

## 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

<b>TITLE (PROVISIONAL)</b>	Compassion fatigue, burnout, compassion satisfaction and depression among emergency department physicians and nurses: a cross-sectional study
<b>AUTHORS</b>	Ma, Huan; Huang, Shuang; We, Bo; Zhong, Ying

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Vanessa Silva e Silva Children's Hospital of Eastern Ontario Research Institute
<b>REVIEW RETURNED</b>	20-Sep-2021

<b>GENERAL COMMENTS</b>	<p>Thank you for the opportunity to review your paper. This paper reports the details of a survey performed with registered nurses and physicians working in the emergency room of five hospitals of the province of Sichuan in China. The survey investigated burnout, compassion fatigue, compassion satisfaction and depression among that population as well as made correlations among those scales. Overall, this is a well-written manuscript and I believe that this paper will be a valuable contribution to the literature and of great interest to the readers.</p> <p>There are some points, though, in which I would suggest changes/clarifications. I added the comments in the pdf attached. Thank you for the opportunity to provide feedback on your manuscript.</p> <p>The reviewer provided a marked copy with additional comments. Please contact the publisher for full details.</p>
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<b>REVIEWER</b>	Wahaj Khan Umm Al-Qura University
<b>REVIEW RETURNED</b>	02-Jan-2022

<b>GENERAL COMMENTS</b>	<p>Page 10 This is a well written study with some good findings. I think it would've been great if the authors investigated, in addition to their battery of tests, the effect of the pandemic on emergency department workers.</p> <p>However, I suggest adding a brief paragraph about how the pandemic may affected the depression levels of emergency department workers. As the results shows unusually high scores of depression symptoms. Maybe then briefly talk about it in the limitation section.</p>
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## VERSION 1 – AUTHOR RESPONSE

### Reviewer 1:

1. The reviewer's comment: The title leaves some important elements of the article out of the description

The authors' answer: As suggested by the reviewer, the title has been revised as "Compassion fatigue, burnout, compassion satisfaction and depression among emergency department physicians and nurses: a cross-sectional study."

2. The reviewer's comment: I would add from the Province of Sichuan, since this data does not represent all emergency medical staff from China.

The authors' answer: We have added the phrase "the Province of Sichuan" on abstract and conclusion parts.

3. The reviewer's comment: you also measured compassion satisfaction and burnout, which had significant results presented and should also be highlighted.

The authors' answer: compassion satisfaction and burnout were added (on page 3).

4. The reviewer's comment: are there any data on emergency medical staff? that would be more meaningful than comparing with healthcare professionals from such different field with different perceptions on how stress and work-related issues affect them. I am not sure how relevant this is to your introduction, since the target population is not healthcare professionals working in emergency care.

The authors' answer: we have cited the related studies (from page 3 to page 4).

[1] Hooper C, Craig J, Janvrin DR, Wetsel MA, Reimels E. Compassion satisfaction, burnout, and compassion fatigue among emergency nurses compared with nurses in other selected inpatient specialties. *J Emerg Nurs*. 2010;36(5):420-427.

[2] An Y, Yang Y, Wang A, et al. Prevalence of depression and its impact on quality of life among frontline nurses in emergency departments during the COVID-19 outbreak. *J Affect Disord*. 2020;276:312-315.

5. The reviewer's comment: you only mention in your introduction compassion fatigue and depression. However, you do analyze compassion satisfaction and burnout as well. My suggestion is to include those aspects in your introduction to clarify to the reader why those are important variables in your study. you also explored burnout and compassion satisfaction, not sure why those are not included in your objectives

The authors' answer: We are very sorry for our negligence of compassion satisfaction and burnout. We have made correction and added those aspects on the introduction part (on page 4 and page 5).

6. The reviewer's comment: authors mention emergency staff in their introduction and their target population is only doctors and nurses. If no other allied health professionals were included in the sample, then I would suggest the authors to include some data specific to this population and reword their introduction to reflect that they're targeting physicians and registered nurses.

The authors' answer: Our target population is only physicians and nurses, we have revised this part according to the reviewer's suggestion (on page 4 and page 5)

7. The reviewer's comment: Also I would refrain from using the word doctors and refer to this class as physicians as for that degree they do not necessarily hold a PhD degree.

The authors' answer: We are very sorry for our incorrect description and we replaced "doctors" with "physicians".

8. The reviewer's comment: About sociodemographic data, is this the description of the demographic survey mentioned above? if so, I suggest clarify that.

The authors' answer: We have clarified about this part in details (on page 6).

9. The reviewer's comment: I would suggest a brief explanation of three dimensions about the Center for Epidemiologic Studies Depression (CES-D) scale.

The authors' answer: We have explained these dimensions (on page 7).

10. The reviewer's comment: I'm confused why they chose to compare their data that is from a very specific working class with that of patients with breast cancer.. I don't see how these populations are comparable. My suggestion is to find articles that have a similar study population, even if the similarity is only by the professional class (physicians/nurses)

The authors' answer: We have cited the related study (on page 9).

