

Managing Pandemic Communication Online: Turkish Ministry of Health’s Digital Communication Strategies During COVID-19

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Health ministries around the world have used online communication, specifically social media platforms, to provide information, communicate warnings to the public, and influence behavior according to recommended health precautions due to the COVID-19 pandemic. Grounded in agenda-setting theory, this study analyzes Turkey’s Ministry of Health’s (MoH) social media communication strategies and practices during COVID-19 through a content analysis of the content shared via its official Twitter, Facebook, and Instagram accounts from February to June 2020, focusing on the first 120 days of the pandemic, when it was at its height. Findings reveal that the MoH’s social media activity was mainly driven by Twitter, and the minister of health has become the face of the fight against the pandemic. Results reveal that the government’s efforts to fight against the virus and its prevention measures are among the most popular themes in online communication. The MoH’s social media communication has shown only limited success in community building and network expansion due to inconsistent and ineffective hashtag use, among other weaknesses in the ministry’s use of social media conventions.

Keywords: COVID-19, pandemic, social media, digital communication, Ministry of Health, content analysis

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The COVID-19 pandemic has drastically affected societies around the world, with countries forced to quickly ramp up their pandemic management and health communication skills to minimize or prevent the virus's spread. As of August 2022, approximately 600 million people worldwide have been infected, and close to 6.5 million people have died because of the epidemic, which continues to impact people around the world (World Health Organization [WHO], n.d.). When we look at the numbers from Turkey, more than 16.5 million people have been infected with COVID-19 in Turkey, and more than 100,000 people have unfortunately lost their lives due to the disease as of August 2022. This study examines Turkey's Ministry of Health (MoH)'s online communication strategies during the COVID-19 pandemic, explicitly focusing on its most critical early months, covering 120 days from February 3 to June 1, 2020. By studying the crisis management and communication strategies carried out in this extraordinary situation, which turned into a global health crisis, the authors identify the online communication efforts by Turkey's MoH and study the implementation of these strategies. The Turkish case of dealing with the pandemic is significant as Turkey quickly found its place in the top 10 countries with the highest number of COVID-19 cases (Johns Hopkins University and Medicine, n.d.) despite having reported the first case of COVID-19 relatively late in March 2020 (Lindenstrauss & Daniel, 2020). In addition, Turkey was also late in ordering a nationwide lockdown in 2021 compared to many other European countries (*The Economist*, 2020). Furthermore, as a society with prominent social and political cleavages and potential skepticism of individuals toward the competence and intentions of public institutions in this global health crisis (Dal & Tokdemir, 2022), Turkey's efforts to combat the pandemic provides an interesting example. Consequently, the Turkish case carries interesting lessons and strategies worthy of detailed elaboration. According to Bostan, Erdem, Öztürk, Kılıç, and Yılmaz (2020), the pandemic agenda and coverage including the number of new cases and death tolls may seriously impact community psychology, thus Turkey has tried to control pandemic mis- and disinformation to a certain extent through its proactive communication on traditional and social media by the MoH and the minister of health. By focusing on a specific country, this case study provides a resource for crisis communication action plans and communications via social media platforms. It may also provide direction for future studies focusing on online communication strategies during various crises.

COVID-19's effects have been drastic, with "an unprecedented political and social response" that has imposed "massive consequences on the global economy" (Singh et al., 2020, p. 1). In addition to its calamitous impact on health, societies, economies, and politics, the pandemic has also shifted media and communications practices. Many international academic studies have focused on understanding the social media discourse and conversation on COVID-19, especially on Twitter, which has an established popularity, significance, and urgency in how it spreads information (see e.g., Banda et al., 2020; Chen, Lerman, & Ferrara, 2020; Fang & Costas, 2020; Kurten & Beullens, 2020; Mourad, Srour, Harmanai, Jenainati, & Arafah, 2020; Rao, Vemprala, Akello, & Valecha, 2020; Rufai & Bunce, 2020; Singh et al., 2020; Vicari & Murru, 2020; Wicke & Bolognesi, 2020). Banda and colleagues (2020) have suggested that studying social media platforms like Twitter and Facebook is necessary because of the "abundance of text data that can be utilized for research purposes" (p. 8).

On the other hand, as Mourad and associates (2020) have suggested, this "tsunami" of social media to communicate news, guidelines, and precautions to people, has also created an "infodemic." The United Nations secretary-general Antonio Guterres and WHO director Dr. Tedros Adhanom Ghebreyesus have referred to social media as an infodemic of misinformation, which needs to be resisted as decisively as the

pandemic itself (United Nations, n.d.). Thus, governments and major health organizations, such as the WHO, have used Twitter for “managing the evolving pandemic by regularly disseminating guidance and updates and by providing emergency responses” (Mourad et al., 2020, p. 1).

Rao and colleagues (2020) stated that people have relied on Twitter, particularly specific hashtags, as a communication tool to share information about COVID-19: “Its spread, dread factors, and mitigation strategies” (p. 1). Twitter is also increasingly used by governments and response teams (Chen, Sharman, Rao, & Upadhyaya, 2008). Policy makers need not only to communicate about the virus to “lower the burden on the health care system” (Kurten & Beullens, 2020, p. 1) but also to respond to troubling tweets that spread mis/disinformation on social media (Rao et al., 2020), formulating “regular responses to the infodemic using a strategy of active engagement and communication” (Mourad et al., 2020, p. 7). There were public criticisms against the MoH both from academics and the mass media, suggesting that their published numbers or announced death toll was inaccurate and not reflective of the real impact of COVID-19 (e.g., Burn-Murdoch, Romei, & Giles, 2020; Sayili, Acar, Şahin, & Can, 2020). However, despite the criticisms and public scrutiny, the ministry was acknowledged and used as an information subsidy, as it was the only official state organization providing daily statistics and systematic real-time information regarding the pandemic.

