Author's response to reviews

Title: Critical features of peer assessment of clinical performance to enhance adherence to a low back pain guideline for physical therapists: a mixed methods design.

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Author's response to reviews: see over
Concept Author’s response to reviews

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Title: Critical features of peer assessment of clinical performance to enhance adherence to a low back pain guideline for physical therapists: a mixed methods design.

Authors: Marjo JM Maas, Simone A van Dulmen, Margaretha H Sagasser, Yvonne F Heerkens, Cees PM van der Vleuten, Maria WG Nijhuis - van der Sanden and Philip J van der Wees

Date: 17 July 2015

Dear editor and reviewers,

We thank you for considering our paper ‘No pain no gain: critical features of peer assessment to improve adherence to clinical practice guidelines in physical therapy: a mixed methods design’ for publication in BMC Medical Education. We appreciated your comments and we felt invited to address your revision suggestions. We copied each comment of the reviewers and responded point by point as you suggested. We referred to revisions in the manuscript by page and line numbers. Changes in the manuscript are printed with bold face font. We sincerely hope that we adequately addressed your requests and comments and that our revisions will meet your expectations.

On behalf of all authors,
Sincerely,
Marjo Maas: marjo.maas@han.nl
Reviewer’s report

Title: No pain no gain: critical features of peer assessment to improve adherence to clinical practice guidelines in physical therapy: a mixed methods design.

Version: 1
Date: 29 June 2015
Title:

Reviewers Report

**Title: No pain no gain: critical features of peer assessment to improve adherence to clinical practice guidelines in physical therapy: a mixed methods design.**

**Reviewers report**

The methods are overall well described, I have the following feedback on clarification of the methods.

1. The updated clinical practice guidelines that were followed (line 162-163) should be fully cited and referenced, as there are a number of different clinical practice guidelines on low back pain (LBP).

   **Author’s response**
   
   We fully cited the clinical practice guideline, and translated the reference into English.

   Line 136 - 138
   
   They received a link to the updated guideline ‘low back pain for physical therapy and manual therapy’ (Staal et al. 2010) published by the Royal Dutch Society for Physical Therapy (31).

2. It would be helpful to have some additional information on how the external coaches were selected and what their qualifications were.

   **Author’s response**
   
   Coaches were experienced PTs, teachers in undergraduate PT education, and coaches in the PA procedure. We revised the manuscript.

   Line 140 -142
Coaches were experienced PTs, teachers in PT education, and trained coaches in the PA procedure. They facilitated the process of providing and receiving feedback, and they gave additional feedback when needed.

3. Please clarify if participants in the simulated patient role receive any training other than “Short written simulation instructions”, and did they provide any clinical feedback or simulate patient responses?

**Author’s response**
Participants did not receive additional training in performing the simulation role. We revised the manuscript in the methods section and refer to this information in the limitation section (see point 9).

Line 152 - 156
**In the patient role, participants received the clinical case along with written simulation instructions.** Simulation instructions consisted of a description of the patient’s complaints, including personal factors (e.g., cognitive / emotional), and contextual factors (e.g. family, work) that might be relevant to the patient’s problem. Participants were instructed to improvise patient responses and provide feedback from the patient perspective.

4. It would be helpful to describe how the clinical cases were developed? Were they specific to Low Back Pain (LBP) or did they include other system involvement or red flags.

**Author’s response**
We understand this request. Developing cases that contained the critical features of patient profiles described in the guidelines required expert consultation. We revised the manuscript to clarify this issue.

Line 144 – 147
**In the PT role, participants completed a written assignment that contained a clinical case and brief instructions for diagnosis or treatment. Clinical cases were developed by a team**
of experienced PTs and guideline experts. The cases fully covered the patient profiles of LBP described in the guidelines, including red flags.

5. Are the data sound?
In the results section it would be helpful to have more information on characteristics of the participants such as: years of experience, frequency of patients with LBP in caseload, manual therapy or specialized qualifications. This would help with generalizability of results and identification of who benefits from peer assessment.

Author’s response
We do recognise the importance of specifying participants’ characteristics. We did sample these data and included the data in the revised manuscript. Table 2 presents the data of the 44 participants who participated in the program. We refer to the table in the manuscript.

In total 44 PTs participated in the program. Table 2 shows an overview of the participants’ characteristics. Two PTs did not fully complete the ranking procedure, and were excluded from quantitative analyses (response rate = 95%).

9. Are limitations of the work clearly stated?
I think using peers as patients should be listed as a limitation of the study, since it does not allow for complete assessment of clinical performance improvement. For example, therapist clinical reasoning or performance based on patient response, cannot be fully assessed using peers to simulate patients.

