

Qualitative Research

CAUSES OF RESISTANCE TO SOCIAL DISTANCING IN THE WAKE OF THE COVID-19 OUTBREAK IN PAKISTAN. A QUALITATIVE STUDY IN LAHORE, PAKISTAN

Malik Moazzam Elahi¹, Muhammad Ishaq², Nauman Ali Chaudhary³, Muhammad Salman Butt⁴

ABSTRACT

Background: The study aimed to understand the reasons for resistance or a casual approach among people of Lahore towards COVID-19 guidelines of social distancing.

Material and Methods: An exploratory research design and qualitative research methodology was selected for this study based on the philosophical foundations of interpretivism.

Fifteen participants living in Lahore who were aware of the preventive measures against COVID-19 in general and social distancing were interviewed. Purposive sampling was utilized to short-list and approach the participants. The data collected, was analyzed using Graneheim and Lundman's approach.

Results: Through the qualitative data analysis, four major themes were derived, namely Knowledge about COVID-19 and Social Distancing, Role of socio-religious values; Role of Education; Nature of Work and attitudes toward social distancing.

Conclusion: The study concludes that most of the people were aware of the disease and adhered to SOPs about social distancing; however, a low literacy rate in certain segments of the population, preferring religious and cultural values and practices over SOPs, led some people to resist social distancing.

Key Words: Covid-19, Social Values, Attitudes, Awareness

doi: <https://doi.org/10.51127/JAMDCV4I2QR01>

How to cite this:

Elahi MM, Ishaq M, Chaudhary NA, Butt MS. Causes of resistance to social distancing in the wake of the COVID-19 outbreak in Pakistan. A qualitative study in Lahore, Pakistan.

JAMDC. 2022;4(2): 90-98

doi: <https://doi.org/10.51127/JAMDCV4I2QR01>

INTRODUCTION

Coronavirus disease 2019 (COVID-19) is caused by a novel coronavirus, known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2; formerly known as 2019-nCoV), initially defined as a result of an eruption of respiratory disease in Wuhan City, Hubei Province, China. The WHO first announced that on Dec 31, 2019.¹

On Jan 30, 2020, the WHO declared the outbreak of COVID-19 as a global health emergency. On Mar 11, 2020, the WHO declared COVID-19 as a global pandemic, the first of its kind since the 2009 declaration of an H1N1 influenza pandemic. The SARS-CoV-2 disease was referred to as COVID-19 by the WHO, an acronym derived from the Coronavirus Virus 2019.² The name was chosen to avoid stigmatizing the virus's source regarding cultures, geography, or animal associations.

Long-term growth trajectories of the countries could have been affected by the decisions taken then by the countries and their funding. The United Nations mobilized the UN system to support national authorities

¹Instructor Sociology, Department of Sociology, LRO, Virtual University of Pakistan.

²Assistant Professor, Institute of Social and Cultural Studies, University of the Punjab, Lahore.

³Assistant Professor, Institute of Social and Cultural Studies, University of the Punjab, Lahore.

⁴Ph.D. Public Health Scholar, Department of Public Health, University of the Punjab, Lahore, Pakistan.

in developing public health preparations and response planning to the COVID-19 crisis through its 131 country teams surveyed 162 countries and territories.³ The impact of COVID-19 on the immediacy of the socio-economic crisis in The UN's Framework for the Immediate Socio-Economic Response warned that the COVID-19 pandemic is far more than just a health crisis.³ Although the effects of the pandemic will vary in different countries, poverty and inequalities will most likely increase globally. The loss of several lives due to the pandemic caused permanent and lasting damage to the global society and economies.⁴ Water contamination, runoff from sewage, climate change, degradation of the ozone layer, global warming, loss of groundwater levels, environmental and ecosystem changes, and arsenic pollution were all environmental concerns.⁵ COVID-19 has also caused several countries to implement various strategies, such as lockdown and social distancing, to mitigate the effects of the virus.³ Practicing social distance means remaining as far as possible at home and away from others to prevent COVID-19 spread. Social distancing has been used since the beginning of the nineteenth century, indicating "the extent to which people and particularly people from social groups (such as race, ethnicity, class, and gender) accept or reject the social interaction"⁶ Social distancing had been considered as the first line of defense in humanity's fight against the latest Coronavirus. To prevent community transmission, all local and central governments worldwide literally imposed a ban on the movement of their citizens outside their homes.⁵ The evidence supports that the virus of COVID-19 can be contained and restricted to a certain extent by practicing social distancing. However, successfully implementing social distancing would require public support.⁷ Banning religious, sports, and commercial events also caused global economic challenges for developing nations like Pakistan. Pakistan faced the unique challenge