Pandemic management and communication by the MoH began in Turkey before its first nationally confirmed case of COVID-19, which was identified on March 10, 2020. Although officially the disease appeared later in Turkey than elsewhere, as part of its pandemic management strategy, on January 10, 2020, the ministry had established a Coronavirus Scientific Advisory Board to establish a national coordination system for infection protection and control, aiming to implement various measures according to the recommendations of the board and in close cooperation with other national institutions. As the MoH was already communicating COVID-19 related information before it was declared a pandemic globally and the first case in Turkey was announced, we have included the social media content posted in February in our data set. A “COVID-19 (SARS-CoV-2 Infection) Guideline” was prepared following the Scientific Advisory Board’s recommendations and shared with the public through written, visual, and social media communications. At the beginning of March, when the first case was seen in Turkey, a decision was made to allow sports tournaments to take place without spectators, to quarantine citizens returning from the Umrah visit, and to suspend in-person kindergarten, primary, and high-school education. Other public spaces such as concert halls, restaurants, cafes, coffee houses, and so on were also shut down. During this period, the Ministry of Health Communication Center began to communicate via the COVID-19 Advisory Line.² On March 21, 2020, a curfew was imposed on individuals aged above 65 and those with chronic illness. With the Presidential Circular published the next day, practices such as remote or rotational work were introduced for public personnel. During this period, when various measures such as school holidays, cancellation of activities, and curfews were applied, the Ministry of Health maintained an open and effective risk communication, informed institutions and the public, and launched the “Hayat Eve Siğar” (“Life Fits Into Home”) campaign on March 22, 2020.

² ALO184 (<https://sabim.gov.tr/>) is the MoH’s communication center for all COVID-19 and other health-related consultations. It is a 24-hour hotline that citizens can call and get direct information from health professionals.

Why is Turkey important in the COVID-19 social media conversation? Turkish Twittersphere is rich, with more than 11.8 million active users, making it the sixth-largest Twitter population globally and second in Europe after the United Kingdom (We Are Social, 2020). Turkish Twitter usage during COVID-19 has also been a subject of analysis in international studies. In their analysis of more than 21 million tweets from January 16 through March 15, 2020, Singh and colleagues (2020) revealed that the Turkish Twittersphere was bubbling with COVID-19 related conversation, with tweets in Turkish ranking as the sixth most popular language of global tweets, with more than 1 million tweets in one month, with a large increase and spikes in March, amounting to nearly 3% of all Twitter conversation on the topic. Similarly, in their multilingual coronavirus Twitter data set, Chen and colleagues (2020) found that Turkish was the ninth most common language in the data set, claiming more than 1.3 million tweets overall. Turkish researchers have focused on risk or crisis communication during the COVID-19 pandemic (e.g., Ateş & Baran, 2020; Tüzün, Demirköse, Özkan, Dikmen, & İlhan, 2020), with many researchers highlighting the increasing use of social media content related to health and COVID-19 in the online ecosystem. While some studies focus on understanding online health information sharing during the pandemic (Özdemir & Arpacioğlu, 2020), others have drawn attention to the online video ecosystem, specifically the use of YouTube as a health communication platform (Dikmen, Kılıç, & Akşak Özdora, 2020; Tam, 2020).

Communication during crises is not only crucial for communicating actions implemented by organizations to establish legitimacy, but it is also critical to develop societal consciousness to ensure that necessary behaviors are undertaken to avoid further spread of diseases, especially in the case of COVID-19. Consequently, the use of social media platforms by health ministries across the world and the content they share are essential. The relevant units of health ministries responsible for social media management and communication have assumed an extra workload during the pandemic. It is crucial to identify and examine content flow and content management strategies to develop a deeper understanding of social media communication management during crisis periods such as the COVID-19 pandemic.

A review of the national and international literature has revealed a need for studies on state organizations' social media practices during crises. Thus, this study makes a unique contribution to the literature due to its focus on crisis communication during this pandemic. These results will benefit not only academic circles but also national and international organizations, which can better understand social media use during crises and enhance their strategies and implementation.

The study uses and builds on the social media audit framework developed by Adi and Moloney (2012). The authors implemented a qualitative exploratory analysis of the social media practices of Occupy Bournemouth movement in the United Kingdom and studied how the group used social media communication to create awareness. In their analysis, they examined the following: The history and activity data of the Movement's account by looking at the date of opening the account, the number of followers, and other such details; account photo, bio, description, and links shared; visual and message coherence of the social media accounts both within and among themselves; and content of the tweets shared through an in-depth reading of textual outputs and frequent topics mentioned. Using the framework developed by Adi and Moloney (2012), this qualitative study examines the social media platform presence of the MoH during the first four-month period of COVID-19 in Turkey. Specifically, we aim to answer the following research questions:

RQ1: How does Turkey's Ministry of Health use social networking platforms to communicate about COVID-19?

RQ2: How did the MoH's social media communication strategies and activities evolve according to the government's response to the pandemic and COVID-19 cases?

RQ3: What are the main types of content shared by the MoH via the examined social platforms?

RQ4: How does the MoH use the interactive and engagement-fostering components of social platforms, such as network generation and hashtag activism?

Theoretical Background

Public Relations and Social Media Use to Engage in the Public Sphere

Scholars have defined public relations as a management function that helps build, nurture, and strengthen mutually beneficial relationships between an organization and its publics (Bruning & Ledingham, 2000; Cutlip, Center, & Broom, 1994; Ki & Hon, 2007; Ledingham, 2006).

