

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

TITLE (PROVISIONAL)	The experience of people with rheumatoid arthritis living with fatigue: a qualitative meta-synthesis
AUTHORS	Primdahl, Jette; Hegelund, Annette; Lorenzen, Annette; Loeppenthin, Katrine; Dures, Emma; Appel Esbensen, Bente

VERSION 1 – REVIEW

REVIEWER	Sanne Rongen-van Dartel Radboudumc Nijmegen, The Netherlands
REVIEW RETURNED	22-Jun-2018

GENERAL COMMENTS	<p>This Study gives a systematic overview of qualitative studies on the experience of living with fatigue in rheumatoid arthritis. Please clarify why studies such as A multidimensional 'path analysis' model of factors explaining fatigue in rheumatoid arthritis. by Rongen-van Dartel SA et al. was not included in this literature search topic strategies to manage fatigue. The inclusion criteria for the eight qualitative studies was not totally clear. In addition, i missed in the discussion the study of Effect of Aerobic Exercise Training on Fatigue in Rheumatoid Arthritis: A Meta-Analysis. Rongen-van Dartel SA, Repping-Wuts H, Flendrie M, Bleijenberg G, Metsios GS, van den Hout WB, van den Ende CH, Neuberger G, Reid A, van Riel PL, Fransen J. about the importance for physical exercising in RA patients with fatigue related symptoms.</p> <p>Overall this study add updated awareness to health professionals why fatigue is important to manage in RA.</p>
-------------------------	--

REVIEWER	Dr Alicia Hughes King's College London, UK
REVIEW RETURNED	23-Jun-2018

GENERAL COMMENTS	<p>This is an interesting topic and extracts themes common across fatigue research. However, I do not see how this paper contributes more than simply reading the 8 qualitative studies. The meta-synthesis seems to be more of a summary of the findings rather than a drawing together of the literature in a meaningful and analytical way. Furthermore, the research has not drawn upon any theoretical models which would help underpin this research and provide more specific ways in which we may intervene to break the 'vicious cycle of fatigue'. More specific comments are broken down per section below:</p> <p>Introduction:</p> <ul style="list-style-type: none"> I appreciate that the introduction is short due to the length of the results section however a authors a grounding in theory is necessary for a scientific approach.
-------------------------	--

	<ul style="list-style-type: none"> • The argument that this study would have more ‘impact’ than the individual qualitative studies is not fully explained. It remains unclear to me what this study adds above and beyond the individual studies. • Some discussion around why qualitative studies were chosen is necessary to address the point above. • For context some discussion of the relevant qualitative research and their findings would also be useful. • No clear aims or hypothesis have been outlined. <p>Methods:</p> <ul style="list-style-type: none"> • Generally I found the methods section unclear; the inclusion and exclusion criteria appear unsystematic e.g. how was ‘credibility’ of studies assessed, I would suggest this should be an evaluation within the analysis and results, not an exclusion criteria. • Page 5 describes the languages included- were differences between countries explored? • Table 1 would usually be found as an appendix • Figure 1 lists ‘outcome’ as an exclusion but this is not mentioned or explained in the text. What is this referring to? • It is unclear what ‘relevance to practice’ refers to- how was this assessed? Were studies excluded based on this? I would see this more as an evaluation of a study rather than a reason to include or exclude a study. • Page 6 outlines an ‘initial critical assessment’ of the studies- it is unclear whether this was an exclusion criteria. • An appendix of the full items used to ‘critique’ the studies would be helpful. • The following paragraph mentions ‘a comparative appraisal’ it is unclear from this sentence what exactly was done. • Page 8- first sentence is unclear- was this analysis based on any theoretical models or theory? If so what were these? These should have been discussed in the introduction. <p>Findings:</p> <ul style="list-style-type: none"> • Not related to existing theory. • Findings across studies were not compared or contrasted- only summarised. • Lacks critical evaluation and deeper analysis. • Would have been interesting to explore differences e.g. between countries and age groups. • Don’t know what this adds above reading the 8 articles individually. <p>Discussion:</p> <ul style="list-style-type: none"> • Does not draw together these findings in relation to other literature or theoretical models. • The literature search being supervised by a research librarian is highlighted as a strength of this study. I would argue that this is just good practice and not a particular ‘strength’. • A limitation is identified as ‘restricting searches to last 15 years’- need to elaborate on why this might be a limitation e.g. changing medications?
--	---

VERSION 1 – AUTHOR RESPONSE

Reviewer(s)' Comments to Author:

Reviewer: 1

Reviewer Name
Sanne Rongen-van Dartel

Institution and Country
Radboudumc Nijmegen, The Netherlands

Please state any competing interests or state 'None declared':
none declared

Please leave your comments for the authors below

1.1: This Study gives a systematic overview of qualitative studies on the experience of living with fatigue in rheumatoid arthritis. Please clarify why studies such as A multidimensional 'path analysis' model of factors explaining fatigue in rheumatoid arthritis. by Rongen-van Dartel SA et al. was not included in this literature search topic strategies to manage fatigue.

Answer: Your study, Rongen-van Dartel et al, was not included, as it is a cross-sectional study, where relations between quantitative variables and explanation is the aim rather than the experience of living with fatigue. Thus, the study did not meet the inclusion criteria for this meta-synthesis, which solely included qualitative studies.

1.2: The inclusion criteria for the eight qualitative studies was not totally clear.

Answer: We have tried to clarify that a qualitative design was an important inclusion criteria in the Methods section p. 5 right after Table 1. This links to "reporting experiences of living with fatigue in patients diagnosed with RA". Furthermore we have changed the formulation in the following paragraph from "after an initial critical assessment of the studies' typology, credibility and relevance for practice" to "in accordance with the described inclusion and exclusion criteria" for clarification and hope that this is satisfactory.

1.3: In addition, i missed in the discussion the study of Effect of Aerobic Exercise Training on Fatigue in Rheumatoid Arthritis: A Meta-Analysis. Rongen-van Dartel SA, Repping-Wuts H, Flendrie M, Bleijenberg G, Metsios GS, van den Hout WB, van den Ende CH, Neuberger G, Reid A, van Riel PL, Fransen J. about the importance for physical exercising in RA patients with fatigue related symptoms.

Answer: Thank you for making us aware of your meta-analysis. We have added this in the Discussion section (Reference # 35).

1.4: Overall, this study add updated awareness to health professionals why fatigue is important to manage in RA.

Answer: Thank you very much for this comment. We also hope our study can contribute to further understanding and awareness on fatigue.

Reviewer: 2

Reviewer Name
Dr Alicia Hughes

Institution and Country
King's College London,
UK

Please state any competing interests or state 'None declared':
None declared

Please leave your comments for the authors below

2.1: This is an interesting topic and extracts themes common across fatigue research. However, I do not see how this paper contributes more than simply reading the 8 qualitative studies. The meta-

synthesis seems to be more of a summary of the findings rather than a drawing together of the literature in a meaningful and analytical way.

Answer: We are glad that you find the topic interesting. In our study, we have described a meta-synthesis of the included qualitative studies, which not only summarized, but synthesized the findings from the included studies. This process resulted in four additional themes ('being alone with fatigue'; 'time as a challenge'; 'language as a tool for increased understanding' and 'strategies to manage fatigue') which were not evident based on the included studies. These themes emerged across the studies. The first theme 'A vicious circle of an unpredictable symptom' which can be described in relation to its physical, cognitive, emotional and social impact does not represent new knowledge, however, we think that it strengthens existing work. We have added a little to clarify this in the beginning of the Discussion section and under Strengths and weaknesses.

2.2: Furthermore, the research has not drawn upon any theoretical models which would help underpin this research and provide more specific ways in which we may intervene to break the 'vicious cycle of fatigue'.

Answer: We have added information about two disease specific theoretical models to understand fatigue in the Introduction section. Furthermore, we have inserted a paragraph in the Discussion section p. 15-16 where we discuss the development of future interventions to address fatigue.

More specific comments are broken down per section below:

2.3: Introduction:

- I appreciate that the introduction is short due to the length of the results section however a authors a grounding in theory is necessary for a scientific approach.

Answer: The meta-synthesis is based on a hermeneutical approach. We have added this to the Methods section. The methodology is based on Sandelowski and Barossos model. This is described in the Methods section as other theoretical models could have been chosen for the meta-synthesis and still would have fulfilled the aim of the study.

2.4:

- The argument that this study would have more 'impact' than the individual qualitative studies is not fully explained. It remains unclear to me what this study adds above and beyond the individual studies.

Answer: Thank you for this comment. We have addressed this point in our answer to 2.1.

2.5: • Some discussion around why qualitative studies were chosen is necessary to address the point above.

Answer: We hope that the changed formulations regarding the inclusion criteria in the Methods section clarifies this in a satisfactory manner.

2.6: • For context some discussion of the relevant qualitative research and their findings would also be useful.

Answer: We agree that we could discuss the findings in more depth but due to the limitation in words this is not possible. We have focused on the discussion of the results from the meta-synthesis.

2.7: • No clear aims or hypothesis have been outlined.

Answer: We have merged information regarding the aim of the study from the first part of the Methods section to the last sentence in the Introduction section to clarify the aim. A hypothesis would not be appropriate for a qualitative meta-synthesis.

2.8: Methods:

- Generally I found the methods section unclear; the inclusion and exclusion criteria appear unsystematic e.g. how was 'credibility' of studies assessed, I would suggest this should be an

evaluation within the analysis and results, not an exclusion criteria.

