Planned Parenthood	Reproductive rights, reproductive justice	National	Washington, DC, USA	November 1, 2011	309,592	853	78	9
UN Women	Leading and coordinating the UN's work on gender equality, supporting member states, and intergovernmental bodies	Global	New York City, NY, USA	November 3, 2008	1,898,685	3,227	1,168	36
Total						6,642	1,668	25

[a]Data were collected September 30, 2020.

website GitHub (Yanowski, 2013). The downloaded data set comprised 6,642 tweets across all five organizations. To identify content related to the COVID-19 pandemic, we performed a keyword search and identified all tweets containing the terms: COVID, COVID-19, corona, pandemic, social distancing, and the hashtags #COVID19, #coronavirus, and #socialdistancing. This search reduced the original data set to 1,952 tweets. Table 1 shows the number of tweets collected for each of the organizations and the number of tweets related to the pandemic. After removing irrelevant and duplicate tweets, our final data set comprised 1,668 tweets.

Data Analysis

To analyze the data, we followed a mixed methods approach combining a thematic analysis (Braun & Clarke, 2006) with a quantitative content analysis (Krippendorff, 2004). Mixed methods research "combines elements of qualitative and quantitative research . . . for the broad purposes of breadth and depth of understanding and corroboration" (Johnson et al., 2007, p. 123). For Twitter-based research, Murthy (2016) has recommended mixed methods approaches because the open coding typical of qualitative research adds nuance and context, leading to a balanced means of analysis. In our study, we applied thematic analysis to explore the data set inductively with no preconceived notion of what content themes we would find. We then performed a content

analysis to quantify the occurrence of different themes, establish connections between them, and test for their relationships with the microblogging functions (Lovejoy & Saxton, 2012).

To address RQ1, we performed a thematic analysis, which identifies, analyzes, and reports themes in data while keeping the data's original richness (Braun & Clarke, 2006). Thematic analysis helped not only in identifying key themes which was an important focus of our study, but also allowed us to flexibly refine and revise themes as additional tweets were analyzed. Following Braun and Clarke's (2006) Step 1, we familiarized ourselves with the entire data set by carefully reading and reviewing tweets. Based on this, we generated a set of initial codes by noting meaningful features related to the study purpose that repeatedly appeared in the tweets (Step 2). As part of Step 3, we then grouped the initial codes into nine central themes. The decision on whether a theme counted as "central" was made based on whether or not it captured an important aspect with regard to RQ1 (Braun & Clarke, 2006). Step 4 consisted of reviewing the identified themes and Step 5 comprised defining and naming them. Two members of the research team undertook the coding and the entire team met frequently to confirm codes and refine themes based on shared understandings and careful attention to the actual data. Step 6, the final step, involved producing the report around the nine most central themes.

To address RQ2 and RQ3, we conducted a quantitative content analysis (Krippendorff, 2004). The nine themes previously identified through the thematic analysis were used as the basis for the content analysis. Each tweet was coded for the nine content themes (multiple themes could be assigned). The content analysis was also used to examine the functions of tweets following Lovejoy and Saxton's (2012) framework. Each tweet was coded as one of the three main microblogging functions: (1) information, (2) community, or (3) action. For each microblogging function, we also coded for subcategories within the major functions. These subcategories were adopted from Lovejoy and Saxton's (2012) original framework. To reflect the unique communication strategies used by women-focused nonprofit organizations during the initial stage of the COVID-19 pandemic, we added five subcategories to the information function: staying healthy during the pandemic, sex education, guide to resources, gender and women during the pandemic, and information about each organization's activities. To assess intercoder reliability for the two coders, we calculated percent agreement, an appropriate measure of reliability for studies with two independent judges (Roaché, 2017). The rate of agreement between the coders was 87%, suggesting that our code frame was reliable.

Results

Tweet Themes: The Gender Dimensions of the COVID-19 Pandemic

Table 1 shows stark differences across the five organizations in the number of tweets with a COVID-19 focus: UN Women had the most tweets by far with 1,168 while Anova had the fewest with only 14. Clearly differences in resources and staffing translate into differences in Twitter activity. Our thematic analysis of the Twitter data revealed nine core themes that pertain to gender and the COVID-19 pandemic. Across all the themes, we found that the organizations tweeted about the many ways in which COVID-19 affected women and girls, characterizing the crisis as a "gendered pandemic." We discuss next each theme in more detail.

Women's Safety. Many tweets highlighted a relationship between the COVID-19 pandemic and surges in gender-based violence including sexual violence and intimate partner violence. Mostly, these tweets pointed out how public health measures such as stay-at-home orders had isolated women from their support networks—friends and family—and "trapped" them at home with their abusers. The tweets also showed concern about how the pandemic had led to many women and girls losing access to critical information, helpful tools, and support services such as community supports, shelters, and safe houses. Some tweets also shared articles and resources that informed about strategies on how to identify and respond to cases of gender-based and sexual violence.

