

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Protocol for a meta-integration: Investigating positive aspects of caregiving in dementia
<b>AUTHORS</b>	Branger, Camille; O'Connell, Megan; Peacock, Shelley

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Jacki Stansfeld University College London - UK
<b>REVIEW RETURNED</b>	22-Jan-2018

<b>GENERAL COMMENTS</b>	<p>Summary: It was a pleasure to read your paper which details a protocol for a mixed meta-synthesis investigating the positive aspects of caregiving in dementia. You presented a robust methodology in an important and emerging topic area. In general, the methodology for this paper is well thought through however there are many areas in that the wording could be cut down and made more concise, which would improve the quality of the paper overall. In addition, there are some grammar errors and awkward phrasing which impede the flow and reading of this protocol.</p> <p>Abstract:</p> <ol style="list-style-type: none"><li>1. You give a good rationale for conducting the review. However Page 3 line 10 does not read very clearly- please revise.</li><li>2. The strengths and limitations of the study section has some minor wording issues which makes it quite difficult to read. Please clearly list the strengths, i.e. “the search is systematic with a clearly defined protocol due to the plentiful literature pertaining to positive aspects of caregiving” and limitations.</li></ol> <p>Introduction:</p> <ol style="list-style-type: none"><li>1. Please reference the first paragraph of your introduction (lines 13-20) discussing the aging population and rise in dementia.</li><li>2. Your statement in page 5, lines 42-44 is correct- there are many challenges in the measurement of the positive aspects of caregiving. However this is a strong statement without reference and I feel it could be stronger if you referenced and discussed literature that already evidences the challenges in measuring positive aspects in caregiving and the conceptualisation of these measures/domains.</li><li>3. The introduction section could benefit from discussion of other models of wellbeing that may be applied to caregiving, aside from that of Ryff, which may be relevant for the topic, e.g. DPF-5 or PERMA framework. If these are considered irrelevant to your work, it should be made clear why your introduction has focused on that of Ryffs model.</li><li>4. In your search strategy it is clear that you are investigating caregiving strengths such as resilience/self –efficacy / competence, which may be included under the broad category of positive aspects</li></ol>
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	<p>in caregiving but are different by distinction in that they are positive character traits which in turn contribute to wellbeing. A discussion of this in your introduction would be beneficial due to these concepts being included in your search.</p> <p>5. Please state clearly the objectives of this review in a separate section.</p> <p>Method:</p> <p>1) Page 14 lines 3-6 – Please correct the typographical error “indicate don” – “indicated on”</p> <p>2) The Cochrane Collection Guidelines and CASP tool are good choices for your methodology but are you going to use them to guide the weight you place on the conclusions of the review? I appreciate you are not excluding poor quality research, but providing indication as to quality would be useful for readers of your final paper.</p> <p>3) In your prisma diagram, please state a few (Most common reasons) why papers were excluded after phase one and two screening.</p> <p>4) Your methods section is robust but it could be much more concise. It is difficult to follow in places and that masks the quality of the methods.</p>
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<b>REVIEWER</b>	L, Gallego-Alberto Autonomous University of Madrid, Spain
<b>REVIEW RETURNED</b>	13-Mar-2018

<b>GENERAL COMMENTS</b>	<p>The authors described a protocol for examining the positive aspects of dementia caregiving. The literature about caregiving is usually focused on negative outcomes, and the research on positive and/or protective factors is also important and necessary in this field. This work is quite ambitious and involves different research methodologies (meta-analysis, meta-synthesis and the mixed method). It is highly recommended that experts in this type of methodologies review this protocol and manuscripts related to it. I enjoyed reviewing this work and have several recommendations that are listed below:</p> <p><b>INTRODUCTION</b></p> <ul style="list-style-type: none"> <li>-The first sentence in that section "the current work describes protocol..." it is the objective of the work. It would be helpful for readers starting the section justifying the importance of the caregiving topic.</li> <li>-Page 5, line 42. It would be interesting to cite some of these recent publication in positive aspects related to caregiving.</li> <li>-Page 6, line 33, please cite studies of these findings</li> <li>-Referring to the "mixed-meta synthesis" There are publicated articles with this methodology? In the affirmative case, it would be necessary to report them.</li> <li>- It would be helpful for readers to summarize the part about meta analysis and the metasynthesis. Maybe the authors could consider it only as an introductory part of the mixed-meta synthesis section.</li> <li>- I recommend finishing the introduction with a the objectives of the study (the first sentence of the manuscript).</li> </ul> <p><b>METHOD</b></p> <ul style="list-style-type: none"> <li>-It would be helpful for readers to numerate the method sections according the first list described in the method. For example (1. Identify relevant data bases). Also, the authors could change the list with the seps accordig the sub-section titles.</li> <li>-The authors listed the term of child caregiver and spouse caregiver.</li> </ul>
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	<p>Some studies have been developed only with daughters, it would be interesting to add these term to the search.</p> <p>-In the case of the terminology on positive aspects, it may be useful to review meta-analysis about the studied variables in positive psychology literature</p> <p>-Page 19, line 54. The screenings protocols PICO and SPIDER were expanded, What modifications were made by the authors?</p> <p>-the first stage to perform the mixed meta-synthesis is a meta-analysis or a review of the quantitative evidence and the second is the synthesis of the qualitative data. The third stage combines the results of both parts. However, In teh case of the meta-analysis was not possible, the authors will analyze the differences between studies. What are the differences between this part and a narrative revision about the outcomes of the different types of studies?</p> <p>-Page 25, line 35. It would be recommendable to explain the thematic synthesis approach.</p> <p>-Given the novelty of this method, I recommend to the authors to try to clarify and support the final step with other studies that have used this mixed meta-synthesis.</p> <p><b>CONCLUSIONS:</b> It would be interesting to review the structure of the section to make the text easier to read.</p>
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### VERSION 1 – AUTHOR RESPONSE

Reviewers' Comments to Author:

Reviewer: 1

Reviewer Name: Jacki Stansfeld

Institution and Country: University College London - UK

Competing Interests: None Declared

Summary: It was a pleasure to read your paper which details a protocol for a mixed meta-synthesis investigating the positive aspects of caregiving in dementia. You presented a robust methodology in an important and emerging topic area. In general, the methodology for this paper is well thought through however there are many areas in that the wording could be cut down and made more concise, which would improve the quality of the paper overall. In addition, there are some grammar errors and awkward phrasing which impede the flow and reading of this protocol.

Abstract:

1. You give a good rationale for conducting the review. However Page 3 line 10 does not read very clearly- please revise.
2. The strengths and limitations of the study section has some minor wording issues which makes it quite difficult to read. Please clearly list the strengths, i.e. “the search is systematic with a clearly defined protocol due to the plentiful literature pertaining to positive aspects of caregiving” and limitations.

We have revised the manuscript to address both of these concerns. Thank you for the helpful suggestions!

Introduction:

1. Please reference the first paragraph of your introduction (lines 13- 20) discussing the aging population and rise in dementia.

2. Your statement in page 5, lines 42-44 is correct- there are many challenges in the measurement of the positive aspects of caregiving. However this is a strong statement without reference and I feel it could be stronger if you referenced and discussed literature that already evidences the challenges in measuring positive aspects in caregiving and the conceptualisation of these measures/domains.

3. The introduction section could benefit from discussion of other models of wellbeing that may be applied to caregiving, aside from that of Ryff, which may be relevant for the topic, e.g. DPF-5 or PERMA framework. If these are considered irrelevant to your work, it should be made clear why your introduction has focused on that of Ryffs model.

4. In your search strategy it is clear that you are investigating caregiving strengths such as resilience/self-efficacy / competence, which may be included under the broad category of positive aspects in caregiving but are different by distinction in that they are positive character traits which in turn contribute to wellbeing. A discussion of this in your introduction would be beneficial due to these concepts being included in your search.

5. Please state clearly the objectives of this review in a separate section. We have substantially revised the introduction section as per the editorial request to reduce the introduction for the protocol and have deleted much of the material these comments are based upon. These comment, however, will be very helpful for us when we are writing the final manuscript.

#### Method:

- 1) Page 14 lines 3-6 – Please correct the typographical error “indicate don” – “indicated on”
- 2) The Cochrane Collection Guidelines and CASP tool are good choices for your methodology but are you going to use them to guide the weight you place on the conclusions of the review? I appreciate you are not excluding poor quality research, but providing indication as to quality would be useful for readers of your final paper.
- 3) In your prisma diagram, please state a few (Most common reasons) why papers were excluded after phase one and two screening.
- 4) Your methods section is robust but it could be much more concise. It is difficult to follow in places and that masks the quality of the methods.

We have rewritten the method section to include comments on quality and to improve clarity.

#### Reviewer: 2

Reviewer Name: L, Gallego-Alberto

Institution and Country: Autonomous University of Madrid, Spain

Competing Interests: None declared

The authors described a protocol for examining the positive aspects of dementia caregiving. The literature about caregiving is usually focused on negative outcomes, and the research on positive and/or protective factors is also important and necessary in this field. This work is quite ambitious and involves different research methodologies (meta-analysis, meta-synthesis and the mixed method). It is highly recommended that experts in this type of methodologies review this protocol and manuscripts related to it. I enjoyed reviewing this work and have several recommendations that are listed below:

#### INTRODUCTION

-The first sentence in that section "the current work describes protocol..." it is the objective of the work. It would be helpful for readers starting the section justifying the importance of the caregiving topic.

-Page 5, line 42. It would be interesting to cite some of these recent publication in positive aspects related to caregiving.

-Page 6, line 33, please cite studies of these findings

- Referring to the "mixed-meta synthesis" There are published articles with this methodology? In the affirmative case, it would be necessary to report them.
- It would be helpful for readers to summarize the part about meta analysis and the metasynthesis. Maybe the authors could consider it only as an introductory part of the mixed-meta synthesis section.
- I recommend finishing the introduction with a the objectives of the study (the first sentence of the manuscript).

We have substantially revised the introduction section as per the editorial request to reduce the introduction for the protocol and have deleted much of the material these comments are based upon. These comment, however, will be very helpful for us when we are writing the final manuscript.

#### METHOD

- It would be helpful for readers to numerate the method sections according the first list described in the method. For example (1. Identify relevant data bases). Also, the authors could change the list with the seps accordig the sub-section titles.
- The authors listed the term of child caregiver and spouse caregiver. Some studies have been developed only with daughters, it would be interesting to add these term to the search.
- In the case of the terminology on positive aspects, it may be useful to review meta-analysis about the studied variables in positive psychology literature
- Page 19, line 54. The screenings protocols PICO and SPIDER were expanded, What modifications were made by the authors?
- the first stage to perform the mixed meta-synthesis is a meta-analysis or a review of the quantitative evidence and the second is the synthesis of the qualitative data. The third stage combines the results of both parts. However, In teh case of the meta-analysis was not possible, the authors will analyze the differences between studies. What are the differences between this part and a narrative revision about the outcomes of the different types of studies?
- Page 25, line 35. It would be recommendable to explain the thematic synthesis approach.
- Given the novelty of this method, I recommend to the authors to try to clarify and support the final step with other studies that have used this mixed meta-synthesis.

We used this guidance to re-organize the substantially revised method section. We have clarified that we did not make modifications to PICO and SPIDER (the writing was unclear in the previous version), and we have clarified the steps in the analyses including a more fulsome discussion of the thematic synthesis.

#### CONCLUSIONS:

It would be interesting to review the structure of the section to make the text easier to read.

Thank you, we revised this section.

#### VERSION 2 – REVIEW

<b>REVIEWER</b>	Jacki Stansfeld University College London, UK
<b>REVIEW RETURNED</b>	12-May-2018
<b>GENERAL COMMENTS</b>	It was a pleasure to read this revised manuscript, thank you for your careful revisions. This is an important and much needed area of research and your methods are sound and generally well described. Below are some minor comments.  It is unclear why "Meta-analysis of quantitative data may not be

	<p>possible if methods used to measure positive aspects of caregiving vary across studies." Do you mean if there are two measures of 'gain' for example, you cannot use meta-analysis? I do not agree with this - you could group by concept and then use meta-analysis. Please expand on this point.</p> <p>Research question 4 is not clear and from reading it I cannot tell exactly what your question is - please clarify this.</p> <p>Under your methods header, your patient and public involvement statement seems unfinished. Do you mean for it to be a subheading? This needs editing.</p> <p>How did you choose the labels for construct variables? This is currently unclear.</p> <p>You state that in the quantitative dataset synthesis that the extracted data will be reviewed to gain a sense of the homogeneity - exactly what will be reviewed? The participant characteristics? Measurement? Theoretical underpinnings? You could be more clear here.</p>
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### VERSION 2 – AUTHOR RESPONSE

Reviewers' Comments to Author:

Reviewer: 1

Reviewer Name: Jacki Stansfeld

Institution and Country: University College London, UK

Competing Interests: None declared

It was a pleasure to read this revised manuscript, thank you for your careful revisions. This is an important and much needed area of research and your methods are sound and generally well described. Below are some minor comments.

It is unclear why "Meta-analysis of quantitative data may not be possible if methods used to measure positive aspects of caregiving vary across studies." Do you mean if there are two measures of 'gain' for example, you cannot use meta-analysis? I do not agree with this - you could group by concept and then use meta-analysis. Please expand on this point.

We agree, it would be fine to group measures of, gain, for instance. The challenge we see is that there will be heterogeneity in concepts and measures used to reflect positive aspects (e.g., gain, satisfaction, positive aspects, personal growth) in addition to heterogeneity in the measures for each of these. In addition, what any one measure is investigated in in relation to (e.g., caregiver burden, caregiver distress, psychological well-being) will present added heterogeneity and may preclude meta-analysis of these data.

Research question 4 is not clear and from reading it I cannot tell exactly what your question is - please clarify this.

Thank you for pointing this out, this has been changed to “what do the data indicate about the relationship between positive aspects and other informal caregiving variables? “

Under your methods header, your patient and public involvement statement seems unfinished. Do you mean for it to be a subheading? This needs editing.

How did you choose the labels for construct variables? This is currently unclear.

We have added: (these concepts were chosen based on the researchers knowledge of the most common labels used to described these constructs, being active researchers in the area).

You state that in the quantitative dataset synthesis that the extracted data will be reviewed to gain a sense of the homogeneity - exactly what will be reviewed? The participant characteristics? Measurement? Theoretical underpinnings? You could be more clear here.

We agree this was unclear. We have included the sentence, “Specifically, we will look at whether there is enough consistency in the measures used for positive aspects across studies (i.e., it would not be appropriate to group measures of gain with measures of satisfaction) and in the variables in which positive aspects are investigated in relation to (i.e., it would not be appropriate to group investigation of positive aspects and caregiver burden with positive aspect and caregiver distress), to calculate effect sizes.”