Reviewer's report

Title: The Casualty Chain Inventory: A new scale for Measuring Peritraumatic Responses: a cross-sectional study

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Reviewer: Eric Bui

Reviewer's report:

This is a very interesting paper on the development of a new scale measuring peritraumatic responses.

Major Compulsory Revisions

1. My main concern is about the lack of discussion of the rationale/findings with regards to the peritraumatic distress inventory which also includes one factor with “threat” and “physical reactions” factor.

2. Background

The authors have well described the relationship between the peritraumatic dissociation and subsequent PTSD but the relationship between PTSD and peritraumatic distress is not clearly described. More generally, the authors should more clearly explain the contribution of this new scale with regards with existing measures of peritraumatic responses. (Is the main contribution of this is new instrument the assessment of peritraumatic sensory perception (as the peritraumatic distress inventory already assesses perceived threat and the PDEQ, peritraumatic dissociation)?

3. Background

Furthermore, I’m not sure to understand if the authors imply that pain may be a peritraumatic reaction in the absence of physical trauma, or if an increase of peritraumatic pain (in presence of physical trauma) may be a predictor of subsequent PTSD symptoms (if the latter, the authors may wish to cite prior research on the subject (e.g. Boudou et al, 2007).

Minor Essential Revisions

4. General Comments:

The phrasing is at times clumsy and the authors may wish to have the manuscript proof read by a native English speaking person. (It seems for example that the authors used the terms psychological distress and PTSD on the same level).

5. Background

The authors may want to clearly spell out why it is clinically interesting to investigate the differences in peritraumatic responses between two time points.
6. I believe examining the correlations between the CCI score and the IES-R and PTSS-10 is part of the validation of the scale (convergent validity). If not, (as the authors wrote in the discussion section), then, in order to strengthen the paper, the authors might wish to clarify why it is important to examine this association. Specifically, they may want to say that they aim to examine the predictive power of this measure on subsequent PTSD symptoms.

7. Methods
The authors may wish to spell out “GCS” when used for the first time.

8. Methods
It seems appropriate to also report the mean time elapsed between the trauma and the assessment, as well as the mean duration of the hospital stays.

9. Methods
Furthermore, it is also likely that perceptions may have changed over time during the hospital stay. I wonder if/how the authors have addressed this issue.

10. Methods
Development of the CCI:
It would be interesting to specify if the “Medical doctor” works on physical trauma?
It would also seem interesting to describe in more detail how the items have been selected. Did the authors rely on any qualitative data? Did they brainstorm and select 8 items from a larger set of items?...

11. Methods
The authors may want to explain why they relied on both parametric (Student’s test) and non parametric (Spearman’s correlations) analyses?

12. Methods
The authors indicated in the introduction that they measured the CCI at 2 timepoints “in order to get a measure of the duration of the responses” however, they do not seem to describe nor discuss the duration of the responses. Did they mean that prolonged peritraumatic responses (during the hospital stay) might be better predictors of PTSD than brief responses (only during the event)? If so, the authors might wish to address this question with multivariate analyses.

12. Results
It would be interesting to also report the SD for the different variables (in addition to 95%CI).
Table 2 and the manuscript text report different Cronbach’s alpha values for the perception factor in the hospital.

14. Discussion
Again, the authors might want to discuss the findings with regards to papers on the impact of peritraumatic pain and subsequent PTSD as well as findings from the peritraumatic distress inventory (e.g.: Bui et al, Brunet et al....).

15. Discussion

As the CCI measures peritraumatic reactions, it would have been very interesting to assess the convergent validity with other measures of peritraumatic responses (PDI and PDEQ). This point should be acknowledged in the limitations.

16. Discussion

The authors alternate between psychological distress and PTSD, so that it is difficult to tell if the authors think that CCI is associated (and predictive) of psychological distress or PTSD symptoms. If the former, then, the fact that PTSD does not account for all types of psychological distress should be mentioned. If the latter, then the authors might want to mention that the study was limited by assessment of PTSD symptoms by self report questionnaires (as opposed to interviewer rated) and by the time frame of the assessments of “PTSD symptoms” which might not always correspond to that of PTSD per se (>one month) (i.e.: “PTSD symptoms” within one month of the trauma exposure are not per se PTSD symptoms, but acute stress disorder symptoms).

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests