Reviewer's report

Title: The mental health of neurological doctors and nurses in Hunan Province, China during the initial stages of the COVID-19 outbreak

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This study examines common psychological impacts of the current COVID-19 outbreak - depression and anxiety - among neurological workers in Hunan Province, China. The focus on neurological workers is compelling, given that most studies focus on front-line health care workers and the neurological symptoms increasingly noted among COVID-19 patients. However, there are several areas that require revision and clarification before publication, which are detailed below.

Abstract
1. In Background, it would be helpful to include information that helps make the case for why this study was conducted and what it adds to our knowledge / the literature. It seems like the study does more than just estimate prevalence of depression and anxiety among these health care providers.
2. Additional information is needed in Methods, including cutpoints for the SAS and SDS, the correlates examined, and the statistical methods utilized (briefly).
3. The Results don't fully reflect the findings from regression analysis for both depression and anxiety.

Introduction
1. There are a few points that could be expanded upon, to more clearly make the case for this study. Please include additional discussion of the psychological impact of COVID-19 on health care workers. There has been quite a bit of literature now on this topic during the current pandemic, and the authors could also cite additional studies from the SARS outbreak. A more compelling case also needs to be made for the focus on health care workers in neurology. Why this particular population? There is some mention of their risk, if a patient presents with headache, but are there other factors to consider? Are these providers less likely to have PPE, or training in prevention of infectious disease spread? Much of this is raised in the Discussion, but could be included here.
2. It is my understanding that COVID-19 has led to stroke, as well. This may be something important to add, given the focus on neurological workers.

Methods
1. Please include additional information about participant selection. How were participants randomly selected for participation? Can the authors clarify what is meant by "randomly distributed"? Can the authors include the total number (approximate is OK) of neurology department doctors and nurses in Hunan Province overall? How many total surveys were distributed, and what was the response rate? Were doctors and nurses sampled separately? Is there a sense of how representative this sample is of all doctors and nurses in Hunan Province? Because the study focuses on prevalence, this is a critical issue.
2. It would be helpful to include calculation of Cronbach’s alphas to measure internal consistency reliability of the SDS and SAS in this sample.

3. Did the study assessment household composition? If there are many people in the household, younger children, or older adults, this might contribute to anxiety around bringing the infection home. Did the study ask about previous mental health conditions?

4. Logistic regressions were also used to identify independent risk factors for depression as well?

5. The authors state: "Significant variables identified by univariate analysis were then entered into the regression models". Did the authors mean those variable as associated with anxiety or depression in bivariate analysis? (this is also stated in Results on p. 4 line 28).

6. Because the SAS and SDS are not diagnostic measures, I might define the outcome measures in this study as "probable anxiety" and "probable depression".

Results
1. Please include p-values for bivariate results reported in the text from Tables 1, 2 and 3
2. What was the overall prevalence of anxiety and of depression? This is important to note.
3. The logistic regression analysis would be multivariate, not bivariate.
4. What is the rationale behind presenting both depression and anxiety symptoms severity and depression and anxiety prevalence?

Discussion
1. Several part of this section could be also mentioned in the Introduction, to better make the case for this study, e.g., the lack of PPE in neurology departments, these departments being high risk places for COVID-19 infection.

2. Can the authors compare the prevalence of depression and anxiety in this study to studies of other health care workers? One might hypothesize that the psychological impact of COVID-19 would be somewhat lower in this population compared to front-line workers.

3. Citations are needed to support the hypothesized explanations for greater anxiety or depression among women, nurses, and younger health care workers. Also, occupation and sex were not independently associated with the outcomes in logistic regression analysis.

4. There are somewhat different results for depression and anxiety. Depression is also somewhat more common in this sample compared to anxiety. Was this expected? How does this compare to previous studies? Correlates also differ between depression and anxiety. This should be discussed.

5. A bit more can be said under Limitations. In what way is Hunan Province different from other populations in a way that would impact generalizability? Do the authors mean that this makes it difficult to compare findings to other studies, or generalize results to other populations? The correlates included were also not extensive and some factors identified as important in other studies were not included, e.g., history of mental health conditions, having high risk individuals in their households. Also, it should be noted that sample size was relatively small, which limits the study to a more descriptive focus.

Tables
1. Table 2 is not needed. This information can be reported in the text only.
2. In Table 3, the "Numbers" column may not be needed, as this information is already presented in Table 1. Please include the overall prevalence of anxiety and depression in the sample.
3. What does P for trend indicate in Tables 4 and 5? Please add this to the Methods and Results. I'm not sure that this is appropriate for some of the three-category variables, e.g., those with responses options of yes/no/uncertain. What trend?
4. Tables 4 and 5 can be combined.
5. In Table 4 and 5, it is unclear what the reference groups for each of the binary variables are.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
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No

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