Citation: Adnan, M., Sultana, I., & Hameed, M. B. (2020). The Smokescreen of Media during COVID-19 and Its Perpetual Resolutions: A Thick Description. *Clobal Legal Studies Review*, V(IV), 10-16. https://doi.org/10.31703/glsr.2020(V-IV).02

🛄 Cite Us

# The Smokescreen of Media during COVID-19 and Its Perpetual Resolutions: A Thick Description

Malik Adnan *	p- ISSN: 2708-2458	<mark>e- ISSN:</mark> 2708-246	56 L- ISSN: 2708-2458
Irem Sultana †	Vol. V, No. IV (Fall 2020)	<b>Pages:</b> 10 – 16	DOI: 10.31703/glsr.2020(V-IV).02
Muhammad Basharat Hameed <sup>‡</sup>		URL: http://dx.doi.org/10.31703/glsr.2020(V-IV).02	

Abstract: Regarding the information of Coronavirus, the platform of social and mass media played a vital role. As there was little knowledge about COVID-19 at the beginning, numerous fake news, misinformation, and rumors were spread by the digital media across the globe, which made people lose their nerves and panic decisions. To weaken and stop the spreading of misinformation and fake news in the course of the COVID-19 pandemic are requisite because the misinformation and rumors about the pandemic create anxiety, distress, and disturbance among the public, and leads them to several psychological disorders. Instead of viewing social media as a tributary channel, it must be organized to deliver significant data and information. Moreover, it lets people report their questions directly. Several governments have taken drastic steps to hold the pandemic of misinformation, globally; however, several measures are mandatory to avert such communication barriers.

Key Words: COVID-19, Media, Social Media, Communication Barriers, Pandemic

### Introduction

Coronavirus illness 2019 (COVID-19) came to the scene in Wuhan China at the beginning of December and spread globally and within a short time, became a pandemic (Pan et al., 2020). Governments all over the world instigated the safety measurements of social distancing and isolation to lessen the jeopardy of the virus (Zhai and Du, 2020). Segregation and Self-quarantine caused a menace to the mental health of the people around the world (Brooks et al., 2020). Since there was little knowledge about the unusual Coronavirus, it was necessary to give accurate information attained from reliable sources [Hua and Shaw, 2020]. It was very challenging and problematic to assemble the up-to-date data of the affected, healthier, and dead because of the rapid varying of data on COVID-19. It was informed that the aged and immune-compromised individuals were very close to the threat of COVID-19 infection (Hua and Shaw, 2020). In the initial situation, the people were deprived of medical aids to manage the disease (virus). The apparatuses to avoid Coronavirus were isolation and societal distancing. Also, different media especially social media platforms were utilized to motivate people to obey the guarantine rules, to decrease panic amongst people, and to strengthen public reliance in supporting and following public health measures [Depoux et al., 2020]. The COVID-19 pandemic was considered unique [Faroog et al., 2020). First of all, for the healthcare of people, the expert struggled to constrain the degree of the infection. In this regard, medical misinformation was constantly put on social and mass media platforms at a distressing level (Kouzy et al., 2020). On individual and community levels, the bulk of misinformation regarding Covid-19 was enough disturbing that governing organizations started to recognize its effect and made struggled to maximize them [Kouzy et al., 2020].

Typically, an outburst of the transmittable disease cannot be forecasted in a specific region, community, or period [<u>Oh *et al.*</u>, 2020]. The misinformation, delusion, and fake stories can pointedly obstruct the communication response and intensify anxiety and fear amongst the people. Therefore, it is essential to keep a vigilant eye on media since it is responsible for the information, and it can manage rumors about Covid-19 [Frost *et al.*, 2019]. Social media can be seen as the primary medium thriving the information concerning this virus [<u>Cao *et al.*</u>, 2020]. The prime shortcoming of social media during a challenging condition such as Coronavirus is that social media has been utilized as a tactic to deliver fake

<sup>&</sup>lt;sup>‡</sup> M.Phil. Media Studies, Community Awareness Officer, Punjab Emergency Service, Toba Tek Singh, Punjab, Pakistan.



