**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:** 1  **Date:** 03 Dec 2017

**Reviewer:** Maria Papadakaki

**Reviewer's report:**

Thank you for the kind invitation to review this manuscript on the psychological burden of MVC survivors. This is an interesting attempt to explore the validity of two scales. My comments are shown below.

Introduction

1. The study aims to explore the validity of two scales and the manuscript is focused on these aspects. I think that the title is not very representative of the aims.

2. The following sentence needs some scientific references/justification.

   "Problems of detection in psychometric screens include the propensity t…..If a diagnostic strategy has limited sensitivity and specificity, then public health and clinical consequences are problematic."

3. "The DASS-21 has not been used to detect MDD in adults who have experienced MVC-related physical injury and engaged in compensation". …." It is not clear why the authors chose one scale that has not been previously used in MVC research (although earlier they mentioned many OTHER scales used in MVC research). Justification is needed.

4. The first objective of the study is not justified. Why is calculation of the prevalence of MDD and PTSD necessary and important? Is it a missing issue? Please justify with adequate evidence.

5. The second objective is not well justified (..investigate the validity of the DASS-21 and IES-R for measuring MDD and PTSD in adults physically injured in an MVC and engaged in compensation). Why investigation of the validity of MDD and PTSD necessary and important? Is it a missing issue? Please justify with adequate evidence.
Methods

6. The setting is not well defined. Where did this study take place? Where participants were recruited from - how many sampling units were involved? What was the total population of eligible participants in this setting (fulfilling the inclusion criteria) for the two year recruitment period? What percentage of eligible participants were sampled for the current study?

7. I would like to see a flow chart of the recruitment process with eligible and non-eligible cases and those excluded from the study for various reasons. This is always helpful.

8. What are the time restrictions for lodging a compensation claim and under which criteria? How was "3-4 months of the MVC" decided as an inclusion criterion? Information already provided on this could refer to a certain regulatory framework.

9. "catastrophic or complex injuries" are not defined based on widely-stablished definitions. How was this decided? What percentage of injured MVC patients are behind this exclusion criterion? Are there any biases identified?

10. DSM-5 criteria were assessed via "a secure online site"? What about the psychiatric assessment that the authors used in the introduction to justify the necessity of their study regarding the investigation of validity of the two scales?

11. And what about the assessment of DSM-2 criteria assessed for the previous 2 weeks in persons injured 3-4 months before?

Discussion

12. The authors need to employ recent literature and more literature to discuss their findings in relation to MVC research, not general studies on depression and stress in other populations.

13. The first objective of this study is not discussed in comparison to other studies on this filed.

14. The authors discuss the effect of compensation on depressive and stress symptoms and the effect of relevant interventions. However, their study design does not allow any conclusions on that aspect.

15. Criterion validity is only one element of validity. There are other tests/procedures to explore validity and reliability of a tool and this should be acknowledged among the limitations.
16. The authors should further avoid claiming in the Discussion section that the two scales are "valid" based on their findings - but they should be specific regarding the validity aspect they explored as well as specific regarding the population that this validation study applies to (only those in compensation procedures were involved, etc).

17. The authors should acknowledge the limitations raised by their study design as well (cross sectional), the sampling design, the recruitment process, the inclusion/exclusion criteria they employed, etc.

18. Overall, the authors assume that this is a validation study. However, the conclusions are not focused on the findings and the implications of the validation instead they refer to the impact of the study on screening practices, which does not fit with the focus of the introduction.

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

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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