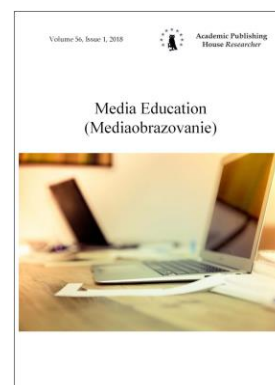




Published in the Slovak Republic
Media Education (Mediaobrazovanie)
Has been issued since 2005
ISSN 1994-4160
E-ISSN 2729-8132
2021. 17(2): 169-176

DOI: 10.13187/me.2021.2.169
www.ejournal53.com



The Role of Mass Media in Tackling COVID-19 in Pakistan

Waqar Ahmed Afridi ^{a,*}, Tanveer Hussain ^a, Ammara Hashmi ^a, Rohail Asghar ^a

^a Virtual University of Pakistan, Pakistan

Abstract

At the end of 2019, in December, the Huanan Seafood Wholesale Market appeared to be linked with the massive outbreak of pneumonia in Wuhan. It was identified that a virus later called the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) was responsible for this condition. The disease was named COVID-19 and declared a pandemic as it affected the entire world and claimed many lives. News pertaining to the spread of COVID-19 became the hot talk in all forms of media ranging from print and television to social media platforms. This study aims to provide an analysis of the role of all types of media in the crisis and emergency that has arisen worldwide due to the outbreak of COVID-19. The role of media in disseminating information, particularly within Pakistan, is discussed in detail regarding the spread of coronavirus and the media's active part in sensationalizing or controlling the situation.

Keywords: COVID-19, mass media, TRPs, pandemic, fake news, decontextualized.

1. Introduction

In December 2019, China witnessed a massive outbreak of pneumonia in the city of Wuhan. The pneumonia was linked to the Huanan Seafood Wholesale Market, although the exact cause was not known. As the respiratory disease spread rapidly throughout China and led to many deaths, the Chinese government declared a state of emergency worldwide and informed WHO on 31st December 2019 (Hui et al., 2020).

The disease's causative agent was first identified as a virus on 7th January 2020 by the Chinese Centre for Disease Control and Prevention. The virus belonged to the Coronaviridae family and was named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2).

Therefore, WHO named the disease COVID-19 later on. The disease symptoms include dry cough, fever, dyspnea, and other lung infections (Sohrabi et al., 2020). In an unprecedented spread since the Spanish flu outbreak almost a hundred years ago, the virus infected more than four million population across the globe, with almost three hundred thousand reported deaths. After China, the USA, Italy, Spain, and the UK became epicenters of the outbreak with a staggering death toll (Yan, 2020). The virus also travelled to Pakistan, most probably through Iran and spread to all provinces in a matter of days (Gillani, 2020).

The first case of COVID-19 in Pakistan was confirmed on 26th February 2020, and to this date, around 260,000 people are infected by the virus, and the reported death toll is approaching 5500 (Ilyas et al., 2020; Pakistan, 2020). With the country's limited healthcare facilities, the outbreak has become a challenge for the ruling government. Moreover, keeping in lieu that more than 50 % of the population comprises of lower-class families that mostly earn through daily

* Corresponding author

E-mail addresses: waqar.afridi@vu.edu.pk (W. Afridi); rohail.asghar@vu.edu.pk (R. Asghar)

wages, the country cannot afford a complete lockdown for long. WHO has already expressed concerns about Pakistan becoming an epicenter of the COVID-19 outbreak if proper measures are not adopted (Khan et al., 2020). Given the geographical position of Pakistan, which shares its borders with Afghanistan, China, and Iran - all badly affected by this pandemic, the need to adopt strict measures for decreasing the virus's spread is imperative (Waris et al., 2020). In this context, mass media's role is all the more important in an age where almost everyone has an ease of access to information, news, and opinions.

2. Materials and methods

A time period from February 2020 to August 2020 was considered for this study because it was the first phase of COVID-19 in Pakistan where public was clueless about the nature and impact of this pandemic. Fear and uncertainty were the common factor among the people. The study encompasses both the character and role of mass media in all its sub-categories including digital, print, electronic and social media. This involved consideration of each form of media as a separate entity since there was a considerable variation in the mode of communication. The data was analyzed using various techniques including observation, classification and hierarchy analysis of information. Since as the Cultivation Theory suggests media plays a crucial role in determining the opinion of people, therefore media clips were analyzed in terms of their psychological impact. Conversely, the Agenda-Setting Theory (Yang et al., 2016) looks at the media in terms of its role, wherein, it filters and shapes information before it casts impact on opinions of people. Keeping this in view the content was analyzed in terms of filtration of data and its structuring.