of being sandwiched between the severely infected borders of COVID-19, such as China and Iran.⁸ Furthermore, COVID-19 significantly impacted Pakistan through different aspects such as economic, religious, social, educational, and health.⁹ The condition due to the coronavirus pandemic has also been alarming in Pakistan because of its weak healthcare infrastructure, poor sanitation, inadequate access to health services, and dramatic growth in local cases in a population that is larger than the combined population of Italy and Iran.⁸

Pakistan, since the outbreak of the coronavirus pandemic, is also included among the 180+ countries which have faced considerable challenges in the various sectors.¹⁰ Due to this, the country put efforts into mitigating this health emergency and minimizing the economic loss extent through the method of social distancing policy in the country.¹¹ The spread of the disease within and into the country was similar to that of the global context as most of the cases in the world's urban population at 4.2 billion occurred in the metropolitan cities, which was similarly the case in Pakistan in which 40% of people live in cities.¹²

According to the Government of Pakistan (2020), the fatalities in Pakistan reached 6,342. It had 299K confirmed cases of Covid-19 till then; however, many remained unreported. Similarly, the government's estimate suggested that the mortalities in Pakistan could rise to 58,000 and could lie anywhere between 5 to 10% of this number. It was the healthcare system. It was forecasted to be overwhelmed.¹³ Disease prevention is not just dependent on the system of sound health but also is concerned with the policies involving the population segments confronting the factors that create the condition of the spread of the disease, such as social distancing. Certain segments of the population, such as the unprivileged and those earning daily through odd jobs, remained at high risk of the disease due to their reluctance to maintain social distancing.¹³

The government of Pakistan on the federal and provincial levels had shown a great lack of coordination during the implementation of the policies like the lockdown for the prevention of the Covid-19 spread.¹⁴ The provincial governments focused on preventing the disease rather than the economic loss. In contrast, the federal government focused on minimizing the loss to the country's economy and ensuring that most of the population of Pakistan, which was dealing with poverty, did not die of hunger due to the country's economic collapse.¹⁵ The government of Pakistan was restricted in its ability to deal with the pandemic emergency due to the country's social, political, and cultural practices.¹⁶ The culture of Pakistan also plays a significant role as an obstacle in maintaining social distancing.⁸ Most people in Pakistan follow religion blindly; specifically, people with low literacy rates in Pakistan have developed a belief that Covid-19 is a conspiracy made by the infidels against Muslims.¹⁷ Due to these circumstances, people have shown immense resistance to the lockdown and are reluctant to follow the social distancing policy, specifically during religious occasions such as prayers.¹⁸ In addition to the resistance from the religious sector of the society, poverty within the country was also observed as the significant cause of the resistance to the guidelines of social distancing provided by the government.¹⁹ Unfortunately, there had been a casual approach toward social distancing.²⁰ Therefore, the reason for executing this study was to gain insight into the concept of Covid-19 with consequences and study its impacts, specifically in Pakistan.

MATERIAL AND METHODS

An exploratory research design and qualitative research methodology were selected for this study based on the philosophical foundations of interpretivism. In this research, people living in urban centers or cities were selected as the population of the study. The criterion for the inclusion had basic knowledge about the

preventive measures against covid-19 in general and social distancing in particular. Purposive sampling, accessorized with convenience sampling, was used to short-list the participants.

