Author’s response to reviews

Title: The determinants and consequences of adult nurse staff turnover: a systematic review of systematic reviews

Authors:

Mary Halter (maryhalter@sgul.kingston.ac.uk; maryhalter@hotmail.co.uk)
Olga Boiko (olga.boiko1@gmail.com)
Ferruccio Pelone (f.pelone@sgul.kingston.ac.uk)
Carole Beighton (c.beighton@sgul.kingston.ac.uk)
Ruth Harris (ruth.harris@kcl.ac.uk)
Julia Gale (j.gale@sgul.kingston.ac.uk)
Stephen Gourlay (gourlaysn@kingston.ac.uk)
Vari Drennan (v.m.drennan@sgul.kingston.ac.uk)

Version: 1 Date: 11 Aug 2016

Author’s response to reviews:

Dear Editor,

Thank you for the opportunity to respond to these reviews which we found helpful in revising our manuscript. We address each reviewer’s comments point-by-point in the table below and accompany this response with tracked changes in the document. The table will not replicate in this box, so we have also added it as an additional file, which we hope is acceptable and adds to the readability of the same content below.

We feel the reviewers have assisted us to improve the paper and we acknowledge this in our declarations.

We look forward to your view on the appropriateness of the revisions we have made.

Yours faithfully,

Mary Halter, on behalf of the author team.
Reviewer #1

This paper offers a review of 9 review articles on nurse turnover. I agree with the authors that many reviews have been completed on this topic and that synthesizing them offers a useful platform for future research. I believe this work has the potential to contribute to the literature on nurse retention, but also has a few issues that need to be addressed. These issues are detailed below. Thank you for your positive comment on the potential usefulness of the review. We have responded on the issues that needed addressing in turn below

1. The papers selected for the review appear to represent the literature comprehensively, and I think the idea of reviewing all the reviews is a good one. Nurse turnover has been studied extensively and there are a lot of reviews in the literature. The topic has been exhausted to some degree and bringing together the reviews is very interesting. That said, the review of reviews doesn't really bring a new perspective in its current form. I appreciate that the authors examined Gilmartin's model as they noted on page 6 of the paper, but I think discussing how the results fit into a more comprehensive turnover model in the broader HR literature might bring a new perspective on nursing turnover. Holtom et al. (2008) have a comprehensive model in their paper, and discussing how nursing turnover studies fit into that framework might ignite new insights and new ideas for future research. If you don't like the Holtom model, Vardaman et al. (2015) have a discussion of extant turnover models and
propose a two-stage model of turnover. This paper also sheds light on the intentions versus turnover behavior issue you've highlighted and features a sample of nurses. I realize your paper is specifically on nurse turnover, but applying a framework from the broader turnover literature in management would give the review added novelty and impact. This need not take multiple pages or even be a featured aspect of the paper, but I think an integration or at least a discussion of your findings in the context of such a framework would be valuable and add to the paper's contribution.

Thank you for your comment regarding comprehensiveness and interest in bringing the reviews together. We address point 1 and 2 together as they are linked.

We accept that the paper did not suggest a link to the models from the HR literature. We have now referred to such models, that you helpfully pointed us to, in the introduction, limitations, discussion and conclusion of our manuscript. We have not explicitly linked the nursing turnover literature we have overviewed to one of these models, but have sought to highlight where the nursing turnover literature exhibits similarities to and differences from the broader HR literature.

With respect, we would however, wish to offer a small challenge to the suggestion that bringing the literature into one place is the only issue of interest. We have sought to clarify in our summary of findings (the discussion section) that it is in bringing the literature together that we in fact highlight gaps in the literature that have practical consequence for those aiming to address nurse turnover. Highlighting the limitations to quality of the reviews is also new knowledge. We hope also that bringing in the broader HR literature that you suggest accentuates this point.

In drawing upon this literature we have also sought to better address the intentions versus behaviour issue. As you suggest, this is important and needed greater attention.

2. The paper is executed very well. I found the categorizing of factors that predict turnover to be sensible, and the insights provided were very readable and straightforward. My issue relates back to point 1, in that although you are reviewing reviews, nothing that is reported is really all that unexpected or novel. For the most part, I don't know more from reading this paper than I would from reading all the other reviews (I acknowledge that your paper does provide a one-stop article for this information and that is valuable, but it in itself doesn't bring a new perspective). This is why I think applying a framework from the broader turnover literature in management is so important. Doing so provides a new perspective that makes your review much more impactful and would give it the added novelty it needs.

