### Peer Review File

Article information: https://dx.doi.org/10.21037/jphe-21-28

#### <mark>Reviewer A</mark>

#### Comment 1: Methodologies for analyzing qualitative data need to be better explained.

Reply 1: We have tried to explain in as much detail the process of analysing our qualitative data step by step. We have tried to make this clearer now.

Changes in the text: By using the codes, the programme was able to generate and identify the most common issues that are mentioned in the qualitative data.

### Comment 2 (Also comment 5 and 14) : The discussion should be reworded somewhat, particularly the key findings should be better highlighted.

Reply 1: The discussion section has been majorily reworded Changes in the text: Please see manuscript for major changes

#### Comment 3: More careful control of form and grammar is needed.

Reply 1: General editing and fine tuning of grammar was taken place by all authors to ensure consistency

Changes in the text: as shown in the document through track-changes.

### Comment 4: If it were possible, the form with the questions asked would be added as additional material.

Reply 1: The form is now added as supplementary material Changes in the text: nil

#### <mark>Reviewer B</mark>

## Comment 5: I recommend major revision of the discussion part of the manuscript, which would acknowledge limitations of the study (small sample size, bias and uncertainty of the tools used) and compare the findings to recent research articles on the topic.

Reply 1: We have added a limitations section in the discussion and have majorly changed the discussion section as seen in the manuscript.

Changes in the text: According to our knowledge this is the largest dataset to date that assesses the role of medical students in the COVID-19 pandemic internationally. Although the sample size is small, we have managed to give an overview of roles played in a wide range of countries in both the global north and south. The survey used is not a validated tool, however a similar survey was piloted prior to this study and relevant changes were made to increase the validity of our current survey.

Comment 6: With regards to conclusion section: - "our results confirm" à please kindly change to "suggest" Reply 1: changed Changes in the text:changed to suggest

Comment 7: - "significant" à delete or change the wording, unless you can provide evidence that their contribution resulted in significant improvement of the service provided to the patients

Reply 1: have changes Changes in the text:deleted

#### <mark>Reviewer C</mark>

Comment 8: The title of the article is objective and might draw the reader's attention. I would suggest you to include in the title, the design of the study, to make it clearer for the reader that it is a descriptive and qualitative analysis.

Reply 1: have added this.

Changes in the text:A descriptive study exploring the worldwide involvement of medical students in the COVID-19 pandemic

#### INTRODUCTION

## Comment 9: The number of cases of COVID-19 daily increases, it would be important to emphasize that the numbers in the text refer to a certain time, when the study was held ou lastly reviewed (Lines 84-86).

Reply 1: have changed to highlight it is at the time the study was written.

Changes in the text: The number of cases at the time this article was written, has been accelerating with now more than 173 million confirmed cases in 219 countries worldwide, causing 3.7 million deaths as of the 4th of June 2021 (2).

Comment 10: As the study sets out to analyze the perception of medical student worldwide, I would suggest greater referencing to the evidence base of measures adopted in other regions such as Latin America, Asia and Middle East countries. The pool of references includes only Europe, United States and Pakistan (Lines 89-92). Gathering data from different countries could enrich further associations in the Discussion.

Reply 1: I have researched and added references highlighting the health systems situation in Latin America; Asia Pacific and EMR.

Changes in the text: References Added.

Comment 11: Finally, concerning protocols of medical student participation in activities during the pandemic, I would suggest author to look for some examples of existing guidelines, such as AAMC (USA) and NHS (UK) (Lines 103-105)

Reply 1: The AAMC 'Guidance on Medical Students' Participation in Direct In-person Patient Contact Activities' was deemed an added value to the discussion section and has thus been added.

Changes in the text: Added to the discussion section: An example of such a protocol is the Association of American Medical Colleges' 'Guidance on Medical Students' Participation in Direct In-person Patient Contact Activities', which underlines the importance of student safety (19). The fact that only 20.8% of respondents were aware of such a protocol in their context, canThis can lead to some knock-on effects, including students not being aware of how they can help and therefore losing on a valuable resource.

# Comment 12 (see comment 5, added it as potential limitation): It could be interesting to better detail the instrument testing and what strategies were used to improve realiability, sensitivity and validity (Lines 121-122).

Reply 1: have tried explaining this in the methods section and also added it to the limitations Changes in the text: The survey used is not a validated tool, however a similar survey was piloted prior to this study and relevant changes were made to increase the validity of our current survey.

Comment 13 (see comment 5, added potential limitation): This were administered to 1st to 8th year medical students, including recent medical graduates.

The amount of responses (279) was very similar to the number of institutions (209), suggesting small student participation per university. It would be sound to clarify this into Discussion, as a potential limitation of the study (Lines 151-152).

Reply 1: added to the limitations

Changes in the text: Although the sample size is small, with the number of participants equal to the number of institutions, we have managed to give an overview of roles played in a wide range of countries in both the global north and south.

Comment 14: DISCUSSIOn: A stronger case needs to be made as to fast-tracked graduation acceptance among medical students. Greater referencing are required to better understand how different countries are dealing with this issue and what is available in existing literature about the perception of medical students (Lines 299-301).Similarly, reference concerning students' compensation and social vulnerability issues, in contexts other than COVID-19 pandemic could deepen the discussion, as well as more clearly articulation of the gaps in knowledge (Lines 274-278).

Reply 1: As per previous reviewers comments, the discussion section has been revised. Further referencing has been added to strengthen the section. Because it was not deemed possible by the authors to make a stronger case regarding final year medical students with our results or other literature, we are suggesting to remove that section completely.

Changes in the text: As per above. Final-year medical student text removed in the introduction, results and discussion.