**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:** 06 Nov 2017

**Reviewer:** Whitney Scott

**Reviewer's report:**

This manuscript reports on the use of the DASS and IES as screening tools for major depression and PTSD in a sample of 109 participants who have made a compensation claim following a motor vehicle injury. The data are from a baseline assessment as part of an RCT. The results provide screening cut-offs for identifying people at risk of major depression and PTSD. The data are of potential interest to those working in the area of injury and compensation. However, several important issues in the study design limit the usefulness of the findings.

**Introduction**

1) The authors outline a number of relevant populations in which the DASS has previously been validated. It would be helpful if the authors could explicitly describe the unique features of the compensation context that necessitate examination of the psychometric properties of the DASS in a sample seeking compensation.

2) Why was the DASS chosen as a screening tool when a diagnosis of Major Depressive Disorder was the benchmark? Why was a more specific depression screening measure, such as the PHQ-9, not preferred?

**Methods**

3) Are the eligibility criteria reported the same as those used for the full RCT from which the current data were drawn? If not, it would be useful to report the full eligibility criteria for the trial and any reason for non-participation which could help the reader interpret the relatively low recruitment rate (43.2%).

4) "These included age, sex, education, pre-MVC work status, and marital status." This is not a complete sentence.
5) The authors describe that the DSM-5 criteria for MDD and PTSD were used as the "gold standard" against which the DASS and IES screening measures were evaluated. However, this is misleading, as the gold standard is a diagnostic clinical interview conducted by a trained professional applying these criteria and making a clinical judgment. The use of self-reported symptoms of DSM-5 criteria is not the same as a diagnostic interview.

It is unclear, for example, how it was judged that the depression episode was not attributable to other conditions such as bereavement or substance abuse. A typical diagnostic interview for depression would also need to rule out any contributing medical conditions or medications. Use of clinical reasoning by a trained professional conducting the interview is particularly important in an injury context, as the presence of post-injury physical symptoms can mirror the somatic symptoms of depression, which could inflate prevalence rates if not accurately accounted for. Likewise, the presence of a history of mania also needs to be ruled out for diagnosis of depression. It is not clear that these diagnostic issues could have been adequately judged using the self-report assessment described in this study. Therefore, it does not appear that a "gold standard" benchmark was used.

Results

6) Specificity is particularly low for the IES (48.9-61.4).

Discussion

7) Further discussion of the low specificity is needed for the IES. This is particularly important given the costs associated with over-treatment of people who do not actually have PTSD (both to the system, and taking resources from people that actually have PTSD). Given the relatively lower prevalence of PTSD as judged by the IES (in comparison to MDD), it might be reasonable to use the IES as a screen for the need for further diagnostic interview rather than as a screen for treatment provision. Such a strategy could increase the specificity of PTSD diagnoses and could then better match people with treatment, while only requiring a full diagnostic interview for approximately 20% of the population, if the current data are accurate.

8) "The findings of this study provide assessment or screening pathways that have the potential reduce risk of psychological disorder in people sustaining injury in an MVC and engaged in compensation." This is somewhat misleading. The screening cut-offs in and of themselves will not reduce risks of psychological disorder in this population. Rather, they provide a starting point to potentially initiate treatment. It should be explicitly stated that screening
initiatives should only be implemented when appropriate, empirically validated treatments are in fact available for those who screen positive.

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.

Yes

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