Authors response
Our research group has extensive experience in the use of professional PTs simulating patients in role-play settings. Our choice to use professionals instead of standardised patients was both practice-based as evidence-based. We described how participants were prepared to perform the simulation role (see point 3) and we elaborate on this choice in the discussion section and the limitation section.
Although comparing high fidelity simulation (standardised patients) and low fidelity simulation (peer role-play) was beyond the scope of our study, we question the benefits of standardised patients in the context of post-graduate education. Professionals might be more successful in empathising with the patient role because of their experience with LBP.
patients. However, we acknowledge this limitation and revised the manuscript by briefly discussing the literature about standardized patients vs. peer role-play in the discussion section, and by addressing this again in the limitation section.

Line 481 - 486 Discussion section
As regards the use of peer role-play (low fidelity simulation) compared to standardized patients (high fidelity simulation), research in undergraduate education shows that both tools provide a psychological safe area of practice, where mistakes are not critical [42]. Studies on student perceptions show that standardized patients are perceived as more effective than peers [43, 44]. However, research evidence on learning outcomes remains inconclusive [44, 45].

Line 506 – 509 Limitation section.
It can be argued that a limitation of the PA approach is the role-play of peers simulating patients. Although the choice of peers instead of standardized patients was defensible as argued above, and although the results show that their feedback was valued, additional training in the patient role might have increased the fidelity of the peers’ performance.

8. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Reference 35, should be fully cited in the bibliography and in Box 1. Trial Design.

Author’s response
The reference is fully cited in Box 1.

Line  682 - 683
Box 1 Overview of the methods and results of a previously published trial (Van Dulmen et al. 2014) [18]

9. Do the title and abstract accurately convey what has been found?
The abstract adequately conveys the information. However, I believe the title of the study does not adequately convey its purpose. I would suggest rewording the title to specify LBP guidelines and the fact that clinical performance was assessed, in addition to adherence to clinical guidelines.

Author’s response
We do agree with this comment. We revised the title of the manuscript:
Critical features of peer assessment of clinical performance to enhance adherence to a low back pain guideline for physical therapists: a mixed methods design.

12. Minor Essential Revisions. Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct).

a. In the introduction, lines 79-82 regarding clinical practice guidelines could be consolidated and more concise, since the main focus of this study is related to the impact of peer assessment on clinical performance.

Author’s response
We do agree with this comment. We consolidated and summarizes this section in the manuscript by focusing on implementation barriers of guidelines, rather than the guidelines itself.

b. Methods: was any additional training received by participants or discussion of procedures other than reading the peer assessment training manual?

Author’s response
Apart from the PA training manual, participants received no additional training in the PA procedure including participants performing the patient role. We revised the manuscript by giving additional information in the methods section. In the discussion and the limitation section we elaborate on the advantages and disadvantages of peer role-play.

Line 139 – 140 Methods section
As the PTs were novices in the PA method, and no additional training was provided, the PA process was supported by a coach (MM or HE).

Line 152 – 156 Methods section
In the patient role, participants received the clinical case along with written simulation instructions. Simulation instructions consisted of a description of the patient’s complaints, including personal factors (e.g., cognitive / emotional), and contextual factors (e.g. family, work) that might be relevant to the patient’s problem. Participants were instructed to improvise patient responses and provide feedback from the patient perspective.
As regards the use of peer role-play (low fidelity simulation) compared to standardized patients (high fidelity simulation), research in undergraduate education shows that both tools provide a psychological safe area of practice, where mistakes are not critical [42]. Studies on student perceptions show that standardized patients are perceived as more effective than peers [43, 44]. However, research evidence on learning outcomes remains inconclusive [44, 45].

It can be argued that a limitation of the PA approach is the role-play of peers simulating patients. Although the choice of peers instead of standardized patients was defensible as argued above, and although the results show that their feedback was valued, additional training in the patient role might have increased the fidelity of the peers’ performance.

There were a number of grammatical errors or sentence structure errors found as follows:

Line 50: the phrase “to motivate their choices” is not clear

Author’s response
Thank you very much for your help on all the errors. We revised this sentence in the abstract section and the methods section of the manuscript.

After the program was finished, a questionnaire was administered in which participants were asked to rank the program tasks from high to low learning value and to describe their impact on performance improvement.

After the program was finished, a questionnaire was administered in which participants were asked to rank the program tasks from high to low learning value, assigning the highest rank for the most learning value and the lowest rank for the least. Subsequently, they were asked to provide written comments on the three most instructive PA task elements.

d. Line 408: the phrase “rather discussed” needs rewording
Author’s response
We rephrased this sentence in the results section.