Organizational websites and social media are becoming a crucial component of public relations, community building, and creating public discourse due to the interaction opportunities they create between organizations and their publics, such as content sharing, enabling conversations, and a forum in which to ask questions (Bonsón & Ratkai, 2013; Hill & White, 2000; Ye & Ki, 2012). Especially during the last decade, social media have become part of the political environment and carved an increasingly important role for themselves in democracy and political public relations. Public relations plays an essential role in using the Internet as a participatory public sphere, as suggested by Jenkins (2006), and enhances interactivity by being a facilitator by bringing competing interests closer via community discourse creation. Social media platforms, specifically Twitter, meet governments' need to attract and engage constituencies, thereby contributing to community building.

Organizational communication activities that take place on social networks align with the relationship management paradigm (Ledingham & Bruning, 1998) and dialogic public relations based on mutual benefit, respect, trust, and goodwill (Kent & Taylor, 2002). Social media platforms' interactive and engaging characteristics (Atkin & Rice, 2013; Motion, Heath, & Leitch, 2016) have fostered online relationships, thereby enhancing dialogic public relations (Macnamara, 2017). By sharing persuasive messages and multimedia, social media platforms may help promote public awareness and behavior change (Hon, 2015). Public awareness and the need for behavior change were and continue to be critical during the pandemic. The COVID-19 pandemic caused many governments to implement strict curfews and social-distancing measures, which resulted in social media remaining "one of the few areas in which public discourse is still possible" (Kurten & Beullens, 2020, p. 5). Twitter allows for quick and organized information dissemination through topic handles called hashtags and collective communication through "retweets," where people can continue conversations and disseminate contextual information (Palen, Vieweg, Liu, & Hughes, 2009). These features make it popular among governments, officials, and news media organizations

during crises and emergencies (Kim, Bae, & Hastak, 2018). Wicke and Bolognesi (2020) found that tweets with hashtags such as #coronavirus, #Covid-19, or #Covid were quite popular and heavily used on Twitter, with 16,000 new tweets with these hashtags posted per hour. One of the critical questions in the present study is whether Turkey's MoH could use Twitter to establish connections with the public, create dialogue, and promote online public discussion about the COVID-19 pandemic.

Agenda Setting Through Health and Crisis Communication

This study approaches health, especially health crisis communication, from an agenda-setting theoretical perspective. Agenda-setting theory mainly argues that the media can increase the salience of particular issues by covering and placing them on the public agenda (McCombs & Shaw, 1972) through increased emphasis (McCombs, Shaw, & Weaver, 2014). Like traditional media, Twitter also has some agenda-setting capabilities that add salience to specific issues. Waters, Tindall, and Morton (2010) stated that "the changing media environment and the evolving online atmosphere" (p. 241) have shifted traditional media relations strategies such as media kits and news-release distribution to the social media environment. The same change is also visible in health communication.

Unlike traditional health communication, social media and online tools allow collaboration and sharing among patients, and the new generation of health communication that emphasizes this culture of participation is called "health 2.0" (Sarason-Kahn, 2008, p. 2). Much of today's health communication involves Twitter, Facebook, and other social media platforms (Hawn, 2009). Internet and social media platforms, which have been at the center of public relations and communication studies during the recent pandemic, are frequently used by individuals and institutions for sharing information about COVID-19.

The most critical component of crisis management is crisis communication. Crisis communication can be defined as "collecting, processing and disseminating the information needed to address a crisis situation" (Coombs, 2010, p. 20). Simply put, crisis communication entails researching and using health communication strategies to shape and inform health-related decisions (Parvanta & Bass, 2020). Crisis communication is a critical component of an organization's public relations strategy and may affect perceptions of its success in managing the crisis. Approaching crisis communication as a component of public relations, this study aims to analyze the Turkish Ministry of Health's online communications during this period to analyze which strategies have been used the most, provide a framework for best practices, and develop meaningful and broadly applicable templates for using online communications in crisis management.

Methodology

This study uses qualitative content analysis to analyze the Turkish Ministry of Health's tweets during the first four months of the COVID-19 pandemic. The study also uses Twitter's engagement metrics and descriptive statistics to back up study findings with frequencies to reveal details about the ministry's Twitter use. Content analysis was selected as the study's methodology as it allows for a systematic analysis, helping to reveal context and allowing multiple interpretations. Krippendorff (2018) indicates that content analysis highlights communications' symbolic connotations, thus enabling data analysis of a particular context. He suggests that written documents, images, and verbal discourse appear to be significant resources for content

analysis data. "Content analysis allows researchers to establish their context for inquiry, thus opening the door to a rich repertoire of social-scientific constructs by which texts may become meaningful in ways that a culture may not be aware of" (Krippendorff, 2018, p. 404). In qualitative content analysis, researchers have a deep concern for "meaning and interpretation of symbolic material," (Schreier, 2012, p. 173) where the context helps determine meaning through an iterative procedure.

The study sample consists of the content collected via Web harvesting from MoH's official Twitter (<https://twitter.com/saglikbakanligi>), Instagram (<https://www.instagram.com/saglikbakanligi>), and Facebook accounts (<https://www.facebook.com/saglikbakanligi>), posted during the period February 3–June 1, 2020 (120 days), the critical first four months of COVID-19. In total, 811 tweets, 378 Instagram posts, and 811 Facebook posts were shared by the MOH, and we collected all posts between these dates from these social media platforms and saved them in PNG format from the online environment using the Web browser extension "Full Page Screen Capture." This content was later transferred to a spreadsheet program for detailed data analysis. The data file included the post itself, its date, hashtags used in the posts, photos, videos, infographics, and hyperlinks to conduct the qualitative content analysis. Data (graph) visualization techniques were used to support data analysis and interpretation, which allowed for data mapping and clustering for effective summarization and inspection of study findings.