3. The confluence of turnover intentions and turnover in the literature is quite problematic. Meta-analysis in the management field (Griffeth et al. 2000) demonstrates that intentions
only explain about 20% of turnover variance, and an entire literature has emerged on the reasons for this weak linkage (e.g., Allen et al., 2005). Extant turnover frameworks suggest turnover intentions are a part of the process and not a proxy for turnover behavior. Turnover intentions are in fact not translated into behavior in most cases. I realize you and the authors of past reviews are at the mercy of the studies that have been done in on nurse turnover in the past, but the paper should note this issue. I believe addressing point 1 will help in this regard. I strongly encourage the authors to discuss a turnover framework from the management literature (which would detail that intentions are a step in the process, not a proxy) to help address this issue and the one raised in comment 1.

Thank you for pointing out that the issue of intention versus actual turnover holds greater importance than we had afforded it in mentioning it only briefly in the limitations section. We have now referred to the HR literature, which you helpfully pointed us to, still in the limitations section and acknowledged the issue as more central.

4. The explanation of job-related determinants was nicely-done. I was struck by the fact that no work has been done on working conditions. Recent work on the role of working conditions in nurse turnover (Vardaman et al., 2014) suggests this could be area of future explanation that has been ignored in past work. I think noting this would be interesting for the reader.

Thank you for supporting our explanation of job-related determinants and for directing us to your paper – we now refer to this in highlighting the differences between the nursing and HR literature, and noting that, in reviewing review, we are likely to have missed other such recent literature in primary studies.

MINOR POINTS

5. Line 4 on page 20 has a strikethrough that should be removed.

6. Why is "adult" specified throughout the manuscript? This is a minor issue but I would assume all RN's or other professionals would be assumed to be adults.

5. We have removed this
6. We have used the term ‘adult nurses’ as it is used in the UK by the body registering nurses and midwives i.e. those nurse providing care to adult patients, excluding those providing care to those adults presenting with mental health conditions. We gave a brief note explaining our use of the term adult nurses in paragraph three of the introduction, but as we can now see this does not eliminate the question for the reader, particularly international readers, we have changed it to ‘adult nursing’.

In sum, I very much enjoyed the paper and I feel it has the potential to add to the body of knowledge on nurse retention. The review was well-executed, the paper was clear and easy to read, and the topic is interesting. I believe the contribution and impact of the paper will be enhanced by addressing the comments above.

Thank you again for your helpful review. We trust that we have adequately addressed your comments and improved the paper in response to the suggestions you made and the literature you directed us to.

Reviewer #2

This manuscript covers an important topic that will likely be of interest to readers. I am not familiar with assessments of multiple systematic reviews but think from what these authors write such assessments are useful to readers.

Thank you for your support for the method we have used. In response to the issues raised by reviewer #1 we hope that we have further clarified the usefulness of having taken that approach in the findings we highlight.

I think the term "adult nurses" is confusing. I did not realize what the term meant until page 6 when the authors defined the term. I thought they meant nurses 18 and over and couldn't figure out how someone under 18 could be a nurse. I am familiar with the literature on nurse turnover and don't recall that many published articles identify that they are about nurses who only care for adults. The authors should assure the reader that all the articles in the systematic reviews limit their analyses to nurses who care for adults. One can assume that if the samples are restricted to nurses who work in hospital adult med surg units they care only for adults, but if the samples include emergency room nurses one can not be sure of that. For example on page 7 they exclude any review that did not evaluate adult nurse turnover.

You and reviewer #1 have assisted us in clarifying our meaning. As above we have now referred to the papers as those pertinent to turnover in adult nursing. You rightly point out that
very few papers explicitly use the term ‘adult nursing’ and it was in our detailed reading of papers that we sought to ensure we only included nurses in those settings. Where settings were mixed we excluded the papers. We have aimed to clarify this in the exclusion criteria within the methods section: criteria for considering studies for review section.

The manuscript could be strengthened by separating/clarifying findings related to leaving a position and leaving the profession (see p. 17 for example)

Thank you for highlighting to us the importance of clarifying this for the reader. We agree that this is an important distinction. We are hindered however in separating the findings in this way as the literature, apart from the four places where we specify in the results section, does not offer us explanation of what ‘leaving’ means. While this does not solve the issue, we have now inserted a brief section into the limitations and implications sections to comment on this.

I was puzzled about why the authors included both determinants and consequences of turnover, which are conceptually quite different, when there was only one systematic review of consequences.

We agree with you that determinants and consequences are conceptually different. Our rationale for including both was that we are aware that determinants of turnover lead to turnover which lead to consequences that may be the same as the determinants (e.g. cost > resourcing issues > low satisfaction > turnover), i.e. this is a potentially negative circle. We have sought to clarify this by referring to this in the discussion section.

p. 1 I had trouble understanding the 3rd sentence. In the 4th sentence author should clarify that the data cited are from the U.S. and Canada only. Many in the U.S. (particularly Buerhaus) would argue with the conclusion of the BLS.