<sup>\*</sup> Assistant Professor, Department of Media Studies, The Islamia University of Bahawalpur, Punjab, Pakistan. Email: <u>dr.adnan@iub.edu.pk</u>

<sup>&</sup>lt;sup>†</sup> Assistant Professor, Department of Mass Communication, Government College University, Faisalabad, Punjab, Pakistan.

news and misinformation [Park *et al.*, 2020]. With the expansion of social networking tools such as YouTube, Twitter, and Facebook, the information broadcast in catastrophe circumstances has been amplified worldwide at different points [Park *et al.*, 2020]. Social media gives a platform for sharing public opinion and insights, which can be explosive and sensitive in critical circumstances as the COVID-19 pandemic [Han *et al.*, 2020]. However, misinformation concerning COVID-19 is spreading quickly via media and the internet during the epidemic. The thick description of such misinformation argues how it builds up emotional awareness and discouraging decision-making [Han *et al.*, 2020].

#### **Research Method**

This expressive and qualitative study adopts the 'thick description' – the epistemology which gives the information and sense about the given social patterns and describes the inclusive interpretation of involvements of "explicit patterns of [society]" in bad circumstances (Holloway, 1997, p. 154). This study focuses on the picture of society in pandemic through media: the in-depth study of the social media platforms interpret the social patterns embedded in them.

#### Smokescreen of Media during the Pandemic

No doubt nowadays a significant source of information is social media; Twitter possesses the quality to provide real-time content scrutiny and allows the public health care authorities to respond to the probes of the people swiftly (Ahmed et al., 2020). During the COVID-19 pandemic, social media played a vital role in pandemic concerning the information which alerts the people in real-time (Oh et al., 2020). The H1N1 flu epidemic was also first informed and accounted for via different channels of media. [Jang & Baek, 2019 Also, the government organizations such as the Centers for Disease Control and Prevention (CDC) utilized social media to report people of ostensible infections like the Zika and Ebola epidemics (Oh *et al.*, 2020). The persistently growing social media has, thus, become a key platform for communication in the time of crisis. Public health departments and individuals are using social media networks to communicate and reciprocate information during public health emergencies [Zhao et al., 2020). Prevalent social media tools - Twitter, TikTok, Facebook, and YouTube - have served to educate people vis-à-vis the precautions and safety measures to circumvent misinformation during Coronavirus. But, the contribution of these media channels remains interrogative [Li *et al.*, 2020]. The social media platform used to overcome psychological stresses during the universal guarantine (Depoux et al., 2020), however, it also distorts the sensible motives as it was used to provide fake acknowledgement about the safety measures (Depoux et al., 2020).

Generally, an epidemic endangers the health care of a huge number of people. It needs instant measures to control the infection at the civic level [Würz *et al.*, 2013]. Researchers conclude that anger, fear, awareness at the individual level, and defensive manners let people access media [Oh *et al.*, 2020]. A school of thought has projected that these reactions stimulate the connection between awareness and media [Oh *et al.*, 2020]. Also, anxiety is exhibited by people commonly on media, especially on social media as a pertinent negative sentiment during the COVID-19 pandemic [Oh *et al.*, 2020]. This incorrect information, when it is conveyed to the public, generates a panic situation and makes them confused in numerous ways [Liu *et al.*, 2020].

Hence, the urgent need to relieve anxiety and panic owing to social media has become the main concern of the government and concerning health authorities [Depoux *et al.*, 2020]. Since the pandemic began, the public has been ambivalent about discovering the right online channels of information [Zhao *et al.*, 2020]. Researchers also observed that the interest of the public in pandemics and viruses on social media made them connect to the present news and worldwide events; hence they endured to pay heed to all news even fake and deliberately searched terms related to covid-19 [Zhao *et al.*, 2020]. World Health Organization (WHO) also told time and again that the anxiety, fear, anxiety, and anger primarily feed the misinformation [Gao *et al.*, 2020]. It is shown by various studies that incidental media disclosure to mass trauma may strengthen the preliminary signs of post-traumatic stress disorder (PTSD) [Gao *et al.*, 2020]. During the wave of COVID-19, half-truth, and delusive news about COVID-19 raided social media and caused groundless terror amongst several cybercitizens that can cause misperception and disturb the mental health of peoples [Ha *et al.*, 2020].