Given the need for immediate data collection to improve the patient care process and the limitations of face-to-face contact, data were gathered through 15 semi-structured in-depth telephone interviews at a convenient time for the participants during March and April 2020. The study used the primary method to obtain data through in-depth interviews. The data were collected during the first lockdown in 2020, from April 2020 to July 2020, to explore the factors for resistance against social distancing measures. Fifteen in-depth interviews were conducted with the participants living in Lahore who were aware of the spread of Covid-19 and the social distancing of SOPs as a precautionary measure against its spread.

Verbal consent was obtained and the study's goals were explained to the participants. On consent from the participants, a feasible time for the interviews was scheduled. The interview process continued until saturation was achieved and no further data themes emerged. The interview length was based on the participants' desires and experiences. The interview data was preserved by recording the interviews of the participants.

DATA ANALYSIS

Graneheim and Lundman's method was used for the analysis of data. Each interview data was transcribed into text. After numerous reviews, codes were extracted from the data. After the generation of codes, the participants were consulted, and the codes were verified accordingly. The codes were then categorized according to their relevance to reaching the participants' agreement, and the themes embedded in the data were generated.

ETHICAL CONSIDERATIONS

The research had been conducted according to the ethical guidelines, keeping in mind the human subjects involved in this research for

interview purposes. A consent form had been signed to obtain participants' informed consent. Moreover, all the information/data collected from secondary sources were cited systematically.

RESULTS

Fifteen participants participated in the study, of which five participants were females, and ten were males. The minimum age limit was 23 years, and the maximum was 49 years, giving the average age of 34.2 of the study participants (Table 1).

Table 1: Demographic characteristics of the Participants (N=15)

| Participants | Age (Years) | Gender | Residence |
|--------------|-------------|--------|-----------|
| 1 | 23 | Female | Lahore |
| 2 | 25 | Female | Lahore |
| 3 | 25 | Male | Lahore |
| 4 | 26 | Male | Lahore |
| 5 | 30 | Female | Lahore |
| 6 | 32 | Male | Lahore |
| 7 | 34 | Male | Lahore |
| 8 | 36 | Male | Lahore |
| 9 | 36 | Male | Lahore |
| 10 | 37 | Female | Lahore |
| 11 | 38 | Male | Lahore |
| 12 | 40 | Male | Lahore |
| 13 | 40 | Male | Lahore |
| 14 | 42 | Female | Lahore |
| 15 | 49 | Male | Lahore |

The data codes were categorized into four major themes (Table 2). Major themes are explained under.

Table 2: List of themes and major codes

| Themes | Major codes |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Knowledge about COVID-19 and Social Distancing | The participants highlighted their knowledge of COVID-19 and social distancing measures against the spread of the pandemic. |
| 2. Role of socio-religious values | The participants showed the influence of socio-cultural factors on their attitudes towards social distancing practices. The respondents also mentioned a stronghold of religious values on the decisions of the people around them and their practices. |
| 3. Role of Education | The level of education and the concept of COVID-19. The level of education and the attitude towards social distancing |
| 4. Nature of Work and attitude towards social distancing | Types of work and effects on the attitudes of people |

Knowledge about COVID-19 and Social Distancing

The concepts of COVID-19 from the perspective of 15 participants living in Lahore who were aware of the spread of COVID-19 and social distancing as a precautionary measure against its spread were examined through interviews. They were asked about the concept of Coronavirus. Most of the participants were well aware of Coronavirus and had a basic concept about it. 12 out of 15 participants knew about the global effects of the disease and the means of its spread. One of the participants stated that: *"It is a very dangerous and contagious virus. It has spread around the globe within a few months. Hundreds of people have died because of this virus. It spreads through the touch and droplets from sneezing and*

coughing. I know about this mostly through media and social media. People also talk about this."

However, not all the respondents had basic knowledge about COVID-19; 3 out of 15 participants had a very different perception of the virus. These participants' ideas were contrary to the facts about the virus. One of the participants stated that:

"I heard from people about this disease that spreads through the bats, and whoever gets affected develops a condition of worms in their body. Some say one experiences high fever and flu."

