Author's response to reviews

Title: Physiotherapists’ experiences of physiotherapy interventions in scientific physiotherapy publications focusing on interventions for children with cerebral palsy: A qualitative phenomenographic approach.

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Author's response to reviews: see over
Referee 1

We are pleased to have the opportunity to resubmit our manuscript MS: 9719233753325498. Thank you for reviewing the manuscript, which have been revised according to your valuable and fruitful comments. The title is changed so it more precisely describe the study: *Physiotherapists’ experiences of physiotherapy interventions in scientific physiotherapy publications focusing on interventions for children with cerebral palsy: A qualitative phenomenographic approach.*

Thank you for your comment that you enjoyed reading this manuscript.

Reviewer's report

**Title:** Physiotherapy interventions in scientific physiotherapy publications focusing on interventions for children with cerebral palsy: A qualitative phenomenographic approach.

**Version:** 2  **Date:** 29 April 2011  
**Reviewer:** Lesley Wiart

**Reviewer's report:**

Physiotherapy interventions in scientific physiotherapy publications focusing on interventions for children with cerebral palsy: A qualitative phenomenographic approach

This manuscript is an interesting phenomenographic study of research reports evaluating physical therapy intervention strategies for children with cerebral palsy. The intent of the analysis is to determine variation in the underlying philosophical assumptions and resulting practices of physical therapy interventions reported in the literature. The paper is of relevance to pediatric rehabilitation. Despite the fact that philosophical assumptions in physical therapy can influence many aspects of approaches to intervention, beliefs of therapists are often not made explicit. All suggestions are for discretionary revisions.

The background information is relevant and interesting. I would suggest that a sentence be added to the first paragraph to describe the various sections in the background section and why there were included (i.e., FCS, motor learning, conceptualization of disability and health) to provide readers with a framework for the background section before the paragraph on FCS.

- We have rewritten the first paragraph in the background section with the aim of being more concrete and provide the readers with a framework for the background section.

In the last sentence in the 1st paragraph of the background section, there is a reference made to ensuring family and child participation in clinical decision-making. I would suggest that FCS ensures that families have opportunities to participate and that their desire and/or ability to participate may fluctuate.

- We have enlarged this sentence according to your suggestion.

2nd paragraph in background section, last sentence. In regards to the ICF, I would suggest that the ICF doesn’t determine cause and effect relationships but rather provides a conceptual framework for recognizing the effects of personal and environmental contextual factors on the components of health.

- This has been altered according to your suggestion.

Last sentence, 4th paragraph, introduction section- I believe that readers may benefit from additional clarification (i.e., develops autonomy and responsibility by reasoning).

- Additional clarification has been added.

Last paragraph, background section- In regards to ‘voices being heard’ I think it may be helpful to be more specific (i.e., goals, values and ideas are considered to be central to intervention planning)

- We have tried to be more specific according to your suggestions.

Clarification would be helpful in regards to the statement made in the last sentence of the 1st paragraph in the methods section (i.e. and with other goals...)

- This has been removed and the method section is rewritten.
It would be helpful to have additional information on how the authors selected the articles. The articles were strategically selected but what criteria were used? (e.g. variation in journals, intervention strategies, location of research etc.) and, conversely, what rationale were used to exclude the others?

- We have expended this section. We now describe this process clearer in order to be more concrete and explicit.

It may help the reader to describe the analysis process before the current first paragraph in the analysis section. The first paragraph makes reference to interpretation of quotes but the process has not yet been outlined.

- The seven steps procedure is moved to the beginning of the analysis section.

Additional clarification is needed for the 1st sentence in the analysis section. It would be helpful to have some additional information on what the authors looked for in the condensation process. How were significant quotes identified?

- In order to make this procedure more understandable we have described the seven steps procedure in more detail and present the questions we applied to address the material in the different steps.

