## Reviewer #1:

Dear authors, I would like to thank you for the contribution you have made. The manuscript is well-written; however, there are some concerns of mine which I think need to be taken into consideration. Summary: Utilizing the PRISMA approach, the authors have ventured on conducting a systematic review on review and summary of evidence on burnout and anxiety in healthcare workers during previous global pandemics. According to the study, female healthcare workers and nurses were identified to be at a higher risk of developing burnout and anxiety during pandemic. There was also a variation in the prevalence of burnouts and anxiety across different studies due to different mental health instruments were used in different studies.

1. There are some limitations in the study. The biggest is the construct validity of the instruments used in different studies. While the studies acknowledge the same keywords or variables, they utilize different instrumentation. How can this be justified in the study? The authors have briefly mentioned the instrument variability in their limitations section. However, there needs to be rigorous justification and an explanation of what the authors did to the partial out the unintended differences.

Response #1: The different use of instruments for reporting burnout posed challenges of quantitative comparisons. Therefore, the current umbrella review took into the account of the qualitative results of these shortlisted studies to provide an overview of the prevalence (pooled prevalence) of burnout and anxiety among HCWs. Another issue is of we are using a vigorous approach to standardise some selected instruments used in various previous studies, then the no. of articles remained in this umbrella review will be very few (less than 3). Thank you.

The other point worthy of note, is the abrupt presentation of the data. It is partly understandable, because it is a
review paper, however, the general reader may need a bit more to know about the theoretical underpinnings of the
study before delving into the main study.

Response #2: Thank you for your comment. The information has not been sufficiently explained in the earlier submitted version. More relevant background information is added in the section-Introduction, before delving into the main study.

3. My last comment is, the study needs to give a more detailed account of the selection criteria and the procedures taken. Please add more detail to enhance replicability of the study. Kind regards

## Response #3:

Thank you for your comment. Paragraphs about the motivation of the study and added information of the procedures are added in the sections-study design, critical appraisal and search strategy. Thank you.

## Reviewer #2:

- 1. This is an umbrella review on burnout and anxiety in healthcare personnel during pandemics. It follows precisely the PRISMA guidelines to select systematic reviews on the topic. The methodology is robust and results are plausible in that sense. However authors are advised to pay more careful attention in the discussion on the differentiation between burnout, depression and anxiety, especially for healthcare system employees.
  - This problem has already been studies extensively (e.g. Toshkova-Hristozova, S., & Haralampiev, D. S. K. (2014). Anxiety and Depression as State Predictors for Burn Out in Health Care. New Model of Burn Out Syndrome: Towards Early Diagnosis end Prevention, River Publishers, Aalborg, Denmark, 115-130.). Its relevance comes from the fact that state anxiety may be considered as meaningful risk factor for burnout in certain context.
  - There are also other fundamental resilience factors which may be considered to influence burnout in medical personnel, especially during pandemics, such as sense of coherence: <a href="https://clicktime.symantec.com/15tpJAvBwQYgpxxeNHUon?h=bVoOy2zm8V03nm2CwiMJWhXBfS">https://clicktime.symantec.com/15tpJAvBwQYgpxxeNHUon?h=bVoOy2zm8V03nm2CwiMJWhXBfS</a> dUwUPaUQPtvmxhqTo=&u=https://doi.org/10.3389/fpsyt.2021.709587.
  - Authors may feel free to disregard the references, yet they are advised to attend to both caveats.

Response: Thank you for your valuable comments. Our team considered this is a valuable and important information and has added into our manuscript in section-Discussion.