

PEER REVIEW HISTORY

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ARTICLE DETAILS

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| TITLE (PROVISIONAL) | Exploring community perceptions, attitudes, and practices regarding the Covid-19 pandemic in Karachi, Pakistan |
| AUTHORS | Shahil Feroz, Anam; Akberali, Naureen; Feroz, Ridah; Akber Ali, Noshaba; Nazim Meghani, Salima |

VERSION 1 – REVIEW

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| REVIEWER | Bing Hu Sichuan University West China Hospital |
| REVIEW RETURNED | 18-Feb-2021 |

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| GENERAL COMMENTS | <p>1.This is a cross-sectional study. The objective of the study is interesting and essential to reveal the public attitudes towards Covid-19 pandemic. However, there seems to exist significant flaws regarding the study design and result illustration. Since this is a qualitative study, the interpretation of the result is too subjective. News report might be a better format for the article, rather than original study.</p> <p>2. Purposive sampling of 27 members from few middle to upmarket neighborhoods in a single city might produce selective bias. Lacking stratification of religion and detailed explain of inclusion criteria might also impair the credibility of the result.</p> <p>3.In the additional file, only 4 themes of questions are mentioned while there are 6 in the result section.</p> <p>4.In the result section, the author described the 6 themes by quoting the interviewees' opinions while expressing the author's own ones. Although this looks interesting, it is too qualitative to show a quantitative result. Perhaps a table having all 27 interviewees' opinions towards the 6 themes might help better exhibit the points.</p> |
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| REVIEWER | Eric Lofgren Washington State University |
| REVIEW RETURNED | 18-Mar-2021 |

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| GENERAL COMMENTS | <p>The manuscript is a qualitative evaluation of the beliefs a selected group of residents of Karachi, Pakistan have regarding COVID-19, having been collected relatively early in the country's experience of the epidemic. It appears carefully conducted, and the conclusions reasonable.</p> <p>Major:</p> <p>1) The WhatsApp and email groups for these neighborhoods - are they pre-existing? How did the researchers find and obtain access to them?</p> <p>2) My major hurdle with this study is what to do with it - what</p> |
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| | <p>implications might it have beyond a snapshot of the thinking of people in Karachi in late spring of 2020? Given the chance to revise, I would very much like to see the author's put the findings in the context of the broader outbreak in Pakistan - was there an uptick in cases during Eid? Is there evidence, as there are in other countries, that younger generations are indeed driving transmission?</p> <p>3) I would like to see some discussion, given that the survey was conducted in two communities, if the broad themes were the same, or different, between those groups, as one might imagine very different exposures to, and abilities to protect themselves from, COVID-19.</p> <p>Minor:</p> <p>1) "COVID-19" should be capitalized throughout. 2) Specific authors (i.e. ASF, NAA) need not be specified in the methods. If they are, their initials should be expanded the first time they appear. 3) Some minor editing for idiom and tense may be needed to improve the language of the manuscript, but this is in the scope of copy editing and does not interfere with the legibility of the paper itself.</p> |
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| REVIEWER | Srinivasan Venkatramanan University of Virginia |
| REVIEW RETURNED | 20-Mar-2021 |

