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

<table>
<thead>
<tr>
<th>TITLE (PROVISIONAL)</th>
<th>What does high value care for musculoskeletal conditions mean and how do you apply it in practice? A consensus statement from a research network of physiotherapists in New South Wales, Australia</th>
</tr>
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<tbody>
<tr>
<td>AUTHORS</td>
<td>Gleadhill, Connor; Dooley, Katherine; Kamper, Steven; Manvell, Nicole; Corrigan, Michael; Cashin, Aidan; Birchill, Noah; Donald, Bruce; Leyland, Murray; Delbridge, Andrew; Barnett, Chris; Renfrew, David; Lamond, Steven; Boettcher, Craig; Chambers, Lucia; Maude, Travis; Davis, Jon; Hodgson, Stephanie; Makaroff, Andrew; Wallace, James; Kotrick, Kelly; Mullen, Nicholas; Gallagher, Ryan; Zelinski, Samuel; Watson, Toby; Davidson, Simon; Viana Da Silva, Priscilla; Mahon, Benjamin; Delore, Caitlin; Manvell, Joshua; Gibbs, Benedicta; Hook, Chris; Stoddard, Chris; Meers, Elliott; Byrne, Michael; Schneider, Tim; Bolsewicz, Katarzyna; Williams, Christopher</td>
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VERSION 1 – REVIEW

<table>
<thead>
<tr>
<th>REVIEWER</th>
<th>Amin, Junaid</th>
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<tbody>
<tr>
<td>University</td>
<td>University of Ha’il, Department of Physical Therapy</td>
</tr>
<tr>
<td>REVIEW RETURNED</td>
<td>02-Feb-2023</td>
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</tbody>
</table>

GENERAL COMMENTS

I congratulate the authors for their efforts to contribute novel and preliminary work to give strength to physiotherapy practice. The study gives a comprehensive report on high-value care for musculoskeletal conditions to apply in clinical practice. The introduction summarizes the current state of the topic and its importance. The aim of the study is also consistent with the rest of the manuscript. The results are presented clearly and accurately and match the methods. The relevant and sufficient data is included and followed the reporting guidelines of data.

However, I would like to recommend the following minor changes to be executed before the final acceptance:
In the inclusion criteria, please mention the specialty of the included physiotherapists and the number of years of their clinical practice for the selection of study.

In discussion, it would be better, if authors can compare the final domains and their definitions with the previous existing definition in literature.

Best wishes

Saunders, Benjamin
Keele University, Research Institute for Primary Care & Health Sciences

23-Mar-2023

This is a well-written paper that addresses a gap in the current knowledge around management of MSK conditions by physiotherapists. A three-phase approach was used to generate consensus from physiotherapists on a definition of high-value care. The results can have implications for informing clinical practice and further research in this area. There are limitations related to recruiting participants from a particular research network, but these limitations are acknowledged. There are some areas, particularly within the methods, in which further detail and clarification would enhance the paper, as outlined below:

• P6: Table 1 provides a useful overview of the different study phases, but it is a little confusing that the description of the methods is conflated with an outline of participant characteristics. As such, I found it difficult to follow who was involved at each stage, and which participants had already taken part in the previous phase. Greater clarity would be useful, and perhaps a separate section on participant characteristics.

• It is stated the review working group included a mix of clinicians and clinician-researchers. It appears that the clinician-researchers are part of the authorship team for the paper. Given that this is under the title of participant characteristics, the mix of researchers and participants needs more clarity. I’m unsure whether members of the authorship team were also later involved in the consensus work.

• P8: On line 202 there is reference to the consensus working group discussing preliminary themes. Is this referring to the consensus meeting in stage 3, or was this prior to this meeting? Again, greater clarity would be useful.

• P8: Braun and Clarke’s reflexive TA is referenced, but there is no attention in the paper to the reflexive part, i.e. how the backgrounds, views, knowledge of the research team may have impacted data collection and analysis. This is particularly important to attend to here, as the differentiation between the research team and participants is a little unclear, i.e. are the researchers all part of the same physiotherapy network that the participants were recruited from?

• One additional minor point is that Braun and Clarke are emphatic on their dispreference for the term ‘emerge’ when talking about themes; it might be useful to change to identified/developed.

