# PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (http://bmjopen.bmj.com/site/about/resources/checklist.pdf) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

### ARTICLE DETAILS

TITLE (PROVISIONAL)	Occupational challenges of health care workers during the COVID-19 pandemic. A qualitative study
AUTHORS	Jeleff, Maren; Traugott, Marianna; Jirovsky-Platter, Elena; Jordakieva, Galateja; Kutalek, Ruth

#### **VERSION 1 – REVIEW**

REVIEWER	Chang, Chee-Tao Hospital Raja Permaisuri Bainun
REVIEW RETURNED	15-Jul-2021

GENERAL COMMENTS	This is an interesting study which presents the challenges faced by healthcare workers during the COVID-19 pandemic. Generally the paper provides important insights about challenges faced by healthcare workers, and this is important for reference of future pandemic outbreaks. Below are some suggestions for the paper. Abstract Conclusion: The term "required personnel" can be replaced with essential workers Conclusion: I am not sure why "especially nursing staff" was stated in the conclusion, as this was not particularly mentioned in the Results section. Introduction Line 125-126: "due to the prolonged pandemic response". Please kindly check whether this is correct in English. Line 127-128: The author can consider to cite the paper "Experiences of Social Stigma Among Patients Tested Positive for COVID-19 and Their Family Members: A Qualitative Study" https://www.researchsquare.com/article/rs-153721/v1 Line 130:especially nurses are quitting their jobs. Please check English and rephrase the sentence. Line 142: with the most prominent example of temporary shortages in PPEPlease check English and rephrase the sentence. Line 143-144: Meanwhile the crisis also shows how the pre- existing lack of qualified personnel has serious effects in this emergency situation. This sentence requires citation Line 150: The author can elaborate on what is meant by context- specific recommendations Methods Line 157: Is there any reasons for selecting the specific five public and one private hospital? Perhaps can state many hospitals are there in Vienna? This can give idea on the representativeness of the selected sites

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	Line 158: When author mentioned by personal introduction of the
	chief physician, is there any inclusion or exclusion criteria applied?
	Line 159: In one hospital, there is a key informant. How about the
	other 4 sites? And what is the position of the key informant, is it the
	same as chief physician?
	Line 160-162: How do you ensure maximum variation if you use
	snowball sampling? Usually this is achieved through purposive
	sampling
	Line 165-166: Since one participant is not being recorded, what is the way to transcribe for this subject?
	Line 166: How is the topic guide developed and what is the
	content?
	Line 174-182: Is thematic analysis being used? It should be stated
	clearly in this paragraph. Also, please mention why select thematic
	analysis.
	Line 180-182: When the authors mentioned the research considers
	changes over time, is this the appropriate study design to
	investigate this question? Perhaps the author should provide some
	citations of qualitative study design for support if they intended to
	answer this question.
	Other comments on Methods:
	Please specify the setting, timing and location of the study. In the
	limitation it was mentioned that some interviews were carried out
	shorter than usual, under stressed and tired condition. How do
	interviewers address this issue to ensure their data collected is
	valid?
	The authors did not mention how they derived the sample size. Is it
	based on saturation of data? This must be elaborate extensively as
	it is the core of a qualitative research design
	How do authors deal with subjects who refused consent? Is there
	any data on this group of patient?
	Results Line 189: When authors mentioned direct and indirect contact, this
	should be first defined in the Methods.
	Table 1: In the row "other physician", one example is surgeon. I am
	not sure whether this is appropriate. This is also not tally with line
	191, "other professions".
	192: What profession are the two participants at the private
	hospital?
	201: Acronym should be spelled in full first time use
	220-223: Cleaning staff was not included in your methods, and
	they should not be in your results. I am not sure whether you want
	to remove this paragraph.
	Line 224-225: What is meant by first phase and second phase?
	Line 227: "HCWs felt that other hospitals in Vienna were
	unprepared to take on COVID-19 patients". What is the definition of
	other hospitals? And who does the HCWs refer to?
	Line 235-Line 245 I suggest the authors to insert a few quotes from
	the subjects to support their findings.
	Line 246-248, should there be a separate subheadings: mental
	protection?
	Line 255-266: Authors should provide some quotes to support the
	entire paragraph, for example i. mentally and physically exhausted,
	ii. Worked extra hours iii. Permanent alarm mode iv. Emotional
	challenges v. seeing young people died. And I felt that the last sentence of this paragraph is redundant.
	Line 277-279: This paragraph should have subjects' quote to
	support, regarding the multiple request of staff
	Line 280-289: This paragraph should have subjects' quote to
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support
Line 313-316: ""One HCW recounted that she considered herself
as a role model. This had to do with the perception that" I am
not sure whether this is related to 3.5 stigma and avoidance
Line 327-328: Is there any quote for the qualified nurses who
feared to fall into oblivion?
Discussion
Line 337-339: Our paper is one of only few studies dealing with this
topic in the European Union. It will be good the authors can cite
some studies here.
Line 343-344: Our findings largely correspond with results from
other international studies on related topics, showing how most
experiences are shared on a global level. Citation should be
included in this line.
Line 378-379: When other authors was mentioned, it is better to
provide citation
Line 396: Is there any example of "specific needs"? Authors can
give examples
English: Overall, a round of English editing may be required to
improve clarity, especially in the Introduction and Methods.
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REVIEWER	Hall-Flavin, Daniel Mayo Clinic
REVIEW RETURNED	12-Dec-2021