In the results section, it would be helpful if there was a brief explanation of how the ‘hierarchy’ of intervention approaches was established (i.e. brief explanation of why one approach is preferable over the other).

- This is now explained in the text.

Results section- it would be helpful to include a brief definition of the ‘mixed-health paradigm’

- This is done.

7th sentence 2nd paragraph in the discussion- clarification is required. It is unclear how focussing on the child’s potential is related to activity and participation components of the ICF (i.e. a therapist could work from an approach focused on deficits but still target goals at the activity level).

- We agree and have added “in every-day life”.

‘This can be recognized as an ability to follow the demands...’ in the discussion section. I believe clarification of the meaning of this sentence is needed.

- We have clarified the meaning of this sentence and have explained it further.

I think it would be helpful to explain how the focus on impairment implies a deductive, positivistic approach (discussion, making it normal section).

- We have explained this in the “Making it normal” section and in the Discussion section further considerations. The word positivistic is removed.

Discussion, making it normal section, 4th sentence- I would suggest deleting ‘in the long term perspective’ because there is a lack of evidence to support the effectiveness of many impairment focused physical therapy interventions at the level of activity or participation (not just in the long-term).

- We have deleted this. Thank you for reminding us!

Methodological aspects, 1st paragraph, 5th sentence- Would it be more accurate to state that the experience of physiotherapy interventions can be inferred from the descriptions of the interventions?

- The word inferred can be used. However, the manuscript has been language corrected and the section has been rewritten.

Methodological aspects, 2nd last paragraph, 1st sentence- How do the findings of this study confirm the findings of previous studies?

- This has been rewritten. The previously published studies concerning different aspect of physiotherapy interventions are, as before, used as references in the discussion section. One of them is also mentioned in the paragraph about triangulation in the discussion section.

Although the authors mention that environmental context influences approach to intervention, I think that this point may need to be explored further. Physical therapy interventions that are motivating to children and that encourage motor learning will likely need to take place in a child’s natural setting. However, therapists who
work in rehabilitation centres often do not observe children in their everyday environments. Perhaps the authors could note that it may be challenging for therapists who do not work with children in their natural environments to embrace all aspects of the ‘making it possible’ approach. Given this challenge, how can therapists who work in these environments work towards doing so?

- We totally agree with what you say. However, we think that this is beyond the scope of this article. We have tried to make it clearer in the manuscript that the aim of this study was to identify how physiotherapy interventions described in scientific published articles are experienced in various ways. The results from this study may be related to other research studies within other areas of physiotherapy. However, if they are related to how physiotherapists intervene with the child in their every-day clinical setting we do not know. The perspective in these interventions are probably different and the transferability between these two perspectives are not clear. The context and the perspective are important in a phenomenographic analysis. Thus, we do not think that this important discussion belongs in this manuscript.

There are several sentences in the manuscript that seemed awkward or were grammatically incorrect - they are:

- The 1st and 3rd sentences in the background section
- 2nd paragraph in background section, last sentence
- 4th sentence, 3rd paragraph, background section (perhaps delete - The definition of)
- Last two sentences in the 4th paragraph, introduction section
- Last paragraph, background section - add comma after ‘From the FCS perspective’
- Last paragraph, last sentence - separate these two points (i.e., More specifically, the objective was to identify variations…)
- Last sentence, 1st paragraph of the methods section.
- Second sentence in results section - making it work.
- 2nd last sentence, discussion section, making it normal paragraph.
- Last paragraph in discussion, 3rd and 4th sentences
- Last sentence in the discussion section (i.e. child made to feel competent as a parent)
- First sentence, second paragraph in the background section - it may be helpful to the reader to specify ‘family environment’.
- First sentence methods section - should conceiving be conceptualizing? (same comment for second paragraph in the discussion)
- Second sentence under A: Making it possible in results section - suggestion to change contextual environment to context in which the child functions on a daily basis (or something similar).
- Discussion - Making it normal section, first sentence - this approach is embedded in a biomedical paradigm or originates from a biomedical paradigm (i.e., instead of ‘has a biomedical paradigm’)?
  - The manuscript has partly been rewritten and all of this above mentioned is corrected or clarified.