The third theory that guided the method was "Third Person Effect" (Eisend, 2017), which maintained that since people are more concerned with how a news item impacts others, it amounts to a greater discussion on the news item and hence its popularity. Together these theories formed the basic lens through which various sub-categories of media were analyzed. In order to strengthen the argument, multiple examples of each media sub-category were studied regarding the report of same event. And since the theories focus on pre-impact, impact and post-impact scenarios of news items, they helped to assess the whole process. The theoretical framework informed by three theories helped in understanding the positive and negative role of media in the present study.

The difference in the character and role of digital, print, electronic and social media compelled to use different techniques of observing and interpreting data (Stieglitz et al., 2018). In case of print media, news appeared in written text and therefore words with loaded connotation and sentence construction was considered more important. In this context, Agenda-Setting Theory was used for analysis. In case of electronic media, the visuals, their frequency and emphasis were considered significant aspects for casting impact; therefore Cultivation theory also played an important role in interpreting data. In case of social media, the scenario was entirely different; it was considered a platform where Agenda-Setting was not much relevant while Cultivation Theory and Third Person Effect turned out be more significant. The Agenda-Setting theory, however, became more important while considering monetization of Youtube.

3. Discussion

Mass media is a powerful mechanism for shaping public opinions and perceptions. It should also be noted that once an opinion is shaped, it is further strengthened by similar opinions and sharing frequency. The significance of mass media cannot be underestimated in times of a pandemic. It can induce unnecessary fear, introduce superstitions instead of facts, and misinform people by misinterpretation of data. As television channels are known business enterprises, sometimes certain news or opinion is broadcasted to increase viewership and program ratings.

Similarly, social media such as YouTube are also monetized applications. The more clicks a video receives, the better is the financial gain. It is extremely likely that people on social media create sensational information to attract viewership. Unlike television channels, social media has no strict censorship policies; it can give rise to two very contrasting outputs. On the one hand, it can reveal what people actually think about an issue and on the other, it can spread fake information.

It needs to be realized that given the significance of media in shaping opinions and perceptions, its role in unusual conditions, wherein people are already looking for answers and solutions, becomes manifold. Media cannot only affect perceptions; it can induce motives for public actions. Various studies have suggested that our critical evaluation abilities reduce under stress and panic. We tend to accept based on convenience instead of looking at the facts. A clear

example is when people on social media are claiming to have found the cure of COVID-19 through some herbal medicine. Such people should be held accountable. Guy Berger is the Director for Policies and Strategies regarding Communication and Information at UNESCO. One of the agency's lead officials on the subject of disinformation stated, "When disinformation is repeated and amplified, including by influential people, the grave danger is that information which is based on truth, ends up having an only marginal impact" (UN News, 2020). This state of affairs is particularly alarming when it comes to third world countries where health facilities and general education are compromised. People tend to believe in stories that are convincing to lesser rationality and therefore substitute it with truths that are complex to understand.

Mass media is usually understood as various means through which information and opinions are communicated to the masses. It includes electronic media that involves broadcasting technologies such as television and radio (Xie-Connell, 2015), the print media, which includes newspapers, magazines, books, posters, hoardings (Bean-Mellinger, 2018), and then the latest digital media that includes spread of information through the internet in the form of emails, blogs, websites, etc. (Goldberg, 2019). Another form of mass media that rapidly grew in the last couple of decades is social media. Social media includes various software applications such as YouTube, Facebook, Instagram, and Twitter, which provide a platform for the general public to express and share its opinion. With the arrival of smartphones, these applications became easily accessible, and hence the social media became a powerful tool to disseminate information, news, opinions, perspectives, and propaganda. Social media is far quicker and more responsive than other forms of media and has made every user into a potential news reporter, newscaster, analyst, and commentator (Hudson, 2020).

The multiple forms of mass media have made access to information easier on the one hand and the other paved the way to spread false and unverified information. The former is a revolutionary and positive development. Still, the latter can be disastrous, especially when seen in the context that mass media shapes public opinion, contributes to the formation of beliefs and constructs, or deconstructs perceptions.