Confusion and panic are aroused by misinformation [Depoux *et al.*, 2020]. False and misleading information became a noteworthy issue through social media sites during the COVID-19 pandemic. A novel update has been led by Facebook, which serves as a warning to users if they are involved with improper information [Ahmed *et al.*, 2020]. Different studies have informed that certified Twitter accounts and healthcare accounts had the least unverifiable information in contrast to others [Kouzy *et*]

<u>al., 2020</u>]. Some features and tweets of Twitter accounts were found to incline to deliver untrue and unverified intelligence. A few examiners of the situation revealed that the 'humor effect', wherein the users participated in the discussion to mock the treachery involuntarily, was posing a risk for misguidance [Ahmed & Lugovic, 2019]. On social media sites misinformation constantly publicized a wrong message among the public, which became a menace for different societies that did something good by adopting protective measures for the safety of their people [Kouzy *et al.*, 2020]. For instance, misinformation on Facebook about *hydroxychloroquine* as a possible medication to treat and cure COVID-19 urges numerous healthy persons to buy such medications without consulting any doctor. It caused a shortage of these medicines for the virus-affected patients [Abdelhaiz *et al.*, 2020]. On the other hand, the persons who were suffering from other ailments also used these medicines for the coronavirus virus; hence, put themselves and their governments in trouble. Hence, accessing and transmission swift, exact information that addresses serious problems of control is necessary [Chan *et al.*, 2020].

The discussions on the misleading nature of social media made people think of the extra care while consuming the tools and platforms of media that may avert the spread of rumors and misinformation concerning COVID-19 [Abdelhaiz *et al.*, 2020]. In this regard, the blossoming arena of research may help people and public health agencies and scheming public strategies as it calculates the electronically generated and expended health data [Eysen-bach, 2009]. The advantage of this type of research is its proficiency in assembling concerned health data in real-time from written, unstructured, picture, or user-generated information that is delivered with the help of digital media – websites, blogs, and different sites of social network [Eysenbach, 2011]. The user-generated data is less reliable [Zhao and Zhang, 2017] because user-generated and shared health information on social media regarding the COVID-19 was often proved as a less fruitful method for public health surveillance (Park *et al.*, 2020). Examining the online analysis of and reactions to health issues by the public as seen on social media proposes insights into the public's opinions of and self-revelation of signs associated with the infection (Park *et al.*, 2020). In this regard, the network scrutiny is considerably useful for checking mutual networks among numerous stakeholders, and also for the proper supply of sources during emergencies and national disasters [Park *et al.*, 2020].

The excessive information was noticed from too much use of the internet during the COVID-19 pandemic. Excessive information is described as neurotic online browsing for health-related information basically about particular symptoms of the disease. This information overloading generates the circumstances wherein the miscommunication in the form of information processed processes the misguidance that makes the whole procedure ineffective (Faroog et al., 2020). This information overloading also damages human cognitive reasoning (Achanccaray et al., 2018; Fergus & Russell, 2016; Starcevic & Berle, 2013). During new, unusual, and possibly fatal pandemic surroundings such as the COVID-19 pandemic, the shortage of flawless communication can confuse and even panic among the inhabitants (Faroog et al., 2020). The easy access to social media as a tool for getting information causes the 'information overloading' that highlights the fact that social media news is no more valid or inclusive approach as compare to the reports of journalists (Faroog et al., 2020). Hence, social networking sites and search engine designers should take actions to ensure unbiased, clear, and logical information to the users to prevent the harmful effects of 'information overloading' and at the same time communicate and address the graveness of the pandemic and propose health care measures for the citizens (Faroog et al., 2020). Educating people about the safe and responsible use of social media, therefore, may aid to alleviate the negative impacts (Faroog *et al.*, 2020).