**Quality of written English:** Needs some language corrections before being Published

- This manuscript has been language corrected.
Referee 2

We are pleased to have the opportunity to resubmit our manuscript MS: 9719233753325498. Thank you for taking the time to review our manuscript, which have been revised according to your critical, valuable and fruitful comments.

Reviewer's report
Title: Physiotherapy interventions in scientific physiotherapy publications focusing on interventions for children with cerebral palsy: A qualitative phenomenographic approach.
Version: 2 Date: 5 August 2011
Reviewer: Margaret O'Neil
Reviewer's report:
Please see the report below based on the items reviewers were asked to consider.

Points for Major Compulsory Revision:
1) Review the conceptual model for the research and present a convincing argument that the qualitative phenomenographic methodology is appropriate for systematic review of quantitative scientific research articles on physical therapy intervention for children with cerebral palsy. What is the rationale for using a qualitative approach for scientific articles that engaged in impairment based methods primarily?
   • We investigated the articles that we found in the search process and then strategically selected using a phenomenographic analysis. These were all research articles that used a quantitative design as this was an inclusion criterion. References 3, in our study, states that research for children with CP has been focused on impairment-based methods and consider it important that other aspect in research are illuminated. The aim of using a phenomenographic analysis was that we were interested in describing how physiotherapists articulate and document their interventions, what theory and which research design they use i.e. their assumptions underlying the intervention. We assume that the experiences in the articles had variations and were able to identify three different descriptive categories. A description is in phenomenography related to understanding of knowledge as a matter of meaning and similarities and differences in meaning. Using other articles may have changed the outcome space (described in Figure 1) but we do not know that. An ordinary review using a quantitative method do not focus on this. We have rewritten the information concerning what the phenomenographic approach is all about and explained what an experience, according to phenomenography, is. Hopefully this can make our study more concrete and explicit and hopefully, more easy to access.

2) Rework the methodology discussing the major points in ANY qualitative research (trustworthiness of the data, triangulation and why it was not done in this case, guidelines not just the seven steps in the data analysis - open coding?, axial coding? etc)
   • In the method section additional clarification has been added. The questions we applied in the seven steps procedure is now presented. Phenomenography does not use open coding or axial coding. The procedure described in phenomenographic literature is the seven steps and we use the article [35] that first described these steps. The first author of this article is one of the four researchers that established this approach in the 1970s, in Gothenburg, Sweden.
   • In the discussion section we discuss trustworthiness and our pre-understanding and we have expanded this paragraph. We also explain why we did not use triangulation in this study and discuss (the pragmatic criterion) what the results in this study may imply.

3) Describe how the three themes (Making it Possible, Making it Work, Making it Normal) were derived and how the quotes for these themes were determined.
   • The additional clarifications that we have added in the seven steps may better explain the procedure of how the descriptive categories emerged. The quotations used are some of several that describe the descriptive category. It is important that the expression used makes the descriptive category understandable in relation to how the physiotherapy intervention is experienced. According to
phenomenography the action reflects the experience [26]. Thus, we decided that these expressions could help the reader to understand what the experiences in the descriptive categories described.

4) Review the references and the appendix articles chosen and defend why the scientific articles and not the family-centered articles were the focus of the manuscript.... Again, I am not clear on this point.
   - In a phenomenographic analysis the variations of experiences of the phenomenon are the results. This imply that the material must have variations. Our aim was to describe how physiotherapists’ experiences physiotherapy interventions for children with CP in scientific physiotherapy publications. If we have selected the articles according to their content and not modality used, the sample had been to narrow and to alike. The results of a qualitative study has not met the variation criteria in the samplings, that most of the qualitatively methods takes for granted. In the search process inclusions criteria and exclusions criteria were used in order to be sure of that the articles only described physiotherapy interventions and not the effect or treatment after e.g. surgery. None of the articles were more in focus than another as long as it met the inclusions/exclusions criteria and was strategically chosen. The method section is partly rewritten and information concerning how the strategically selection of the articles were done is now added.