The significance of mass media in shaping opinions and perceptions can be understood by briefly looking at the Cultivation Theory and Agenda-Setting Theory. These theories addressed the influence of mass media much before digital and social media came into being. However, they can be extended to incorporate new forms of media due to a similar operative reality. The Cultivation Theory maintains that popular media such as television has the power to influence our view of the world and is primarily responsible for our perceptions of day-to-day norms and reality (Infante et al., 1997). George Gerbner likened it to a "key member of the family, the one who tells the most stories most of the time" (Gerbner et al., 1980). Given the usage of social media on smartphones, the theory can be extended to suggest that the more exposure one has to social media, the greater are the chances of influenced opinion and perception. When a person also receives information, how different people are endorsing certain news or opinions, and what number is in agreement.

The Agenda-Setting Theory, as Lumen learning puts it, "Two basic assumptions underlie most research on agenda-setting: One, that the press and the media do not reflect reality, they filter and shape it; and two, that media concentration on a few issues and subjects leads the public to perceive those issues as more important than other issues" (McGregor et al., 2016). The factor that concentration on a certain issue makes it important is particularly relevant in understanding social media's significance. The concentration on an issue makes it more accessible, and therefore more and more individuals retain it in their memory. This implies that the more information will circulate on social media, the more it will become important and accessible. Researchers have also found that information suggestive of fear spreads faster. In the case of the Severe Acute Respiratory Syndrome (SARS) epidemic of 2003, it was found that the idea 'SARS is a killer' gained popularity (Wahl-Jorgensen, 2020).

Another important psychological basis that adds to media's effect on perceptions and opinions is the "Third Person Effect." The hypothesis states that an individual, when confronts with a persuasive argument in the mass media, he or she focuses more on the effect of the argument on others instead of himself (Schweisberger et al., 2014). This perspective becomes the basis for people to comment to protect others, but the outcome is that the more an idea is discussed, the more popular it becomes. For instance, if a thousand people are commenting that a virus is dangerous to protect people, the perception will become popular. The tendency becomes obvious by looking at the number of messages people receive with an instruction to 'share as much as possible.'

In recent history, the internet and social media along with print media have played a key role in creating awareness among the public. An example case is SARS, which is thought to be the global pandemic that revolutionized mass media's concept in playing its key role in tackling such issues.

4. Results

Mass media in the form of digital media, print media and social media have played a significant role in creating awareness against Polio, Ebola, and Dengue in Pakistan (Khan, 2014; Asad et al., 2018). However, the role of media in the current situation is more important than ever before. The various media outlets are giving proper coverage to the COVID-19 pandemic with regular shows. Although collecting data in such days is a tedious and life-threatening task, all forms of media are doing their best to gather the proper information and avoid creating panic (Shaukat, 2020). Let us now discuss some of the Mass media's positive and negative aspects in the current COVID-19 pandemic.

Multiple cities in Pakistan are in a state of lockdown these days due to coronavirus outbreak to prevent its spread among the community. Thousands of suspected patients of COVID-19 in their homes or hospitals have been quarantined. Social media has been the best source of communication in the current situation in Pakistan these days. People communicate with their family and friends both in Pakistan abroad with ease and comfort (Sokolov, 2020).

Media has also been a major source of information to create awareness among people. It is giving people day to day information about the ongoing COVID-19 pandemic. Radio channels are the major source of information for people living in far-flung areas and villages. In such areas, people don't have access to newspapers and owing to lack of electricity and internet facilities; radio is the only source of information. These radio channels have been doing a good job so far by keeping people updated about the pandemic and giving them the proper information regarding protection and safety precautions (Relief Web, 2020).

The role of media is also highly appreciable in helping the government in the current scenario in Pakistan. The government has displayed various hoardings and distributed pamphlets and has a very good impact. People read and understand them easily because they are written in Urdu's native language (Relief Web, 2020).

Another valuable thing that has been happening is that people here in Pakistan are using the internet and social media sites as a platform for making online questionnaire and are conducting survey-based studies to study various aspects such as the level of awareness among the common public about COVID-19, its physiological basis as well as about the resources that we have to cope with COVID-19. These online surveys are key sources of knowledge gathering (Qazi et al., 2020; Saqlain et al., 2020).

