

## 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>	Latent profile analysis of mindful self-care and associations with mental health among nurses in China
<b>AUTHORS</b>	Yang, Zhongfu; Zhou, Yehong; Wan, Weiwei; Li, Mingdan; Yan, Weiping; Jiang, Hu

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Hayes, Blánaid Beaumont Hospital
<b>REVIEW RETURNED</b>	24-Apr-2024

<b>GENERAL COMMENTS</b>	<p>I have made a number of comments on the manuscript which are linked to the text. In summary:</p> <ol style="list-style-type: none"> <li>1: Introduce a little balance into introduction in relation to demands of work</li> <li>2: First objective achieved but second objective not so, and I don't believe the design facilitated the exploration of interaction mechanisms between mental health and self care.</li> <li>3. I would like to see some more 'strengths' listed by the authors</li> <li>4. Ensure the manuscript is carefully proof read by a person whose mother tongue is English</li> <li>5. Please address the number of short questions in my comments (e.g. regarding participants, (line 130), their characteristics (line 217), ethics (lines 202-206), LPA (line 293).</li> <li>6. Unless the authors can do more with the weak correlations between mental health indices and mindful self-care, I suggest this aspect of the paper is minimised and not 'milked'.</li> <li>7. I am not competent to determine if the statistical tools used and conclusions reached therefrom are appropriate so I would, as noted, ask that this receive statistical review (unless the other reviewer is competent in this area).</li> </ol>
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<b>REVIEWER</b>	Luna, David Instituto Nacional de Rehabilitación Luis Guillermo Ibarra Ibarra, Unidad de Investigación Multidisciplinaria en Salud
<b>REVIEW RETURNED</b>	21-May-2024

<b>GENERAL COMMENTS</b>	<p>The article addresses a relevant topic, albeit one that has been extensively reviewed. However, the primary value of this study lies in the person-centered approach employed for data analysis, resulting in novel findings, quality outcomes, and pertinent conclusions suitable for publication in BMJ.</p> <p>I recommend that the authors incorporate the psychometric properties obtained from the sample through confirmatory factor analysis and estimate internal consistency using omega. This</p>
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	<p>would enhance the understanding of the instrument's behavior when applied to the target population. Additionally, I suggest the utilization of effect size measures and measures of association, accompanied by their interpretation (e.g., large, medium, small effects). This supplementation to significance levels is pragmatic, particularly when laying the groundwork for subsequent applied studies.</p> <p>It would be beneficial to include a legend in Figure 1 explaining the numerical references, making it self-explanatory and obviating the need to refer back to the text for instrument dimensions. While the tables are adequate, I request the inclusion of a marker or indicator to identify cells where frequencies of Average monthly income (yuan) and Department exceed expected values.</p> <p>Furthermore, I propose that the authors dedicate at least one paragraph in the Introduction to elucidate the value of person-centered analysis (inclusive of latent profile analysis) in contrast to variable-centered analysis and its limitations. This would underscore the novelty of their approach and the significance of their findings. The latter could also be integrated into the Discussion section as a methodological strength.</p> <p>Finally, I wish to acknowledge the invaluable assistance of Rosa Paola Figuerola Escoto (PhD) in reviewing this work and recommend her as a potential reviewer for BMJ.</p> <p>Please feel free to contact me for further clarification or assistance.</p>
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## VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

1. Introduce a little balance into introduction in relation to demands of work.

Response to Reviewer:

Thank you for your suggestion; we have highlighted the discussion on the severity of nursing job demands and issues in the introduction section.

2. First objective achieved but second objective not so, and I don't believe the design facilitated the exploration of interaction mechanisms between mental health and self care.

Response to Reviewer:

We apologize for the poor description, we clarify that the purpose of this study was not to explore the interaction mechanisms between mental health and self-care. We have revised them in the manuscript.

3. I would like to see some more 'strengths' listed by the authors

Response to Reviewer:

Thank you for your suggestion, we have already added some more 'strengths' in this section as follows:

- The LPA approach was employed in this study to delve into the diverse subgroups of mindful self-care practices among Chinese nurses.
- This study utilized confirmatory factor analysis to ensure the validity of the measurement tools.
- This study has added evidence of the relationship between Mindful Self-Care and anxiety, depression, and perceived stress.
- This study was limited by cross-sectional research design.

The generalizability of our findings may be constrained due to the survey data being sourced from a single region, potentially limiting its wider applicability.

4. Ensure the manuscript is carefully proof read by a person whose mother tongue is English.

Response to Reviewer:

Thanks to your review, we looked for language editing services that made the quality of the manuscript better.

5. Please address the number of short questions in my comments (e.g. regarding participants, (line 130), their characteristics (line 217), ethics (lines 202-206), LPA (line 293).

Response to Reviewer:

Thank you for your careful review and annotations, we have revised the manuscript accordingly.

6. Unless the authors can do more with the weak correlations between mental health indices and mindful self-care, I suggest this aspect of the paper is minimised and not 'milked'.

Response to Reviewer:

We sincerely appreciate you pointing out these issues; we have made revisions based on your feedback, downplaying the weak correlations between variables.

7. I am not competent to determine if the statistical tools used and conclusions reached therefrom are appropriate so I would, as noted, ask that this receive statistical review (unless the other reviewer is competent in this area).

Response to Reviewer:

Thank you for your meticulous consideration. It is an honor that Reviewer 2 has offered insightful suggestions in the area of statistics. We believe that by further refining the statistical results, we can enrich the research findings and ensure the accuracy of the study.

Reviewer: 2

1.I recommend that the authors incorporate the psychometric properties obtained from the sample through confirmatory factor analysis and estimate internal consistency using omega. This would enhance the understanding of the instrument's behavior when applied to the target population.

Response to Reviewer:

Thanks to your suggestions, we refined this aspect and made changes in the manuscript.

2.Additionally, I suggest the utilization of effect size measures and measures of association, accompanied by their interpretation (e.g., large, medium, small effects). This supplementation to significance levels is pragmatic, particularly when laying the groundwork for subsequent applied studies.

Response to Reviewer:

We have added the effect size according to your comments.

3.It would be beneficial to include a legend in Figure 1 explaining the numerical references, making it self-explanatory and obviating the need to refer back to the text for instrument dimensions. While the tables are adequate, I request the inclusion of a marker or indicator to identify cells where frequencies of Average monthly income (yuan) and Department exceed expected values.

Response to Reviewer:

Thank you for your suggestion, we have revised it with reference to the comments. However, for the data in the table, we do not have the expected values, so we are unable to label them.

4. Furthermore, I propose that the authors dedicate at least one paragraph in the Introduction to elucidate the value of person-centered analysis (inclusive of latent profile analysis) in contrast to variable-centered analysis and its limitations. This would underscore the novelty of their approach and the significance of their findings. The latter could also be integrated into the Discussion section as a methodological strength.

Response to Reviewer:

We fully accept your suggestion and have added discussions about LPA in both the introduction and the discussion sections of the manuscript.

#### VERSION 2 – REVIEW

<b>REVIEWER</b>	Luna, David Instituto Nacional de Rehabilitación Luis Guillermo Ibarra Ibarra, Unidad de Investigación Multidisciplinaria en Salud
<b>REVIEW RETURNED</b>	10-Jul-2024
<b>GENERAL COMMENTS</b>	Thank you for considering my suggestions and good work.