

ORIGINAL RESEARCH

The effective of health communication about the awareness of COVID-19 through social media

Andaleep Sadi Ades

Abstract

The on-going pandemic of COVID-19 has threatened the lives of all the populations across the world as everything, ranging from economic to social have since come into a standstill. Social media such as twitter has been used more frequently to disseminate essential information regarding the pandemic. This study aim to explore if social media or mass media are relied on when seeking information about COVID-19, and subsequently establish the effectiveness of using social media as a health communication tool to create awareness of COVID-19 among members of the public. The researcher adopted a cross-sectional study design in which 500 questionnaires were distributed and filled via survey monkey. The overall findings have shown that people used social media more than mass media in seeking information about COVID-19. Twitter handles as well as other digital social media platforms such as Facebook are effective means of communication in the contemporary society and can, therefore, be effectively and efficiently used by healthcare organizations and various government institutions to create awareness on how to control the pandemic through hand washing, wearing of face mask, and keeping social distance. The paper has ended by recommending aspects for future studies

Andaleep Sadi Ades

Masters in Communication, Griffith University, Australia.

Professor of the department of media and communication at Umm Al-Qura University in Saudi Arabia

Email: andaleepb7@gmail.com

Received: May 2020.

Accepted: August 2020.

Conflict of interest: none.

on the same topic. Keywords: COVID-19, coronavirus disease, social media, mass media, health communication and awareness.

INTRODUCTION

First reported in the City of Wuhan in China in December 2019 and later declared as a global pandemic by the World Health Organization (WHO) in March 2020, coronavirus disease, commonly known as COVID-19 has since spread to countries across all corners of the world (Chan, Nickson, Rudolph, Lee & Joynt, 2020). The on-going pandemic of COVID-19 has since threatened the lives of all the populations across the world as everything, ranging from economic to social have since come into a standstill. The disease has claimed the lives of hundreds of thousands of individuals worldwide, with millions of people being reported to have contracted the disease (Hamzah, et al., 2020).

As by June 20, 2020, close to a half of the world population were in various forms of lockdown, meaning that their movements were restricted or rather contained by the respective governments. Moreover, measures placed by the respective government to slow down the rate of disease transmission have seriously impacted the normal way of doing business with numerous businesses closing, leading into massive income and job losses (Ting, Carin, Dzau & Wong, 2020). The restriction on movement and the closure of most country borders have specifically witnessed the majority of the airlines and some other transport system such as passenger cruisers grounded. With the confounding impact of the lockdowns, governments and health systems across the world are focusing on public

sensitization on how to contain the spread of the pandemic virus. Most countries believe that it is only through proper communication that behaviour change may be achieved and hence help contain the virus (Ting, Carin, Dzau & Wong, 2020). Researchers have consequently been advised to apply virtual methods, including teleconferencing, virtual research seminars and virtual laboratory meetings in order to maintain the studies that can remotely be undertaken.

The extend of the crisis and the response of the government to the crisis have actually been matched by a kind of colossal flow of information regarding coronavirus in terms of 24 hours news coverage, televised press conferences that are provided by both the health authorities, politicians and kings. Such a massive flow of information on the viewpoints regarding the pandemic is unprecedented and at the same time varied (Park, Park & Chong, 2020). While the younger population seems to prefer information via social media platforms like YouTube, Twitter or Instagram, the older adults are entirely informed via newspapers and national evening television news. Since the pandemic has since developed, the urgent need to offer honest, clear and valid information to the members of the public across the globe have become so obvious as had been expressed in one of the editorial work in May which concluded that there cannot be any way to prevent COVID-19 pandemic within the present globalized time but only verified information which is the most effective way to prevent the world from the current pandemic (Park, Park & Chong, 2020).

As argued by Panagiotopoulos, Barnett, Bigdeli & Sams (2016), various social media platforms such as Facebook, Twitter, WhatsApp among others have become the main center for communication for the present generation, not only in healthcare but in politics, business, education among others. Health experts and the political leaders across the world have the core duty of providing members of the public with accurate information on steps to take so as to help contain the virus. Despite that, however, within the chaotic flow of required information, every individual with different responsibilities and roles might contribute to help improve the flow of information as well as on the debate on COVID-19. Health communication is considered as

essential in the step towards saving the lives of people during the current times of pandemic crisis (Hollander & Carr, 2020). Well developed and accurate information on health might assist in facilitating how various societies handle fear and uncertainty, accomplish and promote adherence to the required behaviour change, and foster hope among members of the population within the current face of the coronavirus. Professionals who are within the fields of health communication, health behaviour change and patient education have the core responsibility to contribute towards the spread of concise and valid the relevant information in numerous contexts (Ferrara, 2020). Health campaigns that are aimed at increasing awareness of the members of the public on matters of COVID-19 prevention and transmission are equally being employed by numerous international as well as local organizations. Social media such as twitter has been used more frequently to disseminate essential information regarding the pandemic (Brindha, Jayaseelan & Kadeswara, 2020). This study aimed to explore if social media or mass media are relied on when seeking information about COVID-19 and subsequently establish the effectiveness of using social media as a health communication tool to create awareness of COVID-19 among members of the public and to explore the effectiveness of using social media as a health communication tool to create awareness on COVID-19 among members of the public.

Research questions

Based on the above study objectives, the present study sought to answer the following research questions:

1. Can social media or mass media be relied on when seeking information about COVID-19?
2. How effective is social media in creating awareness regarding COVID-19 pandemic across members of the public?

Methodology

Population and Sample

Participants (N= 500) aged 18–55 years (M= 34.11, SD= .88) were recruited from all over the world. Accordingly, the researcher designed a Likert scale questionnaire based on the two

research questions: Can social media or mass media be relied on when seeking information about COVID-19? How effective is social media in creating awareness regarding COVID-19 pandemic across members of the public? The questionnaires were distributed through survey monkey to Twitters. The questionnaires had been structured based on five-point Likert scale and written in English version only, only participants who are good in English language took part in the survey. The E-survey is preceded by the cover contains information about aims and purpose of the study. They participants informed on the purpose of the study so that they understand the impact of their information; as well as withdraw anytime if they want to. The searcher kept the information that participants gave as private and confidential and only used for the purpose of the present study. The participants were asked to complete the questionnaire and share them back within two weeks. Google survey was used for the present study based on the fact that the world was going through a difficult time where a physical meeting is discouraged.

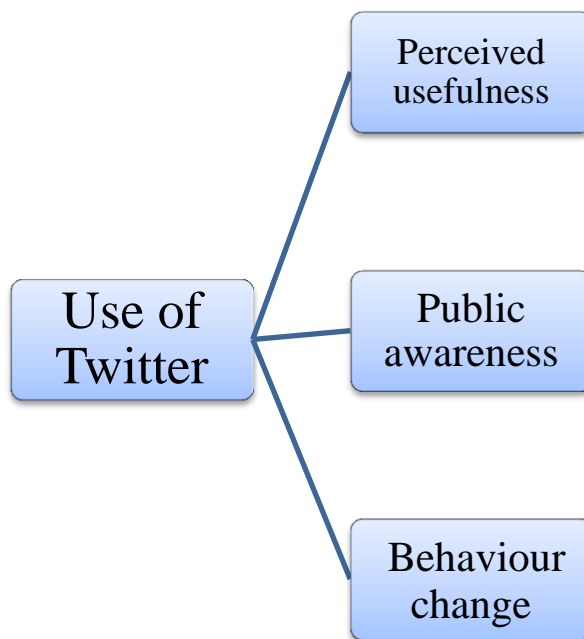
The sampling technique used was the snowball sampling technique which is common in the selection of participants that are not easily accessible to the researcher. The snowball sampling technique involves selecting a few participants who assist in sharing the questionnaire to other potential participants. In this research, the researcher was targeting different levels of age groups, different demographic characteristics such as gender among the participants.

Study variables

The study independent variables were demographic characteristics and the use of Twitter as a source of information on Covid-19 while the dependent variables were the perceived usefulness, public awareness and behaviour change among members of the public in response to COVID-19 pandemic. Questions on demographic characteristics were contained in section one of the questionnaire and they included aspects like age, sex, level of education among others. Twitter as a source of information had three questions. On the other hand, the perceived usefulness of social media had three questions; public awareness had three questions while behavior change had four changes. Participants responded to questions such

as “Twitter is effective in passing COVID-19 related information. The study adopted the following framework.

Figure 1.
Illustrating conceptual framework



Data analysis

After cleaning, data were summarized and coded numerically before being entering into SPSS version 17.0 Simple statistical analysis involving measures of central tendencies was done and information presented in figures, frequencies and tables.

Results

Demographic information

Majority of the participants were male (64%, n=320) while females were 36%. Most participants aged 20-30 years with the least number of participants aged above 55 years. It is important to mention that the participants comprised of people of different races across the world, including Americans (30%), the Asians (20%), Middle East (10%), Europe (30%) and black Africa (10%). Most of the respondents (44.7%, n=500) had completed college and above.

Table 1
Demographic information

(N=500)		%	M	SD
Sex	Male	60%	56.8	0.68
	Female	72%		
Age	20 to 30	68%	33.4	0.77
	≥30	66%		
Level of education			64.8	0.89
	No formal education	0		
	Primary school	4%		
	Secondary school	10%		
	College and above	86%		

Source of information

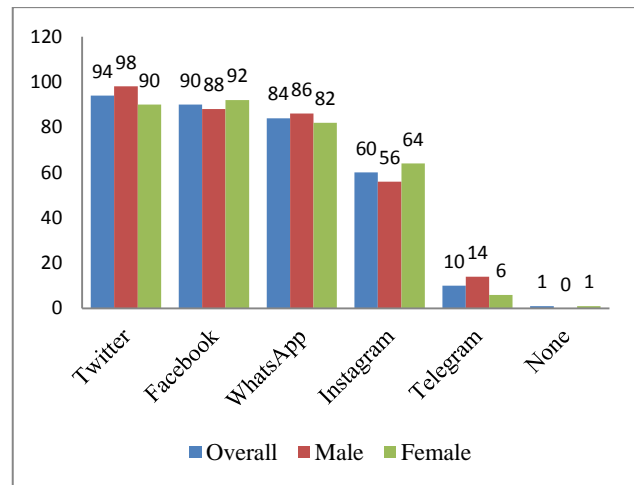
Asked about the source of information on COVID-19 awareness, social media (66%) and mass media (34%) were mentioned as the main sources of information. Female participants were more likely to use Twitter social media platforms than male participants in receiving or sharing information related to COVID-19. Unlike the female participants, the male participants seem to significantly use mass media platforms such as TV in getting information related to COVID-19 as compared to their female counterparts but were least likely to use social media platforms to access COVID-19 related information.

Table 2.
Source of information

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
Social media	330	66	66	66
Mas media	170	34	34	100.0
Total	500	100.0	100.0	
Mean		46.6349		
Median		54.0000		
Std. Deviation		.78532		

Around 94% of the participants reported to frequently use Twitter, followed by 90% who reported that they frequently use Facebook to access information and only 10% of the participants reported that they use Telegram. It is important to note that only 1% of the participants reported that they never use any digital media platform to access COVID-19 related information. Other than Facebook and Instagram, male participants were more likely to use Twitter, WhatsApp and Telegram more than the female participants.

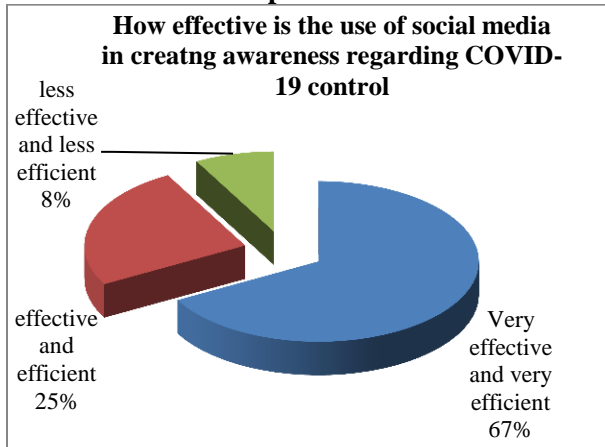
Figure 2
Illustrating the frequency to which different social media platforms are used



Perceived effectiveness of social media platforms like Twitter in creating awareness regarding COVID-19 pandemic across members of the public

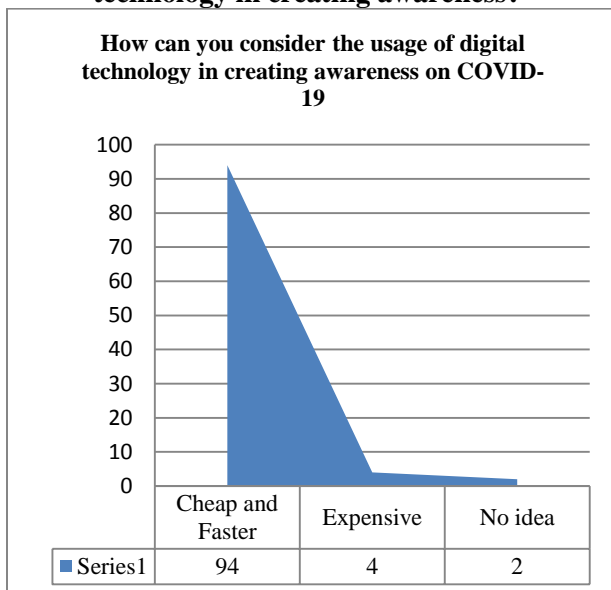
Most of the participants recognized social media platforms such as Twitter, Facebook, Whatsapp and Instagram as the most useful tools for disseminating information in regard to COVID-19. Two-thirds of the participants indicated that social media platforms, specifically Twitter and Facebook are very effective and efficient platforms for sharing information on COVID-19, 25% indicated that it is efficient and effective while only 8% asserted that these media platforms are less efficient and effective in as far as creating public awareness on COVID-19 is concerned. The illustration is shown in the figure below.

Figure 3
Illustrating how effective is the use of social media in creating awareness regarding COVID-19 control among members of the public



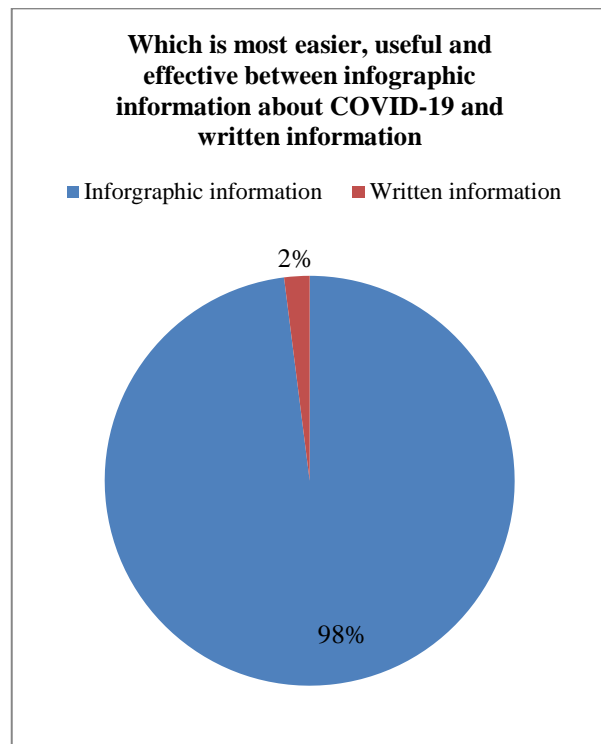
Moreover, the study participants were asked on how they considered the usage of the modern digital technology in creating awareness regarding COVID-19 pandemic across members of the public, almost all the participants (94%) indicated that it is cheaper for the government and healthcare organizations to use such technology in creating awareness while only 6% stated that it was either expensive or they had no idea about it as shown in the figure below:

Figure 4
How do you consider the usage of digital technology in creating awareness?



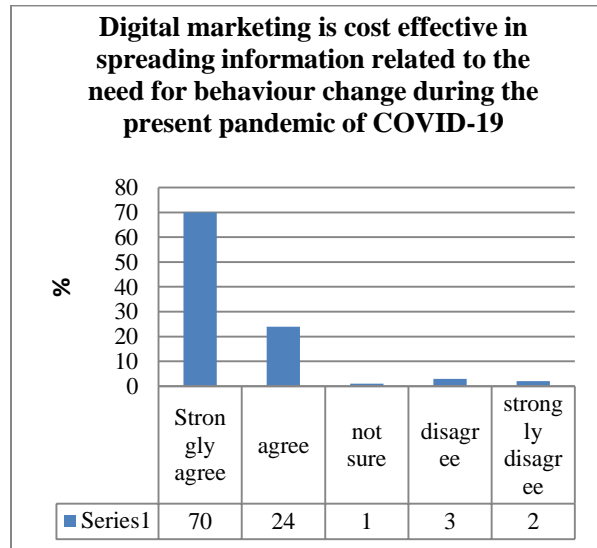
Asked about which is most easier, useful and effective between infographic information about COVID-19 or written information, 98% of the participants asserted that infographic information is more appealing and therefore useful and effective in communicating COVID-19 related information.