Media exposure and the public view can have a noteworthy effect on both the private and public sectors in determining the concerning suspending programs such as airline programs, compared to the genuine need for public well-being (Depoux *et al.*, 2020). Mass media have long been noticed as critical sources of public views of threat (Oh *et al.*, 2020) because media acknowledged people as they pretend to be that risk the real issues of the epidemic (Oh *et al.*, 2020). The information concerning the risk is conveyed in such a manner that it impacts the perception of people about the risk, specifically about the pandemic crisis (Chong & Choy, 2018). In specific, it is thought that anger and anxiety facilitate the outcome of media coverage. No doubt, the outbreak of COVID-19 is an adverse happening across the world, resulting in an incalculable number of ailments and mortalities, causing negative self-relevant sentiments in public (Oh *et al.*, 2020). People frequently show and highlight their apprehensions about the pandemic outbreak via social media (Oh *et al.*, 2020). However, in some cases, the different channels of media remain inept at recording the epidemic on time, so failing to be the leading indicator [Liu *et al.*, 2020] and does not perform as a valuable pre-warning part in communicating people about the precaution for their health (Liu *et al.*, 2020). Since there is no research on this newly emerged virus,

misinformation transmitting through the mass media is leading towards serious psychological disturbance among people [Liu *et al.*, 2020].

A cautiously planned study of global online deliberations will comprise a quick estimation of the spread of COVID-19 and possible developments in public observations and attitudes (e.g. self-isolation, approach to health care), identification of the infection and its indications, and the outcome of important epidemic decisions (e.g. quarantine measures, invention/discovery of new vaccines) (Depoux et al., 2020). The establishment of a communicating platform to deliver real-time warnings of worldwide spreading rumors and misinformation concerning Coronavirus would allow public health care authorities and relevant contributors to answer speedily with an appealing and practical narrative that can resolve and handle the fake information (Depoux et al., 2020). This would also help to ease public panic (Depoux et al., 2020). People ought to be advised by public health officials regarding engaging and exchanging inaccurate information on social media. On the other hand, the improper data must be wrapped as unsuitable to the social media authorities as there are numerous complaints about the reporting of the wrong information (Ahmed et al., 2020). Another way of lessening incorrect information is to get support from noticeable public administrations and organizations such as elected personalities, government agents, relevant medical professionals, physicians, or the fourth estate (Ahmed *et al.*, 2020). Startups also established free and isolation-alert tracking apps like 'Safe Paths' in the USA and 'Geo Health' in Germany, to get and save GPS locality data of individuals for a maximum of 28 days to assemble more private data for health organizations if their test is positive for the virus (Kummitha, 2020).

Public health authorities should detect the risk of COVID-19 misinformation and take pivotal steps to certify the reliability of information flowing on the sites of social media (Kouzy *et al.*, 2020). Along with the struggles of public health officials to support verified research during this pandemic, the physicians, medical staffs, and science journals play dynamic roles in fighting against misinformation (Kouzy *et al.*, 2020). Medically unverified content and misinformation about the COVID-19 pandemic is rapidly spreading on social media. (Kouzy *et al.*, 2020). With the help of worldwide cooperation and multidisciplinary alliances, false information can be replaced by the verified medical reports and accurate information (Kouzy *et al.*, 2020).

Social media features like 'mentions' and 'hash-tags' permit different government organizations to deliver information exactly and fast. They can answer people's questions by post and can enrich communications with the community and develop their level of rendezvous [Chen *et al.*, 2020]. The government should reinforce its capability to handle rumors by observing and gauging responses to choose if the behavior has changed or stories have been clogged [Frost *et al.*, 2019]. Besides, a flood of news and information can generate mass communication collapse and dull the impact of the media. It is the responsibility of the government as well as of the mass media to find out the right news themes and numbers to avert harmful mental stress regarding the outbreak [Liu *et al.*, 2020]. Governments that adopt an all-inclusive approach to incorporate public involvement in political progressions, such as discussions on public strategy, raise transparency, and assist transparent executives [Chen *et al.*, 2020]. Because of its direct, dialogic, and sharing nature, social media suggests major benefits in giving synchronous and cooperative contact between managements and people, providing new enthusiasm to communication among people [Chen *et al.*, 2020].