Women's Physical Health. In this theme, tweets primarily focused on sexual and reproductive health. A main concern articulated was that access to prenatal care, menstrual products, birth control, and abortion services had been restricted during the COVID-19 pandemic, leaving many women and girls with unwanted pregnancies and without the support of caregivers. The tweets discussed the need to classify some medical services as "essential" including abortions, care by midwives, and emergency contraception. A second point of concern was the large number of women working in pandemic response jobs. These tweets raised awareness about gender issues such as the concern that nurses had to wear protective gear, such as masks, designed and sized for men's bodies, making them less effective for women health care workers and leaving them disproportionately prone to infection.

Women's Mental Health. Tweets in this theme highlighted how stress and isolation had left many women feeling anxious, depressed, and fatigued. Frequently mentioned was the added burden of child care and homeschooling that mainly fell onto the shoulders of women. The five organizations also provided motivational content, encouraging their followers to take care of their mental health by following self-care practices.

Women's Labor. Tweets in this theme focused on women's roles as essential workers in sectors like health care, peacekeeping, food services, and the care economy. The tweets raised concerns about women being more likely than men to be employed in minimum-wage, low-income jobs. The organizations also tweeted that a large proportion of women were employed in precarious labor, which leaves them vulnerable to the effects of the pandemic. Many tweets emphasized the importance of ensuring there is equal representation of women in the workforce and in a variety of sectors. Hashtags were used to recognize women in various sectors, such as #WomeninPeacekeeping, and to advocate for better job opportunities for women, such as #decentwork. There was also a significant focus on the unpaid, domestic labor that COVID-19 has disproportionately placed on women. Increased child care burden with children remaining home from school has resulted in women taking on the role of educators and caregivers in addition to their regular labor responsibilities.

Women's Economic Situation. Numerous tweets concerned the negative effects of the COVID-19 pandemic on women's economic situation. The tweets informed about how the number of women in poverty increased drastically during the pandemic, although this number had been decreasing previously. A frequent issue raised in tweets was the extent to which women engage in unpaid work and how this disadvantaged them economically.
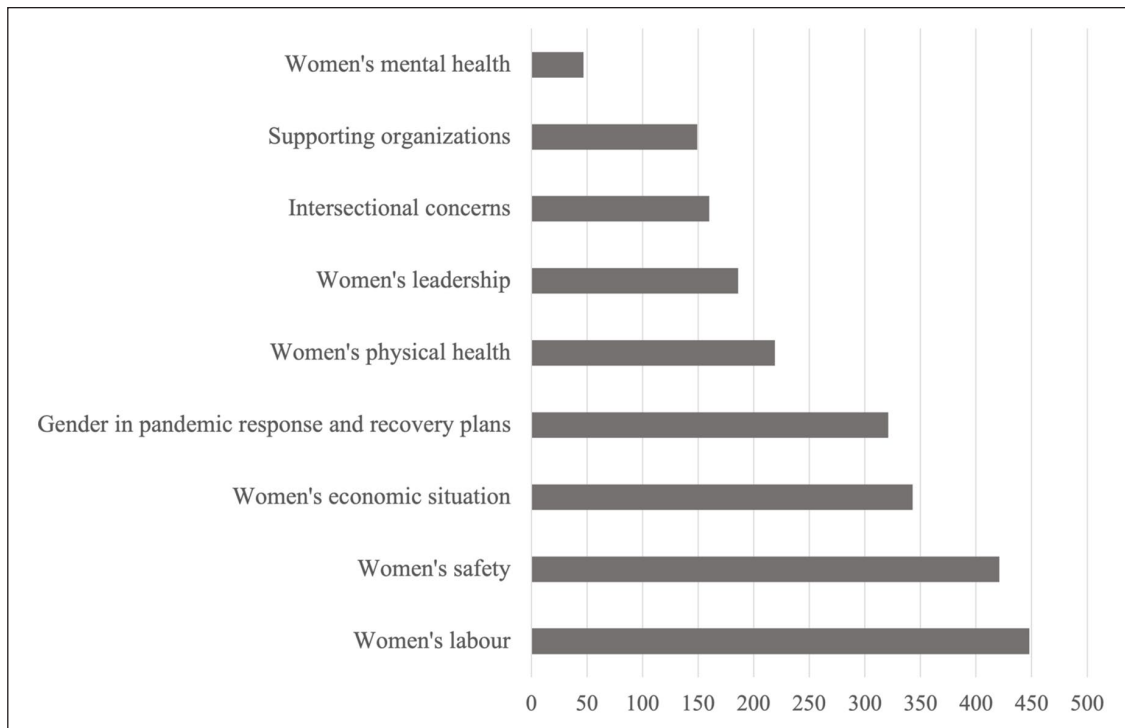
Figure 1. Tweets per theme across all women-focused nonprofit organizations.

Intersectional Concerns. Mainly, these tweets highlighted how different aspects of women's identity can exacerbate the gender-related issues associated with COVID-19. The experiences of Black women and other racialized groups in precarious employment settings were discussed frequently. The experiences of women who were refugees were emphasized often, as they also faced difficulties participating in the labor market and subsequent negative economic consequences.

In addition, women's belonging to the LGBTQ+ community was also included in the tweets. The increased risk of domestic violence against trans women was discussed as well as their economic marginalization. Similar issues for women with disabilities was a prevalent topic among the tweets as well. Those that discussed the intersectional experiences of women used hashtags to represent the groups they were discussing, like #BlackWomensEqualPay and #BlackTransLivesMatter. The importance of disaggregating data to allow researchers to look at the gendered effects of COVID-19 from an intersectional lens was prominent.