Figure 5
The effective between infographic information about COVID-19 or written information



As it was witnessed on the perception of the participants, 70% of the participants indicated that they strongly agreed that digital media platforms such as Twitter are very cost-effective in spreading information related to the need for behavior change like social distancing, hand washing, putting on face mask and staying at home to avoid unnecessary movement during the present pandemic of COVID-19 while only 1, 3, and 2 percent were not sure, disagreed or strongly disagreed in that order. These findings are illustrated in the figure below.

Figure 6
Illustrating how cost-effective is digital marketing in spreading information related to the need for behavior change during the present pandemic of COVID-19



How social media platform flexibility can be harnessed so as to increase public awareness on adherence measures they should undertake so as to combat the spread of COVID-19

Asked on how twitter flexibility can be harnessed so as to increase public awareness on adherence measures they need to undertake so as to help combat the spread of COVID-19, the participants were categorical that twitter needs to make it easy for the members of the public to find credible information and limit the spread of potentially misleading and harmful content. One of the possible ways to enhance Twitter flexibility can be by introducing new labels and warning messages that will help offer some additional context and information on some Tweets that might be having disputed or misleading information related to COVID-19. Twitter needs to improve its internal systems so as to proactively monitor the content that are related to COVID-19. Moreover, the participants mentioned that Twitter needs to increase its search prompts in all countries across the world using the #coronavirus so as to feature authoritative health-related sources when one search for terms that are related to COVID-19 pandemic and the safety measures to be undertaken.

Discussion

The study aimed to explore if social media or mass media are relied on when seeking information about COVID-19 and to assess the effectiveness of using social media as a health communication tool to create awareness on COVID-19 among members of the public. The results show that people used social media higher than mass media as the main sources of information. Female participants were more likely to use social media than male participants in receiving or sharing information related to COVID-19. Moreover, result indicate that various social media platforms such as Twitter, Facebook, and Watsap have always been used as source of information in creating awareness on how to control the spread of COVID-19 through keeping social distance, hand washing, staying at home to avoid unnecessary movements and putting on face mask. For instance, Twitter was identified by the participants as the most used social media platform for creating awareness, followed by Facebook among other platforms.

COVID-19 pandemic is presently a matter of public health concern that impact hundreds of countries in different parts of the world. Guidelines on social distancing and lockdowns have equally posed a great challenge to public health campaigns. This, therefore, has necessitated the need to shift from mass media and the print media like magazines and newspapers that are relatively expensive to the wireless social media like Twitter. The study results suggest that the common social media platforms can effectively and efficiently be applied to improve the public awareness regarding COVID-19.

Social media platforms should, therefore, be enhanced further so as to disseminate knowledge and clear myths that the public might be having on COVID-19. It is important to note, however, that misinformation can as well be spread through such platforms, resulting into panic, fear and anxiety among members of the public (Lewis & Dicker, 2015). As outlined from the study findings, infographic information should be distributed through these platforms by verified pages as well as accounts of health officials and public agencies (Panagiotopoulos, Barnett, Bigdeli & Sams, 2016). WHO already has a dedicated Twitter handle under #coronavirus that is

presented in different languages to pass information related to how to control and manage COVID-19? When applied in an appropriate manner, Twitter handle as well as other social media platforms can be used to report probable cases, contact tracing, and making appointments for tests and also for delivering test results for the specific clients.

Literature has shown that there is an increased spread of the internet, as most people are found online. The government and healthcare organizations like WHO can make good use of social media platforms to create awareness on COVID-19. Lozano (2020) admitted that there are several benefits which social media platforms have over other sources of information. Firstly, with increased advancement of technology, most of the people can access the internet using mobile phone devices and personal computers. Researcher claims that the public behaviours have changed and most of the members of the public are opting to get information online instead of using print media. With this, Cui, Lui & Guo (2012) clarified further that people often search the information regarding COVID-19 on online platforms. Lozano (2020) also indicate changes in social trend as a considerable number of individuals spend their leisure on the social media platforms. All these aspects points to the fact that when harnessed properly, social media platforms such as Twitter can be an effective tool towards creating awareness on behaviour change in response to the current pandemic of COVID-19.