Line 403 – 404 Result section
Appraising the performance of a peer was not common practice. **PTs would rather discuss than assess the observed behaviors.**

e. References 1 and 7 are not in English, are there English versions of these available?
   **Author’s response**
   We removed reference 7. We replaced the Dutch version of reference 1 by the English version of the book.

f. Spelling errors were found in references 11 and 17.
   **Author’s response**
   Spelling errors are corrected.

Reviewer’s report Prue Morgan

**Version:** 2 **Date:** 21 June 2015
**Reviewer:** Prue Morgan

1. There are a number of grammatical errors and typographical errors throughout. I would recommend that proof reading is undertaken by a native English speaking colleague prior to resubmission.

   **Author’s response**
   Proof reading is performed by a professional Proof Reading Institute: [www.PROOF-reading.com](http://www.PROOF-reading.com). Document ID: **578505** Edit Confirm has been enabled for Maas_Critical_Features_PA_PRO.docx.

2. Overall an excessive number of references are used - these could be reduced to key references only.

   **Author’s response**
   We reduced the number of references from 71 to 53.
Major compulsory revisions (with minor spelling/grammatical revisions identified by line number):

Abstract

Background:
3. You need to make it clearer that this study is unpacking the elements of the PA program previously published in the RCT. This is not clear and is confusing to the reader throughout the abstract. Just present what is NEW information/processes

4. Methods
You didn't actually analyse and decompose the PA program in this component of the study. Remove this sentence.

5. 'and to motivate their choices' - I don't understand what you mean by this (line 50)

6. line 53 should read: 'analysed using template analysis'

Conclusion:
7. first sentence is too long. I don't understand what you are trying to say. It needs to be shorter and sharper.

Author's response
We thank the reviewer for the recommendations to improve the abstract. We revised all the sections of the abstract and addressed all the comments in the abstract. Changes in the abstract are printed bold. We hope these changes adequately address the comments of the reviewer.

Main manuscript:

Background:
8. The background is too wordy/long winded and not focused on the key arguments that support your study. I suggest editing and reshaping the background to illustrate more clearly what are known barriers and facilitators to CPG implementation.

9. Furthermore, towards the end of the introduction we realise that the entire study is to investigate more deeply (via unpacking) elements of a previously trialled and published peer assisted training program. This needs to be more upfront in the introduction, and more explicit throughout the
manuscript about what is new information and what is information from the prior publication describing the RCT.

10. Paragraph 1 - eg split this paragraph into firstly issues describing barriers and facilitators of CPG implementation and secondly development of accurate self-perception.

**Author’s response**

We acknowledge that the background could be focused on the key arguments supporting the study and that we should have been more clear about the position of the RCT in this study. We reshaped the background and addressed all the comments. Changes in the background section are printed in boldface font.

**Background section:**

11. line 79: clinical practice guidelines - need abbreviation after this as you use the abbreviation from here onwards.

   line 88: a study of Rutten should be ‘a study by Rutten’

   line 90: should read ‘overestimate’ and ‘underestimate’

   line 108: ‘is’ should read ‘its effectiveness’

   line 114: should read ‘mutually’

   line 127: should read ‘determined’

**Author’s response**

Thank you for these suggestions. We followed all the suggested revisions. Changes in the background section are printed in boldface font.

**Method section**

12. The peer assessment program: given that you are unpacking elements of a previously delivered program (the RCT), suggest condensing this section more fully.

**Author’s response**

We revised the method section according to your suggestion. We removed some parts and rephrased other parts. Changes in the methods section are printed in boldface font.

13. Box 1 is confusing as it refers to previously published RCT. Need to be more explicit that this content refers to the previous manuscript, not this one (suggest in the title of Box 1 make this explicit)
14. need also to include reference for 'Self Reflection and Insight Scale' in this Box.

**Author’s response**

We rephrased the box title and fully cited and referenced the Self Reflection and Insight scale.

Line 683 - 684

**Box 1** Overview of the methods and results of a previously published trial (Van Dulmen et al. 2014) [18]

Changes in reflective practice were measured with the Self-Reflection and Insight Scale (Grant et al., 2002) [49].

15. The interview guide describes selection of a subset of participants based on average and deviant ranking results. Q3 of the interview guide asks interviewees to expand on 'task X, Y and Z to have the strongest learning value'. Why would you not also explore which elements had the least learning value? How can we be confident that this sample represents the breadth of learning outcomes?

