Author's response to reviews

Title: Evaluation of a tailored, multi-component intervention for implementation of evidence-based clinical practice guidelines in primary care physical therapy: a non-randomized controlled study

Authors:

Susanne Bernhardsson (susanne.bernhardsson@vgregion.se)
Maria E.H. Larsson (maria.eh.larsson@vgregion.se)
Robert Eggertsen (robert.eggertsen@vgregion.se)
Monika Fagevik Olsén (monika.fagevik-olsen@vgregion.se)
Kajsa Johansson (kajsa.johansson@liu.se)
Per Nilsen (per.nilsen@liu.se)
Lena Nordeman (lena.nordeman@liu.se)
Maurits van Tulder (maurits.van.tulder@vu.nl)
Birgitta Öberg (birgitta.oberg@liu.se)

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Author's response to reviews: see over
Dear editor (s):

Thank you very much for inviting us to submit a revised version of our manuscript “Evaluation of a tailored, multi-component intervention for implementation of evidence-based clinical practice guidelines in primary care physical therapy: a non-randomized controlled trial” (MS: 1250914102102607).

We thank the reviewers for their thorough and thoughtful review of our manuscript. We have carefully considered all comments and have revised our manuscript based on the reviewers’ comments. Details of our revision are provided below. To facilitate viewing our revisions and as per instructions from the editor, we have left the “tracked changes” visible. Since this is a bit messy to read, due to the substantial revisions, we are also submitting a clean copy.

We thank you in advance for your continued consideration of this manuscript for publication in BMC Health Services Research and look forward to hearing from you again. Please let us know if you have any questions or comments.

Sincerely,

Susanne Bernhardsson
corresponding author

Susanne Bernhardsson
Närhälsan Öckerö Rehabilitation
Region Västra Götaland
Strandvägen 35
475 40 Hönö
Sweden

susanne.bernhardsson@vgregion.se
Reviewer: Ilona Autti-Rämö

Reviewer's report:

General issues

The research group has focused on an important topic; how effectively are guidelines implemented. However, as they have not been able to combine baseline and follow-up surveys on individual basis but they are both cross-sectional surveys it remains unclear what explains the relatively small change. They have gathered some very important background variables (age, time of graduation, work experience) that could be used to explain some of the results eg who changed attitude and who implemented the guideline in practice but this information has not been used (or could not be used?). A major pitfall is also that the authors did not ask whether the PTs took care of the relevant patients (having the problem that the guideline was focused on). Thus it is quite unclear why the PTs didn’t use the guideline, it may well be that they did not take care of such patients. Or that they relied on their personal experience. Or they didn’t thrust on the guideline producing group/produced evidence or…

Thank you for raising these important issues. Since the project was an integrated organizational development/research project we needed to take a pragmatic approach and do as best we could based on the circumstances. The organizational development part of the project comprised the guideline development and implementation, while the research part comprised the implementation strategy development and evaluation. The actual execution of the implementation intervention was part of the integrated project. Because we wanted to minimize the risk for social desirability bias, questionnaire responses were anonymous and not traceable between the two data collection points, so we could only compare proportions (added under Limitations). We have addressed your other concerns point by point below and made corresponding clarifications in the manuscript.

Major changes

1. The article is far too long, it can be shortened on all levels/chapters.

   We have shortened the manuscript in all sections, particularly the Introduction and Discussion. We have also changed the order of some paragraphs in the Introduction and Methods sections, to what we consider more logical. The number of references has been reduced: 3 references were removed and replaced by 2 that were more recent and more relevant (Grimshaw 2012, Giguere 2012) (in the Introduction).

   Introduction:

   2. The authors need to explain how the guidelines were produced. Who decided that they are needed and is the county supporting the use of these guidelines? If a need for guideline isn’t supported by the whole PT community it’s difficult to implement any. It’s difficult to understand that one could produce guidelines but offer information only on selected workplaces. As so many form the control group were also aware of the guidelines on has to assume that the guidelines must have been published openly.