The thematic content of the posts was analyzed qualitatively to uncover significant themes used to frame COVID-19 and also reveal the MoH's social media strategies to engage in effective crisis communication and community building. To enhance the Twitter metrics and the descriptive statistics provided related to the social media usage of MoH, some examples of the most popular thematic contents shared by the MoH are given to provide an in-depth analysis of the ministry's Twitter communication priorities during the pandemic and strengthen the qualitative aspect of the research. Following the social media audit framework developed by Adi and Moloney (2012), the study (1) analyzes activity data and history of the social media account to reveal its maturity level, (2) reviews account activeness through likes, retweets, and comments, which provide clues about the efficacy of its community building, (3) examines visual and textual message symmetry, and (4) studies the actual content of the messages communicated. The main actors used to present the messages and the different themes were further studied to understand the ministry's online communication. The study also examined hashtags used to assess whether the MoH uses social network conventions/features to foster online interaction and promote health- and crisis-related messages.

Results and Discussion

The first research question examined how Turkey's MoH uses social networking platforms to communicate about COVID-19, reviewing their account history and activity status. To answer this question, we studied the ministry's social media accounts, focusing specifically on activity data and account history to reveal its maturity level as per Adi and Moloney's (2012) framework. Turkey's MoH first established its Twitter account (@saglikbakanligi) in April 2012. On January 1, 2020, the number of followers was 523,574, and by February 2021, the total number of followers was 2,022,800, and 2,444,062 as of August 2022. Similarly, on January 1, 2020, Health Minister Dr. Koca's (@drfahrettinkoca) followers were 235,066, and this number had exceeded 6 million by February 2021 and stood at 8,059,460 in August 2022. The MoH's Facebook account was established in April 2012 and consistently had around 1.7 million followers as of

August 2022. The MoH's Instagram account was established in January 2013, and as of August 2022, it has shared 4,863 posts and has more than 3.2 million followers. A detailed analysis of the three different social media accounts revealed that the ministry is primarily using its Twitter account for online communication to share posts and directly sharing Twitter content via its Facebook and Instagram accounts. Twitter was the main driver for online crisis communication by the MOH, and this was our rationale for specifically focusing on Twitter for the analysis.

To put the MoH's social media follower numbers into a global context, we have provided some examples of global health authorities. Considered the global health authority, the WHO (<https://twitter.com/WHO>) has 11,671,159 followers on Twitter as of August 2022, while its country office in Turkey, WHO Turkey (https://twitter.com/WHO_Turkiye) merely has approximately 32,000 followers. In comparison, the U.S. Centers for Disease Control and Prevention (<https://twitter.com/CDCgov>) has 5.3 million followers total.

When it comes to comparing the official Twitter and Instagram accounts of the MoH, Twitter is the primary driving social media account for the ministry, with the MoH Instagram account consisting of only the MoH's Twitter posts. A detailed analysis of the distribution of Instagram posts, similar to the ministry's Twitter account, reveals that most of the content comes from Health Minister Dr. Koca. However, compared with Twitter, there is a minor difference in the Instagram posts. While 47% of the Instagram posts come directly from the minister's account, the remaining 41% are posted originally by the Ministry of Health, and 11% of the remaining consist of Instagram posts shared by other government officials. For this reason, we conclude that the Twitter content is the primary source and driver of MoH's social platform presence. Although the MoH Instagram account has 3.2 million followers, the MoH tends to use its Twitter account (with more than 2.1 million followers) as the main driver of its social media content and conversations. While its Instagram account only includes 4,000 posts, the MoH's Twitter account has posted more than 20,000 tweets as of August 2022. Consequently, only the Twitter posts (individual Tweets) posted during the four-month study period were included in the analysis.

In addition, analyzing the content of the Instagram and Facebook accounts would be repetitive, as they recirculate the same content initially shared through Twitter. Of the total ($N = 811$) tweets shared during the research period, 78% ($n = 633$ including retweets) were related to the COVID-19 pandemic and were included in the analysis. The remaining 22% ($n = 178$) were excluded from the study sample as they were related to other health issues such as new hospital-opening promotions, important days, condolences, Ramadan celebrations, quitting smoking, and other such topics, or political and/or social events such as funerals, affairs with other ministries, official meetings, and visits, and so on. The MoH posted an average of seven tweets per day during the four-month period of study. A breakdown of the sources of tweets and retweets is presented in Figure 1 below. The ministry is responsible for the majority of these, precisely 64% consist of retweets ($n = 512$) and only 36% ($n = 299$) comprise tweets. Among the retweets, 53% ($n = 271$) are posted by Health Minister Dr. Koca, 10% are those posted by other government agencies and state officials, and only 1% are posted by the *Coronavirus Scientific Advisory Board* members, which consists of 38 doctors who meet regularly to provide guidance and direction for the government in its COVID-19 policy and procedures.

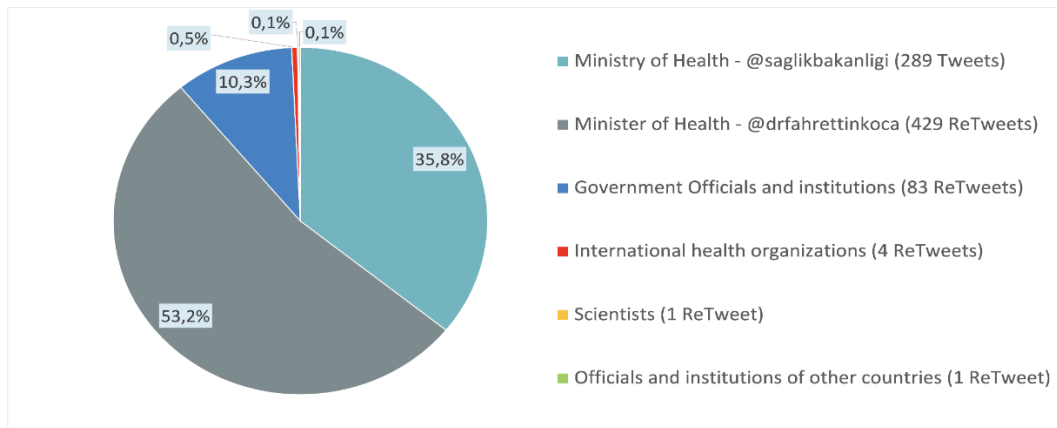


Figure 1. Distribution of tweets and retweets by MoH between February and June 2020.