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| GENERAL COMMENTS | <p>The authors report a qualitative study aimed at understanding community perceptions, social norms and cultural practices related to COVID-19 control in Pakistan. They report qualitative content analyses of 27 in-depth community interviews conducted across age groups and genders done during May-June 2020. In addition to prevailing perceptions, the authors elicit information on preferred information sources, adherence and future preparedness.</p> <p>Overall I think this is a very useful study and adds to the literature on global variations in COVID-19 perceptions. I applaud the authors for taking up this effort, and would kindly encourage conducting subsequent 'rounds' to capture any temporal changes (esp. recently with respect to vaccinations). In my comments I have requested if the authors can provide some additional context to help interpret the findings. Some of the comments may not be relevant, if the goal is to report overall perceptions in Karachi instead of comparing the two communities.</p> <p>Detailed comments:</p> <ul style="list-style-type: none"> - The authors explicitly list in the limitations that the interviews were done over Zoom. It doesn't take away anything from the quality of study, but would be good to mention it in the abstract (in-depth virtual interviews). It does provide additional information on survey participants (internet literacy in the family to some extent). - In the Study setting, authors briefly describe the characteristics of the two communities under study, which seem quite different. Would be good to include a Table with more quantitative comparisons (age, education level, income, household structure, etc.) from a recent Census. This will help provide more context for any comparisons. |
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| | <p>- On a related note, would be good to show a comparison of the COVID-19 experience (case rates, hospitalizations, deaths, etc.) in these two communities (or for Karachi as a whole, if data is only available at that resolution) during that timeframe. Did the communities differ in ongoing interventions? The participants were selected as having not contracted the disease, or isolated/quarantined for recent exposure, but community level incidence is likely to have influence on their perceptions.</p> <p>- Some of the quotes don't have age information. Is this intended? Would be good to be consistent across all. Another suggestion is to label them by community to see if there are differences between them.</p> <p>- The authors mention using meaning units and codes for the transcribed interviews. It is unclear how this was used. More details (e.g., coding scheme) would be useful for other studies in the future.</p> <p>Typos:</p> <ul style="list-style-type: none"> - Line 152: 'evidenced-base' -> 'evidence-based' - Line 263: 'religious intuitions' -> 'religious institutions' (possibly a transcription error?) - Line 287: 'was trying to' -> 'were trying to' - Line 301: 'if the plan' -> 'if they plan' - Line 328: 'Eid festive' -> 'Eid festival' |
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| REVIEWER | Haroon Ahmed COMSATS University Islamabad |
| REVIEW RETURNED | 18-May-2021 |

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| GENERAL COMMENTS | <p>Manuscript: " Manuscript ID bmjopen-2020-048359 entitled "Exploring community perceptions, attitudes, and practices regarding the Covid-19 pandemic in Karachi, Pakistan" has been submitted to for BMJ Open" by Feroz et al., The manuscript can be accepted for publication after the incorporation of following minor comments.</p> <p>Abstract:</p> <ul style="list-style-type: none"> - ok <p>Introduction:</p> <ul style="list-style-type: none"> - Cite some studies of KAPs from Pakistan - https://pubmed.ncbi.nlm.nih.gov/?term=Knowledge%2C+Attitude%2C+Practices+and+Risk+Factors+Regarding+COVID-19+in+Pakistan&sort=date&size=50 <p>Methods:</p> <ul style="list-style-type: none"> - How's the authors calculate the sample size. <p>Results:</p> <ul style="list-style-type: none"> - ok <p>Discussion:</p> <ul style="list-style-type: none"> - Add some information's on CE from neighboring countries of Iran in start of discussion e.g. India, Pakistan etc - Add one paragraph related to previous studies of KAPs of COVID-19 from Pakistan - https://pubmed.ncbi.nlm.nih.gov/?term=Knowledge%2C+Attitude%2C+Practices+and+Risk+Factors+Regarding+COVID-19+in+Pakistan&sort=date&size=50 |
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| REVIEWER | Sujita Kumar Kar King George's Medical University, Department of Psychiatry |
| REVIEW RETURNED | 30-May-2021 |

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| GENERAL COMMENTS | <p>a. What are the research gaps?</p> <p>b. Why this study is important at this point of time (May end 2021)?</p> <p>c. The authors conducted the study on May -June 2020. The current scenario is highly different than what it was at that time. What is the implication of the study findings at this current moment?</p> <p>d. Refer to the table 1: The third column mentions, Male =12 and Female=14. The number of males interviewed is 13, (not 12). It needs to be corrected.</p> <p>e. How the investigators recruited the participants to the study (method of selection of participants)? Authors mentioned they used purposive sampling. As they contacted individuals through e-mails and social media, how many people responded? Out of the total responses, how many are excluded?</p> <p>f. Any selection criteria were set for the recruitment of patients.</p> <p>g. Are there any participants, who belonged to the same family? If yes, how many?</p> <p>h. The authors had mentioned that "Data collection was ceased once saturation was achieved". What do mean by saturation as the authors have not decided the sample size a priory?</p> <p>i. There are several similar studies from Pakistan, to highlight a few are: https://www.frontiersin.org/articles/10.3389/fpubh.2020.602434/full https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-10083-y https://onlinelibrary.wiley.com/doi/10.1002/jcop.22512 https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0243696 https://link.springer.com/article/10.1007/s10900-020-00875-z https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7755600/</p> <p>j. Small sample size and purposive sampling from a small catchment area is the major limitation, which grossly limits the generalizability of the study.</p> |
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| REVIEWER | Nicola Vanacore National Centre for Epidemiology |
| REVIEW RETURNED | 31-May-2021 |

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| GENERAL COMMENTS | <p>This is a qualitative study to understand social responses towards Covid-19 in Karachi, Pakistan. The study is well done and the methods are correct.</p> <p>I suggest to discuss more deeply these two issues :</p> <ul style="list-style-type: none"> • the possible misinformation in to receive information from religious institutions and relatives and friends working in hospital facilities; • the younger generation may inflict damage in the community as safety precautions are not being followed. <p>Moreover, a detailed decription to include in the introduction of the public campaign against COVID-19 of the Government of Pakistan is reccomended .</p> |
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VERSION 1 – AUTHOR RESPONSE

REVIEWER 1 COMMENTS

| S. No. | Comment | Point by point response |
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| 1. | This is a cross-sectional study. The objective of the study is interesting and essential to reveal the public attitudes towards Covid-19 pandemic. However, there seems to exist significant flaws regarding the study design and result illustration. Since this is a qualitative study, the interpretation of the result is too subjective. News report might be a better format for the article, rather than original study | Thank you for the comment. This is a qualitative approach to explore the understanding of Covid-19 and acceptance of control measures among community members. Since our approach to this inquiry is qualitative, it is more focused on subjective meanings and individuals' own accounts of their perceptions towards Covid-19. Original qualitative study designs are primarily employed to understand the subjective meanings and individuals' accounts towards a phenomenon. |
| 2. | Purposive sampling of 27 members from few middle to upmarket neighborhoods in a single city might produce selective bias. Lacking stratification of religion and detailed explain of inclusion criteria might also impair the credibility of the result. | <p>Since this is a qualitative inquiry, we relied on purposive sampling technique to recruit individuals from two communities. The 'selection bias' error occurs in quantitative studies when the selection of participants is not random and when random sampling is central for the generalization of findings. In qualitative approach, the selection bias is not a concern since the intent is not to generalize the findings rather to dig into the depth of each interview to understand the unique perspectives of community members regarding Covid-19 and its control measures (David et al., 1996).</p> <p>We did not provide stratification for religion as both are Muslim communities and all interviewed individuals belonged to Islam Religion.</p> |
| 3. | In the additional file, only 4 themes of questions are mentioned while there are 6 in the result section. | The interview guide (Additional file) was only used to conduct semi-structured interviews. The six themes mentioned in the result section were identified from the interviews through conventional content analysis. Since this is a qualitative inquiry, several themes could emerge from a set of interview questions. |
| 4. | In the result section, the author described the 6 themes by quoting the interviewees' opinions while expressing the author's own ones. Although this looks interesting, it is too qualitative to show a quantitative result. Perhaps a table having all 27 interviewees' opinions | In the results section, we have mainly provided the themes that emerged from the analysis and supporting verbatim from our study participants. This is the traditional way of reporting qualitative studies. Since this is a qualitative inquiry which used a semi-structured interview guide, we do not |

| S. No. | Comment | Point by point response |
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| | towards the 6 themes might help better exhibit the points. | have opinions for all 27 interviewees on all six themes. These are individual accounts which does not follow a particular format... each individual in the study informs a particular story about their perceptions towards Covid-19 and its precautionary measures. |

