

Peer Review File

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Reviewer A

The rationale behind using QOL measures clinically and in research in this population is well-articulated. I think this article is an important first step in the validation or development of an appropriate QOL measure.

Comment 1:

Overall

- There are a few instances where the authors use “TBI” in place of brain injury- I would try to keep it consistent with “brain injury” so as to include strangulation-related injuries as well.

Reply 1: Thank for noting this inconsistency. This change has been made throughout the document.

Changes in the text: All instances where “TBI” was used incorrectly in the manuscript were replaced with “brain injury”.

Comment 2:

Abstract

- Line 23: missing the word “injury” after “Brain”

Reply 2: Thank you for noting this. This correction has been made.

Changes in the text: The word “injury” was added after “brain” in the abstract.

Comment 3:

Introduction

- Line 59: Consider adjusting the definition of brain injury, since not all brain injuries result in identifiable structural damage

Reply 3: Thank you for noting this area required clarification. See changes made below.

Changes in the text: Removed “due to damage to the brain structure”. The sentence now reads “A brain injury is defined as a disturbance in brain functioning that results from blunt force to the head, violent shaking, or asphyxiation (12)”.

Comment 4:

- Line 75: The rationale behind the emphasis on emergency departments as the point of contact for QOL screening is unclear to me. I think this is included due to the journal audience, but I would either omit it or expand upon it a little more

Reply 4: Agreed and removed.

Changes in the text: Removed “and emergency departments as uniquely positioned to connect with this population”.

Comment 5:

Methods

- Line 135-144: The rationale behind the re-review of the 47 articles rather than conducting a new search with just QOL and IPV search terms is unclear. I think this rationale needs to be included as

the number of articles may increase significantly with the expanded search. Alternatively, re-running the search with out brain injury terms may be appropriate.

Reply 5: Thank you for noting this. The rationale has now been included as noted below.

Changes in the text: Included a rationale: “Given the objective of this study was to identify measures of QOL in survivors of IPV *with* brain injury, a new search with only the QOL and IPV search terms was not conducted. The articles from the initial review were deemed to be most representative of the objective of this study and were therefore screened for samples in which physical violence was assessed”.

Comment 6:

- Line 174-175: I think later in this manuscript you say that this article did not specify which items were used. I would either expand up the items used or indicate here that they didn't specify.

Reply 6: Correct, thank you. This change was made to indicate the items were not specified.

Changes in the text: Added: " although the specific items selected were not specified”.

Comment 7:

Discussion

- Line 310-311: I'd like to see more details of the use of QOL measures in brain injury samples either here or in the introduction.

Reply 7: Agreed. This was expanded on in the introduction.

Changes in the text: Line 72-76: “QOL measures have been widely used in populations with brain injury. Many QOL measures, such as the Medical Outcomes Study 36-item Short-Form, have been validated in this population. In fact, there are QOL measures that have been developed specifically for this population, including the Traumatic Brain Injury-Quality of Life (TBI-QOL) measurement system”.

Reviewer B

Comment 8:

While this topic is extremely important and the scoping review is of great interest, unfortunately, this review is incomplete and therefore a full, comprehensive review is premature and impossible. This is quite disappointing as I was very excited to read this work. In a quick review search, this reviewer found many more journal articles (N=567) that would/may meet the criteria described in the methods section of the manuscript. Examples of the types of articles that seems to meet these search inclusion/exclusion criteria are below.

Examples of articles found using the search terms provided in PubMed:

Jaradat D, Ford-Gilboe M, Berman H, Wong C. Structural and construct validity of the Quality of Life Scale among Canadian women with histories of intimate partner violence. *Womens Health (Lond)*. 2022 Jan-Dec;18.

Laffaye, C., Kennedy, C., & Stein, M. B. (2003). Post-traumatic stress disorder and health-related quality of life in female victims of intimate partner violence. *Violence and Victims*, 18(2), 227-238.

Alsaker, K., Moen, B. E., Morken, T., & Baste, V. (2018). Intimate partner violence associated with low quality of life-a cross-sectional study. *BMC women's health*, 18(1), 1-7.

Gharacheh, M., Azadi, S., Mohammadi, N., Montazeri, S., & Khalajinia, Z. (2016). Domestic violence during pregnancy and women's health-related quality of life. *Global journal of health science*, 8(2), 27.

Naghizadeh, S., Mirghafourvand, M., & Mohammadirad, R. (2021). Domestic violence and its relationship with quality of life in pregnant women during the outbreak of COVID-19 disease. *BMC pregnancy and childbirth*, 21, 1-10.