It can be examined from this statement that despite a lot of awareness campaigns, few people still had a misconception about the spread of the disease as the interviewee heard from people the cause of the disease is bats.

Role of Socio-Religious Values

Most individuals in Pakistan blindly follow the path of religion, and this aspect is considered common in people with a literacy rate, which has resulted in people believing that COVID-19 is a conspiracy developed by infidels against Muslims.¹⁷ The responses from the interview participants were analyzed to identify the role of religious factors in the spread of Coronavirus. One of the participants of the study recorded the response:

"Well, if a virus has to attack, it can attack anywhere. Though I have seen a lot of people in countryside areas, where my work is, people have such views as well".

Another respondent recorded the response:

"Yes, I believe these things (diseases or other evils) do not attack where God's name is spoken. We conducted a milaad (congregational gathering) at our home recently during lockdown for the blessings by God".

The aspect of perception also played a key role because most respondents mentioned that attending funerals is mandatory because of the emotions attached to the event. The responses highlight that prayers such as Jumma and funeral prayers were considered necessary by the participants. Most

participants did not refrain from these congregational prayers, even being aware of the threats of the pandemic. Rather, these participants believed that proper SOPs maintaining social distancing should be implemented in these gatherings.

Participants were asked about the socio-cultural practices of greetings like handshakes and hugs in resisting the commitment to follow social distancing. During the interview, one of the respondents specified how he faced difficulty in avoiding physical contact due to the cultural value of shaking hands:

"Yes, with friends, I have avoided as there is no compulsion with friends. We can say that I will not do this because of Coronavirus. But keeping a distance of 6 feet is nearly impossible. One cannot talk to a person properly at this distance."

It had been identified that the respondent was bound by cultural values of shaking hands on greetings even though the pandemic of COVID-19 was going on in Pakistan, and the cultural values like living in a joint family and proximity restricted the individuals within one household to maintain social distancing during the pandemic of COVID-19 in Pakistan.

To find out the role of age of the participants on their attitude towards social distancing practice, respondents were asked about their practice of social distancing with their elders and how the elders in their families follow the SOPs.

Most of the participants were of the view that keeping their distance from their elders was not considered important by them. Moreover, keeping a physical distance was not only seen as difficult but also disrespectful. In the words of one of the participants:

"If we will not receive the greetings of our elders (tap on head or shoulders), it will be considered disrespectful."

The responses obtained from the participants from both higher and lower age ranges showed a somewhat similar response. They had been reluctant to adopt the social distancing measures.

Level of Education And Attitudes Towards Social Distancing

Education played a major role in developing people's attitudes towards social distancing. The participants living in Lahore were aware of the spread of COVID-19, and social distancing was a precautionary measure against its spread. Those with an education level higher than matriculation tend to show more willingness to follow social distancing measures. The response of one of the participants interviewed detailed that:

"As my husband's sisters are educated (intermediate), they are always more concerned about precautions from coronavirus. They counseled my mother-in-law and father-in-law to stay at home".

The statements by the interviewees show that individuals with a lower level of education tend to be more negligent in their adherence to keeping social distance during the pandemic.

Nature of Work (Occupation) And Attitudes Towards Social Distancing

Through interviews with the participants, the researcher also tried to find the relation between work and attitudes toward social distancing. On asking about following the SOPs of social distancing at work during the outspread of Coronavirus, one of the respondents stated that:

"No, sir, I have been working part-time at a packaging factory with over 70 workers, and none of them wears masks or keeps a distance from each other. They eat together and do handshakes and hugs as normal. Even managers there do not follow any precautions."

The above response from one participant evaluates that even though the government directed the organizations to follow preventive measures and SOPs to build the habit of social distancing among the workforce, the factories and organizations have been ignoring such protocols. The statements depicted the attitude and seriousness of the participants in following social distancing about the nature of their work. Most participants seemed to have made

an excuse for their work to resist the measure of social distancing against the spread of the pandemic.