**Author’s response**

We do acknowledge that when reading the interview guide, these doubts might arise. However, the interview guide questions are defensible because we aimed to explore the critical features of the PA program that contributed to improved guideline adherence. Nevertheless, most respondents spontaneously compared the tasks with the highest learning value (e.g. receiving peer feedback) with the lowest learning value (giving and receiving scores) which emerged in the questionnaires comments and the interview transcripts. We address this issue in the results section and we added an example of such a contrasting comment in the manuscript. However, we did not explicitly ask them to comment on all tasks, and we realize that we might have missed some information to underpin the outcomes. We address this issue in the limitation section.

line 242 – 252  Results section

Although we did not explicitly ask participants to comment on tasks that were perceived as less instructive, they often did so spontaneously:
“Receiving feedback from your colleagues provides new insights. You learn from the mistakes you make, or how you can handle them better. I assigned the lowest ranks to ‘receiving and providing scores’ because I think that scores add nothing to the learning process. Moreover not all aspects of performance can be expressed in scores and scores are not objective” (Q-P8).

We limit the discussion to comments on the most instructive subtasks

Line 511 - 515 Limitation section

Another limitation concerns the questionnaire and the interview guide. Questionnaire comments were reduced by the three tasks with the highest-ranking results. We compensated for this limitation by interviewing participants with contrasting ranking results. Nevertheless, because we did not focus on less instructive tasks in our interviews, we might have lost information that would have underpinned our results.

16. Results Section
line 237: should read 'were' not 'was'
line 257: should read 'firstly' not 'first'
line 258: should read 'secondly' not 'second'
line 368: should read 'lose' not 'loose'
line 410: should read 'was perceived as difficult'

Author’s response
Thank you for these suggestions. We followed all suggested revisions in the manuscript. In addition, we submitted the manuscript for proof reading (see point 1).
Discussion section:

17. Again, suggest making it more explicit in the first paragraph (not the second) that the study outcomes are tied to a previously published RCT. Overall, the discussion could be condensed as it is too longwinded.

Author’s response
We redesigned the discussion consistent with the abstract and the method section. We also condensed the discussion and explicated that the study outcomes are tied to the results of the previously published RCT. We hope we succeeded in making this clear.

18. Interestingly you barely touch on the body of literature relating to the use of simulation as a tool in undergraduate health professional training programs. This should be considered as there are significant parallels between your program and simulation activities (low fidelity) delivered to students - eg the concept of simulation providing a psychological safe area of practice, where mistakes are not critical.

Author’s response
We admit that this aspect was not sufficiently discussed. We reviewed the literature on high-fidelity and low-fidelity simulation and discussed shortly the outcomes in the manuscript. We also underpinned our choice for peer role-play in the context of peer assessment on the basis of research evidence. The topic is also addressed in the limitation section.

Line 482 – 487 Discussion section
As regards the use of peer role-play (low fidelity simulation) compared to standardized patients (high fidelity simulation), research in undergraduate education shows that both tools provide a psychological safe area of practice, where mistakes are not critical [42]. Studies on student perceptions show that standardized patients are perceived more effective than peers [43, 44]. However, research evidence on learning outcomes remains inconclusive [44, 45]. Compared to direct observation (work-place based assessment), the role-play format allows for standardizing the content of interest, creating an adequate case mix of health problems relevant to the guidelines, and describing its key-features [46]. Considering restraints in time and costs, peer role-play is the most feasible method. This conclusion is supported by a systematic review of Overheem et al. (2007)
who evaluated the feasibility and effectiveness of six methods to assess physician performance [47].

Line 507 – 510 Limitation section

It can be argued that a limitation of the PA approach is the role-play of peers simulating patients. Although the choice of peers instead of standardized patients was defensible as argued above, and although the results show that their feedback was valued, additional training in the patient role might have increased the fidelity of the peers’ performance.

19. line 491: remove 'of'
   line 493: should read 'firstly' not 'first'
   line 502: should read 'secondly' not 'second'
   line 502: should read 'stressful' not 'stressing'
   line 508: should read 'thirdly' not 'third'

Author’s response

We revised the manuscript according to all the suggestions. Revisions are printed in bold face font. Thank you for your support.

Conclusion section

20. I struggled to understand the first very long sentence. Please rewrite into 2 or even 3 shorter segments.

30. line 526: should read 'the critical success of peer assessment can be attributed to...'

Author’s response

We followed your advice and revised the conclusion section. Revisions are printed in bold face font.

Line 520 to 524 Conclusion section

The effectiveness of PA can be attributed to the structured and performance-based design of the program. Participants showed a strong cognitive and emotional commitment to performing the task related to the physical therapist role. That might have contributed to
an increased awareness of strengths and weaknesses, and a motivation to change routine practice in the management of LBP patients.

31. List of abbreviations
repeated lines 546-549 and again 567-570

Author's response
We removed the list of abbreviations as all abbreviations are explained in the manuscript. In this respect, we followed the suggestions of PROOF-reading.com.

Reviewer: Marie B Corkery
Version: 1
Date: 24 June 2015

We noticed that the comments of Marie B. Corkery were identical to the comments of the first, anonymous reviewer (editor). We therefore refer to the revisions made according to the comments of the first reviewer.