Thank you for pointing out places where our meaning was unclear. We have amended both of these sentences.

p. 7 I was confused by the 4th bullet. I didn't think that all of the systematic reviews reported on both determinants AND consequences from what the authors wrote. Similarly, I didn't understand the last two bullets. Maybe use different words than "study(review) design."

We have amended these bullet points for clarity.
p. 8 Authors say that they searched data bases from inception to 2015, but in other place they say they limited to 1990-2015. Perhaps they mean that the limited search to 1990 and later unless the index did not begin until after 1990 and they limited the search to the date of inception til 2015. See for example p 21 third line from the bottom. Final bullet on page 8 they say that any discrepancies between two reviewers .... resolved... with third reviewer" but MH (3rd reviewer) was also an original reviewer. How did that work?

Thank you for pointing out further unclear sentences. Again we have amended both.

The authors did a good job of organizing the findings into categories that made sense. But results section was hard to follow, but that is primarily because the literature is so complicated. Of particular note is that the various study authors used turnover OR retention OR intent to stay OR intent to leave, making synthesizing difficult.

Thank you for your comments. We would agree that the literature did not lend itself easily to synthesis and we hope that the additional material placed in this revision in response to reviewer 1’s comments have highlighted that the issues you identify here are in fact findings of this review and warranted discussion.

p. 16 Supervisor support is a strong finding, but get buried on p. 16 as does group cohesion - maybe highlight those at the beginning of the Interpersonal determinants section. This is also buried at the top of p. 20, when it could lead a paragraph

We have now split the interpersonal determinants section into more paragraphs, and have agreed with your suggestion to place the results on supervisor support first in this section as this is supported by more reviews.

Perhaps results reporting could be improved by having a topic sentence at the beginning of each paragraph. For example: "The following 11 determinants were reported...” or after the second sentence a summary sentence Age (negative), marital status (positive), more education (positive) were related to turnover.

We have now listed the determinants examined at the start of each subsection. While we appreciate that listing the positive or negative associations may appear to improve quality, we hesitate to do so in a list as we aim for our presentation of the findings to reflect the complexity of this topic, particularly when we consider the issue of quality of evidence is so central - that is
we might list positive finding for a determinant but give little weight to that review due to quality issues. We hope this explanation of our rationale is acceptable.

In the concluding remarks section the last sentence is a key and important sentence. This should have been highlighted in the results section.

   Thank you for pointing this out. We have now placed a similar statement in the main findings section of the discussion. While we can understand how addressing this in more detail in each section of the results might have introduced greater clarity, in being a review of reviews we are reporting and synthesising the reviews’ findings rather than those of the individual studies.

I was unable to read Figure 2

   We are unsure how to address this as we cannot tell if the reviewer could not access TIFF files or whether the figure is unreadable when opened. We would be grateful if the editorial team could confirm with us which issue requires fixing with this file.

   There are a number of small editing issues.

   p. 1. first sentence should be "is an issue" or "are issues" It is not clear what the subject of the sentence is "Nurses leaving...." singular or "Nurses leaving their jobs AND nurses leaving the profession" (plural)

   p. 6 first sentence of 2nd paragraph "models" (except those modeling clothes) don't "call upon" researchers/authors do. Last sentence would be clearer as "we conduct an overview with is a systematic review of systematic reviews"

   p. 9 last sentence in first paragraph -- does author really mean between (e.g. MH and OB) or among (e.g. MH, OB, and CB discussing together).

   Thank you, we have corrected all of these editing issues.
Editorial Comments:

Can you please ensure your revised manuscript meets our formatting guidelines (which may have changed since your initial submission), in particular the addition of a completed 'Declarations’ section:

https://bmchealthservres.biomedcentral.com/submission-guidelines/preparing-your-manuscript/research-article

Declarations

- Ethics approval and consent to participate
- Consent to publish
- Availability of data and materials
- Competing interests
- Funding
- Authors’ Contributions
- Acknowledgements
- Authors' Information

The following changes have been made to meet the current formatting guidelines: inserted line numbers, removed page breaks, amended the declarations section – added ethics approval statement, data availability statement, renamed acknowledgements as funding; revised the order of this section

We have removed figure headings from individual figure files, renamed supplementary files as additional files and revised the order in the manuscript of figures, tables and additional materials after the references

Please also ensure the that the main section headings are as outlined in the guidelines.

The following changes have been made: renamed introduction as background, renamed findings as results, renamed concluding remarks as conclusions
Thank you for following the PRISMA guidelines. Can you please include a completed PRISMA checklist as an additional file when submitting your revised manuscript (http://www.prisma-statement.org/)

A PRISMA checklist now forms part of the submission; please note that the page numbers in this checklist apply to the manuscript revision which contains tracked changes.