DISCUSSION

The pandemic of COVID-19 was a fatal outbreak in the past, such as Ebola, etc. In Pakistan, the spread of COVID-19, especially in the urban population, was rapid; therefore, it was essential that the urban population gets aware of the concept of COVID-19 and social distancing. The research investigated that the people living in Lahore city of Pakistan know that COVID-19 is a very dangerous and contagious virus and spreads through touching, sneezing, and coughing. Moreover, they were aware that the most common symptoms of the disease were dry cough, difficulty breathing, and chest congestion. However, few of them believed that the inception of the disease was from bats, whereas the research by UNDP (2020)(1) proved that there was no close physical contact between humans and bats; therefore, it was not the origin of COVID-19.

Social distancing was important in decreasing the second wave of COVID-19 in Pakistan. Due to the weakened healthcare system in Pakistan, it was vital for the people of Pakistan to understand the concept of social distancing and practice it.²¹ The current research analyzed the views of 15 participants living in Lahore. It was aware of the spread of COVID-19 and social distancing as a precautionary measure against its spread, regarding social distancing by conducting interviews. The responses showed that most participants had basic knowledge about the concept, ways, and reasons for practicing social distancing during the pandemic. The participants knew that maintaining a distance of 3-6 meters from each other is termed social distancing. In addition, there should be an avoidance of physical contact, such as handshakes and hugs, to reduce the spread of the virus. However, despite being aware of the concept of social distancing and its use in mitigating the novel Coronavirus, a sense of carelessness was observed in the participants'

responses towards strictly following the practice of social distancing.

In line with the study's objectives, one of the important aspects was to look into the source of information. The statements from the research participants revealed the role of media in spreading information about COVID-19 and the practice of social distancing as its major deterrent. The respondents' statements highlighted that news and television perform a major role in informing people regarding the issues of COVID-19 and its repercussions. The response from the research participants suggested that television was an important medium in developing awareness among individuals regarding the news and updates related to COVID-19 and the importance of social distancing during the spread of the virus. Furthermore, the responses can be decoded to gain insights that the automated messages are also crucial during the spread of the virus, which are responsible for generating automated government messages regarding COVID-19 during phone calls. These responses also highlighted that social media is the most used platform to gain information relevant to the spread of the virus and its impact on the economy and people. The statements recorded by the participants highlighted the importance of electronic media in Pakistan, which is the most informative platform for indigenous people. To reach one of the objectives of this research to determine whether socio-cultural values are making it challenging for authorities to implement social distancing measures in Pakistan, the participants were interviewed to explore the effects of socio-cultural and religious values on their attitudes towards practicing social distancing during the pandemic. The response of several participants revealed that citizens living in outskirts areas of Lahore tend to believe that COVID-19 only affects the people from the elite class, and the people living in the middle class and lower class are unaffected by COVID-19. Furthermore, the analysis findings suggested that most participants were reluctant to avoid and educate others

about the greeting ways of handshakes and hugs. Similarly, the responses also indicated that due to socio-cultural factors, people living in close proximity and joint families were also unable to maintain social distancing to prevent the spread of COVID-19 in Pakistan. Furthermore, the findings comprehended that lack of trust by the people in the government and inadequate measures by authorities to prepare the population for the pandemic created major challenges for them in implementing the protocol of social distancing within Pakistan.

The participants' responses also suggested that people have developed the idea that diseases such as COVID-19 have no impact on religious congregations. Additionally, some participants refuted the virus's existence by highlighting that none of the individuals in their social circle had come in contact with it and that everyone in the country was behaving like normal; therefore, the virus did not exist.

By analyzing the participants' responses, it could be distinguished that some participants did not believe in the existence of Covid-19 and that it was just a hoax by the government and other non-Muslim individuals to diminish the population of Muslims so that they could rule over the world. Therefore, it can be analyzed from the study that religious, social, cultural, and perception were the most important factors influencing the public's approach towards social distancing.