   -The initiative to the guideline development and implementation was taken by PT managers within the county council, who perceived a variation in practice among the PTs and therefore a need for guidelines. An integrated organizational development/research project was planned and executed. We have added this clarification in the Methods section (Guideline development).

   -We agree that the need for guidelines should be supported by the whole PT community, or at
least most PTs. In our baseline survey, most PTs expressed positive attitudes to guidelines and many expressed a perceived lack of and a need for guidelines. These findings are reported in a previous manuscript (submitted), referenced in this manuscript.
- The reason why the guidelines that we developed were introduced only in the intervention group was so that we could compare the effects of the intervention with a control group. Immediately after we collected the follow-up data, the guidelines were introduced also to the control group. We have added information about this in the Methods section (Intervention).
- The explanation for the rather high levels of awareness and use of guidelines in the control group (and in both groups already at baseline) is that the question asked: “are you aware of evidence-based clinical practice guidelines relevant for your practice” and “how often do you use evidence-based clinical practice guidelines” in a rather general way. Meaning, we didn’t ask about the specific guidelines that we developed, since they didn’t exist at the time of the baseline data collection. There was likely variation among respondents in how they interpreted these questions. At the time of the follow-up, PTs in the intervention group most likely interpreted the questions as referring to the recently developed and introduced guidelines, whereas the control group most likely interpreted the questions the same way as they did at baseline. We have added this explanation in the Discussion section (Possible explanations of the results).

method:

3. It is unclear who ordered the development of guidelines and who should have supported the use of them. PT organization? health authorities? county? The authors need to explain the process that led to forming the guidelines more explicitly.
The guideline project was commissioned by a group of PT managers within the county council “Region Västra Götaland”, which is the health authority responsible for all health care in Western Sweden. The Swedish PT organization was not involved in this project. We did not describe this process before, as the study’s focus was on the implementation strategy development and the evaluation of the implementation intervention. But we understand that this raises questions and have now added an explanation of the process in the Methods section. To further clarify, we reversed the order of the description of the guideline development and the implementation strategy development and renamed the subsections.

4. Was the implementation supported by the county or was it done only as part of research? How to explain the low participation rate at the seminars?
The implementation was supported by the county council and was an integrated organizational development/research project. Participation in the seminars was supported by area PT managers but was at the discretion of local unit managers, and voluntary for the participants. Some of the unit managers opted to send only one or a few of their staff, while others sent all. We have added information on this in the Methods section (Intervention).

5. Was “the seminar for all” an optimal strategy, why not train “ambassadors” that should have trained the PTs at their workplace. It is not feasible to train every individual out of office – too costly.
We agree that training “ambassadors” could be an alternative method that may be less costly. But there is also a risk of loss of relevant information, skills and quality by not having the guideline developers inform/train all PTs. We have added a brief discussion on this in the Discussion section (Implications for practice).

6. The content of the seminar is unclear. Was 1 hour lectures and 1 hour interaction? was it during working hours or in the evening? Was the participation supported by employers?
We have expanded the description of the intervention to address these questions. We also clarified which of the components that was the core component.

7. It is quite unclear how 37% of the control group were aware of the guideline at the baseline yet it is stated in the method part that they were left out of information that was provided only for the intervention group. Was the access to web site yet open for everybody?.

- The awareness of guidelines reported at baseline did not relate to the guidelines developed in our project, but related to guidelines in general. Both groups reported similar levels at baseline. Please see our earlier response under point 2. We have clarified this issue in the Discussion section.

- The web site was located on the county council’s intranet, which technically was open to PTs in both groups. However, no information was given to the control group about the site.

8. There needs to be a time line to show when the guidelines were formed, when base line survey was made, when was the intervention and when was the follow-up survey done. We thank you for this excellent suggestion, which we hope further clarifies some of the issues raised. We have added a new figure with a time line, the new Figure 2. This means we have renumbered all figures.