Reply 8: Thank you for acknowledging the importance of this work. The search we conducted was seeking to find articles that included a term for 3 constructs: intimate partner violence, brain injury, and quality of life. Because of the unique challenges of sustaining both a brain injury and intimate partner violence, we were searching for articles that evaluated QOL in this specific subpopulation (brain injury from intimate partner violence), rather than survivors of intimate partner violence in the absence of brain injury. The examples of articles found and listed by this reviewer do not meet our inclusion criteria in that they do not include any identification of the brain injury aspect. Our study found that there were in fact no studies that evaluate QOL in this specific population. Therefore, we re-reviewed the articles from the initial search for those with a sample who has experienced physical violence, given the association between physical violence and risk of brain injury, and discuss the measures used in these studies. We did not re-conduct our search using only 2 construct – intimate partner violence and quality of life – given this was not the objective of our study. It would likely reveal more literature on the topic, and this would be an interesting future review to conduct. However, we elected to provide some discussion of the instruments used in the studies from our initial search that met our modified inclusion/exclusion criteria to provide a starting point for future research.

Changes in the text: No specific changes made at this time.

Reviewer C

Thanks for the invitation to review this interesting manuscript. I found this paper to be focused on a very important topic- quality of life among survivors of IPV with IPV-related brain injuries. This paper emphasizes the need for more validated QOL measures to use with this group. Thus, the findings and implications are important ones. However, I do think there are several points that would improve this manuscript. These include more direct statement of the objectives of this review, organization of the discussion section, and some revisions for clarity of writing. Specific comments are included below.

Comment 9:

Introduction:

Line 50: “repeated instances of abuse” – are the authors referring to repeated bouts of assault (e.g., kicking, slapping, sexual violence) or multiple abusive partners? IPV by its nature involves repeated assault, so clarification would be helpful here.

Reply 9: Good point. This was meant to emphasize that survivors of IPV often experience repeated instances of violence (e.g. they may experience multiple blows to the head over time vs a football player who has one incident).

Changes in the text: Line 49 – Added: “within a relationship”. The sentence now reads: Globally, it is estimated 1 in 3 women will experience IPV at some point in their life, with many survivors experiencing repeated instances of abuse within a relationship.

Comment 10:

Line 63: “which is significantly higher than estimates...” It would be helpful if the authors could state how much higher than in other populations to give context

Reply 10: Thank you for this feedback. We have now included a statistic on the rates of brain injury in collision sports for comparison.

Changes in the text: Line 61-62 – added: “which is approximately 10%”.

Comment 11:

Line 70: “surviving both these traumas simultaneously results in a unique, complex situation for the survivor.” Can the authors be more specific here?

Reply 11: Throughout the introduction, we discuss the impact that both IPV and brain injury, independently, have on a person’s biopsychosocial wellbeing. Survivors of IPV-related brain injury are unique in that they experience the impact of both these traumas and the interplay between them is challenging to tease apart and complexly interwoven. The wording was changed slightly for clarity.

Changes in the text: Line 78-81: Changed “consequences” to “impact”. The sentence now reads as: “While each of these incidents comes with a range of biological, psychological, and social consequences (17, 18), surviving both these traumas simultaneously has a unique, complex impact on the survivor challenging to tease apart and complexly interwoven”.

Comment 12:

Can the authors speak to brain-injury related quality of life broadly, and if it is widely measured in other populations?

Reply 12: Thank you for noting this area requires elaboration. We have expanded on brain injury-related QOL in the introduction and also clarified our discussion on measures QOL for developed for those with brain injury.

Changes in the text: Introduction (lines 72-76) – added: “QOL measures have been widely used in populations with brain injury from mechanisms other than IPV (e.g., sports, accidents, military). Many QOL measures, such as the Medical Outcomes Study 36-item Short-Form, have been validated in this population. In fact, there are QOL measures that have been developed specifically for this population, including the Traumatic Brain Injury-Quality of Life (TBI-QOL) measurement system”. Discussion (line: 273) – added: “QOL measures have been validated and are widely used with those living with brain injury” to provide more context for the discussion on the TBI-QOL

measure, which was developed specifically for survivors of brain injury but was not identified in our search on brain injury in survivors of IPV.

Comment 13:

Were there specific research questions besides “identify and evaluate”? If so, please include here.

Reply 13: The study was aimed at identifying and evaluating the generalizability of these measures to our population of interest. This was clarified in the text.

Changes in the text: “the generalizability of” to line 89.

Comment 14:

Methods:

How did the authors define brain injury? Is this traumatic brain injury (TBI?) mild TBI (mTBI?) asphyxia? All of the above?

Reply 14: The definition of brain injury is defined in the introduction (lines 57-59): “A brain injury is defined as a disturbance in brain functioning that results from blunt force to the head, violent shaking, or asphyxiation (12)”. It includes traumatic brain injury as well as brain injury from asphyxiation.

Changes in the text: None.

Comment 15:

How did the authors define QOL? What about related measures that are functioning-related (e.g., the WHODAS). A definition would be helpful

Reply 15: QOL is defined in the introduction (lines 66-72) as “one’s opinion of their life situation, taking into account their culture, values, ambitions, expectations, standards, and worries (19). It is a multidimensional concept that considers the physical and mental health of an individual as well as their independence, relationships, beliefs, and their connection to various features of the environment (19). Thus, QOL is a holistic, subjective determination of the way in which various aspects of one’s own life are impacting functioning (19, 20)”. This study was focused on looking at quality of life measures specifically.