Women's Leadership. Many of the tweets highlighted the role that women have played in leadership positions during the COVID-19 pandemic. Mainly these tweets recognized and advocated for political leadership by women, and some for leadership by women in sectors like health care and as first responders. Many encouraged individuals to show support in calling for more women's leadership during and after the pandemic. Some tweets discussed the success of women's leadership efforts during the pandemic. Women's leadership

has resulted in more positive COVID-19 outcomes, as well as improving the status for the women they serve. The tweets brought up a discussion about what may make women such effective leaders and how their success throughout the pandemic may be replicated in other scenarios.

The Role of Gender in Pandemic Response and Recovery Plans. Tweets in this theme mainly advocated for the inclusion of women and girls in economic recovery plans and improving gender equality overall in a post-pandemic world. In addition, tweets stressed the need for the collection of more gender-segregated data as part of the pandemic response, to assess and address its disproportionate effects on women.

Support Organizations. Finally, many tweets were concerned with the important role of humanitarian organizations that supported women and girls in various ways during the pandemic. The tweets highlighted the importance of nonprofit organizations and charities in the provision of essential services and presented the pandemic as an opportunity to remedy decades of underfunding. The need was most frequently stressed in tweets calling for funding of women's shelters and sexual violence support services.

Prominence of Gender-Related Themes

Our content analysis revealed that three themes were prevalent: "women's labor," "women's safety," and "women's economic situation" (Figure 1). Examining the tweets closely,

Table 2. Tweets per Theme by Women-Focused Nonprofit Organizations.

	Anova		Canadian Women's Foundation		National Organization for Women		Planned Parenthood		UN Women		Total
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	
Women's safety	10	71	114	31	2	5	11	14	284	24	421
Women's physical health	1	7	13	12	14	37	55	70	136	12	219
Women's mental health	1	7	10	3	0	0	6	8	30	7	47
Women's labor	0	0	74	20	9	24	5	6	360	31	448
Women's economic situation	0	0	75	20	9	24	3	4	256	22	343
Intersectional concerns	2	14	40	11	8	21	15	19	95	8	160
Women's leadership	0	0	14	4	1	3	1	1	170	2	186
Gender in pandemic response and recovery plans	0	0	71	19	6	16	0	0	244	21	321
Supporting organizations	0	0	62	17	2	5	3	4	77	7	149

Note. Percentage of topic with regard to the total number of tweets per organization. Multiple topics per tweet could be selected, so percentages across topics don't add up to 100. *N* = 1,668.

these themes included protecting women and girls from physical harm encountered at home, acknowledging their roles as frontline responders, and the increased burden due to domestic care work. Another central theme was the "role of gender in pandemic response and recovery plans." Slightly less prominent were themes such as "intersectional concerns," "women's physical health," "women's leadership," and "supporting women's organizations." The least prevalent theme was "women's mental health," with only 47 tweets across all organizations addressing mental health concerns.

The organizations differed in where they placed their focus (Table 2). These differences were consistent with each organization's mandate and geographic scope; yet they revealed a set of universal concerns. For example, "women's labour," "women's economic situation," and "intersectional concerns" appeared most frequently in the tweets of NOW, Canadian Women's Foundation, and UN Women. These organizations operate on a national or global level; thus, they might be most interested in revealing the big picture of how political, economic, and social structures affected the lives of women and girls during the pandemic. In the tweets by Planned Parenthood, an organization focused on sexual and reproductive health and rights, "women's physical health" was the dominant theme. Anova, an organization that runs a women's shelter in London, Canada, primarily emphasized "women's safety." At the same time, the two themes that were raised most frequently across all tweets—"women's safety" and "intersectional concerns"—were mentioned by each organization, indicating that these reflect widely spread concerns that women-focused nonprofits share across regional and thematic orientations.

Around a third of the tweets included two or more topics (*n* = 607, 36%). A correlation analysis showed that several themes had a significant relationship: "women's economic situation" and "women's labour," $r(1,667) = .281$, $p < .001$, "women's safety" and "supporting women's organizations,"

$r(1,667) = .224$, $p < .001$, and "women's physical" and "women's mental health," $r(1,667) = .127$, $p < .001$. When looking at the themes that showed a significant relation, we find that tweets that mentioned "women's economic situation" in conjunction with "women's labour" (*n* = 181) mostly highlighted the financial precarity of women during COVID-19 and its relationship to low wages, limited job security, and unpaid care work. The tweets indicated that particularly women frontline workers, such as nurses and cleaners, worked for lower wages than men. These tweets also emphasized that domestic work and care work should be appropriately enumerated to prevent widespread poverty among women. Tweets that discussed "women's safety" and "supporting women's organizations" (*n* = 84) mainly expressed concern about the closures of women's shelters during the pandemic, highlighting how such closures had left many women and girls confined at home with their abusers, and called for women's support services to be declared essential. Tweets that focused on "women's physical health" and "women's mental health" (*n* = 17), emphasized the emotional stress and anxiety caused by COVID-19 and how these related to concerns over being infected with the coronavirus or the complications associated with being pregnant during the pandemic. Despite Twitter's 280-character limit, all five women-focused nonprofit organizations created multiple connections between the different themes and thus provided a nuanced picture of COVID-19 as a gendered pandemic.