The second research question examined how the ministry's social media communication strategies and activities evolved according to the government's response to the pandemic and cases in Turkey. Although it was declared a pandemic, and the first case in Turkey was seen in early March 2020, our data reveal that COVID-19-related communications did in fact start one month earlier in Turkey, in February 2020. In the beginning, the MoH communication focused heavily on information about the disease and its symptoms. More specifically, the ministry communicated information on COVID-19 prevention methods such as washing hands, wearing masks, and social distancing. Besides, information on combatting the disease, which included details and statistics about Turkey's capacity and the technical equipment to be used, such as intensive care units, respiratory aid devices, and the number of available COVID-19 test kits, were communicated to create public trust about the ministry's ability to cope with the disease and provide necessary materials. Furthermore, the call to "#StayAtHome" (#EvdeKal and #LifeFitsintoHome #HayatEveSiğar) was made public around the first week of March, immediately after COVID-19 was declared a pandemic by WHO. Aid provided to other countries, international partnerships, and information related to health personnel's working conditions and support were also briefly mentioned during the pre-COVID-19 period of February 3–March 1, 2020. Figure 2 lists the distribution of MoH tweets according to tweet content, the weekly distribution of tweets in our four-month study period, the number of cases, and COVID-19-related significant events and developments such as curfews for different age groups. The thematic subjects of the tweets were not mutually exclusive; when the tweets were coded, a tweet could be coded under more than one theme (topic), and all tweets analyzed have been coded under at least one thematic subject. To determine the thematic content of the tweets during the four-month period, one researcher examined the data file including the tweets and identified major themes and patterns included in the tweets, using the constant comparative technique (Creswell, 2007). The list of predominant themes emerged through this reiterative coding process.

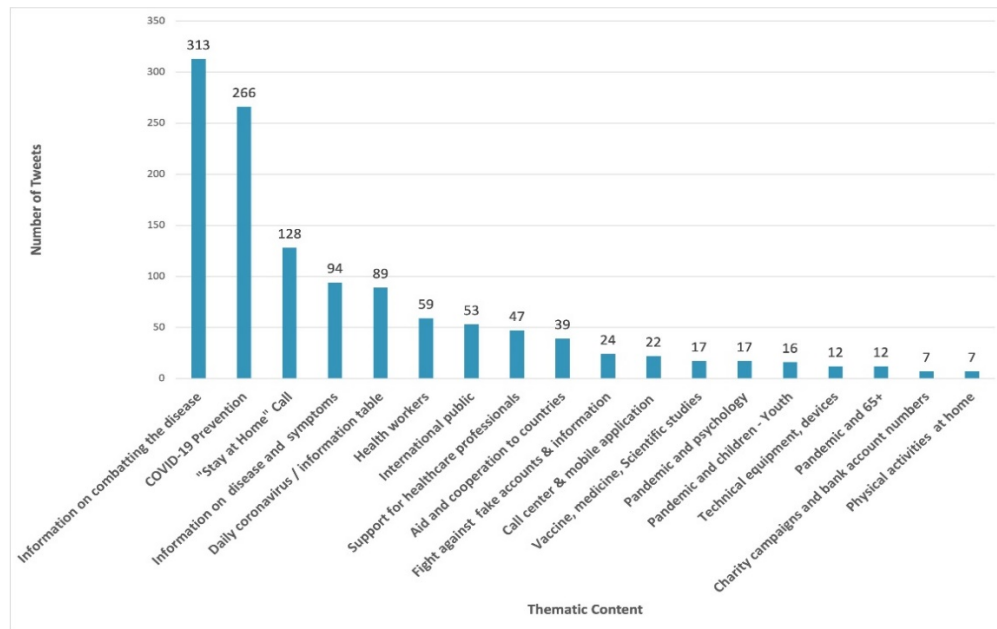


Figure 2. Distribution of MoH tweets in 2020 according to their thematic content (N = 811).

A review of the distribution of the thematic content of tweets revealed 18 total thematic contents highlighted in the total number of tweets ($N = 811$) in our data set. Some tweet examples for the most popular thematic contents are provided below to exemplify the MoH's most popular Twitter use. The most common issue highlighted by the MoH during this period was information on fighting COVID-19, which we coded as combatting the disease, with 49% of the tweets ($n = 313$) mentioning how the ministry and other public institutions were taking measures to combat the virus and protect the public. Some examples of tweets that fit into this category include: "Marmara University Pendik Training and Research Hospital has been opened to service with its strengthened 829 seismic isolators. With this 60 intensive care unit rooms, the hospital has 535 bed capacity. We wish this brings good fortune to our nation" (T. C. Sağlık Bakanlığı, 2020d).

This was followed by 42% ($n = 266$) of the tweets by the MoH discussing how individuals can use specific COVID-19 prevention methods and techniques such as washing hands, wearing masks, implementing 1.5-m social distancing in public spaces, and other such precautions to protect themselves. The tweets below are provided to illustrate the use of this tweet theme: "REMINDERSERVICE Good morning. Open your windows every morning when you wake up. #LifeFitsIntoHome" (T. C. Sağlık Bakanlığı, 2020b). "What to pay attention to when wearing medical masks? #LiteFitsIntoHome" (T. C. Sağlık Bakanlığı, 2020c).