• P8, 213: It would be useful to explain what is meant by items identified as likely to be ‘controversial’, as well as reflecting on the methodological implications of highlighting these to participants as being ‘controversial’ prior to the consensus group meeting. Could this have influenced their voting?
• P8, 222: The network feedback stage is referred to as part of the procedure for gaining consensus, although it is noted that this phase isn’t focused on gaining consensus but rather eliciting participants’ views and suggestions. Badging this as part of the consensus process is confusing, given that this is followed by a formal consensus meeting. I’d suggest changing the description of this phase to more clearly separate it from the consensus meeting.
• How was the consensus threshold of 80% decided upon? Also, is this greater than 80%, or equal to or greater than?
• P9: Nine interviews were conducted, yet there is no reporting of the qualitative interview data and it’s unclear what these interviews added to the survey responses. I realise that it may not have been included due to word limit constraints, but it would be useful to reflect on these findings and include some qualitative data extracts, which could be presented in a table.
• P9, 284: “From a physiotherapist’s perspective” sounds a little strange when this is the consensus of a group of physiotherapists. Might make more sense to pluralise this.

VERSION 1 – AUTHOR RESPONSE

Reviewer 1:
Dr. Junaid Amin, University of Ha’il
Comments to the Author:
I congratulate the authors for their efforts to contribute novel and preliminary work to give strength to physiotherapy practice. The study gives a comprehensive report on high-value care for musculoskeletal conditions to apply in clinical practice. The introduction summarizes the current state of the topic and its importance. The aim of the study is also consistent with the rest of the manuscript. The results are presented clearly and accurately and match the methods. The relevant and sufficient data is included and followed the reporting guidelines of data.
However, I would like to recommend the following minor changes to be executed before the final acceptance:

COMMENT 5: In the inclusion criteria, please mention the specialty of the included physiotherapists and the number of years of their clinical practice for the selection of study.

Author response: We have updated the section that describes participants to include the requested information. The section now includes the following:
“Participant characteristics
We recruited participants from a practice-based research network of physiotherapists in the Hunter Region of New South Wales, Australia (Table 1). We included participants if they were:
1) a network member
2) a registered physiotherapist
3) providing care for people with musculoskeletal conditions.
We excluded network members who were not registered physiotherapists. Some study participants were also involved as working group members who assisted in data interpretation and contextualisation.” (Page 6, line 149)

COMMENT 6: In discussion, it would be better, if authors can compare the final domains and their definitions with the previous existing definition in literature.

Author response: We have now added a section ‘Relation to previous literature’, which includes the following text:
"Relation to previous literature
Our study suggests there is more to value for practising clinicians than previously documented. While there is alignment with many domains and themes described in existing literature, participants in our highlighted the importance of additional themes for Effective and Accountable care in defining high value care. Previous definitions of value have focussed on the economic implications of care and encompass a ratio of the cost relative to care outcomes (16, 49). Previous definitions also state that value can only be determined when the outcome of care is known (16, 49). While the importance of care outcomes is obvious, our study highlights that clinicians think value may be achieved through the consideration of multiple domains, themes, and stakeholder perspectives. This suggests that, in the eyes of clinicians, care value is a continuum that can be shaped by the process of care.” (Page 12, line 344)

Reviewer 2:
Dr. Benjamin Saunders, Keele University
Comments to the Author:
This is a well-written paper that addresses a gap in the current knowledge around management of MSK conditions by physiotherapists. A three phase approach was used to generate consensus from physiotherapists on a definition of high-value care. The results can have implications for informing clinical practice and further research in this area. There are limitations related to recruiting participants from a particular research network, but these limitations are acknowledged. There are some areas, particularly within the methods, in which further detail and clarification would enhance the paper, as outlined below:

COMMENT 7: P6: Table 1 provides a useful overview of the different study phases, but it is a little confusing that the description of the methods is conflated with an outline of participant characteristics. As such, I found it difficult to follow who was involved at each stage, and which participants had already taken part in the previous phase. Greater clarity would be useful, and perhaps a separate section on participant characteristics.

Author response: We agree that Table 1 conflated participant characteristics across the stages. We have now made the focus of Table 1 (page 5, line 160) on participant characteristics only and left the contribution of members to the Author contribution section (which is unchanged).

COMMENT 8: It is stated the review working group included a mix of clinicians and clinician-researchers. It appears that the clinician-researchers are part of the authorship team for the paper. Given that this is under the title of participant characteristics, the mix of researchers and participants needs more clarity. I’m unsure whether members of the authorship team were also later involved in the consensus work.

Author response: Clinician-researchers were not participants, and our original Table 1 did not make this clear. We have now included clearer information in Table 1 (participant characteristics for each stage) and the contribution of authors is included in the Author contribution section.

COMMENT 9: P8: On line 202 there is reference to the consensus working group discussing preliminary themes. Is this referring to the consensus meeting in stage 3, or was this prior to this meeting? Again, greater clarity would be useful.