Microblogging Functions in Women-Focused Nonprofit Organizations

When coding for microblogging functions, we adopted Lovejoy and Saxton's (2012) framework, which includes three main microblogging functions as well as subfunctions for the community and action functions. To better fit the context of our study, we added a set of subfunctions to the
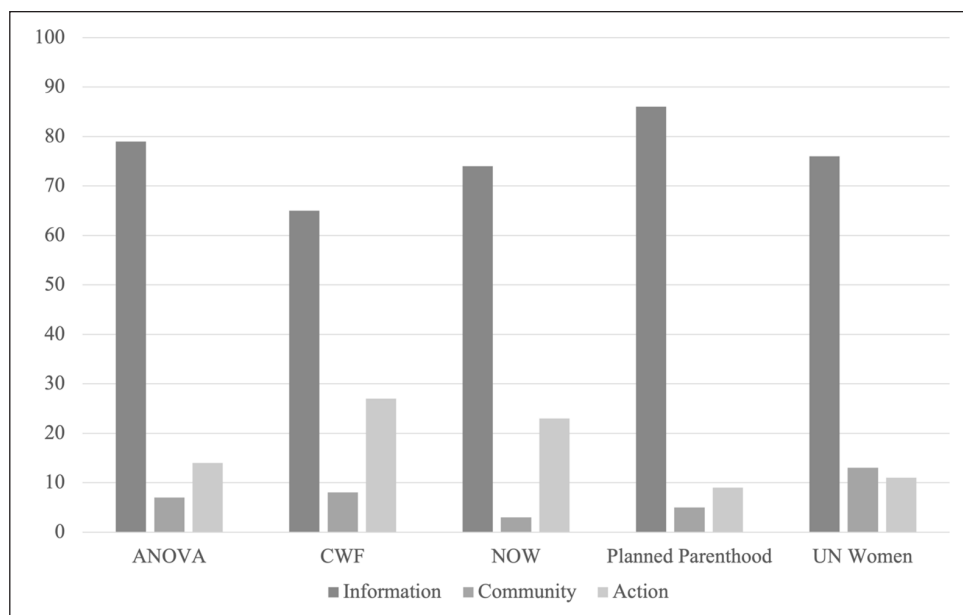
Figure 2. Microblogging functions by women-focused nonprofit organization.

information function. These included information on staying healthy during the pandemic, such as avoiding infection, education related to sex during the pandemic, pointing to useful resources, broadly raising awareness about the role of gender and the experiences of women during the pandemic, and informing about each organization's activities, like publications or local initiatives.

Figure 2 shows that "information" was by far the most prominent microblogging function (74%). This was true for all organizations; each dedicated between 65% and 86% of tweets to informational content (Table 3). Tweets that emphasized "action" comprised 15% of the overall data, with each organization publishing between 9% and 27% of action-oriented tweets. "Community" was the least prominent microblogging function, with only 11% of tweets; looking at the individual organizations, the share of these tweets varied between 13% and as little as 3%. UN women was the only organization where the number of community-oriented tweets (155) was higher than the number of action-oriented tweets (125).

The microblogging subfunctions provided a nuanced picture of the strategies employed by the five organizations (Table 3). Within the category of *informational* tweets, descriptions of the role of women during the COVID-19 pandemic and characterization of a "gendered pandemic" were prevalent. In these tweets, the organizations often shared news articles or referred to content on their websites, such as videos or case studies. We recorded only few instances of the other information subfunctions. One exception was Planned Parenthood, which dedicated a large share of their tweets to information about the general health and sexual health aspects of the pandemic and frequently pointed their followers to additional resources.

The largest share of *community*-oriented tweets expressed recognition for the work of others or thanked them for their commitment to fight the pandemic and acknowledged the many gender inequalities exposed by the pandemic. Often, the organizations put a spotlight on individual activists, volunteers, authors, health care workers, political leaders, or celebrities and their initiatives. The types of initiatives highlighted included sewing masks for a women's shelter, building women-led businesses during the pandemic, collecting donations, or offering online workoutss for girls during COVID-19 restrictions. Several tweets pointed out the work of nurses and characterized them as the "real heroes" of the pandemic. The largest number of recognition tweets came from UN Women which shared numerous portrayals and stories of women fighting against the COVID-19 pandemic. It is important to note that UN Women has a global focus, highlighting the contributions of women from the Global South. Although acknowledging current or local events was not a frequent strategy, there was a noticeable number of tweets that linked women's concerns during the pandemic to national and international awareness and action days that recognize women, often using a specific hashtag. For instance, #EqualPayDay was used to create awareness around the persisting wage gap between women and men health care workers, and #WorldHealthDay was added to tweets to appreciate the contributions of nurses and frontline workers. Direct responses and interactions with other Twitter users were not frequent. The organizations often retweeted content by news outlets or activists; however, we only counted those interactions that constituted an exchange. Tweets that encouraged followers to reply to a tweet by the organization to share their opinion on an issue or an experience were rare.