9. As the authors did not ask whether the PT had any relevant patients (guideline specific problems) how is it possible to use the question on “use of guideline” as a marker for actual use for specific patients? needs to be clarified

The reason why this question was not asked in the questionnaire is that all PTs who participated in the study work at primary care physical therapy clinics within the county council. The predominant patient category in these clinics is patients with musculoskeletal pain, and in this category low back pain, neck pain, and subacromial pain are the most common complaints. We have added this explanation in the Methods section (Design and setting).

results

10. How did the authors receive the information of 10% staff turnover?

We analyzed the staff turnover by comparing the e-mail addresses between the two data collection points. We have added this explanation in the Methods section.

11. It’s unclear how to explain the results for the control group (baseline) if they didn’t get any information about the guideline

Baseline values were similar in both groups, as described. The fact that certain levels of guideline awareness, knowledge, and use were reported in both groups is likely a matter of interpretation by the respondents. Please see our earlier response under point 2. We have clarified this issue in the Discussion section.

12. Can the authors make any analysis concerning the background information. What might explain why many don’t use the guidelines even though they know about them?

We agree that investigating determinants of guideline use is indeed a very important issue. In our previous cross-sectional survey, we analyzed background variables and other possible determinants of guideline use. We found no significant associations between background variables and guideline use. Because of this, we had no reason to build a model a priori for this type of analysis, in this study. Thus, the focus in this study was to evaluate whether there
were any changes after the guideline implementation intervention, and the difference between the groups in these changes.

Discussion

13. should be shortened. The results are truly modest and based on this study it’s not possible to draw conclusion on explanations. Much of the methods and theory has already been discussed in the introduction and it’s not necessary to repeat them. The discussion should be focused only on the major results – what might explain them - and on the limitations of the study. It should also be discussed what ought to have been done differently (e.g. forming the questions, being able to combine baseline and follow-up data on individual level, content of intervention etc)

The discussion section has been shortened and we have tried to focus on the major results according to your suggestion. The suggestions on what could have been done differently have been incorporated in Implications for research.

Reviewer: Henna Hasson

Reviewer's report:

Comments to the authors

Major Compulsory Revisions

1. My major concern deals with the aim and study design of the paper. Currently the aim is stated as: ” … to evaluate the effectiveness of this implementation intervention on process outcomes.” This aim implies that different implementation strategies are compared (for example comparing the current implementation approach with printed materials only).

However, from the method section it seems that this is more of an intervention study i.e. the intervention group receives the guidelines which are not distributed to the control group. In fact, in the method section on p 4 it is stated that ” …the effectiveness of the intervention was evaluated” (the first paragraph). An implementation study would imply a stronger design for instance a comparison of two (or more) active strategies to implement the guidelines. Please, reformulated the aim and describe the study design/methods in accordance to that.

Thank you for bringing this terminology issue to our attention. As you point out, we performed an intervention study, although not a clinical intervention (treatment) but an implementation intervention. We understand an implementation study as one that studies different ways of implementing a clinical intervention (=treatment method) that has been proven effective in previous studies, and that you in that type of study can compare different implementation strategies, to see which one are most effective in implementing the intervention. In our study, the implementation object was the three new guidelines, and we wanted to evaluate the implementation strategy that we developed, by ways of an intervention study in which we compared the effects of the intervention with existing practice. i.e. continued practice as usual, without the new guidelines. We have reformulated the aim and design to make this more clear.