From the data analysis, it was noted that the respondents' education level played a vital role in developing their attitudes towards social distancing. Participants with lower literacy levels responded more inclined to believe in the misinformation and the conspiracy theories resulting in a non-serious attitude toward social distancing. The respondents' feedback of the study highlighted the careful reaction of the people following their association with their level of education towards their family and their support for the social distancing policy.

While analyzing the role of gender in the development of the respondents' attitudes, the researcher found that gender played a

significant role in following the SOPs to mitigate the spread of COVID-19. This response of the male participants put light on the perception about the social distancing practice critical to the male population in Pakistan, which is considered primarily responsible for earning in the families, are burdened with various work duties, and have to abide by them to keep their jobs. Women have been more attentive to the risks linked with COVID-19 and the benefit of social distance practice due to their association with television, social media, and other media channels than men.

Through the analysis of the data extracted from the interviews of the respondents, it was derived that the nature of work also plays a significant role in the practice of social distancing during COVID-19. A significant number of participants believed that proper SOPs especially social distancing, cannot be followed due to their nature of work. The participants' responses contemplated that the nature of work, such as in dairy shops, faces complexities when workers use SOPs like wearing a mask in the workplace as it affects their efficiency level, which restricts the managers from incorporating the basic protocol of COVID-19 at the workplace. The responses specified that an organization held the capacity to follow the basic protocol of COVID-19. But, the nature of work and the people managing the organization were the main determinants that affected the practice of social distancing within the various workplaces across Pakistan.

The responses from the participants further revealed that conspiracy theories also played a major role in the casual approach toward social distancing. Furthermore, it was also noted by the researcher that the factor of age does not have a significant impact on the transformation of attitudes of people towards social distancing measures or about the pandemic in general.

CONCLUSION

Regarding people's attitude when it comes to practically applying the practice of social distancing, the level of education or literacy

rate was a major determinant. Individuals with a better educational background were refraining from social gatherings and ensuring social distancing. However, at the same time, smaller family gatherings were still being conducted for weddings and other functions, which completely violated government restrictions.

The results show that even some people organized religious gatherings to reduce the negative effects of the disease. Similarly, certain cultural values in Pakistan often indicate some form of physical contact, a major socio-cultural factor in non-compliant behavior among people. In terms of age, the older population was more liable to disregard COVID-19 threats by claiming them to be conspiracy theories and a way for non-Muslims to diminish the Muslim population of Pakistan. Lastly, the findings showed that most people were aware of the disease and adhered to SOPs about social distancing. However, a low literacy rate in certain population segments, preferring religious and cultural values and practices over SOPs, led some people to resist social distancing.

AUTHOR'S CONTRIBUTION

MME: Main author, data collection, and conducted the fieldwork

MI: Research supervisor

NAC: Reviewed the methodology

MSB: Reviewed the paper for grammatical mistakes

REFERENCES

1. Undp.org. [cited 2022 Mar 9]. Available from: <http://www.undp.org/content/undp/en/home/coronavirus/socio-economic-impact-of-covid-19.html>
2. UNSDG A. UN framework for the immediate socio-economic response to COVID-19. UN
3. Nicola M, Alsafi Z, Sohrabi C, Kerwan A, Al-Jabir A, Iosifidis C, Agha M, Agha R. The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *Int J Surg.* 2020 Jun 1;78:185-93. <https://doi.org/10.1016/j.ijvsu.2020.04.018>