REVIEWER 2 COMMENTS

| S. No. | Comment | Point by point response |
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| 1. | 1) The WhatsApp and email groups for these neighborhoods - are they pre-existing? How did the researchers find and obtain access to them? | Thank you for the comment. We have now added this in the methods section. Yes, the WhatsApp and email groups for these neighborhoods are pre-existing and we obtained access to these groups through community leaders (gate keepers). |
| 2. | 2) My major hurdle with this study is what to do with it - what implications might it have beyond a snapshot of the thinking of people in Karachi in late spring of 2020? Given the chance to revise, I would very much like to see the author's put the findings in the context of the broader outbreak in Pakistan - was there an uptick in cases during Eid? Is there evidence, as there are in other countries, that younger generations are indeed driving transmission? | Thank you for highlighting this concern. We have now added a discussion around how the study findings have implications for beyond spring 2020 and future outbreaks in Pakistan. There was an uptick in Covid-19 cases in June 2020. This is perhaps due to Eid festival which happened in May 2020. Yes, a large body of evidence suggests that younger generation is driving Covid-19 spread because symptoms are often milder in the young people, and many are unaware that they are infected. |
| 3. | 3) I would like to see some discussion, given that the survey was conducted in two communities, if the broad themes were the same, or different, between those groups, as one might imagine very different exposures to, and abilities to protect themselves from, COVID-19. | I recognize your concern about making comparison between two communities with regard to differences in the exposures and abilities to protect themselves from Covid-19. The scope of this paper was not to look at the differences between the two communities but rather to dig into the perceptions and attitudes of community members towards Covid-19 in two neighborhoods. All individuals interviewed for this study were Muslims and belonged to low-middle class families. We had no intention of comparing the themes of two communities; however, when we completed the first round of coding, we realized that the broad themes were more or less the same in these two communities. |

| S. No. | Comment | Point by point response |
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| 4. | <p>Minor:</p> <p>1) "COVID-19" should be capitalized throughout.</p> <p>2) Specific authors (i.e. ASF, NAA) need not be specified in the methods. If they are, their initials should be expanded the first time they appear.</p> <p>3) Some minor editing for idiom and tense may be needed to improve the language of the manuscript, but this is in the scope of copy editing and does not interfere with the legibility of the paper itself.</p> | <p>We have addressed the minor comments.</p> <ol style="list-style-type: none"> 1. COVID-19 is now used in the entire manuscript. 2. We have removed the initials for specific authors. 3. We have proof-read the paper for idiom and tense. |

REVIEWER 3 COMMENTS

| S. No. | Comment | Point by point response |
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| 1. | <p>In my comments I have requested if the authors can provide some additional context to help interpret the findings. Some of the comments may not be relevant, if the goal is to report overall perceptions in Karachi instead of comparing the two communities.</p> | <p>We have provided additional context to help interpret the findings in the discussion section. We have also clarified under the design heading that our study did not intend to look at the differences between the two neighborhoods with regard to perceptions and attitudes towards COVID-19 but rather to understand how community members in Karachi, Pakistan perceive COVID-19 disease and its precautionary measures.</p> |
| 2. | <p>- The authors explicitly list in the limitations that the interviews were done over Zoom. It doesn't take away anything from the quality of study, but would be good to mention it in the abstract (in-depth virtual interviews). It does provide additional information on survey participants (internet literacy in the family</p> | <p>We have now mentioned 'in-depth virtual interviews' in abstract. Yes, the information of preferred sources of information also indicated internet literacy in the families to some extent.</p> |

