

# The Role of Social Media During the COVID-19 Crisis: A Narrative Review

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## Abstract

In late 2019, the coronavirus 2019 (COVID-19) emerged in Wuhan, China, and rapidly spread around the world. Due to this incident, the use of social networks has increased among people. The present narrative review aimed to investigate the studies conducted on the subject of social media and COVID-19 in the Web of Science database. The investigations show that social media has been used to share viewpoints, health care, and distance learning during the COVID-19 crisis. Therefore, using social media can be a valuable means for the governments and experts to prevent the spread of this epidemic and even in similar future crises.

*Keywords:* Social Networks; Social Media; Outbreak; Crisis; COVID-19; Narrative Review

## 1. Context

Emerged in Wuhan, China, in December 2019, COVID-19 is a novel viral disease that has spread rapidly throughout the world (1). It is a serious problem for public health and the health of individuals and communities. Like other epidemic diseases, people expect to know what measures can be taken to prevent and treat this virus. Since no specific control has yet been discovered for the prevention and treatment of this disease, early diagnosis and rapid treatment of this disease is necessary because not only does the patient become involved in the disease, but also the risk of infection transmission and disease outbreak significantly can increase (2). Therefore, the need for self-care and self-control to preclude the prevalence of this disease is of great importance. The people in the affected communities must learn to protect themselves from the potential dangers of this mysterious and unknown virus. Staying at home, avoiding daily physical interactions, and domestic quarantine are among the methods of controlling and preventing the spread of this disease (3). In this regard, individuals in the community use information technology tools to raise awareness, educate, and follow health-related affairs. In recent years, information technology has become extensively used in the health care system (4). Social media is one of the tools of information technology widely used by the general public (5). Social networks are web-based tools applied for communication through computer systems, making it possible to create two-way communication between users. Since the development of the first type of social media, different types of these network tools have been developed, and employing these networks for many people is con-

sidered to be a daily routine (6-8). Instagram, Telegram, Facebook, Twitter, and WhatsApp are among the most important websites and popular social networking applications (7, 9, 10).

These virtual networks are more useful and effective in forming new relationships (11, 12), maintaining current and past relationships (13), facilitating the communications (5), improving social participation (7), and increasing knowledge and job skills (14). Moreover, spreading rumors and invalid information and not monitoring these networks (7) are among the threats of social media. Many studies have also indicated that social media has been used optimally in educational or therapeutic processes (15-17). It has also been used in healthcare to maintain or improve peer-to-peer and clinician-to-patient communication (18, 19). The present study was selected as a narrative review according to the subject and objective of the investigation (20). For this purpose, we extensively used the advanced and reputable search of Web of Science Core Collection, and the oldest citation database in the world (21), by combining suitable keywords, such as COVID-19, coronavirus disease 2019, social network, and social media to search on June 20, 2020, and retrieve related documents.

## 2. Users Activities in Sharing Viewpoints and Experiences

Individual activities have increased on social media with the outbreak of the coronavirus 2019 crisis (COVID-19). Twitter, Facebook, YouTube, and Instagram

are among the most important networks throughout this period (22, 23). In these networks, different people publish their thoughts, viewpoints, attitudes, and feelings about the crisis and share with others. Twitter is one of the most important social media in which people share their opinions and viewpoints. In this social network, the global trend related to the disease is followed, and important news and information about the disease such as quarantine and other related issues are shared (24). By investigating the tweets of the Twitter users, Abd-Alrazaq et al. (22) concluded that the topics shared by the users are categorized in four main topics, including the origin of COVID-19, source of a novel coronavirus, impact of COVID-19 on people and countries, and methods for decreasing COVID-19 spread.

Another study found that most comments of users on social networks were on “events notification”, “popularization of prevention and treatment”, and “government response” (25). There have also been tweets about COVID-19 and older people on Twitter, most of which were personal comments, jokes and insults, and no informative content, and only a third of the information has been intended to provide information to old patients and recommendations for the general population. In contrast, older people are known to be vulnerable to this disease (26). These people also use social media to learn about the disease and share their viewpoints (23).

### **3. Sharing Educational Resources and the Speed of Its Spread**

Speed and sharing of resources are important features in social networks. For instance, Chan et al. (27) posted a sample infographic on Twitter, WeChat, and the official website of their hospital, which was designed in the field of protecting health workers against COVID-19. Their results indicated that the speed of resharing and visiting this educational resource on social media, especially Twitter, was much higher than the websites (27). Due to the high speed of content sharing, social media are useful for receiving up-to-date and fast information around the world in response to the current changing conditions (28). Social media is also an opportunity to change modern education during the quarantine period (29).