4. McKee M, Stuckler D. If the world fails to protect the economy, COVID-19 will damage health not just now but also in the future. *Nat Med.* 2020 May;26(5):640-2. <https://doi.org/10.1038/s41591-020-0863-y>
5. Klemeš JJ, Van Fan Y, Tan RR, Jiang P. Minimising the present and future plastic waste, energy and environmental footprints related to COVID-19. *Renew. Sust. Energ. Rev* 2020 Jul 1;127:109883. <https://doi.org/10.1016/j.rser.2020.109883>
6. Definition of SOCIAL DISTANCING [Internet]. Merriam-webster.com. [cited 2022 Mar 9]. Available from: <https://www.merriam-webster.com/dictionary/social%20distancing>
7. Mubarak N. Corona and clergy—The missing link for effective social distancing in Pakistan: Time for some unpopular decisions *IJID.* 2020 Jun 1;95:431-2. <https://doi.org/10.1016/j.ijid.2020.04.067>
8. Noreen N, Dil S, Niazi S, Naveed I, Khan N, Khan F, Tabbasum S, Kumar D. COVID 19 pandemic & Pakistan; limitations and gaps. *Global Biosecurity.* 2020 May 21;2(1). <http://doi.org/10.31646/gbio.63>
9. Rehman ZZ, Ahmad M, Ashraf W. Multidimensional Effects of COVID-19 In Pakistan: A cross-country analysis. *JRRSSP.* 2020;3(1):788-802.
10. Ahmed J, Malik F, Arif TB, Majid Z, Chaudhary MA, Ahmad J, Malik M, Khan TM, Khalid M. Availability of personal protective equipment (PPE) among US and Pakistani doctors in COVID-19 pandemic. *Cureus.* 2020 Jun 10;12(6). doi:10.7759/cureus.8550
11. Chowdhury R, Heng K, Shawon MS, Goh G, Okonofua D, Ochoa-Rosales C, Gonzalez-Jaramillo V, Bhuiya A, Reidpath D, Prathapan S, Shahzad S. Dynamic interventions to control COVID-19 pandemic: a multivariate prediction modelling study comparing 16 worldwide countries. *Eur J Epidemiol.* 2020 May;35(5):389-99. <https://doi.org/10.1007/s10654-020-00649-w>
12. Khan S, Khan M, Maqsood K, Hussain T, Zeeshan M. Is Pakistan prepared for the COVID-19 epidemic? A questionnaire-based survey. *J Med Virol.* 2020 Jul;92(7):824-32. <https://doi.org/10.1002/jmv.25814>
13. COVID-19: Pakistan's preparations and response [Internet]. IGC. 2020 [cited 2022 Mar 9]. Available from: <https://www.theigc.org/blog/covid-19-pakistans-preparations-and-response>
14. Umer H, Khan MS. Evaluating the effectiveness of regional lockdown policies in the containment of Covid-19: Evidence from Pakistan. arXiv preprint arXiv:2006.02987. 2020 Jun 4. <https://doi.org/10.48550/arXiv.2006.02987>
15. Sharma GD, Talan G, Srivastava M, Yadav A, Chopra R. A qualitative enquiry into strategic and operational responses to Covid-19 challenges in South Asia. *J. Public Aff.* 2020 Nov;20(4):e2195. <https://doi.org/10.1002/pa.2195>
16. Rehman ZZ, Ahmad M, Ashraf W. Multidimensional Effects of COVID-19 In Pakistan: A cross-country analysis. *JRRSSP.* 2020;3(1):788-802.
17. Ghadyani M, Hussain H, Odeh W, Wood P. Responses to the COVID-19 pandemic in Syria, Iran and Pakistan.
18. Singh DE. Role of religions in the spread of COVID-19. *J Ecumenical Stud.* 2020;55(2):289-310. doi:10.1353/ecu.2020.0019.
19. Atif M, Malik I. Why is Pakistan vulnerable to COVID-19 associated morbidity and mortality? A scoping review. *Int J Health Plan Manag* 2020 Sep;35(5):1041-54. <https://doi.org/10.1002/hpm.3016>
20. Sarwar F, Panatik SA, Sarwar F. Psychology of Preventive Behavior for COVID-19 outbreak. *Journal of Research in Psychology.* 2020 May 10;2(1):1-3. <https://doi.org/10.31580/jrp.v2i1.1370>
21. Balasa AP. COVID-19 on lockdown, social distancing and flattening the curve—A review. *EJBMR.* 2020 May 11;5(3). <https://doi.org/10.24018/ejbmr.2020.5.3.316>