2. Please provide more information about how the controls were expected to work. It is stated that they continued to provide care ”according to individual knowledge and experience”. Is it only individual knowledge or are there any other guidelines available? From what sources is
this group expected to get/build their knowledge? Are there any national or regional
guidelines or steering documents? If there are no guidelines available, it seems that the
questionnaire items concerning guideline knowledge etc are not relevant for this group. Please
clarify this issue and motivate the use of these questionnaire items for the controls.
Thank you for raising this issue and allowing us to clarify. As stated earlier in this letter,
there was quite a variation in PT practice within the county council, which is why this project
was initiated. So individual knowledge and experience were indeed the primary knowledge
sources, and very few guidelines specifically for primary care physical therapy existed before
this project started and we developed our own. There were/are, however, more general
guidelines available for those PTs who were inclined to search for them. We have added a
clarifying sentence in the Methods section (Intervention) regarding availability of guidelines.
For clarification on the questionnaire items and how they may have been interpreted by the
respondents, please see our response to Reviewer 1’s comment #2 above, in which a similar
concern about the levels of guideline awareness in the control group was raised. We have
attempted to clarify this issue in the Discussion section (Possible explanation of the results).

Minor Essential Revisions

Introduction:

3. The sentence ”Important determinants of guideline use were identified.” Seems
unnecessary. It is suggested that the authors either continue by giving examples of the
determinants or omit this sentence since it in it’s current form doesn’t add anything to the
introduction.
The purpose of this sentence was to inform the reader that determinants of guideline use
specific to this population had been identified. We agree that giving examples would be of
benefit, but since they are mentioned later in the text and we needed to shorten the
manuscript, we have omitted the sentence.

4. It is suggested that the second paragraph is shortened or omitted since it’s value to the
paper is limited.
The paragraph has been shortened. We prefer not to omit the paragraph completely, since it
points to the problem at hand – low and varied use of guidelines.

5. It is stated that no prior study has investigated the implementation of guidelines in primary
care physical therapy in Scandinavia. The limitation to Scandinavian seems strange. Please,
motivate why Scandinavian studies are different than others or omit this specific part.
The sentence was formulated in this way, since the only two studies we have identified on
guideline implementation in physical therapy were in the Netherlands and Australia,
respectively (discussed in the Discussion section). We have rephrased the sentence.

6. The term process outcome is used. It is suggested that the term “implementation outcomes”
is used since it is more established what comes to implementation research. The article
otherwise deals with implementation terminology.
We have changed the term according to your suggestion.

7. The description of regional development could be moved to the method section.
We have moved part of the sentence about the regional development of guidelines to the
Methods section, but have left some which we feel is necessary for readers to understand what
the implementation object was in the study, as related to the aim in the subsequent sentence.
Discussion

8. The discussion part could be sharpened. Currently this part is lengthy and little unstructured. For instance it is unclear what the Discussion of findings from a general perspective contributes. This part could be combined with the other parts of the discussions.

9. Second paragraph: Please clarify that the results of significant changes in three of the four primary outcomes concerned the intervention group.

10. It is stated that “The proportion of PTs who reported frequent use of guidelines increased by 9% in the intervention group while remaining unchanged in the control group.” This finding needs more discussion and analysis than stating that this is common in prior studies. The notion that implementation seminar attendance had significant contribution to the use of the guidelines also needs more thorough discussion.

11. A long part of the discussion section deals with possible explanations of the results. It is suggested that this part is shortened. Instead a thorough discussion about what these findings have for implications to practical care, implementation and intervention research could be discussed. In addition, the need for future research could be highlighted.

Limitations

12. The most important limitation seems to be the study design i.e. comparing an intervention rather than comparing different implementations strategies. This should be discussed. We hope that this has now been clarified in our response to your first comment, above, and in concurrent revisions. We have reformulated the study’s aim and design according to your first comment and discuss the study design in the Discussion section (Implications for research).

Author additions: Additional changes made in conjunction with the revision:

Table 1: We have revised table heading and column headings to be consistent with terminology used elsewhere.

Table 3: When double-checking the numbers we discovered a rounding-off error, which led to subsequent errors in this table (bottom row, Use of guidelines). We have redone the analysis for this variable and corrected the numbers. This very minor error does not in any way change the results.

Figure 1: We have revised the flowchart for additional clarity.