Government authorities still regard social media as a corresponding source for spreading information, rather than a source for developing interaction amongst the people. Alerts and guiding information are delivered via their websites, but few employ partaking approaches to endorse collaboration and discourse between government and people [Chen *et al.*, 2020]. The government agencies should recognize the information requirements of people carefully to smooth their engrossment when they execute sanctioned on social media platforms [Chen *et al.*, 2020]. In this regard, emotional power, emotional existence, and sentimental valence may affect public engagement via social media in a different way [Chen *et al.*, 2020]. Hence, it is the responsibility of the government to make sure of the availability of the appropriate information by discouraging and repressing the misinformation. Information control will lessen the misinformation circulation that spreads through digital technologies [Kummitha, 2020]. Additionally, the government must reinforce the public judgment response and epidemic avoidance at all regional levels and develops operative response countermeasures by following the demands of the public in the crisis [Han *et al.*, 2020].

Government organizations all over the world have utilized social media for creating awareness and boosting their civilians during the crisis of pandemic [Chen *et al.*, 2020]. Local government administrators in most of the countries utilized features of Twitter, such as mentions and hashtags, to talk with the general public to describe rumors and recognize wrongdoers during the 2011 riots [Chen

et al., 2020). Twitter features were used by the Indonesian government agencies to communicate the early warnings with people during the 2012 Tsunami, improving their performance in civic information services (Chen et al., 2020). In the United States, government representatives used Twitter in the course of the 2012 Hurricane Sandy crisis to include people in the formation of public services. Nevertheless, they chiefly involved stakeholders, plus individuals, peer government sections, and media channels (Chen et al., 2020). The Chinese government has delivered mental health care services through many platforms, including hotline, online counselling, online course, and outpatient counselling, but hopelessness and worry should be given more consideration (Gao et al., 2020). As an answer to public apprehension, the Chinese government released a series of updates on the 'official' Weibo accounts to describe the disease with an official warning to hospitals, on December 30th, 2019, on how to knob the possible cases (Li et al., 2020). These examples describe how the governments with the help of social media platforms made their people aware and educate about the havoc of the coming disaster. However, there was much fake news about the disaster that also show the mismanagement of the governments in the emergency provisions (Hua and Shaw, 2020). In Egypt, the Ministry of Health (MOH) started using diverse methods of communication to notify the civilians regarding the epidemic, comprising television and street advertising plus text messages (Abdelhaiz et al., 2020). MOH also utilized the supporting ads on Facebook, which mirrors policymakers' acknowledgement of this platform's worth (Abdelhaiz et al., 2020).

The public health reaction (Depoux et al., 2020) must be strengthened by social networks. By discussing theories of conspiracy circulated at the time, public media, newspapers, and radio broadcasters put the knowledge to the detection of fake news (Ahmed et al., 2020). Timely analysis of risk concerning networks and connections with public social media will contribute to promote the understanding of stakeholders' opinions and lead to establishing the appropriate policies for effective risk reduction and resilience, thus maintaining efficient management of disaster incidents (Park et al., 2020). Artificial intelligence on social media can assist government officials in sharing and updating real-time information regarding the current threats of infectious diseases. To share information, people use various media outlets and mass media (Park et al., 2020). On the forum where it exists, a further important remedial action against misinformation should actually occur because individuals do not visit the website to review the negating report. They will also go through the fake facts submitted on a social media site and shared them (Ahmed et al., 2020). In order to avoid the deterioration of the health system, effective public health measures are necessary, and the media can play a vital role in delivering updated guidelines and legislation from the policymakers to the citizens. Effective contact across media and social media channels and between people and public health organizations of governments is one of the critical aspects to respond to the active pandemic (Liu et al., 2020). In the context of future worldwide outbreaks, a communication strategy with toolkits needs to be implemented immediately as a commitment to public health reaction needs (Depoux et al., 2020).