Table 3. Microblogging Subfunctions by Women-Focused Nonprofit Organization.

	Anova		CWF		NOW		Planned Parenthood		UN women		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Information												
Staying healthy during the pandemic	0	0	1	0	3	8	10	13	21	2	35	2
Sex education	0	0	1	0	0	0	22	28	3	0	26	2
Guide to resources	1	7	9	2	0	0	20	26	25	2	55	3
Gender and women in the pandemic	10	71	210	57	21	55	9	11	729	62	979	59
Organization's activities	0	0	2	0	0	0	0	0	24	2	26	2
Other information	0	0	16	4	4	10	6	8	86	7	112	7
Total	11	79	239	65	28	74	67	86	888	76	1,233	74
Community												
Recognition and thanks	1	7	17	5	1	3	3	4	107	9	129	8
Acknowledging current/local events	0	0	4	1	0	0	0	0	39	3	43	3
Responses and interactions	0	0	9	2	0	0	0	0	4	0	13	1
Soliciting responses	0	0	0	0	0	0	1	1	3	0	4	0
Other community	0	0	0	0	0	0	0	0	2	0	2	0
Total	1	7	30	8	1	3	4	5	155	13	191	11
Action												
Promoting an event	2	14	43	12	1	3	4	5	32	3	82	5
Donation appeal	0	0	21	6	0	0	2	3	9	1	32	2
Selling a product or merchandise	0	0	12	3	0	0	0	0	0	0	12	0
Call for volunteers or employees	0	0	0	0	0	0	0	0	0	0	0	0
Lobbying or advocacy	0	0	14	4	7	18	0	0	19	2	40	2
Learning how to help	0	0	5	1	0	0	0	0	26	2	31	2
Join or vote for organization	0	0	1	0	0	0	0	0	9	1	10	0
Other action	0	0	5	1	1	3	1	1	30	3	37	2
Total	2	14	101	27	9	24	7	9	125	11	244	15
Total	14	100	370	100	38	100	78	100	1,168	100	1,668	100

Within the category of tweets calling for "action," event promotions were the most common subfunction, followed by "lobbying or advocacy." The events promoted were almost exclusively virtual. They included webinars or live-streamed meetings, where leaders of the organizations and guest speakers like activists and journalists discussed pandemic response plans. There were also some live discussions with experts or support workers on Twitter and Facebook. In the "lobbying or advocacy" subfunction, tweets urged politicians to dedicate funds to pandemic response packages that would benefit women and girls; yet others included links to petitions or encouraged followers to contact their local political representatives about gender concerns. For instance, NOW promoted a "tweet storm," asking their followers to tweet to members of the US Senate and demand COVID-19 relief. Only a small number of tweets contained "donation appeals" or encouraged their followers to "learn how to help." Most notable in these categories was the Canadian Women's Foundation's call to donate to their Tireless Together Fund which would support women and girls affected by the pandemic. Also, UN Women shared several instructional tweets on ways to fight for gender equality during the pandemic and beyond. Tweets advertising for merchandise sales were rare. This could have been linked in cases like Anova to additional funding available for nonprofit organizations during the COVID-19 pandemic from the Government of Canada (2022) combined with the understanding that many individuals were going through financial hardships. There were also few calls to join the organization as either a volunteer or employee. The reason was likely because of the public safety measures in place during the pandemic, which made in-person events and operations where volunteers were needed infrequent.

We also investigated if there was an association between the microblogging function and the content topics present in the tweets (Figure 3). Chi-square tests of independence revealed a higher-than-average share of informational tweets for women's safety, $\chi^2(2, 1,668) = 31.562$, $p = <.001$, women's physical health, $\chi^2(2, 1,668) = 26.598$, $p < .001$, women's economic situation, $\chi^2(2, 1,668) = 41.618$, $p < .001$, and the role of gender in pandemic response and recovery plans, $\chi^2(2, 1,668) = 25.206$, $p < .001$. Tweets with these topics were overwhelmingly educational or focused on raising awareness of COVID-19's gendered dimensions by providing news articles and study findings. A higher share of community-oriented tweets was associated with
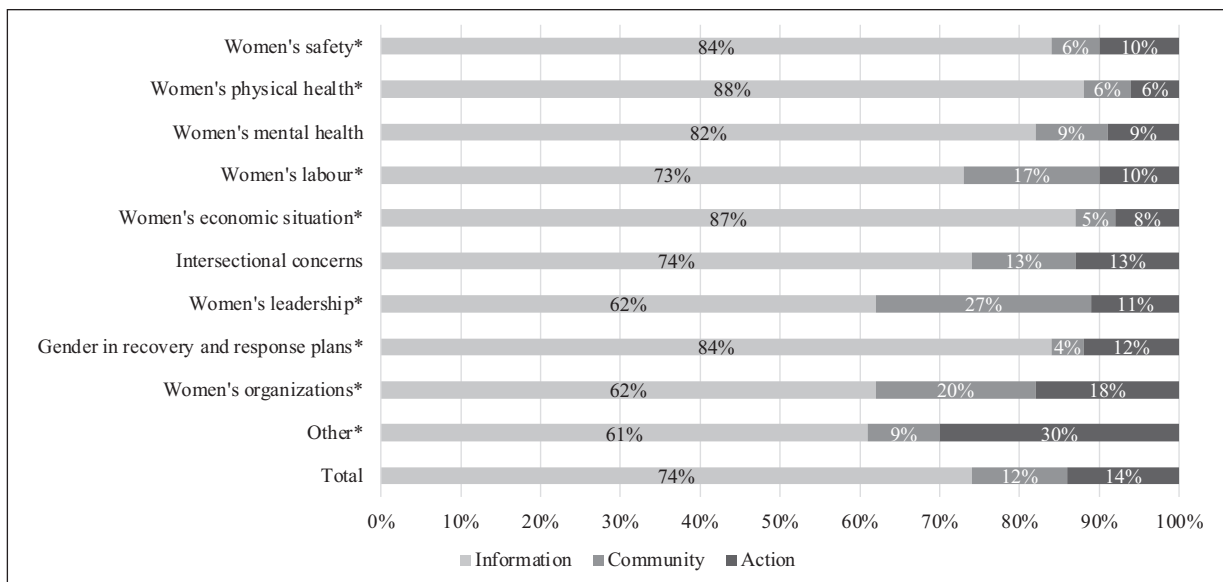
Figure 3. Microblogging function by theme.
Note. *Chi-square test of independence (p < .001); N = 1,668.

