Author’s response to reviews

Title: A study of human resource competencies required to implement community rehabilitation in less resourced settings

Authors:

Brynne Gilmore (gilmorb@tcd.ie)
Malcolm MacLachlan (malcolm.maclachlan@tcd.ie)
Joanne McVeigh (jmcveigh@tcd.ie)
Chiedza McClean (mcclean@tcd.ie)
Stuart Carr (s.c.carr@massey.ac.nz)
Antony Duttine (aduttine@handicap-international.us)
Hasheem Mannan (hasheem.mannan@ucd.ie)
Eilish McAuliffe (eilish.mcauliffe@ucd.ie)
Gubela Mji (gumji@sun.ac.za)
Arne Eide (arne.h.eide@sintef.no)
Karl-Gerhard Hem (Karl-Gerhard.Hem@sintef.no)
Neeru Gupta (neeru.gupta@gnb.ca)

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Author’s response to reviews:

Dear Sir or Madam:

Please find attached our revised manuscript with tracked-changes for your continued consideration. Based on the helpful feedback we received from both reviewers, we have made changes to the context and layout of the manuscript, as indicated below:
In response to Reviewer 1 – Dr. Wong’s comments we have made the following amendments:

Page 2: Line 38 Cannot assume everyone knows what the acronym CBR stands for. Line 38: The Community Based Rehabilitation (CBR) Guidelines

Page 2 Lines 49 to 50: In the Results section there is no mention of the Delphi survey.

Line 49: 33 articles were included in this review. Three Delphi iterations with 19 participants were completed. Taken together these produced 33 recommendations for developing health-related rehabilitation services.

Page 3 line 69: Please would you define what you mean by disability.

Line 73: It is estimated that over 1 billion persons worldwide have some form of disability, as defined by the United Nations Conventions on the Rights of Persons with Disabilities (UNCRPD) as “those who have long-term physical, mental, intellectual, or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others” [2].

Page 5 lines 15 to 16: This is not a very ‘realist’ question. It sits at the descriptive level and does not (for example) ask how or why these human resources are needed, for whom and what they achieve.

We agree that this question is misleading. This was the question posed to use by the funder, who requested a realist synthesis. We worked to specify throughout the process, which is indicated in the methodology. We have taken out the ‘funder question’ because it is not what was actually done within this research and replaced it with the clarified one. Now reads:

With this in mind, our study aimed to answer the question of: what workforce characteristics at the community level work to enable quality rehabilitation services, for whom and why, in less resourced settings?

Page 5: Rationale for Study. This is rather brief and does not explain what prior research (especially in the form of other evidence syntheses) have already been done on this topic area. The issue here is the avoidance of duplication and hence possible redundancy.

We have amended this section greatly. Thank you.

Page 5 onwards: Methods section. Please would you provide information on whether you piloted and refined your review processes?
Please note that we have added this to the limitations section. While we tested our search terms in the databases before searching, we did not do a comprehensive pilot.

Page 5 lines 32 to 33: Odd that you should mention "evaluation" when explaining realist review / synthesis. The latter is a form of theory based approach to evidence synthesis. Revised this whole section to incorporate reviewers helpful comments.

Page 6 line 39: What do you mean by "reflect"? Please not this has been changed.

Page 6 lines 50 to 51: Yes, Pawson and Tilley developed realist evaluation (a form of theory-based evaluation) but Pawson then went on to develop realist synthesis / review. So your referencing is rather misleading as it implies Pawson and Tilley both developed realist synthesis - which is not the case. The seminal text on realist reviews / synthesis is: Evidence-Based Policy: A Realist Perspective, 2006, Pawson R, Sage, London. Surprisingly you have not referenced this text. Please would you explain why.

Thank you for this observation and we revised within text. Much of the ‘Methodology’ has been updated. Thank you for the helpful observation that Pawson (2006) was not included. We previous submitted to a more Rehab journal, which after 2 rounds of reviews and positive comments on the study, decided they do not publish ‘realist synthesis’ type studies. During the revision process however, we had several changes to make this manuscript more relatable to the intended audience. We do recognise that this process may have unfortunately distracted from some of the methodological integrity. While it was the key text for this process, during the manuscript revision we cut it out–an obvious oversight.

Page 7 lines 159 to 162: In this sentence you mention both "programme theory" and "theoretically based evaluative framework". Please would you clarify what, if any, are the relationships between the two?

