**Reviewer’s report**

**Title:** Prevalence and psychometric screening for the detection of Major Depressive Disorder and Post-Traumatic Stress Disorder in adults injured in a motor vehicle crash who are engaged in compensation

**Version:** 2  **Date:** 22 Jan 2018

**Reviewer:** Whitney Scott

**Reviewer's report:**

I thank the authors for their attention to my previous comments in their revised manuscript/response letter. I am satisfied with most of their responses and revisions. However, there are several remaining issues:

Abstract: Should say, "a computerized (or online) psychiatric interview"

- "In prospective research, drivers and passengers who had sustained injury in a MVC had significantly elevated levels of trauma distress of around 30% (i.e. probable PTSD)". This should say "...elevated levels of traumatic distress" (p. 4)

- "It is therefore proposed that for those scoring close below the cut-off score, there is some justification to conduct further assessment, such as referral to clinically trained professional for gold standard interviews." (p. 19). Should this say, "It is therefore proposed that for those scoring close to but below…"?

Results:

- "For the valid detection of probable PTSD, and using the decision rule discussed in the Method, the following is recommended: (i) the IES-R total cut-off scores between 33-40 should be applied to detect PTSD, detecting over 90% of actual PTSD cases and from 50-60% of those not having PTSD (PPV range: 30.2-35.8%; NPV range: 95.6-96.4%; LR+ range: 1.8-2.3; LR- range: 0.19-0.16). It should be noted that cut-off scores up to 40 maintain a high sensitivity of over 90%, but reduce FPs as one approaches 40. However, it is not recommended to apply cut-off scores over 40, as they are becoming distant from the historical norm of 33 [33]."

In contrast to the results for the DASS in which the authors identify a single cut-off score, a range of cut-off scores are suggested in relation to the IES-R for identifying PTSD. Could the authors select a single cut-point for the IES? This might facilitate consistency of use of the cut-off in clinical practice and research. A score of 40 provides the same sensitivity as scores 36-39,
and has higher specificity than these other scores. The authors seem to suggest against a cut-off score of 40 on the basis of historical norms. However, the purpose of this paper is to determine the cut-offs in this context, and the current data are suggesting a slightly higher cut-off score may be more appropriate. Therefore, using historical norms to counter the current data does not seem to be justified.

Limitations:

- "Also, the recruitment style used will result in bias, as well as the potential restrictions enforced by the exclusion/inclusion criteria. Any research that has an opt-in recruitment approach will have bias problems. The impact of these limitations on the occurrence rates of MDD and PTSD in the sample needs to be considered."

Could the authors provide specific implications regarding the bias they identify particularly as it relates to their study design? For example, how might they expect the identified biases to affect the rates of MDD/PTSD reported? If this was just a cross-sectional questionnaire study, it might be that rates of MDD/PTSD are under-reported as more distressed people might not want to participate due to low perceived benefit to themselves. However, as these are baseline data from a trial of a psychological treatment, might participants with higher distress have been more likely to participate, therefore inflating the current estimates?

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

Yes

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?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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