Author response: We have removed mention of the consensus working group and now include the text:
“CG proposed preliminary themes, which were then refined and finalised themes through discussion among a group of authors.” (Page 7, line 205)
COMMENT 10: P8: Braun and Clarke’s reflexive TA is referenced, but there is no attention in the paper to the reflexive part, i.e. how the backgrounds, views, knowledge of the research team may have impacted data collection and analysis. This is particularly important to attend to here, as the differentiation between the research team and participants is a little unclear, i.e. are the researchers all part of the same physiotherapy network that the participants were recruited from?

Author response: We have now included the following text to ensure we discuss reflexivity: “All authors involved in developing themes are physiotherapists with lived experience of providing care to people with musculoskeletal conditions and members of the same research network. These factors have shaped data collection, analysis, and theme development.” (Page 7, line 208)

COMMENT 11: One additional minor point is that Braun and Clarke are emphatic on their dispreference for the term ‘emerge’ when talking about themes; it might be useful to change to identified/developed.

Author response: The text now reads: “We considered data saturation by assessing whether sequential interviews led to new themes; once no new themes were identified, we determined that the data were sufficiently saturated.” (Page 7, line 206)

COMMENT 12: P8, 213: It would be useful to explain what is meant by items identified as likely to be ‘controversial’, as well as reflecting on the methodological implications of highlighting these to participants as being ‘controversial’ prior to the consensus group meeting. Could this have influenced their voting?

Author response: We had asked participants to prepare for items that had been added during stage two, which because of their lack of empirical support, were likely to lead to a lot of discussion. The word ‘controversial’ was slightly misleading in the context of the study and methodology. We have now changed the text to the following: “In reminder emails, we highlighted items that had been added during Stage two and asked participants to prepare their thoughts for these items in advance.” (Page 7, line 219)

COMMENT 13: P8, 222: The network feedback stage is referred to as part of the procedure for gaining consensus, although it is noted that this phase isn’t focused on gaining consensus but rather eliciting participants’ views and suggestions. Badging this as part of the consensus process is confusing, given that this is followed by a formal consensus meeting. I’d suggest changing the description of this phase to more clearly separate it from the consensus meeting.

Author response: We agree the description was confusing. We have now clearly labelled stage two as ‘Network feedback’ and stage three as ‘Consensus meeting’.

COMMENT 14: How was the consensus threshold of 80% decided upon? Also, is this greater than 80%, or equal to or greater than?

Author response: Our consensus level was set a priori to equal to or above 80% agreement. We have changed the text to now read: “Consensus was reached if 80% or more participants agreed.” (Page 8, line 233)

And

“The level of agreement necessary for consensus was based on the level of agreement considered within normal limits of other consensus studies (1).” (Page 8, line 241)

Reference:

COMMENT 15: P9: Nine interviews were conducted, yet there is no reporting of the qualitative interview data and it’s unclear what these interviews added to the survey responses. I realise that it may not have been included due to word limit constraints, but it would be useful to reflect on these findings and include some qualitative data extracts, which could be presented in a table.

Author response: We have now added qualitative data supporting theme development as Appendix 2 (due to the large quantity of data). Appendix 3 is now a table of results from stage three (consensus meeting).

COMMENT 16: P9, 284: “From a physiotherapist’s perspective” sounds a little strange when this is the consensus of a group of physiotherapists. Might make more sense to pluralise this.

Author response: This clause has now been pluralised in page 9, line 288 and in Table 2 and Table 3.

## VERSION 2 – REVIEW

<table>
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<tr>
<th>REVIEWER</th>
<th>Amin, Junaid</th>
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<td>University of Ha’il, Department of Physical Therapy</td>
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<td>REVIEW RETURNED</td>
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**GENERAL COMMENTS**

The manuscript has been improved based on the reviewer’s comments. Overall, this is a clear, concise, and well-written manuscript that can be accepted for publication.

<table>
<thead>
<tr>
<th>REVIEWER</th>
<th>Saunders, Benjamin</th>
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<td>Institution</td>
<td>Keele University, Research Institute for Primary Care &amp; Health Sciences</td>
</tr>
<tr>
<td>REVIEW RETURNED</td>
<td>12-May-2023</td>
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</table>

**GENERAL COMMENTS**

The manuscript has been improved through addressing the comments of the reviewers, and there is now greater clarity relating to the different study phases. However, there are some comments that have not been adequately addressed, and that I would suggest need further attention:

• With regard to the reflexive TA approach, two sentences have been added; however, this appears a little tokenistic. I would like to see the authors discuss “how” their professional backgrounds may have shaped the research process.

• Whilst the term ‘emerge’ in relation to themes has been changed in one place, this term is still used on P9, and needs to be changed for consistency.

• Regarding items identified as ‘controversial’, though the authors state in the response letter having removed reference to this, in the manuscript itself this change does not appear to have been made.