### **4. Providing Health Cares**

In the COVID-19 pandemic, social networks, if appropriately used, can provide fast and effective routes of important information. Therefore, it can be stated that access to high-quality information from confirmed sources on social media can be the optimal response of global medicine to the epidemic of COVID-19 (27). In general, social networks such as Twitter have changed communication, and the provision of health care, and people can use this platform for “social health” topics. Rapid provision of information on the prevalence and resistance to antimicrobials is essential for physicians and the general population (30).

Guo et al. (31) provided a successful experience in providing services and information through online social networks (WeChat) in dental patients’ health care. They provided a positive experience of remote healthcare services due to the special circumstances of the coronavirus crisis and the need for less traffic and home quarantine and found social media useful to prevent the outbreak of the disease (31). Another study has found that existing pages on specific diseases and health care were more active at the time of the coronavirus outbreak and responded to people’s concerns (32). Moreover, virtual question and answer sessions have also been conducted for specific diseases on social media in a desirable and effective way (32, 33). Also, the use of social media to provide more secure health information and services helps COVID-19 patients be aware of existing procedures and conditions (34). Social networks can also be applied as a platform for sharing medical resources for healthcare provider groups, which will reduce the sense of uncertainty, ensure the quality of healthcare, and reduce the workload (35). In general, social networks cannot replace public health measures; however, they are able to increase the attention to the crisis of COVID-19 among individuals by providing news and accurate and relevant information. They can also help medical professionals in complex and decision-making processes (36).

### **5. Data Collection and Polls**

Due to the coronavirus crisis and the lack of face-to-face meetings between individuals and researchers, social media can be used as a suitable platform for collecting data and remotely receiving responses of polls. Accordingly, Facebook, as a social network, can be an effective and cost-effective research strategy for collecting valuable data on a large scale concerning the epidemic of COVID-19 because the presentation of optimal advertising patterns on Facebook has led to the increase of the response to the questionnaire in the statistical sample. Facebook can also be effective in planning, developing, implementing health communication promotion programs, and reducing health threats (37). The public awareness of the disease can be monitored using social media and through publishing online polls (38). The polls can be distributed not only in one society but also in different communities without limitations (39).

### **6. Observance of Social Distancing**

The use of social media leads to a more successful implementation of social distancing between individuals. On the other hand, the effects of the lack of communication among people can reduce social isolation. Simple behavioral rules of social distancing between individuals can help reduce the spread of COVID-19 disease and the social, psychological, and economic pressures on individuals. Therefore, governments and organizations, policymakers put the policies based on social networks on

the agenda (40). Social media can be useful in the interaction of citizens during the COVID-19 crisis and facilitate the interaction between the government and individuals (41). The content of social media can support the participation and development of the social distancing culture, and the role and responsibility of individuals as members of society become more prominent through access to information on these networks (42). Social media can also be used as a way to improve emotional relationships and increase awareness (43).

## 7. Challenges of Using Social Media

Social media is used for information transmission during the outbreak of the COVID-19 crisis, which can change the behavior of individuals in the community (44). Since most social networks allow all users to share information, and also due to the lack of scientific monitoring of health information published on social networks, the problem of publishing incorrect information among users during the COVID-19 crisis is considered as the primary concern (44, 45). Incorrect medical information and unconfirmed content, and even false information as the information based on evidence on the global epidemic of COVID-19 are publishing on social media at an alarming rate (46, 47). In the meantime, wrong home remedies and dedicated consultations shared on social media can increase the outbreak risk of coronavirus (48). The rapid spread of invalid information on social media and the inability to detect the correct and incorrect information by users has increased fears and concerns about the outbreak of COVID-19 disease among people in the community (23, 49, 50). However, concerns and impacts of social media on people may vary depending on their gender, age, and education level (23, 51).

## 8. Conclusions

The results of the present review indicate that social networks have a high potential to help inform and increase awareness, education, and healthcare during the coronavirus crisis period. It is also effective in maintaining social distancing and encouraging people to stay at home and avoid unnecessary commutes. Although the use of social media by users and the general population is beneficial, the threats and challenges that may arise at the community level should not be overlooked. Therefore, relevant organizations and experts should teach people how to use social media correctly. Also, to obtain information, valid databases should be introduced to the people. One of these scientific databases is the LitCovid hub, which is developed with the support of the US National Institutes of Health's intramural research program and updated daily with newly published articles (52, 53). Furthermore, approved and recognized healthcare organizations and specialists should also be more active in these networks during the crisis period to provide the necessary training to users while monitoring social media. Governments

and experts can also use these experiences from social media to prevent the outbreak of COVID-19 disease and other similar future crises.

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