In the current time, social media platforms have always been used to offer content education on the virus. Sites such as Twitter and Facebook have since risen as powerful platforms for creating awareness. A click on the content placed on these websites enables an individual to access information that a government or the ministry of health would wish them to access (Mourad, Srour, Harmanani, Jenainatiy & Arafah, 2020). Health institutions such as WHO can adopt various social media platforms to realize the desired objectives. Usage of platforms such as Facebook and Twitter to create awareness on COVID-19, including upload of pictures of the virus, face masks and hand washing process will put any individual to control the spread of COVID-19. Literature considered Twitter as a tremendous incentive in promotion strategies developed by most

institutions across the world (Ferrara, 2020). Organizations that create awareness using social media platforms have always reported positive feedback, as this has always resulted into higher levels of loyalty. It is therefore crucial for healthcare organisations and other government bodies to incorporate digital awareness techniques (Mustafa, Ansari, Mohanta & Balla, 2020). Twitter and Facebook can be of greater advantages when compared to other traditional awareness techniques. By using social media platforms like Facebook platforms, Twitter, more people will be reached out to within a short period of time and at an affordable cost and get effective result.

Husain (2019) recorded that usage of online sites has been seen as one of the most tremendous incentives in awareness strategies developed by most non-health organizations in the world. For instance, the study by Reveiu & Arghir (2020) had examined the awareness strategies used by companies in the US even as they fostered on behaviour change. The paper points out that the use of social media platforms such as Facebook and Twitter can improve awareness and consequently the behaviors of the targeted individuals. The overall results show that the application of the right strategy can positively impact on the behavioural outcomes, especially during the hard time of pandemic. It is also clear from both the participants and the literature that Twitter need to increase its search prompts in all countries across the world using the #coronavirus so that people can easily access the COVID-19 related information whenever they go to their Twitter handle, irrespective of the country where they are in.

CONCLUSION

Social media used more than mass media in seeking information about COVID-19. Social media such as twitter has been used more frequently to disseminate essential information regarding the COVID-19 pandemic and measures that members of the public need to take in order to control the spread of the virus. This study aimed to explore if social media or mass media are relied on when seeking information about COVID-19 as well as to explore the effectiveness of using such social media platforms such as Twitter as a health communication tool to create awareness on

COVID-19 among members of the public. A cross-sectional design was used and 500 participants were involved by filling a questionnaire distributed through survey monkey. The results have shown that social media used in seeking information about COVID-19 and Twitter handle plus some other digital social media platforms like Facebook are effective means of communication in the contemporary society. Social media like Twitter can therefore be effectively and efficiently used by healthcare organizations and various government institutions to create awareness on how to control COVID-19 through hand washing, wearing of face mask, and keeping social distance. The study has pointed out that Twitter need to increase its search prompts in all countries across the world using the #coronavirus and develop mechanisms through which false information is not passed to the members of the public.

Contribution, limitations and recommendations

As the current COVID-19 pandemic continuous to present major threats to the current human generation, health experts and the political leaders across the world have the core duty of providing members of the public with accurate information on steps to take so as to help contain the virus. Despite that, however, there had been chaotic flow of information on how members of the public can prevent and control the spread of COVID-19. This study is therefore of great significant to members of the public, the government, communication organizations such as Twitter and Facebook and other healthcare organizations such as WHO in as far as control of COVID-19 is concerned. This study has established that it would be good for the web designers to find way and organize and fix the chaotic flow of information. Health communication is essential in the step towards saving lives of people during the current times of pandemic crisis. Infographic information are much useful and effective and preferred by participants more than written information Properly developed and accurate information on health might assist in facilitating how various societies handle fear and uncertainty, accomplish and promote adherence to the required behaviour change, and foster hope among members of the population within the current face of the corona virus. The present study

has established the effectiveness of using Twitter as a health communication tool to create awareness on COVID-19 among members of the public. The study has established that when it is harnessed properly, media technologies including Twitter handle can be used to inform behaviour change among members of the public and hence help in controlling the spread of the current pandemic. Lastly, the present study contribute to the list of scholarly works on how the spread of COVID-19 can be contained through timely information delivered through social media platforms such as Twitter.