Minor Essentional Revisions
1) Reorganize and clarify the writing to be more informative and concise.
   - We have reorganized, clarified and rewritten parts of the manuscript in order to be more informative and concise.

2) Really like the figure! That is a nice feature of the manuscript
   - Thank you! In phenomenography the outcome space is very important to illustrate as the description categories must have a relation with each other and the phenomenon.

Discretionary Revisions
NA

Reviewer Points:
1. Is the question posed by the authors well defined?
The authors pose an interesting question and use a novel approach to examine the question. However, the research question is a bit confusing and underdeveloped while the presentation of the research question or aim is not presented until page 4. This may not be so far along in the article except that the introduction is a bit disorganized making it somewhat difficult to understand the direction and ultimate aim of the study. The authors may want to review the overall introduction and reorganize it for better flow and direct the reader to purpose and PT early on before the discussion of motor learning and control. Further, the FCS model is a service delivery model or approach and it is not causally related to PT outcomes but influences the structure, process and outcomes of the PT intervention.
   - The title of this manuscript is changed so it more precisely describe the direction of the study, Physiotherapists’ experiences of physiotherapy interventions in scientific physiotherapy publications focusing on interventions for children with cerebral palsy: A qualitative phenomenographic approach. Some changes and some reorganization of the material are made in the first paragraph in the background section in order to make the introduction more understandable. Hopefully, this has clarified the aim of our study and improved the manuscript.

   - We have also altered our description of FCS in relation to physiotherapy according to your comment.

2. Are the methods appropriate and well described?
The methods used are qualitative (phenomographic) which was well defined but usually focuses on the “persons” description of experiences. The phenomenon examined in this study was physiotherapy (PT) for children with cerebral palsy (CP). The study poses a unique way to conduct a systematic review of PT intervention literature for CP. However, I find that more discussion and description is needed to support the model of this research because it seems difficult to describe “PT experience for children with CP” by reviewing scientific articles about PT interventions. I think that the articles and the information therein is too far removed
from the actual experience. And if “scientific” articles are being examined, are these “usual” PT intervention sessions in which families would usually have input vs. their agreement to participate in a scientific protocol to examine intervention strategies and outcomes using various strategy tactics. So, more information is needed on the rationale and conceptual model for the study, not so much the use of the ICF Model to frame intervention or the use of motor control and motor learning principles in the delivery of PT interventions or the use of FCS as a service delivery model to engage parents and families in a child’s services.

So, the rationale for the methods and the details on the steps in the methodology need to be re-organized and described in more depth. A better research model and rationale for how and why certain articles were included in the study would strengthen the methods section. For the data analysis section, the short description on how each article was analyzed is weak in that the reader is not informed as to what and how the discussions were framed when determining how the quotes from the articles were chosen to be included in the analysis. The inclusion of the seven steps for analysis using phenomenographic methods was helpful but this information was presented as definition of terms and not applied to the actual study. For example, in Step 2, Condensation, what would constitute a “significant quotation” from the articles?

- Your comments were very important to us as these helped us to be clearer and more concise in our method and discussion sections. Thank you!