The power of social media is also being accepted by WHO, which uses this platform for communication with all the countries of the world. It has a page on Facebook and Twitter where updated information about the actual number of affected cases and the death toll in each country is updated regularly (Awasthi, 2020).

Similarly, different foundations and celebrities have established online fundraisers, and charity work has been rapid in Pakistan. Being the generous nation that Pakistanis are, a lot of money has been generated, and food items, cash has been distributed among the needy people through famous foundations such as Al-Khidmat Foundation, Shahid Afridi Foundation etc. (Awan, 2020; Dunya News, 2020).

The Ministry of National Health Services, Regulations, and Coordination has set up a national action plan. It emphasizes the community's engagement and awareness to fight the virus using print, electronic, and social media. The parliamentarians must also run an active campaign regarding this issue in their respective constituencies (Shah, 2020).

One every important and refreshing aspect that we realized during the COVID-19 pandemic is the highly talented YouTubers and social media content makers of Pakistan. Several Pakistanis have their accounts on social media sites such as Facebook, Twitter, Instagram, and YouTube. They are making funny and refreshing videos and memes about the current pandemic, thus providing people very refreshing and entertaining moments during these tense times (Khatana, 2020).

People are sharing their bravery stories about how they combat this disease and are becoming a source of motivation for others and are spreading a ray of hope among others that this disease is not as fatal (Jaffery, 2020). By adopting proper preventive measures, one can protect himself and their family from it. Many famous Pakistani celebrities are coming forward and are sharing pieces of advice about

fighting this pandemic. Since these celebrities have a huge fan following, so it is expected that their fans will listen and follow their favorite stars (Geo News, 2020).

Print media is also doing an excellent job. Different newspapers have dedicated title pages for creating awareness among the public and spread information. Many experts write columns and important health-related issues and combat this pandemic and have successfully delivered their message (International, 2020; Husain, 2020).

Social media is also being used to tell the public about various important products such as sanitizers, hand wash, gloves, masks, etc. People in Pakistan normally didn't know about it, especially those living in villages and remote areas but due to effective marketing strategies of the different companies, it's now becoming possible, and many people are now buying these products and protecting themselves from COVID-19 (Pakistan, 2020).

Social media has also become the chief source of collaboration in the Pakistani community. Various researchers from different institutions are in constant touch with each other to combat this disease by making new strategies for preventing, diagnosing, and treating the disease. Pakistani scientists are also in contact with different researchers from abroad to design and improve Pakistan's current COVID-19 situation (Anwar, 2020; International, 2020).

The UNDP has issued instructions that governments' job is to curb the menace of inaccurate and misguided information that might further worsen the coronavirus's already frightful impacts (Pakistan, 2020).

The very common feature in our media outlets is the race for rating and TRPs. There is no doubt that Pakistani media is now progressing day by day and has improved its information sources and technology. However, to get high ratings, media channels often sensationalize news that creates panic among the public (Butt, 2020).

Sometimes the issue is not that big, but the media portrays it otherwise. They often share very negative views and programs against the government, thus creating chaos in the country and giving a false impression of the government. Fake data is also published. Some newspapers publish columns and articles under the influence of powerful personnel and work on their agendas, thus weakening the provision of accurate data to the public (The News International, 2020; International, 2020).

Another mistake committed by news channels is that they often invite non-health officials as guests of various shows. The people don't know about COVID-19 and thus give false information to people misguiding them (News, 2020).

There is plenty of misinformation and misinterpretation of information among the common public, further entangling the government's job. People are spreading fake news and false information on popular social media platforms such as Facebook and WhatsApp. One such example is of a Lahore based guy who, based on anonymity, said that he is against the use of hand sanitizers because he read somewhere on WhatsApp that sanitizer has alcohol in it and that he won't be able to pray with sanitizers (Shah, 2020).

A report published in Pakistan today was about a man arrested for the charge of creating panic on social media platforms by spreading false information. He allegedly targeted a family in his neighborhood that they had contracted the coronavirus. A complaint was lodged against him by the neighboring family members against the suspect (Today, 2020).

Another issue is that people and even news outlets share some very sensitive images and disturbing videos. Social media platforms have often created confusion and panic among people regarding the COVID-19 outbreak by portraying unrealistic and sensational pictures of the actual scenario (Babbili, 2020).