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| | to some extent). | |
| 3. | - In the Study setting, authors briefly describe the characteristics of the two communities under study, which seem quite different. Would be good to include a Table with more quantitative comparisons (age, education level, income, household structure, etc.) from a recent Census. This will help provide more context for any comparisons. | As clarified earlier, our study did not intend to look at the differences between the two neighborhoods with regard to perceptions and attitudes towards COVID-19 but rather to understand how community members in Karachi, Pakistan perceive COVID-19 disease and its precautionary measures. In addition, the sociodemographic profile of purposively sampled community members from both neighborhoods were very similar; thus, it provides very little context for any comparisons. |
| 4. | - On a related note, would be good to show a comparison of the COVID-19 experience (case rates, hospitalizations, deaths, etc.) in these two communities (or for Karachi as a whole, if data is only available at that resolution) during that timeframe. Did the communities differ in ongoing interventions? The participants were selected as having not contracted the disease, or isolated/quarantined for recent exposure, but community level incidence is likely to have influence on their perceptions. | Thank you for this suggestion. I have now provided the context for the data collection time frame and the discussion around how the Covid-19 incidence level and ongoing interventions might have influenced the community perceptions and attitudes towards Covid-19. Since the scope of this study is not to compare the two communities, I have not provided the details on how communities differed in terms on ongoing interventions and Covid-19 incidence level. |
| 5. | - Some of the quotes don't have age information. Is this intended? Would be good to be consistent across all. Another suggestion is to label them by community to see if there are differences between them. | Yes, the information on age and community name have been intentionally removed to ensure community member confidentiality. Since we do not intent to see differences between the communities, I have not provided labels for communities in the quotations. |

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| 6. | <p>- The authors mention using meaning units and codes for the transcribed interviews. It is unclear how this was used. More details (e.g., coding scheme) would be useful for other studies in the future.</p> | <p>This is the usual process which is followed in any conventional content analysis. This process helped us to reach to the final six themes. By meaning units we mean that dividing up the interview text into smaller parts and still preserving the core meaning. Once meaning units were made, we progressed to development of codes which can be thought of as a label; a name that most exactly describes what this particular meaning unit is about. The coding scheme is basically the main six themes in the results section.</p> |
| 7. | <p>Typos:</p> <ul style="list-style-type: none"> - Line 152: 'evidenced-base' -> 'evidence-based' - Line 263: 'religious intuitions' -> 'religious institutions' (possibly a transcription error?) - Line 287: 'was trying to' -> 'were trying to' - Line 301: 'if the plan' -> 'if they plan' - Line 328: 'Eid festive' -> 'Eid festival' | <p>Thank you for identifying these errors. We have now corrected the typos in the manuscript.</p> |

REVIEWER 4 COMMENT

| S. No. | Comment | Point by point response |
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| | <p>Introduction:</p> <ul style="list-style-type: none"> - Cite some studies of KAPs from Pakistan | <p>Since this study involved two neighborhoods from Karachi, Pakistan, we have</p> |

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| | | not included papers from other provinces. |
| | <p>Methods:</p> <ul style="list-style-type: none"> - How's the authors calculate the sample size. | <p>Since this is a qualitative study, we relied on the concept of 'data saturation' to reach to the appropriate sample size for our study. Data saturation refers to the point in the research process when no new information is discovered in data analysis. We have added this explanation in the main paper.</p> |
| | <p>Discussion:</p> <ul style="list-style-type: none"> - Add some information's on CE from neighboring countries of Iran in start of discussion e.g. India, Pakistan etc - Add one paragraph related to previous studies of KAPs of COVID-19 from Pakistan | <p>Since this study involved two neighborhoods from Karachi,</p> |

| S. No. | Comment | Point by point response |
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| | - https://pubmed.ncbi.nlm.nih.gov/?term=Knowledge%2C+Attitude%2C+Practices+and+Risk+Factors+Regarding+COVID-19+in+Pakistan&sort=date&size=50 | Pakistan, we have not included papers from other countries and other provinces of Pakistan. |

REVIEWER 5 COMMENTS

| S. No. | Comment | Point by point response |
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| 1 | a. What are the research gaps? | Weak body of qualitative evidence on social responses towards Covid-19 pandemic. |
| 2 | b. Why this study is important at this point of time (May end 2021)? | We recognize that the community perceptions and attitudes towards COVID-19 and its precautionary measures may be different at the present time given that the community has acquainted to the current situation. However, the finding of this study can be directly used to tailor existing public health interventions to address the social and behavioral problems related to this pandemic. The |