Upon review we believe this is a somewhat confusing sentence and have amended it. How this was used is now clarified in the “Results section” to:
Context-mechanisms-outcome configurations were developed from the included articles using the predesigned data extraction template and analysis matrix (Supplementary File 2). Unlike more popular realist synthesis methods of designing a theoretically based evaluative framework prior to the searching [87], due to the limited research on the rehabilitation workforce we looked for patterns within our identified CMOCs and grouped these into 6 framework themes (Table 2). From here, we re-reviewed all data and populated our evaluative framework with evidence, after which the CMOCs were modified into statements conducive to the accompanying Delphi survey.

Page 7 lines 166 to 168: This question (as already mentioned in my earlier comment) is not very realist. It sits at the level of description.

We do recognise that the wording is not very realist. We believe that we have amended it, without changing what work was actually done to:

‘what workforce characteristics at the community level work to enable quality rehabilitation services, for whom and why, in less resourced settings?’

Page 7 line 175: Search process Please provide more details on who did what and when. For example, who did the searching? Which interfaces and software were used (if any)? Who checked for duplicates and how? Did you undertake any additional rounds of searching as informed by your evolving programme theory? If not, why not?

One author (BG) conducted the searches. EPPI-Reviewer 4, a systematic review management software programme, was used to assist in document management including the identification of duplicates.

At each stage screening was done by two reviewers independently: title (BG and JMV), abstract (BG and MML) and full-text (BG and HM)

Page 8 lines 186 to 190: Was the screening and selection done independently? Yes, two reviewers independently assessed articles, compared and then had a third manage any discrepancies – please see above change.

Pages 8 to 9 lines 199 to 211: For your Data extraction and Analysis and synthesis process please would you explain what role your programme theory played in your analysis? Was it further refined from your initial programme theory on Page 7 lines 163 to 165. If not, why not? Also, please would you provide: a) a detailed worked example of how one CMOC was developed b) a
brief explanation of what the matrix from Ref 42 (Dieleman et al) consisted of and how and why you adapted it. Please see Figure 3 which we believe provides a more detailed example of how a CMOC was developed. In addition to the revised accompanying text on pg. 9 we hope this makes the analysis and synthesis more clear.

We further explained this process, and included a Box of the refined theories, which were a result of CMOC findings being iterated back to the initial programme theory for refinement. This produced 6 refined PTs, (hence the framework themes).

We also explained the matrix from ref 42:

Extraction of articles and used a data analysis matrix, which was adapted from a previous realist synthesis [41] to include more details on the workforce. This consisted of extracting characteristics on: study design, intervention (setting, population), workforce (cadre, role description, training, supervision) and reported contextual factors, mechanisms, outcomes and potential CMOCs for the interventions.

Pages 9 Delphi survey: Please would you provide more details on the Delphi process: Who ran them? Was it face to face or online? How long was each session for if face to face? If online, did you have chasing emails? etc.

New text has been added. Section includes:

“CM lead the Delphi study, with support from MML and BG. A panel of experts who could provide insight into the workforce for health related rehabilitation was recruited through purposeful sampling via email, conforming to recommendations of 10 to 25 participants [51, 52]. Participants were asked to complete an online survey administered through SurveyMonkey.”

Page 11 lines 268 to 269 and Supplementary File 2 Within this document, there are tables of contexts, mechanisms and outcomes for each study. There is then a column for CMOCs. What I could not follow was the analytic logic from the columns of Cs, Ms and Os to CMOCs. In addition I did not feel that some of the Ms in the tables were mechanisms. Some seemed to be intervention or programme strategies. Finally, I could not work how you arrived at the illustrative samples in Figure 3 from the data you presented in Supplementary File 2. It is not at all clear to me if and how you have applied the realist logic of analysis set out by Pawson (and Tilley) to your data.

We understand that this is an important point for the very integrity of the realist synthesis. We also have recognised that while at every stage of the review we attempted to adhere to realist
principles, all being novices in this methodology looking back we acknowledge points we may have stumbled.

For the File 2, the CMOCs were always made in reference to the articles, and were linked within the study. Cs Ms and Os and CMOCs were extracted by the two separate reviewers. The Cs, Ms and Os were combined for the purpose of the synthesis, but the CMOCs in the table were synthesised to what is presented in the table by reinvestigated in the original evidence and the data from the two reviewers. This may account for some discrepancies.

The CMOCs in File 2 were all combined and subject to a themed analysis. This produced the framework themes, which the data was then further investigated through.

Page 11 lines 269 to 271: What is the relationship (if any) of these CMOCs "themes" to your initial programme theory?

Expanded upon within text. The themes were thought to best contribute to the refinement of the initial theory, by dissecting important components of it.

Page 11 lines 271 to 272. For the CMOCs you have provide as samples in Figure 3, please would you: a) label of Contexts, Mechanisms and Outcomes in each of the samples provided and b) provide references for the papers that have contributed data to the sample CMOC.

Please see updated figure.