## Conclusions

Risk communication is also now part of the regional response programs for health emergencies. Understanding the capacity of risk communication is an essential matter to maintain global health security [Frost *et al.*, 2019]. For the current COVID-19 pandemic, the development of a real-time information sharing system is necessary, which analyses the data from a variety of social media platforms in several languages globally [Depoux *et al.*, 2020]. It is particularly significant for states that do not have established strategies for media communication or need more efficiency and 'controlled transparency' about the epidemic, and for communities that are more vulnerable due to lack of information during the crisis [Depoux *et al.*, 2020]. Since the outburst of COVID-19 and its status as a pandemic, the media, especially social media, has been flooded with information. The information on such platforms educates the people about the novel virus (COVID-19), whose treatment is not discovered so far, but the media channels also flourish the rumors and misinformation that lead people to terror. The governments and public health care authorities should use the media in developing awareness amongst the people and reducing panic, however, they must address the negative usage of social media to inform their citizens about the approaching danger.

## References

- Abdelhaiz, A. S., Mohammed, Z., Ibrahim, M. E., Ziady, H. H., Alorabi, M., Ayyad, M., Sultan, E. A. (2020). Knowledge, Perceptions, and Attitude of Egyptians Towards the Novel Coronavirus Dis-ease (COVID-19). *Journal of Community Health*, pages 1–10.
- Achanccaray, D., Pacheco, K., Carranza, E., Hayashibe, M. (2018)]. Immersive Virtual Reality Feedback in a Brain Computer Interface for Upper Limb Rehabilitation. In 2018 IEEE International Conference on Systems, Man, and Cybernetics, pages 1006–1016. IEEE.
- Ahmed, W., Lugovic, S. (2019). Social media analytics: analysis and visualization of news diffusion using NodeXL. *Online Information Review*, 43(1):149–160.
- Ahmed, W., Vidal-Alaball, J., Downing, J., Seguí, L., F (2020). Dangerous Messages or Satire? Analyzing the Conspiracy Theory Linking 5G to COVID-19 through Social Network Analysis. *Journal of Medical Internet Research*.
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: a rapid review of the evidence. *The Lancet, 395*(10227):912-920.
- Chan, A. K. M., Nickson, C. P., Rudolph, J. W., Lee, A., Joynt, G. M. (2020). Social media for rapid knowledge dissemination: early experience from the COVID-19 pandemic. *Anesthesia*.
- Chen, Q., Min, C., Zhang, W., Wang, G., Ma, X., Evans, R. (2020). Unpacking the black box: How to promote citizen engagement through government social media during the COVID-19 crisis. *Computers in Human Behavior*, 110.
- Chong, M., Choy, M. (2018). The Social Implications of Haze-Related Risks on the Internet. *Health Communication*, *33*(1):14-21.
- Depoux, A., Martin, S., Kara illakis, E., Preet, R., Wilder-Smith, A., Larson, H. (2020). The pandemic of social media panic travels faster than the COVID-19 outbreak. *Journal of Travel Medicine*, 27(3):27–27.
- Eysenbach, G. (2009). Infodemiology and Infoveil-lance: Framework for an Emerging Set of Public Health Informatics Methods to Analyze Search, Communication and Publication Behavior on the Internet. *Journal of Medical Internet Research*, 11(1):e11-e11.
- Eysenbach, G. (2011). Infodemiology and Infoveil-lance. *American Journal of Preventive Medicine*, 40(5): \$154-\$158.
- Farooq, A., Laato, S., Islam, A. K. M. N. (2020). Impact of Online Information on Self-IsolationIntention During the COVID-19 Pandemic: Cross-Sectional Study. *Journal of Medical Internet Research*, 22(5): e19128-e19128.
- Fergus, T. A., Russell, L. H. (2016). Does cyberchondria overlap with health anxiety and obsessivecompulsive symptoms? An examination of latent structure and scale interrelations. *Journal of Anxiety Disorders*, 38:88–94.
- Frost, M., Li, R., Moolenaar, R., Mao, O., Xie, R. (2019). Progress in public health risk communication in China: lessons learned from SARS to H7N9. *BMC Public Health*, *19*(S3), 475-475.
- Gao, J., Zheng, P., Jia, Y., Chen, H., Mao, Y., Chen, S., Dai, J. (2020). Mental health problems and social media exposure during COVID-19 outbreak. *PLOS ONE*, *15*(4).
- Ha, B. T. T., Quang, L. N., Mirzoev, T., Tai, N. T., Thai, P. Q., Dinh, P. C. (2020). Combating the COVID-19 Epidemic: Experiences from Vietnam. *International Journal of Environmental Research and Public Health*, 17(9), 3125–3125.
- Han, X., Wang, J., Zhang, M., Wang, X. (2020). Using Social Media to Mine and Analyze PublicOpinion Related to COVID-19 in China. *International Journal of Environmental Research and Public Health*, 17(8).
- Hua, J., Shaw, R. (2020). Corona Virus (COVID-19) "Infodemic" and Emerging Issues through a Data Lens: The Case of China. *International Journal of Environmental Research and Public Health*, 17(7):2309–2309.
- Jang, K., Baek, Y. M. (2019). When Information from Public Health Officials is Untrustworthy: The Use of Online News, Interpersonal Networks, and Social Media during the MERS Outbreak in South Korea. *Health Communication*, 34(9), 991–998.
- Ji, Y. G., Chen, Z. F., Tao, W., Li, Z. (2019). Functional and emotional traits of corporate social media message strategies: Behavioral insights from S&P 500 Facebook data. *Public Relations Review*, *45*(1), 88-103.
- Kouzy, R., Jaoude, J. A., Kraitem, A., Alam, M. B. E., Karam, B., Adib, E., Zarka, J., Traboulsi, C., Akl, E., Baddour, K. (2020). Coronavirus Goes Viral: Quantifying the COVID-19 Misinformation Epidemic on Twitter. *Cureus*, (3):12-12.