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| | | findings would help improve community preparedness and response for possible future COVID-19 waves or other outbreaks. Moreover, future research could be conducted to capture any temporal changes in community perceptions and attitudes, especially with respect to vaccinations. |
| 3 | c. The authors conducted the study on May -June 2020. The current scenario is highly different than what it was at that time. What is the implication of the study findings at this current moment? | Same as above |
| 4 | d. Refer to the table 1: The third column mentions, Male =12 and Female=14. The number of males interviewed is 13, (not 12). It needs to be corrected. | Thank you for identifying this. This has now been corrected. |
| 5 | e. How the investigators recruited the participants to the study (method of selection of participants)? Authors mentioned they used purposive sampling. As they contacted individuals through e-mails and social media, how many people responded? Out of the total responses, how many are excluded? | The IDI participants were identified and contacted via the pre-existing community WhatsApp and email groups. The researchers obtained access to these groups through community leaders of both neighborhoods. The community leaders, gate keepers in this study, supported |

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| | | the identification of purposive sample through both communities. A total of 35 eligible individuals were contacted through these groups, out of which 27 agreed to participate in the study. |
| 6 | f. Any selection criteria were set for the recruitment of patients. | <p>Yes, following criteria was used for recruitment.</p> <p>Inclusion criteria</p> <ul style="list-style-type: none"> ▶ Residents of Garden (East and West) and Karimabad <p>Federal B Area of Karachi who have not contracted the disease.</p> <p>Exclusion criteria</p> <ul style="list-style-type: none"> ▶ Those who refuse to participate in the study. ▶ Those who have tested positive for COVID-19 or isolated due to recent exposure ▶ Family members of COVID-19-positive cases |
| 7 | g. Are there any participants, who belonged to the same family? If yes, how many? | No. It has been clarified in the main text. |

| S. No. | Comment | Point by point response |
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| 8 | h. The authors had mentioned that “Data collection was ceased once saturation was achieved”. What do mean by saturation as the authors have not decided the sample size a priory? | Since this is a qualitative study, we relied on the concept of 'data saturation' to reach to the appropriate sample size for our study. Data saturation refers to the point in the research process when no new information is discovered in data analysis and this redundancy signals to researchers that data collection may cease. We have added this explanation in the main paper. |
| 9 | There are several similar studies from Pakistan, to highlight a few are: https://www.frontiersin.org/articles/10.3389/fpubh.2020.602434/full https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-10083-y https://onlinelibrary.wiley.com/doi/10.1002/jcop.22512 https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0243696 https://link.springer.com/article/10.1007/s10900-020-00875-z https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7755600/ | Thank you for highlighting this. We've added the references. |
| 1 | Small sample size and purposive sampling from a small catchment area is the major limitation, which grossly limits the generalizability of the study. | Since our study used a qualitative approach, it was more interested in gaining an understanding of community perceptions and attitudes towards Covid-19 rather than aiming at singular truth and generalization (external validity). Patton (1980) and Rolfe (2006) emphasize that the |

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| | | qualitative inquiry often prioritize depth over breadth through studying smaller samples and even single case and often makes very limited claims about the study external validity. |

REVIEWER 6 COMMENTS

| S. No. | Comment | Point by point response |
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| 1. | the possible misinformation in to receive information from religious institutions and relatives and friends working in hospital facilities; | We have highlighted in the main text that future research is needed to study the impact of the misinformation that is received from religious institutions, relatives and friends working in hospital facilities. |
| 2. | the younger generation may inflict damage in the community as safety precautions are not being followed. | Yes, we have expanded further on this in the main text. |
| 3. | Moreover, a detailed decription to include in the introduction of the public campaign against COVID-19 of the Government of Pakistan is reccomended . | A detailed description has been included in the introduction section on public campaign against COVID-19 by the Government of Pakistan |