GENERAL COMMENTS	This is a well written article that addresses the challenges of health care providers not only at the beginning of the COVID pandemic, but well enough into it (6 months) to provide an interesting snapshot into not only the initial impact of this global health crisis but its evolution over time. While there are more reports surfacing in the literature, this particular study's focus on a more longitudinal assessment is unique and provides a foundation for ongoing assessment of the complexity of the challenges that health care providers face, and a basis for collaborative study between institutions cross-culturally as the pandemic continues. Some general thoughts for the authors to consider weaving into their discussion: 1) In particular, protecting the health care workers both directly and indirectly dealing with the pandemic is critical; in the United States a substantial proportion of medical providers of all backgrounds have decided not to continue in their work in health care. I might recommend to the authors that they incorporate this startling fact into their discussion on meaning and fulfillment in one's professional lives and work life integration. 2) Identifying health care workers as heroes is an honorable sentiment that can nonetheless backfire. It can help to reify the all too well described expectations of perfection from our health care providers. High regard can devolve into blame as fear at all levels is nurtured by the downstream effects of exponential information growth run amok. 3) The hero's journey is a solitary one. This is unsustainable. As recently noted by Dr. Gianrico Farrugia, CEO of the Mayo Clinic, everyone is on the front lines now, and must do their part to end this pandemic in three key ways: 1) continue masking/distancing as appropriate, 2) self-responsibility for symptom management and protection of others, and 3) vaccination.

Inviting the reader into the finer points of these thoughts and others might provide a stronger bridge to future discussion and
research. Well done.

# **VERSION 1 – AUTHOR RESPONSE**

Reviewer: 1

Dr. Chee-Tao Chang, Hospital Raja Permaisuri Bainun

Comments to the Author:

This is an interesting study which presents the challenges faced by healthcare workers during the COVID-19 pandemic. Generally the paper provides important insights about challenges faced by healthcare workers, and this is important for reference of future pandemic outbreaks. Below are some suggestions for the paper.

Response: Thank you very much for your positive feedback.

#### Abstract

Conclusion: The term "required personnel" can be replaced with essential workers Conclusion: I am not sure why "especially nursing staff" was stated in the conclusion, as this was not

particularly mentioned in the Results section.

Response: We replaced the term required personnel with essential workers. We include "especially nursing staff" in the result section of the abstract.

Introduction

Line 125-126: "due to the prolonged pandemic response". Please kindly check whether this is correct in English.

Response: We rewrote the sentence. It now reads "due to the continuation of the pandemic."

Line 130: ....especially nurses are quitting their jobs. Please check English and rephrase the sentence.

Response: We wrote "resigning" instead of quitting their jobs.

Line 142: with the most prominent example of temporary shortages in PPE....Please check English and rephrase the sentence.

Response: We rewrote this sentence (line 148-150).

Line 143-144: Meanwhile the crisis also shows how the pre-existing lack of qualified personnel has serious effects in this emergency situation. This sentence requires citation Response: We added a citation (line 151).

Line 150: The author can elaborate on what is meant by context-specific recommendations Response: We give recommendations as a result of our research; therefore, these recommendations are specific to the research context.

## Methods

Line 157: Is there any reasons for selecting the specific five public and one private hospital? Perhaps can state many hospitals are there in Vienna? This can give idea on the representativeness of the selected sites

Response: We selected these hospitals because they were the first hospitals to treat COVID-19 patients in Vienna. We rewrote this paragraph (line 166-177).