The last most popular thematic content, more specifically 20% of the tweets ($n = 128$), used by the MoH during the pandemic's first four months was a stay-at-home call. Here are some tweets that highlight this thematic focus: "We will cure the patients. You will stay away from social environments and not get sick. This is how we will combat the Coronavirus. #WeWillWinTogether" (T. C. Sağlık Bakanlığı,

2020e); “Let’s not forget the 14 rules and 14 days rule. Let’s contact as little people as possible. Let’s use the precautions all of us 83 million people. #LifeFitsIntoHome” (T. C. Sağlık Bakanlığı, 2020a).

Besides, 15% (n = 94) of the tweets provided information about the disease as more research on the issue became evident, and 15% (n = 89) included daily coronavirus information such as the number of COVID-19 tests administered, the number of people who caught the virus, and the number of people hospitalized and treated in intensive care, and other such details.

On March 21, 2020, the Turkish government initiated a curfew on those above 65 years of age and persons with autoimmune deficiencies and chronic diseases. Later, as of April 10, the lockdown was extended to all individuals and implemented every weekend. Figure 3 reveals the top three tweeted thematic content categories with more than 100 tweets and puts this within the context of the timeline of the pandemic and increased case numbers within the four-month study period. The MoH Twitter account also increased its activity around these dates, especially between March 22 and April 22, 2020, with 50 of 79 hashtagged tweets posted during this one-month period, which is referred to as the Intensive Hashtag Use Period in Figure 3. The increased traffic corresponds particularly to the widespread use of the hashtag #HayatEveSigar (#LifeFitsintotheHome), which was tweeted 34 times during this intense one-month period to ensure social isolation by keeping people at home. During this peak period, the MoH’s main thematic subject was healthcare providers and doctors’ working conditions, focusing on the need to support them, and staying at home was presented as one of the simple things people could do to lessen the demand for healthcare providers.

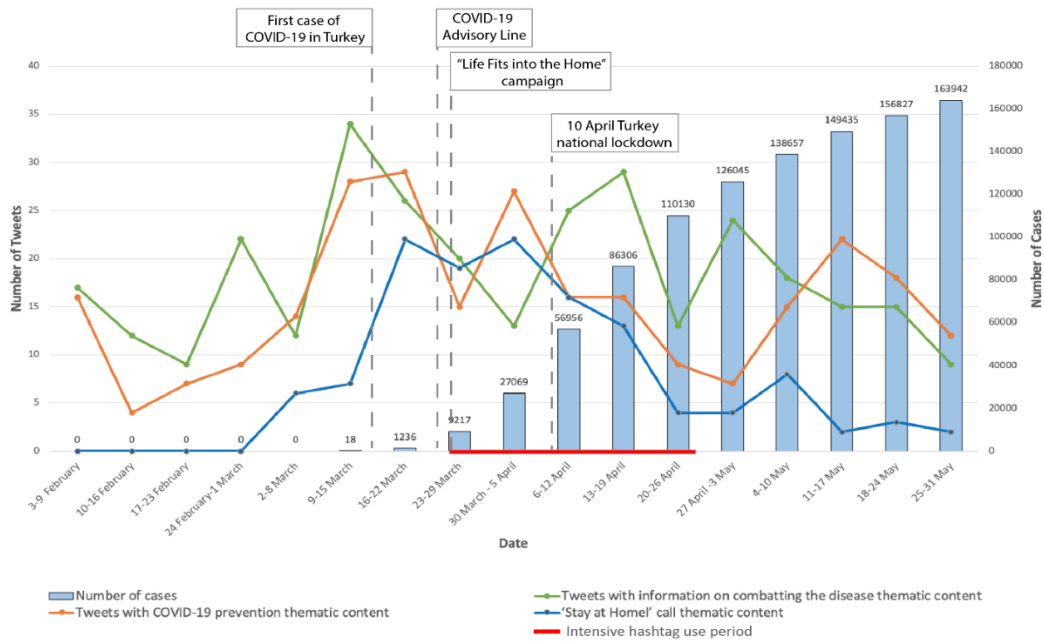


Figure 3. Distribution of tweets according to the thematic subjects.

The ministry's central rhetoric emphasized that the public should not exhaust the healthcare system, and this was followed by the call to *#EvdeKal* (*#StayAtHome*) and *#HayatEveSiğar* (*#LifeFitsIntoTheHome*) through these two popular hashtags, which have turned into slogans. This period also coincided with the weekend-long, nationwide and/or province-specific lockdowns and travel bans. However, after the week of April 20–26, the MoH tweets declined and remained relatively low till the end of the data-collection period, merely providing information on the latest numbers of cases, COVID-19 tests conducted, people receiving treatment at hospitals, and people who lost their lives due to COVID-19. Our analysis reveals that communication about COVID-19 and its symptoms diminished, perhaps as a result of a saturation of pandemic-related news from various sources, and people were mostly seeking information about protection and prevention methods. The MoH had started communicating information on combatting the pandemic/disease, which included the health capacity of Turkey as well as what precautions had to be taken as prevention methods before the first COVID-19 case was officially announced in Turkey. We believe that the ministry had in fact tried to take a proactive approach in its crisis communication efforts and tried to control the number of cases in the country by communicating clear messages that emphasize the importance of personal hygiene and staying at home. It also tried to establish itself as the sole authority in the country by presenting information regarding its capacity to the public.