The information shared on the news channels does not remain limited to their audience. Through social media, news clips are circulated. Sometimes the information is decontextualized and gives way to a wider misunderstanding.

5. Conclusion

Social media plays a critical role in shaping opinions, people still look for authenticity of an account of information on television channels and newspapers, which means that these institutions have a lot more responsibility than when there were no social media. The news anchors who themselves use social media must make it mandatory to debunk misinformation being spread on social media. The following are some suggestions in this regard:

- Race for Ratings should be stopped, and the public be given proper realistic facts and figures.
- More air time should be given to programs about coronavirus.
- Only positive videos and pictures should be shared on social media.
- News channels must only invite specialized health professionals in their shows.
- Field programs should be conducted in remote areas.
- Social distancing should be followed when conducting programs among the public.
- Information collection sources must be verified properly to avoid the spread of fake news and data.
- Media houses must cooperate and follow government instructions.

Being a developing country, the role of media in Pakistan to combat COVID-19 is of significant importance. It must realize it's worth. Till now, media in a larger proportion has played its part effectively and with dedication. They are creating awareness about COVID-19 among people and are preparing people to fight it. However, some news channels and people are creating panic among the public by sharing fake stats and messages. It should be stopped to know about the facts and be prepared mentally to fight this pandemic.

References

- Anwar, 2020 – Anwar, Z. (2020). Fighting COVID-19: Measures and Arrangements. [Electronic resource]. URL: <http://www.uop.edu.pk/news/?q=3187>
- Asad et al., 2018 – Asad A, Ochani, R.K., Shaikh, A. (2018). Poliovirus: a long-due battle for Pakistan. *Le infezioni in medicina: rivista periodica di eziologia, epidemiologia, diagnostica, clinica e terapia delle patologie infettive*. 26(4): 389-390.
- Awan, 2020 – Awan, N. (2020). Charities on the forefront of relief work. [Electronic resource]. URL: <https://tribune.com.pk/story/2197369/1-charities-forefront-relief-work>
- Awasthi, 2020 – Awasthi, P. (2020). Here's what social media apps are doing to fight Covid-19. [Electronic resource]. URL: <https://www.thehindubusinessline.com/info-tech/social-media/heres-what-social-media-apps-are-doing-to-fight-covid-19/article31411805.ece>
- Babbili, 2020 – Babbili, A.S. (2020). The Role of news media in a pandemic. [Electronic resource]. URL: <https://www.caller.com/story/opinion/2020/03/17/role-news-media-pandemic-coronavirus/5062340002/>
- Bean-Mellinger, 2018 – Bean-Mellinger, B. (2018). Introduction of Print Media. [Electronic resource]. URL: <https://bizfluent.com/12749329/benefits-of-the-printing-press-on-education>
- Butt, 2020 – Butt, S. (2020). Family shocked by 'fake' Covid-19 death news. [Electronic resource]. URL: <https://www.dawn.com/news/1546503>
- Dunya, 2020 – Dunya News (2020). Shahid Afridi distributes ration among poor in Chaman. [Electronic resource]. URL: <https://dunya.com/en/Cricket/547907-Shahid-Afridi-distributes-ration-among-poor-in-Chaman>
- Eisend, 2017 – Eisend, M. (2017). The Third-Person effect in advertising: a meta-analysis. *Journal of Advertising*. 46(3): 377-394.
- Geo News, 2020 – Geo News (2020). Pakistani celebrities share precautionary measures against COVID-19 in short film. [Electronic resource]. URL: <https://www.geo.tv/latest/284692-pakistani-celebrities-share-precautionary-measures-about-covid-19-in-short-film-call-to-action>
- Gerbner et al., 1980 – Gerbner, G, Gross, L, Morgan, M. (1980). The "mainstreaming" of America: violence profile number 11. *Journal of communication*. 30(3): 10-29.
- Gillani, 2020 – Gillani, W. (2020). *Virus alert*. [Electronic resource]. URL: <https://www.thenews.com.pk/tns/detail/621158-virus-alert>
- Goldberg, 2019 – Dalia Goldberg, D. (2019). What is digital media and how can it help my career? [Electronic resource]. URL: <https://www.springboard.com/blog/digital-media/>
- Hudson, 2020 – Hudson, M. (2020). What is social media? [Electronic resource]. URL: <https://www.thebalancesmb.com/what-is-social-media-2890301>
- Hui et al., 2020 – Hui, D.S., Azhar, E.I., Madani, T.A. (2020). The continuing 2019-nCoV epidemic threat of novel coronaviruses to global health – The latest 2019 novel coronavirus outbreak in Wuhan, China. *International Journal of Infectious Diseases*. 91: 264.
- Husain, 2020 – Husain, F. (2020). Is Pakistan considering herd immunity? [Electronic resource]. URL: <https://www.dawn.com/news/1556710/is-pakistan-considering-herd-immunity>