women's labor, χ^2(2, 1,668) = 28.503, $p < .001$, women's leadership, χ^2(2, 1,668) = 48.251, $p < .001$, and supporting women's organizations, χ^2(2, 1,668) = 13.127, $p = .001$. These tweets often highlighted the achievements of individual women, groups of women (like women nurses), or other nonprofits serving women (such as shelters), with frequent expressions of gratitude and appreciation. A remarkably high share of action-oriented tweets was found for tweets coded as "other," that is, not mentioning one of these specific gender-related topics, χ^2(2, 1,668) = 59.613, $p < .001$. Tweets in this category, which mostly promoted events or called for participation in petitions and reach out campaigns to political representatives, were often written in general terms and rarely discussed a specific topic area.

Finally, we tested for a relationship between the microblogging function and Twitter users' reactions to tweets. The mean number of likes across the entire data set was 152, and the mean for retweets was 98. We performed a one-way ANOVA and found that tweets falling under the "community" category received a higher number of "likes" ($M = 244$) than those categorized as "information" ($M = 143$) and also a higher number of "likes" than tweets categorized as "action" ($M = 126$). This effect was statistically significant, F(2, 1,667) = 12.386, $p < .001$. There was a similar pattern for retweets with those categorized as "community" being retweeted at a higher rate ($M = 109$) than "information" tweets ($M = 98$), and than "action" tweets ($M = 91.3$). However, this effect was not statistically significant, F(2, 1,667) = .360, $p = .698$. This finding suggests that community-oriented tweets may drive more engagement than informational tweets and more than tweets calling for action. A larger data set would be needed to fully explore this effect and identify if and how specific subfunctions are related to higher or lower user engagement.

Discussion

This study adds to the growing body of research on the use of social media for feminist activism and advocacy by examining the Twitter messaging of women-focused organizations during the initial stage of the COVID-19 pandemic. We found that the five selected organizations engaged in drawing a picture of a "gendered pandemic" by raising central issues which pertain to women and girls in this crisis including safety, health, and economic concerns. There is a strong parallel between our finding and other studies that have linked social media use by feminist groups to counterpublics, which circulate interpretations of current events that deviate from conventional perceptions (Trott, 2021), and discursive activism—the narratives that counteract flawed assumptions and power relations in mainstream discourses (Shaw, 2012). Thus, one way to interpret the messaging by the organizations in our sample is that it functioned to present COVID-19 as a gendered crisis as opposed to, for instance, purely a health crisis. More research is needed to understand how successful such representations are in reframing public perceptions of the pandemic and influencing mainstream media reporting.

Our study also advances the microblogging framework in several ways. Following Lovejoy and Saxton's (2012) suggestion, we applied the framework to organizations that were outside their initial study's scope. Several similarities between our data and their study occurred—for instance, we confirmed their finding that most tweets were informational, and fewer tweets were community-oriented or action-oriented. Also, our study parallels their findings in that "recognition and thanks" was the largest community-based function and "event promotions" was the largest action-based function. These similarities indicate that the

microblogging framework was applicable in our chosen context and that it added to our understanding of how the organizations leveraged Twitter during the initial stage of the COVID-19 pandemic.

There were also some important differences. Most notably, there were fewer community-oriented tweets in total in our sample compared to Lovejoy and Saxton's, and most of the community-oriented subfunctions occurred less frequently. One possible explanation is that the crisis moment of the pandemic, marked by political and health-related uncertainties, caused the nonprofits to shift their focus onto an awareness- and information-focused tactic of communication with less attention paid to community-oriented social media use. What supports this interpretation is that not a single tweet in our data called for employees or volunteers, which is likely related to the pandemic putting many in-person services on hold. Although a change in communication tactics in a crisis is unsurprising, the shift away from community engagement could pose a barrier to the organizations' ability to mobilize resources in the form of volunteers or donations. More research is needed to understand how nonprofit organizations can use Twitter tactics to maintain community engagement despite public health restrictions and translate such engagement into further action (spillover effects) online or on the ground (Bastos, 2022).