The phenomenon we studied were not “physiotherapy (PT) for children with cerebral palsy (CP)” or “PT experience for children with CP”. We studied how physiotherapists’ experiences physiotherapy interventions for children with CP in scientific physiotherapy publications written by physiotherapists, with the aim to be able to identify variations in the underlying assumptions and theory of physiotherapy interventions focusing on CP. Even if semi-structured interviews are the most frequently used method of collecting data in a phenomenographic study other data can be used as drawings, videos and, as in this manuscript, previously published material. Marton & Booth [26] describes that an experience can be the representation of a phenomenon. This also explains that articles can be used as sources for a phenomenographic analysis i.e. describing experiences. In the method section this is now described clearer than before. We have expanded the method section, as mentioned above, and now describe what an experience is, according to the phenomenographic approach. In the background section references from acknowledged researchers within the field of CP interventions and/or motor learning elucidate the framework of physiotherapy interventions for children with CP and their understanding of this phenomenon. Their aspects are thus important to consider in every intervention, also in research. However, we want to point out that this study identifies the variations of collected experiences as they appear in the articles studied may not be wholly representative of how the individual authors actually experience physiotherapy intervention in their everyday clinical practice. A critical assessment of physiotherapy interventions in clinical practice is beyond the scope of this article.

3. Are the data sound?
It is difficult to determine the soundness of the data as it is not clear how the qualitative data that are presented were included in the analysis and in the article. So, more information is needed to understand why certain quotes were included. It is not clear if the three identified themes emerged from the quotes that were included as data or if the three thematic categories were identified by the researchers and quotes were chosen to support these themes. Again, not enough information is provided on the data analysis to determine this. For example, were there guidelines, open codes, operational definitions to help guide the final data analysis of PT processes in the chosen articles?
- The method section is expanded and additional clarification has been made. The descriptive categories are a result of the quotations but it is abstracted to a collected level of experience.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
The manuscript is organized in proper subsections that are standard in article preparation but each section needs more revision for details to explain the study and results and for more attention to grammar and methods of expression.
- This has been done.

5. Are the discussion and conclusions well balanced and adequately supported
by the data? The discussion follows closely to the results and interprets the findings. However, it is difficult to understand how the results were derived and if the discussion is appropriate. The discussion does highlight some of the concepts in qualitative research (ie, trustworthiness of the data) but this section needs more work to strengthen the concept and offer a better definition of the research characteristics of qualitative research.

- We have rewritten and reorganized parts of this manuscript with the aim to tried to do this. However we want to point out that phenomenography is not about interpreting. It is about describing how the phenomenon in different ways is experienced.

6. Are limitations of the work clearly stated? No, the limitations are imbedded in the discussion with a short section on trustworthiness being associated with experience of the qualitative researchers with the explanation that these researchers are very experienced. However, this reviewer is not convinced that the “premise” of the article is flawed and that qualitative phenomenographic research may not be the right methodology to examine PT interventions in scientific research articles when one is not aware of the “experience” of the PT in developing the intervention protocols or the “child experience” when exposed to these interventions. This reviewer understands that the authors were examining the contents of the intervention but it may not be wise to make a leap to “experiences of PT or child or family” based on the intervention description. Especially if outcome measures are not included in the qualitative analysis because outcome measures often (usually) reflect goals of therapy and if measures are impairment based, maybe the intervention articles had a tight research intervention protocol that did not include FCS approaches for a very good reason... hard to say...

- See above answers.
- The content of the intervention is an important issue. However, we examined HOW physiotherapists’ experiences physiotherapy interventions in research. The content or the context in which the intervention is experienced are, according to phenomenography, very important. We describe the phenomenon based on the articles description of the research and cannot assume something that is not articulated. We have described in the method section what an experience is, according to phenomenography. The outcome measures are, as you say, also important and they are included in the quotations that were cut out of the material. When we described the descriptive categories these were included in the process. Even if we did not select them as quotations illustrating the descriptive categories they have been used in the process of identifying the descriptive categories.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? YES!

8. Do the title and abstract accurately convey what has been found? Not sure, the abstract is short (as usual) but a bit vague and disorganized.

- The abstract has been rewritten.

9. Is the writing acceptable? The manuscript needs to be re-organized and edited for more information that is provided in a more concise fashion.

- This has been done.

Kind regards
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