- Ilyas et al., 2020 – Ilyas, N., Azuine, R.E., Tamiz, A. (2020). COVID-19 Pandemic in Pakistan. *International Journal of Translational Medical Research and Public Health*. 4(1): 37-49.
- Infante et al., 1997 – Infante, D.A., Rancer, A.S., Womack, D.F. (1997). Building communication theory. Prospect Heights: Waveland Press.
- International TN, 2020 – International TN (2020). 47 killed, 3,161 corona affected in Pakistan. [Electronic resource]. URL: <https://e.thenews.com.pk/pindi/4-6-2020/page1.asp>
- International TN, 2020 – International TN (2020). Awareness drive on COVID-19 launched. [Electronic resource]. URL: <https://www.thenews.com.pk/print/629990-awareness-drive-on-covid-19-launched>
- International TN, 2020 – International TN (2020). Uks urges Pakistani TV channels to act responsibly, stop politicising coronavirus. [Electronic resource]. URL: <https://www.thenews.com.pk/latest/644850-act-responsibly-stop-politicising>
- Jaffery, 2020 – Jaffery, Y. (2020). Tales of survivors: How I became Pakistan's first COVID-19 patient. [Electronic resource]. URL: <https://tribune.com.pk/story/2183876/1-ales-survival-became-pakistans-first-covid-19-patient>
- Khan et al., 2020 – Khan, S., Khan, M., Maqsood, K. et al. (2020). Is Pakistan prepared for the COVID-19 epidemic? A questionnaire-based survey. *Journal of Medical Virology*. 92(7): 824-832. DOI: 10.1002/jmv.25814.
- Khan, Ahmad, 2014 – Khan, H., Ahmad, I. (2014). Threat of Ebola virus disease for Pakistan. *Gomal Journal of Medical Sciences*. 12(3).
- Khatana, 2020 – Khatana, T. (2020). This funny take by British-Pakistani poetess on coronavirus will leave you in fits of laughter. [Electronic resource]. URL: <https://www.thenews.com.pk/latest/636455-this-funny-take-by-british-pakistani-poetess-on-coronavirus-will-leave-you-ing-fits-of-laughter>
- McGregor et al., 2016 – McGregor, M.A., Driscoll, P.D., McDowell, W. (2016). Head's Broadcasting in America: A Survey of Electronic Media (1-download). Routledge.
- News, 2020 – News A. (2020). The terrible effects of the Corona virus will also have in Pakistan: Sheikh Rasheed. [Electronic resource]. URL: <https://www.youtube.com/watch?v=HxrTo4TvLF4>
- Pakistan, 2020 – Pakistan Go. (2020). COVID-19 Dashboard. [Electronic resource]. URL: <http://covid.gov.pk/stats/pakistan>
- Pakistan, 2020 – Pakistan U. (2020). UNDP: Governments must lead fight against coronavirus misinformation and disinformation. [Electronic resource]. URL: <https://www.pk.undp.org/content/pakistan/en/home/presscenter/pressreleases/2020/undp--governments-must-lead-fight-against-coronavirus-misinforma.html>
- Pakistan, 2020 – Pakistan U. (2020). Zong 4G and UNICEF Pakistan Partner to Create Awareness around COVID-19. [Electronic resource]. URL: <https://www.unicef.org/pakistan/press-releases/zong-4g-and-unicef-pakistan-partner-create-awareness-around-covid-19>
- Qazi et al., 2020 – Qazi, A., Qazi, J., Naseer, K. et al. (2020). Analyzing situational awareness through public opinion to predict adoption of social distancing amid pandemic COVID-19. *Journal of medical virology*. 92(7): 849-855. DOI: 10.1002/jmv.25840.
- Relief Web, 2020 – Relief Web (2020). Corona Virus Public Awareness Campaign. [Electronic resource]. URL: <https://reliefweb.int/report/pakistan/corona-virus-public-awareness-campaign>
- Relief Web, 2020 – Relief Web (2020). COVID-19 Rapid Need Assessment – International Rescue Committee, Pakistan. [Electronic resource]. URL: <https://reliefweb.int/report/pakistan/covid-19-rapid-need-assessment-international-rescue-committee-pakistan-april-13-2020>
- Saqlain et al., 2020 – Saqlain, M., Munir, M.M., Rehman, S.U., Gulzar, A., Naz, S., Ahmed, Z., Tahir, A.N., Mashhood, M. (2020). Knowledge, attitude, practice and perceived barriers among healthcare professionals regarding COVID-19: A Cross-sectional survey from Pakistan. *Journal of Hospital Infection*. 105(3): 419-423. DOI: 10.1016/j.jhin.2020.05.007
- Schweisberger et al., 2014 – Schweisberger, V., Billinson, J., Chock, T.M. (2014). Facebook, the third-person effect, and the differential impact hypothesis. *Journal of Computer-Mediated Communication*. 19(3): 403-413.
- Shah, 2020 – Shah, B. (2020). Fake news, rumors keep people misinformed about coronavirus in Pakistan. [Electronic resource]. URL: <https://www.arabnews.pk/node/1644161/pakistan>
- Shaukat, 2020 – Shaukat, A. (2020). Reporting Covid-19. [Electronic resource]. URL: <https://www.thenews.com.pk/tns/detail/635359-reporting-covid-19>