- Kummitha, R. K. R. (2020). Smart technologies for fighting pandemics: The techno- and human driven approaches in controlling the virus transmission. *Government Information Quarterly* pages 101481-101481.
- Li, J., Xu, Q., Cuomo, R., Purushothaman, V., Mackey, T. (2020). Data Mining and Content Analysis of the Chinese Social Media Platform Weibo During the Early COVID-19 Outbreak: Retrospective Observational Infoveillance Study. *JMIR Public Health and Surveillance, 6*(2): e18700.
- Liu, Q., Zheng, Z., Zheng, J., Chen, O., Liu, G., Chen, S., Ming, W. K. (2020). Health Communication Through News Media During the Early Stage of the COVID-19 Outbreak in China: Digital Topic Modeling Approach. *Journal of Medical Internet Research*, 22(4).
- Oh, S. H., Lee, S. Y., Han, C. (2020). The Effects of Social Media Use on Preventive Behaviorsduring Infectious Disease Outbreaks: The Mediating Role of Self-relevant Emotions and Public Risk Perception. *Health Communication*. pp 1–10.
- Pan, X., Ojcius, D. M., Gao, T., Li, Z., Pan, C., Pan, C. (2020). Lessons learned from the 2019 CoV epidemic on prevention of future infectious diseases. *Microbes and Infection, 22*(2), 86-91.
- Park, H. W., Park, S., Chong, M. (2020). Conversations and Medical News Frames on Twitter: Infodemiological Study on COVID-19 in South Korea. *Journal of Medical Internet Research*, 22(5): e18897-e18897.
- Starcevic, V., Berle, D. (2013). Cyberchondria: towards a better understanding of excessive healthrelated Internet use. *Expert Review of Neurotherapeutics*, *13*(2), 205-213.
- Würz, A., Nurm, Ü.-K., Ekdahl, K. (2013). Enhancing the Role of Health Communication in the Prevention of Infectious Diseases. *Journal of Health Communication*, *18*(12), 1566 1571.
- Zhai, Y., Du, X. (2020). Mental health care for international Chinese students affected by theCOVID-19 outbreak. *The Lancet Psychiatry*, 7(4): e22-e22.
- Zhao, Y., Cheng, S., Yu, X., Xu, H. (2020). Chinese Public Attention to the COVID-19 Epidemic on Social Media: Observational Descriptive Study. *Journal of Medical Internet Research*, 22(5).
- Zhao, Y., Zhang, J. (2017). Consumer health information seeking in social media: a literature review. *Health Information & Libraries Journal*, *34*(4), 268–283.