Changes in the text: None.

Comment 16:

Results:

The results could be organized by the research question, which would make them a little bit clearer. As is stated now, the aim of the review was to identify and evaluate measure of QOL – but the results have a section about the measures for physical violence? Is this relevant to the aims of the study? As of now, it seems to be a distraction from the aim of the review, as they are not a stated aim of the review and these measures are no discussed in depth.

Reply 16: Thank you for noting this area in need of clarification. The aim was clarified as mentioned in comment 13 to reflect the objective of identifying and evaluating the generalizability of the measures to survivors of IPV-related brain injury. The initial review did not reveal any studies using QOL instruments in populations with IPV and a brain injury. A subsequent review was therefore conducted to identify QOL instruments used in survivors of IPV with confirmed physical violence

(which is known to be associated with a high risk of brain injury). While we acknowledge this is not the exact population intended in our objective, we provided this additional information as a starting point to begin exploring instruments of QOL in survivors of both IPV and brain injury. Given this additional review that was conducted, we discuss the measures for physical violence used in the studies we later included as a proxy for the brain injury construct.

Changes in the text: None.

Comment 17:

Relatedly, in the discussion (line 179-188), the authors comment on QOL results from studies, but again the review isn't said to be focused on QOL results – rather just measures. I think it is okay to mention the findings of the papers included in the review- but, it should be mentioned in the methods if the authors decide to do so. The methods should be tightly connected to the research objectives.

Reply 17: In this section, we are discussing the reliability of the QOL instruments to assess generalizability to survivors of IPV with confirmed physical violence. We have clarified the objective of evaluating the generalizability of these instruments as addressed in the comments above.

Changes in the text: None.

Comment 18:

Discussion:

Line 268. Discussion of The Traumatic Brain Injury-Quality of Life (TBI-QOL) measurement seemingly comes out of nowhere. Is it widely used in other research on TBI? Can you give more context for this measure? I think an introduction to this instrument earlier on in the manuscript, including the reasons why it may not be a good fit for IPV/TBI would make more sense. Then the authors could say that there ARE QOL measures for TBI, (emphasizing the need for these types of measures) but they are not appropriate for this context (emphasizing that IPV needs tailored measurements). As written currently, there is not really context of TBI-related QOL measures broadly, so it is hard for the reader to really grasp how shocking the lack of measure truly is. This comment is meant to help the authors emphasize the importance of this review and area of research.

Reply 18: Thank you for this constructive feedback helping us highlight the importance of this work. QOL instruments are widely used in TBI research. The text has been modified as described below to reflect this comment and provide elaboration on QOL instruments used in populations with brain injury.

Changes in the text: Introduction (lines 72-76) – added: “QOL measures have been widely used in populations with brain injury. Many QOL measures, such as the Medical Outcomes Study 36-item Short-Form, have been validated in this population. In fact, there are QOL measures that have been developed specifically for this population, including the Traumatic Brain Injury-Quality of Life (TBI-QOL) measurement system”. Discussion (line: 273) – added: “QOL measures have been validated and are widely used with those living with brain injury” to provide more context for the discussion on the TBI-QOL measure, which was developed specifically for survivors of brain injury but was not identified in our search on brain injury in survivors of IPV.

Comment 19:

Line 276. This section is labelled explanation of findings? Is it meant to be limitations of the studies in the review? If not, it is unclear what the take home point it? The authors could also make a section

in the results labelled “sociodemographic of samples” which they could report this information and then discuss in the discussion

Reply 19: Thank you for highlighting the lack of clarity about the title/objective of this section. In this part of the discussion, we hoped to address the limited diversity of the samples in the studies and acknowledge the barriers to including certain populations in this research. We have renamed this section to provide more clarity on the topic of discussion in this section.

Changes in the text: Line 285 – Renamed section to “Sociodemographic characteristics of samples”

Comment 20:

Line 292-295. This sentence is confusing. Can the authors rephrase for clarity?

Reply 20: Thank you for noting this sentence required clarification. This sentence has been rephrased.

Changes in the text: Lines 301-305 were rephrased for clarity: “Future research should consider the validity and reliability of QOL measures among survivors of IPV-related brain injury. Validated and reliable QOL measures for survivors of IPV-related brain injury would allow for comparison of QOL in survivors of IPV with a confirmed brain injury with other populations, such as survivors of IPV without brain injury or survivors of brain injury sustained from mechanisms other than IPV. This research would also permit the identification of any items in the measure addressing difficulties associated specifically with either IPV or brain injuries. For instance, items related to symptoms of brain injury, such as dizziness and difficulty concentrating, may be important to include”.