The third research question analyzes the types of content shared by the MoH via social media platforms, looking specifically at visual and textual message symmetry and the messages' actual content, as suggested by Adi and Moloney (2012). A surprising finding is that of the 633 tweets included in the analysis, all contained at least one visual element, which resulted in total visual and textual symmetry in the tweets posted. The number of tweets that included videos and/or images/infographics revealed the MoH's emphasis on sharing multimedia content on digital platforms and to ensure that it was not a text-heavy account. This implies that the MoH has invested in its social media content management, using its Twitter account in tune with up-to-date conventions. Compared to five years ago, which coincided with mid Web 3.0 era, social media usage now is no longer limited to or dominated by copy-pasted statements from news releases shared as Twitter posts. An analysis of the tweets revealed that 263 tweets include live videos, 155 include photographs, 152 include infographics, 91 include either graphs or statistics, and 51 tweets include animations. These categorizations are not exhaustive, and one tweet can include a variety of moving images and other multimedia components. For example, a tweet that consists of a video can also include infographics, animations, and statistics within that video, and this tweet was coded to include all the multimedia components. Of the 263 videos posted, 15% ($n = 42$) consist of content produced by media organizations (TV channels/news agencies, etc.), and 85% ($n = 221$) include content created by various public institutions such as the MoH itself but also others including the Presidency, the Green Crescent, and various provincial health directorates. Figure 4 shows the ministry's multimedia content according to the content type.

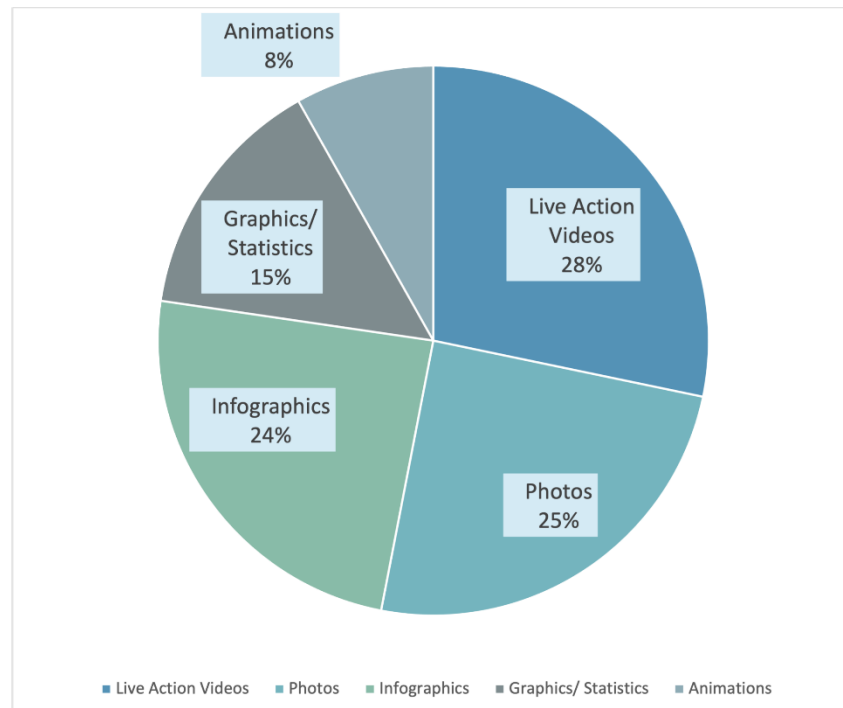


Figure 4. MoH Twitter content in 2020 by multimedia type.

The images shared by the MoH were further analyzed to reveal their visual content and the categories used in coding the images were not mutually exclusive. One photo could be coded under two or more categories depending on its content. An analysis of the distribution of images reveals that roughly one-third, 31% ($n = 199$) of the tweets include a photo of Health Minister Dr. Koca. Another 25% ($n = 157$) have images from press conferences, 22% ($n = 147$) contain statistical and numerical information regarding COVID-19 cases and related information, 18% ($n = 140$) contain images of patients and their relatives, and 17% ($n = 109$) have pictures of the Coronavirus Scientific Advisory Board members. Also, 9% ($n = 60$) of the tweets include photos of various other government authorities and state officials, including President Erdoğan; 9% ($n = 56$) have images of healthcare workers such as doctors, 5% ($n = 32$) contain images of MoH buildings, hospitals, or other public institutions, 5% ($n = 32$) include pictures of international officials, 4% ($n = 23$) include photos of children, 3% ($n = 20$) include images of various landscapes in Turkey, 1% ($n = 8$) have photos of relief work, or mask, gloves, and other health-related materials, and lastly 1% ($n = 8$) include images of older adults to emphasize the need to protect them. The analysis reveals that the main actors of COVID-19 are Health Minister Dr. Koca, COVID-19 patients and their relatives, doctors, and scientists belonging to the Coronavirus Scientific Advisory Board, healthcare providers, and other political actors such as President Erdoğan.

The final research question assesses how successful the MoH has been in using the interactive and engagement-generating components of social media platforms by looking at account activity through likes, retweets, and comments, all of which provide clues about the presence of effective community building as

per Adi and Moloney (2012), and further analyzing network expansion and hashtag activism. When we analyze the ministry’s official Twitter account’s community-building efforts through user interaction with tweets as discussed in the social media framework by Adi and Moloney (2012), results reveal that the MoH’s tweets received a total of 33,271,393 likes during the four months studied, followed by 4,628,131 retweets and 891,644 comments. This public interaction with the Twitter account reveals that the ministry could create an online community and position itself as an information subsidy about COVID-19, which provided relevant updates during this extremely panic-prone infodemic period.

However, when it comes to analyzing how effectively the MoH used social media’s interactivity features such as hashtags or other interactive features, results reveal that interactivity was not a priority for the ministry. Of the 633 total COVID-19 related tweets analyzed, only 12.4% (n = 79) included hashtags, which is quite low considering the significance of hashtag use for online community building and for creating awareness about an issue. The hashtags used in the tweets mostly focused on general or generic terms such as #COVID-19 or more specific calls to action like #LifeFitsintotheHome (#HayatEveSigar), which invite citizens to stay at home, or #WeWillWinTogether (#BirlikteYenecegiz), promoting solidarity. The MoH used 20 different hashtags in a total of 79 tweets, which are listed below in Figure 5.



Figure 5. Hashtags used by the MoH in 2020.

The most popularly used hashtags were #HayatEveSigar (#LifeFitsintotheHome) with 35 tweets, followed by eight #BirlikteYenecegiz (#WeWillWinTogether) hashtags and six #RiskiGorun (#RealizetheRisk) hashtags. Some acknowledgment hashtags were used to celebrate special days such as World Women’s Day, World Health Day, No Tobacco Day, and suchlike. Also, 10 of 79 tweets with hashtags included more than one hashtag. Some of the examples of tweets with multi-hashtag use are #HayatEveSigar / #BirlikteYenecegiz (five times) #COVID-19/EPW/GPW/ UnitedActionForBetterHealth (one time) targeting the international community, #BizBizeYeterizTurkiyem / #BizBizeYeteriz (one time), and

#Covid19 / #DogrulariÖğren (one time). Figure 5 reveals, by means of a tree map visualization chart, the most popular hashtags used by the MoH and how many times they were used in the sample.

Conclusions

Social media are regarded as the home of conversations on COVID-19 (Yammine, 2020), with Twitter being the driving force behind these conversations (Chen et al., 2020; Thelwall & Thelwall, 2020). Our findings reveal that Twitter discussions of COVID-19 focused on treatment and prevention, government precautions against its spread, and its societal effects, similar to findings by Fang and Costas (2020). It seems natural that the government uses social media to communicate directly with citizens about such vital information. As stated by Rao and colleagues (2020), it is critical for the government to “maintain reassurance through their communication during the time of an outbreak to maintain peace in the society” (p. 4). Many international research initiatives are proof that governments and organizations are increasingly using the direct and quick communication opportunities allowed by social media in their fight against COVID-19, some of which may include local as well as global updates as well as warnings and guidelines about dealing with the pandemic and its effects (Mourad et al., 2020).

In their time-series analysis from Belgium, Kurten and Beullens (2020) revealed that significant events related to COVID-19 resulted in an immediate increase in tweets addressing them. Our analysis shows that intense Twitter use by the MoH in Turkey coincides with the first COVID-19 case in Turkey and the government’s initial lockdown implementation, which reveals that the MoH systematically used its Twitter account to support, justify, and reiterate the government’s weekend lockdown procedures, share information, and foster behavior changes among the public. Twitter was used almost as an instant announcement tool to share up-to-date information and position the MoH as a critical and reliable resource about the pandemic information in Turkey.

As new uncertainties and limitations affect people’s lives every day, political and organizational leaders need to communicate about COVID-19 and explain the importance of prevention and protection methods such as hand hygiene, social distancing, and self-isolation to limit human-to-human transmission. As suggested by Rao and associates (2020), “policy makers and health officials can suggest interventions and strategies for enhancing resilience of communities” (p. 5), and Twitter has become a “powerful public health tool for world leaders to rapidly and directly communicate information on COVID-19 to citizens” (Rufai & Bunce, 2020, p. 510). Our analysis of Turkey’s COVID-19 response reveals that Twitter was the main driver for crisis communication, and Health Minister Dr. Koca was effectively positioned as the face of this strong and consistent presence online and in traditional media, communicating daily and openly about Turkey’s fight against the pandemic. Findings imply that the MoH has mostly focused on providing up-to-date and timely information about its fight against the pandemic at the national level and simultaneously communicating specific information about COVID-19 prevention and protection methods that the public can easily adopt, like washing hands and wearing masks. The call to stay at home to protect loved ones was also emphasized as part of disease prevention. However, how these topics were mentioned and reinforced on social media over time could be the focus of a future time-series analysis. Perhaps such a study would reveal that as more information comes to light about the virus, its spread, and effective protection from it, the public agenda on COVID-19 could have shifted more toward vaccination and new treatment protocols.

The MoH has established itself as a critical information subsidy for COVID-19 related information in Turkey. Furthermore, understanding hashtag use, especially effective and strategic hashtag use, was also one of this study's leading questions. Tweets were analyzed for the presence, number, and types of hashtags used. Revealing hashtag use was also crucial because, as Saxton, Niyirora, Guo, and Waters, (2015) suggest, tweets will get noticed and tweeted as long as they use sector-spanning hashtags, those that educate the public, reflect organizational goals and values, and create public dialogue or engagement. Results from our research reveal that the Turkish MoH has not been effective in using hashtags consistently to promote calls to action or foster online community building. Except for the 50 days of systematic hashtag use, the MoH has not been able to lead conversations on social media by using meaningful and strategic hashtags. In fact, a majority of the tweets do not even include any hashtags. An interesting finding of this study is that only 20 different hashtags were used in 79 tweets. There are no standard procedures to govern hashtag use in the tweets, which implies that the MoH does not have a very systematic or strategic social media strategy for effective agenda-setting through social media, thus missing an important opportunity to establish an online network. We assume that MoH's Twitter management strategy might be changing according to the person managing the account at a given moment, which could be the focus of a future qualitative study.

Study Limitations and Areas for Future Research

This study mainly focused on the Turkish MoH's social media usage, explicitly focusing on Twitter usage in the first four months of the pandemic. No other study has provided comparable data to put the numbers of likes, followers, hashtag use in perspective. Future quantitative studies could help provide a comparative analysis of such institutional communication efforts. The Turkish MOH was also under heavy scrutiny by academic and clinical leaders during the same time period for reducing the numbers of the cases and not providing accurate information (Gall, 2020). Future studies could take a more critical approach and examine whether the MoH was in fact part of an infodemic of misinformation.

Consequently, future studies could focus on transmedia storytelling and transmedia narrative transportation and focus on how an organization or government officials use various media platforms to enhance crisis communication. Future studies could also focus on the reception of organizational crisis communication and examine public perception of the effectiveness of crisis communication related to COVID-19. Furthermore, social network analysis could reveal the significance of official governmental players and highlight the level of their impact.

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