

Manuscript NO.: 58028

Title: Psychological Stress and Long-Term Blood Pressure Variability of Military Young Males: The CHIEF Study

Dear Editor:

Thank you very much for the opportunity to revise our manuscript. We have revised our paper using point-by-point response to the reviewers' comments and highlighted in red as follow.

PEER REVIEWER COMMENTS:

Reviewer #1:

Specific Comments to Authors:

The manuscript by Lin et al is an excellently written one. Although the results were negative for association between psychological stress and long-term blood pressure variation, it will contribute to the literature by publishing this manuscript. I have the following few comments for the authors to consider before publishing:

Response:

Thank you very much for your kindly comments.

We have revised the manuscript as you suggested.

a) The study cohorts were well defined. However, the blood pressure measurements were rather infrequent (every two years in interval). The authors should discuss whether this might affect the outcomes.

Response:

Thank you very much for your kindly comments.

We have discussed this issue at the end of the section of limitation.

"Fourth, there were only four occasions (every two years in interval) for blood pressure measurement, which would cause wide variations of SD and ARV, resulting in reduced associations for psychological stress. The interval of blood pressure measurement was long time scale (years instead of months). Therefore, it may promote further studies to either confirm or dispute the conclusions."

b) I was not clear whether BSRS score and BP were measured with each visit for all participants. If so, were there any changes of BSRS score for individual participants from one visit to the other? were there changes of SBP, DBP, MAP from one visit to the other correspondingly?

Response:

Thank you very much for these important comments.

Yes, both the BSRS score and BP were measured on each visit for all participants.

However, as the initial protocol for collecting only the BSRS score at the first visit (2012-2014) was reviewed and approved by the IRB, there were no information regarding the BSRS score the participants recorded at the other visits. Accordingly, it is impossible to make the correlation analyses as you suggested.

c) It was pretty widely accepted concept that chronic psychological stress may affect blood pressure. This study revealed a null association between chronic stress and long-term BPV in young adults. It would be important to clearly state that the interval of BP measurement were long (years) instead of months. So it may promote further studies to either confirm or dispute the conclusions

Response:

We have discussed this issue at the end of the section of limitation.

"Fourth, there were only four occasions (every two years in interval) for blood pressure measurement, which would cause wide variations of SD and ARV, resulting in reduced associations for psychological stress. The interval of blood pressure measurement was long time scale (years instead of months). Therefore, it may promote further studies to either confirm or dispute the conclusions."

d) The association of less physical activities, higher tobacco smoking with chronic mental stress were interesting. Further discussion would be helpful.

Response:

Thank you very much for this thoughtful comment.

We have added a statement in the first paragraph in Discussion as you suggested.

"We found that those with chronic psychological stress had higher prevalence of alcohol drinking and less physical activity, reflecting that the BSRS score may be reliable for an evaluation of mental stress."

Science Editor comments:

1 Scientific quality: The manuscript describes an observational study of psychological stress and long-term blood pressure variability of military young males. The topic is within the scope of the WJC. (1) Classification: Grade B; (2) Summary of the Peer-Review Report: The manuscript by Lin et al is an excellently written one. Although the results were negative for association between psychological stress and long-term blood pressure variation, it will contribute to the literature by publishing this manuscript; and (3) Format: There are 2 tables and 1 figure. A total of 15 references are cited, including 3 references published in the last 3 years. There are no self-citations.

Response:

Thank you very much for these kindly comments.

2 Language evaluation: Classification: Grade A.

Response:

Thank you very much for this kindly comment.

3 Academic norms and rules: The authors provided the Biostatistics Review Certificate, the signed Conflict-of-Interest Disclosure Form and Copyright License Agreement, and the Institutional Review Board Approval Form. No academic misconduct was found in the CrossCheck detection and Bing search. The highest single-source similarity index in the CrossCheck report showed to be 11%. The CrossCheck results showed the similarity to be high. According to our policy, the overall similarity index should be less than 30%, and the single-source similarity should be less than 5%. Please rephrase these repeated sentences.

Response:

Thank you very much for this important comment.

We have revised our manuscript throughout as you suggested and the single source similarity has been down to <5% in the revised manuscript.

4 Supplementary comments: This is an unsolicited manuscript. The study was supported by Hualien Armed Forces General Hospital. The topic has not previously been published in the WJC. The corresponding author has not published articles in the BPG.

Response:

Thank you very much for these kindly comments.

5 Issues raised: (1) I found the authors did not provide the approved grant application form(s). Please upload the approved grant application form(s) or funding agency copy of any approval document(s); (2) I found the authors did not provide the original figures. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor; and (3) I found the authors did not write the "article highlight" section. Please write the "article highlights" section at the end of the main text. 6 Re-Review: Required. 7 Recommendation: Conditionally accepted.

Response:

Thank you very much for these kindly comments.

All issues you raised have been revised accordingly.