• The following sentence has been added with an accompanying reference: ‘The level of agreement necessary for consensus was based on the level of agreement considered within normal limits of other consensus studies’. This is not an adequate explanation of
the chosen consensus level, as the chosen threshold varies across consensus studies. It would be useful for the authors to reflect on their aims and homogeneity of their participant group when explaining the consensus threshold chosen. For instance, it may be that because participants were from the same professional background, and therefore brought a similar perspective, it was possible to reach a higher level of consensus.

- It is positive that quotes from interviews are included as an appendix, though there needs to be more reference to this in the results section of the manuscript. Also, the referencing of appendices seems to be incorrect in places, e.g. on p11 appendix 2 is referenced, but this doesn’t seem to be referring to the qualitative data.
- The change made to ‘a physiotherapists’ perspective’ is now mixing singular and plural. Suggest changing to ‘physiotherapists’ perspectives’ or ‘perspective of physiotherapists’.

**VERSION 2 – AUTHOR RESPONSE**

Reviewer One
Dr. Junaid Amin, University of Ha’il

Comments to the Author:
The manuscript has been improved based on the reviewer’ comments. Overall, this is a clear, concise, and well-written manuscript that can be accepted for publication.

Author response: Thank you.

Reviewer Two
Dr. Benjamin Saunders, Keele University

Comments to the Author:
The manuscript has been improved through addressing the comments of the reviewers, and there is now greater clarity relating to the different study phases. However, there are some comments that have not been adequately addressed, and that I would suggest need further attention:

Comment one: With regard to the reflexive TA approach, two sentences have been added; however, this appears a little tokenistic. I would like to see the authors discuss “how” their professional backgrounds may have shaped the research process.

Response: Thank you for the comment. We have now changed the text to read:
“Therefore, theme development was likely a shared endeavour where authors who analysed data shaped theme development through their own experience, and a clear delineation between participant data and the research team’s perspective cannot be made (1).” (Page seven, line 211)

Comment two: Whilst the term ‘emerge’ in relation to themes has been changed in one place, this term is still used on P9, and needs to be changed for consistency.

Author response: Unfortunately, I failed to track this change and apologise to editors and reviewer two. The text on page nine reads:
“We considered data saturation by assessing whether sequential interviews led to new themes; once no new themes were identified, we determined that the data were sufficiently saturated.” (Page seven,
line 206)
A comment bubble points to the text that was changed.

Comment three: Regarding items identified as ‘controversial’, though the authors state in the response letter having removed reference to this, in the manuscript itself this change does not appear to have been made.

Author response: This is, again, a result of my failure to track the change in the document used by reviewer two. A comment bubble points to the text in the revised version, and the text reads: “In reminder emails, we highlighted items that had been added during Stage two and asked participants to prepare their thoughts for these items in advance.” (Page seven, line 219)

Comment four: The following sentence has been added with an accompanying reference: ‘The level of agreement necessary for consensus was based on the level of agreement considered within normal limits of other consensus studies’. This is not an adequate explanation of the chosen consensus level, as the chosen threshold varies across consensus studies. It would be useful for the authors to reflect on their aims and homogeneity of their participant group when explaining the consensus threshold chosen. For instance, it may be that because participants were from the same professional background, and therefore brought a similar perspective, it was possible to reach a higher level of consensus.

Author response: The text now reads, “To set the level of agreement necessary for consensus, senior investigators first considered the normal limits of other consensus studies (45). Senior investigators also considered that participant’s similar professional backgrounds would lead to high levels of agreement. However, it would likely have taken more than the available time to reach 100% agreement on all items. So, for pragmatic reasons, 100% agreement was not sought.” (Page eight, line 244).

Comment five: It is positive that quotes from interviews are included as an appendix, though there needs to be more reference to this in the results section of the manuscript. Also, the referencing of appendices seems to be incorrect in places, e.g. on p11 appendix 2 is referenced, but this doesn’t seem to be referring to the qualitative data.

Author response: To highlight the addition of Appendix 2, we have included the phrase, “Quotes from interviews and surveys can be found in Appendix 2.” (Page nine, line 281)

Once again a failure to track the changes that are included in the final manuscript has led to the order being incorrect in the tracked version. The final manuscript has the correct ordering of appendices and comments have been placed in the tracked version to highlight the correct ordering.

Comment six: The change made to ‘a physiotherapists’ perspective’ is now mixing singular and plural. Suggest changing to “physiotherapists’ perspectives’ or ‘perspective of physiotherapists’.

Author response: Once again, this comment stems from my failure to track changes in the document that reviewer two has used. The instances that reviewer two refers to on page nine read ‘physiotherapists’ perspectives’ (see comment bubble). We have thoroughly checked through the rest of the manuscript and all instances of the object ‘perspective/perspectives’ are appropriately matched with the singular or plural subject.