Line 157: When author mentioned contacted directly, what is the basis of contacting the HCW? Is purposive sampling method employed in this process? How do the authors ensure to subjects can provide rich information pertaining to the research topic?

Response: Contacted directly means that there was no chief physician involved prior to contacting them. We agree that this sentence is misleading, and we deleted the sentence.

All HCWs who were interviewed worked directly or indirectly with COVID-19 patients and were able to provide rich information on their lived experiences at their workplace (on their workplace situation, their challenges etc.).

Line 158: When author mentioned by personal introduction of the chief physician, is there any inclusion or exclusion criteria applied?

Response: Thank you for pointing this out. The chief physician did not select the participants. He gave "permission" to do the interviews. However, we deleted the sentence because it is misleading.

Line 159: In one hospital, there is a key informant. How about the other 4 sites? And what is the position of the key informant, is it the same as chief physician?

Response: The key informant was a HCW who worked at one of the selected hospitals, he/she was not a chief physician. As for the other hospitals we did not have a key informant but had one prior contact and then continued with snowball sampling.

Line 160-162: How do you ensure maximum variation if you use snowball sampling? Usually this is achieved through purposive sampling

Response: This sentence refers to the key informant as we wanted to avoid random selection: "In one hospital, we had a key informant who arranged contacts to other hospital staff. The aim was to gain a maximum variation in contacts, including qualified nurses, nurse assistants, cleaning staff, physiotherapists, and medical doctors." All other contacts were recruited by snowball sampling. In case of snowball sampling no maximum variation was pursued.

Line 165-166: Since one participant is not being recorded, what is the way to transcribe for this subject?

Response: We took written notes which were sent to the participant after the interview. He/she gave comments on the notes which were then analyzed together with the other transcripts. We added a sentence to clarify this (line 179-181).

Line 166: How is the topic guide developed and what is the content? Response: We translated the questions from German to English and include the topic guide as supplementary file.

Line 174-182: Is thematic analysis being used? It should be stated clearly in this paragraph. Also, please mention why select thematic analysis.

Response: We added a sentence regarding thematic analysis (line 192-194).

Line 180-182: When the authors mentioned the research considers changes over time, is this the appropriate study design to investigate this question? Perhaps the author should provide some citations of qualitative study design for support if they intended to answer this question. Response: We did not plan to consider changes over time; it was rather an outcome of the research. We started this research when no one could expect that the pandemic would take that long. As such we could not include this aspect in the study design. The data shows that the challenges changed as the pandemic unfolded.

Other comments on Methods:

Please specify the setting, timing and location of the study. In the limitation it was mentioned that some interviews were carried out shorter than usual, under stressed and tired condition. How do interviewers address this issue to ensure their data collected is valid?

Response: We added information on setting, timing and location (line 175-177). HCWs being stressed and tired did not have an effect on the validity of their statements. This just means that we adapted the conversation according to their needs (e.g. one HCW was interviewed straight after his nightshift and it was noticeable that he needed to rest. In this case we kept the conversation as short as possible but still asked the questions that were needed.)

The authors did not mention how they derived the sample size. Is it based on saturation of data? This must be elaborate extensively as it is the core of a qualitative research design Response: We added information on how we derived the sample size (line 183-185).

How do authors deal with subjects who refused consent? Is there any data on this group of patient? Response: No participant refused consent.

Results

Line 189: When authors mentioned direct and indirect contact, this should be first defined in the Methods.

Response: We included a sentence in the methods (line 166-168).

Table 1: In the row "other physician", one example is surgeon. I am not sure whether this is appropriate. This is also not tally with line 191, "other professions". Response: This surgeon was assigned to treat patients in a COVID-19 intensive ward.

192: What profession are the two participants at the private hospital? Response: Both participants were qualified nurses, however we do not consider it meaningful to provide this information.

201: Acronym should be spelled in full first time use Response: We spell out the acronym on page 4 (line 126-127).

220-223: Cleaning staff was not included in your methods, and they should not be in your results. I am not sure whether you want to remove this paragraph. Response: Cleaning staff is part of the HCW workforce as defined by the WHO (https://www.who.int/hrh/statistics/Health\_workers\_classification.pdf). We do mention cleaning staff in the methods section (line 172).

Line 224-225: What is meant by first phase and second phase? Response: The first phase is early 2020, the second phase is during summer 2020 (line 246-247).