Other than its strengths, the present study also had a number of limitations. For instance, being a cross-sectional study, the results for this study only present the situation on the ground at the time the study was carried out. Also, the study has only used quantitative methodology with data collected through survey monkey in English language. This limit the sampling and that might lower the validity and reliability of the study findings. Therefore, future further study is recommended on the same topic but which apply both quantitative and qualitative in data collection as well as considering different languages. Such future research may investigate how the application of social media platform in creating COVID-19 awareness varies from different countries and the impacts of such variations on behavior change and the spread of the virus.

Acknowledgments

I acknowledge the inputs of Umm Al-Qura University, Mecca, for offering their database and recourses to ensuring that this project is a success.

Conflict of Interests: The author declares no funding and no conflict of interests.

REFERENCES

- Brindhya, M. D., Jayaseelan, R., & Kadeswara, S. (2020). Social media reignited by information or misinformation about COVID-19: a phenomenological study.
- 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. *Anaesthesia*.

- Ferrara, E. (2020). # covid-19 on twitter: Bots, conspiracies, and social media activism. *arXiv preprint arXiv:2004.09531*.
- Hamzah, F. B., Lau, C., Nazri, H., Ligot, D. V., Lee, G., & Tan, C. L. (2020). CoronaTracker: worldwide COVID-19 outbreak data analysis and prediction. *Bull World Health Organ*, 1, 32.
- Hollander, J. E., & Carr, B. G. (2020). Virtually perfect? Telemedicine for COVID-19. *New England Journal of Medicine*, 382(18), 1679-1681.
- Husain, M. S. (2019). Social Media Analytics to Predict Depression Level in the Users. In *Early Detection of Neurological Disorders Using Machine Learning Systems* (pp. 199-215). IGI Global.
- Kelly, K. (2017). A different type of lighting research—A qualitative methodology. *Lighting Research & Technology*, 49(8), 933-942.
- Lewis, M. A., & Dicker, A. P. (2015, October). Social media and oncology: The past, present, and future of electronic communication between physician and patient. In *Seminars in oncology* (Vol. 42, No. 5, pp. 764-771). WB Saunders.
- Lozano, Cristina Moreno. "Seeing COVID-19, or a Visual Journey Through the Epidemic in Three Acts."
- Mourad, A., Srour, A., Harmanani, H., Jenainatiy, C., & Arafah, M. (2020). Critical Impact of Social Networks Infodemic on Defeating Coronavirus COVID-19 Pandemic: Twitter-Based Study and Research Directions. *arXiv preprint arXiv:2005.08820*.
- Murshed, F., & Zhang, Y. (2016). Thinking orientation and preference for research methodology. *Journal of Consumer Marketing*.
- Mustafa, A., Ansari, I., Mohanta, S. K., & Balla, S. (2020). PUBLIC REACTION TO COVID-19 ON TWITTER: A THEMATIC ANALYSIS. *EPRA International Journal of Multidisciplinary Research (IJMR)*, 15, 357.
- Niknejad, N., & Amiri, I. S. (2019). Quantitative Research Methodology for Service-Oriented Architecture (SOA) Adoption in Organizations. In *The Impact of Service Oriented Architecture Adoption on Organizations* (pp. 43-51). Springer, Cham.
- Panagiotopoulos, P., Barnett, J., Bigdeli, A. Z., & Sams, S. (2016). Social media in emergency management: Twitter as a tool for communicating risks to the public. *Technological Forecasting and Social Change*, 111, 86-96.
- 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.
- Queirós, A., Faria, D., & Almeida, F. (2017). Strengths and limitations of qualitative and quantitative research methods. *European Journal of Education Studies*.
- Ragab, M. A., & Arisha, A. (2018). Research methodology in business: A starter's guide. *Management and Organizational Studies*, 5(1), 1-14.
- Rahman, M. S. (2017). The Advantages and Disadvantages of Using Qualitative and Quantitative Approaches and Methods in Language" Testing and Assessment" Research: A Literature Review. *Journal of Education and Learning*, 6(1), 102-112.
- Reveiu, A., & Arghir, D. C. (2020). MINING SOCIAL MEDIA TO IDENTIFY THE IMMEDIATE IMPACT OF COVID-19 PANDEMIC ON THE ROMANIAN RETAILERS: EARLY FINDINGS. *New Trends in Sustainable Business and Consumption*, 1225.
- Ting, D. S. W., Carin, L., Dzau, V., & Wong, T. Y. (2020). Digital technology and COVID-19. *Nature medicine*, 26(4), 459-461.