In our study, we found subcategories under the information microblogging functions, which had not been previously identified in Lovejoy and Saxton's study. One explanation for this finding could be our focus on a specific context—concerns linked to gender-related issues. These subfunctions, particularly "resource guides" and "information on the organizations' activities," can make a valuable addition to future studies adopting the microblogging framework. Also, our analysis revealed relationships between content themes and microblogging functions. For instance, the information category was associated with topics like "safety and health," whereas the community category showed above average mentions of "labor," "leadership," and "women's organizations." We expect that exploring these relationships further across different nonprofits and contexts could make a valuable addition to the microblogging framework in the future.

Furthermore, we took up Lovejoy and Saxton's (2012) suggestion to investigate how Twitter users respond to the nonprofit organizations' messages and found that the different microblogging functions are linked to user engagement, such that in our study tweets with a community function received a larger number of "likes" than the information- and action-oriented tweets. In addition to making a theoretical contribution, this insight has practical relevance: Organizations could fine-tune their communication tactics and, for example, present a critical issue in a community-oriented tweet to increase engagement from their follower base. We recognize that there are more Twitter-based engagement metrics to consider, such as the number of replies, which we were unable to investigate because they were not included in our data set. Another

complication was that the number of tweets in the subfunctions was too small to test for these effects.

It would also be worthwhile for future research to study how gender-focused nonprofit organizations use different social media platforms. Such comparative analyses would provide insights into how the unique affordances of each platform shape how organizations share different topics and if microblogging functions translate to other social media platforms. There is a need for more cross-platform comparisons to discern best practices.

ORCID iD

Anabel Quan-Haase (iD) https://orcid.org/0000-0002-2560-6709

References

Bastos, M. (2022). Network spillover effects and the dyadic interactions of virtual, social, and spatial. In A. Million, C. Haid, I. Castillo Ulloa, & N. Baur (Eds.), *Spatial transformations: Kaleidoscopic perspectives on the refiguration of spaces* (pp. 169–180). Taylor & Francis.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Duke, E. E., Sitter, K. C., & Boggan, N. (2018). Sex work and social media: Online advocacy strategies. *Cultural and Pedagogical Inquiry*, *10*(1), 49–61. https://doi.org/10.18733/cpi29372

Eckert, S. (2018). Fighting for recognition: Online abuse of women bloggers in Germany, Switzerland, the United Kingdom, and the United States. *New Media & Society*, *20*(4), 1282–1302. https://doi.org/10.1177/1461444816688457

Eckert, S., & Steiner, L. (2016). Feminist uses of social media: Facebook, Twitter, Tumblr, Pinterest, and Instagram. In A. Novak & I. J. El-Burki (Eds.), *Defining identity and the changing scope of culture in the digital age* (pp. 210–229). IGI Global.

Edwards, L., Philip, F., & Gerrard, Y. (2020). Communicating feminist politics? The double-edged sword of using social media in a feminist organisation. *Feminist Media Studies*, *20*(5), 605–622. https://doi.org/10.1080/14680777.2019.1599036

Eslen-Ziya, H. (2013). Social media and Turkish feminism: New resources for social activism. *Feminist Media Studies*, *13*(5), 860–870. https://doi.org/10.1080/14680777.2013.838369

Fileborn, B., & Loney-Howes, R. (Eds.) (2019). *#MeToo and the politics of social change*. Palgrave Macmillan. https://doi.org/10.1007/978-3-030-15213-0

Fotopoulou, A. (2017). *Feminist activism and digital networks: Between empowerment and vulnerability*. Palgrave Macmillan.

Fu, J. S., & Zhang, R. (2019). NGOs' HIV/AIDS discourse on social media and websites: Technology affordances and strategic communication across media platforms. *International Journal of Communication*, *13*(25), 181–205.

Government of Canada. (2022). *COVID-19: Financial support for people, businesses and organizations* Canada.ca. https://www.canada.ca/en/department-finance/economic-response-plan.html

Gruzd, A., & Mai, P. (2020). Inoculating against an infodemic. *Social Media Lab*. https://doi.org/10.5683/SP2/JLULYA

Henriques, M. (2020, April 12). Why Covid-19 is different for men and women. *BBC*. https://www.bbc.com/future/article/20200409-why-covid-19-is-different-for-men-and-women

Jackson, S. J., Bailey, M., & Foucault Welles, B. (2020). *#HashtagActivism: Networks of race and gender justice*. MIT Press.

Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research*, *1*(2), 112–133. https://doi.org/10.1177/1558689806298224

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology* (2nd ed.). SAGE.

Lewis, H. (2020, March 19). The coronavirus is a disaster for feminism. *The Atlantic*. https://www.theatlantic.com/international/archive/2020/03/feminism-womens-rights-coronavirus-covid19/608302/

Lovejoy, K., & Saxton, G. D. (2012). Information, community, and action: How nonprofit organizations use social media. *Journal of Computer-Mediated Communication*, *17*(3), 337–353. https://doi.org/10.1111/j.1083-6101.2012.01576.x

Madgavkar, A., White, O., Krishnan, M., Mahajan, D., & Axcue, X. (2020). *COVID-19 and gender equality*. McKinsey Global Institute.