Answer: Thank you for pointing this out. We acknowledge that this was not clearly explained. We have added a new heading "Appraisal of the included articles" and we have added text about the initial comparative analysis under this heading. Furthermore we have changed the formulation under the above heading from "after an initial critical assessment of the studies' typology, credibility and relevance for practice" to "in accordance with the described inclusion and exclusion criteria" for clarification as described in our answer to 1.2. We have changed the formulations regarding inclusion and exclusion criteria in the Method section p. 5.

2.9: • Page 5 describes the languages included- were differences between countries explored?

Answer: No, we did not explore differences between countries, as the aim of this study was to synthesize the findings from qualitative studies. We agree that this would be a very interesting potential topic to explore.

2.10: • Table 1 would usually be found as an appendix

Answer: Thank you for suggesting this. We have moved Table 1 to a Supplementary file 1.

2.11: • Figure 1 lists 'outcome' as an exclusion but this is not mentioned or explained in the text. What is this referring to?

Answer: The short term "outcome" in the box describing reasons for exclusion in Figure 1 refers to the inclusion criteria "reporting experiences of living with fatigue in patients diagnosed with RA...". We have added the term outcome to the inclusion criteria to clarify this.

2.12: • It is unclear what 'relevance to practice' refers to- how was this assessed? Were studies excluded based on this? I would see this more as an evaluation of a study rather than a reason to include or exclude a study.

Answer: Thank you for pointing this out. Please see our answer and the description of the applied changes in our answer to 2.8.

2.13: • Page 6 outlines an 'initial critical assessment' of the studies- it is unclear whether this was an exclusion criteria.

Answer: Please see our answer to 2.8.

2.14: • An appendix of the full items used to 'critique' the studies would be helpful.

Answer: The items used to critique the studies are described in the Methods section p. 6: Sampling strategies, data management, discussion, implications and techniques for maximizing rigour and credibility were essential issues. The critique of individual studies was further informed by selected elements from Sandelowski and Barrosos' reading guide to strengthen the appraisal of the findings.(11) The selected elements encompassed judgement about whether plausible findings were appropriately supported by data; if appropriate analysis and interpretation of data were evident; if findings related to the overall aim of the individual study; variation of findings; coherence between and precise reporting of ideas and concepts and finally whether the results offered new information or insight in RA-related fatigue". No additional criteria were applied.

2.15: • The following paragraph mentions 'a comparative appraisal' it is unclear from this sentence what exactly was done.

Answer: We have added a sentence to explain the comparative appraisal in short (Method section p. 6)

2.16: • Page 8- first sentence is unclear- was this analysis based on any theoretical models or theory? If so what were these? These should have been discussed in the introduction.

Answer: We were aware of the two disease specific models for RA-fatigue and have included information about this to the Introduction section, but the analysis was not based on these. The

methodology for the meta-synthesis was based on Sandelowski and Barrossos approach and started with an inductive approach alternating with a deductive approach as described in the Methods section. As indicated in our answer to 2.3 we have inserted a short sentence in the Methods section about the scientific theoretical approach. The analysis was based on Malterud's text condensation. In the Methods section (Analysis, synthesis and integration of findings) we have added additional information about the analysis process and we have added a Supplementary file 2 with an example from the analysis. We hope this make the process more transparent.

2.17: Findings:

- Not related to existing theory.

Answer: We have added a paragraph in the Discussion section where disease specific models are discussed in relation to the findings in our study and in relation to a more transdiagnostic approach (p. 15-16). Thank you for advising us to relate our synthesis to theoretical models.

2.18: • Findings across studies were not compared or contrasted- only summarised. Lacks critical evaluation and deeper analysis. Don't know what this adds above reading the 8 articles individually.

Answer: Please see our answer to 2.1 and 2.15.

2.19: •

- Would have been interesting to explore differences e.g. between countries and age groups.

Answer: We agree that this would be interesting, however, this was not part of the aim of the study. The included studies were all from Northern Europe. Please see our answer to 2.1

2.20: Discussion:

- Does not draw together these findings in relation to other literature or theoretical models.

Answer: Please see our answer to 2.17. We do think we discuss our findings in relation to other studies and have tried to reformulate some of the paragraphs in the Discussion section to clarify his and relate to models on RA-fatigue.

2.21: • The literature search being supervised by a research librarian is highlighted as a strength of this study. I would argue that this is just good practice and not a particular 'strength'.

Answer: We agree that this is part of good practice, but as it is not always so, we chose to add it to the strengths of the study as it is linked to whether the search is considered to be thorough or not.

2.22: • A limitation is identified as 'restricting searches to last 15 years'- need to elaborate on why this might be a limitation e.g. changing medications?

Answer: We have elaborated on the pros and cons of the chosen time limitation in the Discussion section p. 16. Thank you for this comment.

In addition, we have performed some minor language editions in the manuscript.

VERSION 2 – REVIEW

REVIEWER	Alicia Hughes King's College London, UK
REVIEW RETURNED	07-Nov-2018
GENERAL COMMENTS	Thank you for addressing all my comments and feedback. I think the paper is much improved.