Sohrabi et al., 2020 – *Sohrabi, C., Alsafi, Z., O'Neill, N.* (2020). World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). *International Journal of Surgery*. 76: 71-76. DOI: 10.1016/j.ijssu.2020.02.034.

Sokolov, 2020 – *Sokolov, M.* (2020). The pandemic infodemic: how social media helps (and hurts) during the coronavirus outbreak. [Electronic resource]. URL: <https://www.thedrum.com/opinion/2020/03/03/the-pandemic-infodemic-how-social-media-helps-and-hurts-during-the-coronavirus>

Stieglitz et al., 2018 – *Stieglitz, S., Mirbabaie, M., Ross, B.* (2018). Social media analytics – Challenges in topic discovery, data collection, and data preparation. *International Journal of Information Management*. 39: 156-168.

The News International, 2020 – The News International (2020). Coronavirus: Social media aids spread of misinformation. [Electronic resource]. URL: <https://www.thenews.com.pk/print/606879-coronavirus-social-media-aids-spread-of-misinformation>

Today, 2020 – Today P. (2020). Man arrested for spreading fake news on coronavirus. [Electronic resource]. URL: <https://www.pakistantoday.com.pk/2020/03/25/man-arrested-in-lahore-for-spreading-fake-news-on-coronavirus/>

UN, 2020 – UN News (2020). During this coronavirus pandemic, 'fake news' is putting lives at risk: UNESCO. [Electronic resource]. URL: <https://news.un.org/en/story/2020/04/1061592>

Wahl-Jorgensen, 2020 – *Wahl-Jorgensen, K.* (2020). Coronavirus: how media coverage of epidemics often stokes fear and panic. [Electronic resource]. URL: <https://theconversation.com/coronavirus-how-media-coverage-of-epidemics-often-stokes-fear-and-panic-131844>

Waris et al., 2020 – *Waris, A., Khan, A.U., Ali, M.* (2020). COVID-19 outbreak: Current Scenario of Pakistan. *New Microbes and New Infections*. 100681.

Xie-Connell, 2015 – *Xie-Connell, C.* (2015). What is Electronic media? [Electronic resource]. URL: <https://www.skillmaker.edu.au/what-is-electronic-media/>

Yan, 2020 – *Yan, H.* (2020). The Spanish flu killed more than 50 million people. These lessons could help avoid a repeat with coronavirus. [Electronic resource]. URL: <https://edition.cnn.com/2020/04/16/health/spanish-flu-coronavirus-lessons-learned/index.html>

Yang et al., 2016 – *Yang, X., Chen, B.C., Maity, M., Ferrara, E.* (2016). Social Politics: Agenda Setting and Political Communication on Social Media. *International Conference on Social Informatics*: 330-344.