Malik, A., Khan, M. L., & Quan-Haase, A. (2021). Public health agencies outreach through Instagram during the COVID-19 pandemic. *International Journal of Disaster Risk Reduction, 61*, Article 102346. https://doi.org/10.1016/j.ijdrr.2021.102346

Mendes, K. (2015). *Slutwalk*. Palgrave Macmillan.

Mendes, K., Ringrose, J., & Keller, J. (2019). *Digital feminist activism: Girls and women fight back against rape culture*. Oxford University Press.

Morstatter, F., Pfeffer, J., Liu, H., & Carley, K. (2013). Is the sample good enough? *Proceedings of the International AAAI Conference on Web and Social Media*, *7*(1), 400–408.

Murthy, D. (2016). The ontology of tweets. In L. Sloan & A. Quan-Haase (Eds.), *The handbook of social media research methods* (pp. 559–572). SAGE.

Nau, C., Quan-Haase, A., & McCay-Peet, L. (2022). Defining social media and asking social media research questions. In A. Quan-Haase & L. Sloan (Eds.), *The handbook of social media research methods* (2nd ed.) (pp. 13–26). SAGE.

Pınar Özdemir, B. (2012). Social media as a tool for online advocacy campaigns. *Global Media Journal: Canadian Edition*, *5*(2), 23–39.

Piquero, A. R., Jennings, W. G., Jemison, E., Kaukinen, C., & Knaul, F. M. (2021). Domestic violence during the COVID-19 pandemic. *Journal of Criminal Justice*, 74, Article 101806.

Pruchniewska, U. (2019). A group that's just women for women. *New Media & Society*, *21*(6), 1362–1379. https://doi.org/10.1177/1461444818822490

Quan-Haase, A., Mendes, K., Ho, D., Lake, O., Nau, C., & Pieber, D. (2021). Mapping #Metoo. *New Media & Society*, *23*(6), 1700–1720. https://doi.org/10.1177/1461444820984457

Rentschler, C. A., & Thrift, S. C. (2015). Doing feminism in the network. *Feminist Theory*, *16*(3), 329–359. https://doi.org/10.1177/1464700115604136

Rivers, N. (2017). *Postfeminism(s) and the arrival of the fourth wave: Turning tides*. Palgrave Macmillan. https://doi.org/10.1007/978-3-319-59812-3

Roaché, D. J. (2017). Intercoder reliability techniques: Percent agreement. In M. Allen (Ed.), *The SAGE encyclopedia of communication research methods* (pp. 752–752). SAGE.

Robinson, L., Schulz, J., Khilnani, A., Ono, H., Cotton, S. R., McClain, N., . . .Tolentino, N. (2020). Digital inequalities in time of pandemic. *First Monday*, *25*(7). https://doi.org/10.5210/fm.v25i7.10845

Sanders, T., Scoular, J., Campbell, R., Pitcher, J., & Cunningham, S. (2017). *Internet sex work: Beyond the gaze*. Springer.

Shaw, F. (2012). The politics of blogs: Theories of discursive activism online. *Media International Australia*, *142*(1), 41–49. https://doi.org/10.1177/1329878X1214200106

Statista Research Department. (2022, February 8). *Social media—Statistics & facts*. Statista. https://www.statista.com/topics/1164/social-networks/#topicHeader__wrapper

Stoddart, M. C. J., Ramos, H., Foster, K., & Ylä-Anttila, T. (2021). Competing crises? Media coverage and framing of climate change during the COVID-19 pandemic. *Environmental Communication*. Advance online publication. https://doi.org/10.1080/17524032.2021.1969978

Trott, V. (2021). Networked feminism: Counterpublics and the intersectional issues of #MeToo. *Feminist Media Studies*, *21*, 1125–1142. https://doi.org/10.1080/14680777.2020.1718176

Veil, S., Reynolds, B., Sellnow, T. L., & Seeger, M. W. (2008). CERC as a theoretical framework for research and practice. *Health Promotion Practice*, *9*(4), 26S–34S. https://doi.org/10.1177/1524839908322113

World Economic Forum. (2020, May 9). What the COVID-19 pandemic tells us about gender equality. *World Economic Forum*. https://www.weforum.org/agenda/2020/05/what-the-covid-19-pandemic-tells-us-about-gender-equality

Yanowski, D. (2013). *A script to download all of a user's tweets into a csv*. GitHub. https://gist.github.com/yanofsky/5436496

Author Biographies

Charlotte Nau (MA, University of Memphis) is a doctoral candidate in Media Studies at Western University. Her research interests include gender, social media activism, and digital feminism.

Anabel Quan-Haase (PhD, University of Toronto) is a professor of digital media at the Department of Sociology and the Faculty of Information and Media Studies and Rogers Chair in Studies in Journalism and New Information Technology at Western University. Her research interests include social media, digital activism, social networks, and aging.

Riley McLaughlin is a graduate research assistant at the University of Western Ontario. Her research interests include social media, policy evaluation, and equity, diversity, and inclusion.