[1] Das A, Sil A, Jaiswal S, et al. A Study to Evaluate Depression and Perceived Stress Among Frontline Indian Doctors Combating the COVID-19 Pandemic. Prim Care Companion CNS Disord. 2020;22(5):20m02716.

11. The reviewer's comment: not sure how this relates to your results what type of mental illness are we talking here? would this be depression? or are you talking about compassion fatigue and burnout? Again, the target population of the article described here does not compare with this study's target population. This is a speculation of the authors that would require support from evidence to be included the way it is written, or a suggestion would be rephrase it to make it clear it is their opinion and not a fact.

The authors' answer: We have revised these aspects (on page 10).

12. The reviewer's comment: Are these caregivers registered nurses/physicians? if not, I suggest finding a reference that relates to your target population.

The authors' answer: We have cited the related study (page 11).

[1] Song X, Fu W, Liu X, et al. Mental health status of medical staff in emergency departments during the Coronavirus disease 2019 epidemic in China. Brain Behav Immun. 2020;88:60-65.

13. The reviewer's comment: to realize or to confirm? I think that the fact that depression is multifactorial is well-known in the literature, right?

The authors' answer: We have deleted this sentence.

14. The reviewer's comment: Are there any suggestions for future studies?

The authors' answer: We have put forward some suggestions for future studies (on page 13).

15. The reviewer's comment: What do these phrases " primary professional title, Intermediate professional title, and senior professional title " mean ?

The authors' answer: Medical professional ranks in China were divided into three categories, including primary titles (physicians, nurses, nurse practitioners), Intermediate titles ( physicians in charge of a case, house physicians, nurses-in-charge), senior titles (assistant director physicians, director physicians, assistant director nurses, director nurses ).

## **Reviewer 2:**

1. The reviewer's comment: I think it would've been great if the authors investigated, in addition to their battery of tests, the effect of the pandemic on emergency department workers.

The authors' answer: Thanks for your good suggestion. We will consider it in the near future.

2. The reviewer's comment: I suggest adding a brief paragraph about how the pandemic may affected the depression levels of emergency department workers.

The authors' answer: We have added some details about how the pandemic may affected the depression levels of emergency department workers (on page 11).

3. The reviewer's comment: As the results shows unusually high scores of depression symptoms. Maybe then briefly talk about it in the limitation section.

The authors' answer: We have added this aspect to the limitation section (on page 12).

### VERSION 2 – REVIEW

<b>REVIEWER</b>	Vanessa Silva e Silva Children's Hospital of Eastern Ontario Research Institute
<b>REVIEW RETURNED</b>	14-Feb-2022

<b>GENERAL COMMENTS</b>	<p>Thank you for the opportunity to review this revised copy of your paper. Although the authors responded many of my previous concerns, there are still some points that require clarification. For once, I don't see any mention of the study being reviewed by a research ethics board. There is only mention that participants "provided consent to participate", I strongly suggest the authors to make it clear if the study was reviewed by a Research Ethics Board and add the approval number. In the results section and table 1, authors mention primary, intermediate, senior professional title, but again, it is not clear what that means, for example, is that regarding the level of experience of the professionals? if so, I suggest the authors to clearly state that. Lastly, in the conclusions, they suggest new studies with in depth interviews to "accurately evaluate the prevalence of depression", but in-depth interviews will help to clarify underlying causes and not the prevalence, since prevalence is a quantitative measure.</p> <p>Thank you for the opportunity to provide feedback on your manuscript.</p> <p>The reviewer provided a marked copy with additional comments. Please contact the publisher for full details.</p>
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### VERSION 2 – AUTHOR RESPONSE

Reviewer 1:

1. The reviewer's comment: There is only mention that participants "provided consent to participate", I strongly suggest the authors to make it clear if the study was reviewed by a Research Ethics Board and add the approval number

The authors' answer: The study was approved by the Institutional Review Board of Xiangya Nursing School (Approval number E202062), Central South University, China.

2. The reviewer's comment: In the results section and table 1, authors mention primary, intermediate, senior professional title, but again, it is not clear what that means, for example, is that regarding the level of experience of the professionals? if so, I suggest the authors to clearly state that.

The authors' answer: According to the level of experience of the professionals physicians and nurses' professional ranks in China were divided into three categories , including primary titles (physicians, nurses, nurse practitioners), Intermediate titles ( physicians in charge of a case, nurses-in-charge), senior titles (assistant director physicians, director physicians, assistant director nurses, director nurses ).

3.The reviewer's comment: Lastly, in the conclusions, they suggest new studies with in depth interviews to "accurately evaluate the prevalence of depression", but in-depth interviews will help to clarify underlying causes and not the prevalence, since prevalence is a quantitative measure.

The authors' answer: Thanks for your good suggestion.We have revised it.