Line 227: "HCWs felt that other hospitals in Vienna were unprepared to take on COVID-19 patients". What is the definition of other hospitals? And who does the HCWs refer to? Response: We added a citation to clarify this point (line 250-256).

Line 235-Line 245 I suggest the authors to insert a few quotes from the subjects to support their findings.

Response: We added a citation (line 268–275).

Line 246-248, should there be a separate subheading: mental protection? Response: We included mental protection in the heading, it now reads "physical and mental protection" (line 260). Line 255-266: Authors should provide some quotes to support the entire paragraph, for example i. mentally and physically exhausted, ii. Worked extra hours iii. Permanent alarm mode iv. Emotional challenges v. seeing young people died. And I felt that the last sentence of this paragraph is redundant.

Response: We added a citation (line 295-303).

Line 277-279: This paragraph should have subjects' quote to support, regarding the multiple request of staff

Response: We added a citation (line 328-335).

Line 280-289: This paragraph should have subjects' quote to support, regarding the shift of work settings and incompetencies Response: We added a citation (line 342-350).

Line 301-310: This paragraph should have subjects' quote to support Response: We added a citation (line 376-379).

Line 313-316: ""One HCW recounted that she considered herself as a role model. This had to do with the perception that......" I am not sure whether this is related to 3.5 stigma and avoidance Response: Yes, this has to do with avoidance behavior. She considers herself a role model which is why she must avoid certain behavior.

Line 327-328: Is there any quote for the qualified nurses who feared to fall into oblivion? Response: We added one quotation (line 398-401).

Discussion

Line 337-339: Our paper is one of only few studies dealing with this topic in the European Union. It will be good the authors can cite some studies here. Response: We added citations (line 410).

Line 343-344: Our findings largely correspond with results from other international studies on related topics, showing how most experiences are shared on a global level. Citation should be included in this line.

Response: We added citations (line 418).

Line 378-379: When other authors was mentioned, it is better to provide citation Response: Unfortunately, we cannot provide citation here as no other author has mentioned this issue.

Line 396: Is there any example of "specific needs"? Authors can give examples Response: We added an example (line 484). The essence of this sentence, however, is that HCWs should be asked about what they need and then the interventions can be adjusted to their specific needs.

English: Overall, a round of English editing may be required to improve clarity, especially in the Introduction and Methods.

Response: We double checked the language.

Reviewer: 2 Dr. Daniel Hall-Flavin, Mayo Clinic Comments to the Author:

This is a well written article that addresses the challenges of health care providers not only at the beginning of the COVID pandemic, but well enough into it (6 months) to provide an interesting snapshot into not only the initial impact of this global health crisis but its evolution over time. While there are more reports surfacing in the literature, this particular study's focus on a more longitudinal assessment is unique and provides a foundation for ongoing assessment of the complexity of the challenges that health care providers face, and a basis for collaborative study between institutions cross-culturally as the pandemic continues.

Response: Thank you very much for your positive response.

Some general thoughts for the authors to consider weaving into their discussion:

1) In particular, protecting the health care workers both directly and indirectly dealing with the pandemic is critical; in the United States a substantial proportion of medical providers of all backgrounds have decided not to continue in their work in health care. I might recommend to the authors that they incorporate this startling fact into their discussion on meaning and fulfillment in one's professional lives and work life integration.

Response: Thank you for bringing this up. We agree that this is an important point and included it in the discussion (line 474-478).

2) Identifying health care workers as heroes is an honorable sentiment that can nonetheless backfire. It can help to reify the all too well described expectations of perfection from our health care providers. High regard can devolve into blame as fear at all levels is nurtured by the downstream effects of exponential information growth run amok.

Response: Thank you again for pointing this out. It is interesting because heroization was mentioned by some participants as really disturbing. We agree that this should be part of the discussion (line 464-470).

3) The hero's journey is a solitary one. This is unsustainable. As recently noted by Dr. Gianrico Farrugia, CEO of the Mayo Clinic, everyone is on the front lines now, and must do their part to end this pandemic in three key ways: 1) continue masking/distancing as appropriate, 2) self-responsibility for symptom management and protection of others, and 3) vaccination.

Inviting the reader into the finer points of these thoughts and others might provide a stronger bridge to future discussion and research.

Well done.

Response: We agree and weaved this point into the paragraph on heroization and recognition (line 464-470).

Reviewer: 1 Competing interests of Reviewer: None

Reviewer: 2 Competing interests of Reviewer: I have no competing interests.

Editor(s)' Comments to Author (if any):