Page 12 lines 291 to 293: How did you deal with the differences in opinion between your 'evidenced' statements and if there was disagreement form the Delphi panel? Did you refine the statements based only on the feedback form the panel? Or did you go back to your studies to find more data to inform your revisions? In other words, who's perspectives and interpretations were you privileging and why?

For the most part the Delphi component worked to increase trustworthiness of the review developed statements. When statements were changed, we would consult the included studies. We have revised to read:

Contextual clarification and/or changes to the wording of statements were done without literature consultation. New statements or any substantial statement changes were only done if also supported by included studies.
Page 13 Discussion section Please revise the contents of this section after you have considered the guidance in the RAMESES Publication standards for realist syntheses.

Please see in-text revisions to this section.

Page 13 line 310: You say that your recommendations are not a prescriptive list or formula, but then you often use the word "should". In addition not all the recommendations are sufficiently detailed to explain when a recommendation might or might not be useful. Perhaps you may want to call what you have produced a decision support resource that provides a series of CBR programme design issues that people who run these programmes may wish to consider when they are designing or refining their programme?

Thank you for this suggestion and we have taken it on-board as it does over a more appropriate description. Please see changes (including changing ‘should’ to ‘may’) in the discussion.

Page 13 line 311: Factor is a rather vague and unhelpful word here that does not capture what come of your recommendation are. Are what you are providing here intervention or perhaps implementation strategies.

This has been changed due to the substantial changes to the discussion.

Page 13 lines 313 to 327: How does this section of text relate to your findings or recommendations?

Ar that this was out of place for the discussion, and has been revised. Some of which has been included in the ‘rationale’, as it needed further evidence-based as suggested.

Page 14 lines 330 to 333. I disagree, what is your justification for making the claim that analysing workforce characteristics is any more adaptable? What do you mean by "non-specific" and "adaptable"? If you are making claims about transferability of findings, then the warrant for such claims in a realist review relates to the realist understanding of mechanisms.

We understand this point and do agree. I think we did not explain well in the text what we meant by this.

We were trying to explain that we choose to focus on the characteristics of workers who engage in CBR activities, not on a specifically classified ‘CBR workforce’. This scope could therefore
be more about the CBR component of a programme and the workers who implement it. We have changed the sentences to read:

“This very point however, required the review to look more broadly at the characteristics of workers who engage in CBR activities, not a specific cadre, in the development of the CMOCs. These then could be used as implementation strategies to a wider body of CBR programmes”.

Page 15 Strengths and limitations section. Please would you include more reflection on the strengths and weaknesses of the way you have conducted your realist review. At present the focus is more on what there is and is not in the literature. This is also mixed in with recommendations for the conduct of future research. Olesen note that we have revised this section.

Page 15 line 373: Do you mean "mechanisms" here in the realist sense of the word or do you mean processes? This was meant in the process sense, but agree that it could be confusing considering the study! We have changed it to “processes”

Page 17 lines 405 to 407: This sentence is full of jargon that a more general readership may or may not understand. Please consider revision.

We have revised the conclusion section for several reasons and as such this sentence has changed.

Figure 1: This indicates you recruited an Advisory Team. The role of this team was not mentioned in your manuscript.

During the beginning stages we had differentiated between the ‘research team’ and ‘advisory group’. However throughout the process of the review the two merged together as the advisors’ role was very much hands on contributing to the methods and interpretation of findings. We should be more clear and just have ‘research team’, this is amended in the updated figure.

In response to Reviewer 2 (Dr. Kuipers’s) comments we have made the following amendments:

The title (and parts of the text) imply a degree of specificity (to health related aspects of the CBR guidelines) that is not borne out in the search or the conclusions.
We understand and agree with this point. When we started the review, it was specific on the health-related workforce for CBR. However, due to the type of methodology and the topic itself, the review became more broad.

We do think however, that the findings related to ‘health’ are of interest in that while we intended to keep it specific on health evidence was showing this is not possible. There should not be a workforce that only does ‘health’ as a CBR worker is likely to have a wide range of responsibilities and assume more social roles within society and to their client. We have included more on this in the Discussion:

“A very prominent finding throughout this work was that it is likely not possible to consider ‘health related CBR components’ in isolation. Understanding and supporting the workforce requires the integration of all CBR components: health, social, education, livelihoods and empowerment. “

The review and the delphi process were not limited in focus to the health dimensions of the CBR guidelines, indeed they were not even limited to CBR. As such I don't think you can be that specific in your conclusions. For example, numerous "mental disability" and "mental rehabilitation" articles mention "community" - and therefore are picked up in your search - but the approaches described in a few of them bear little or no relevance to the CBR model. We agree that while we were focusing on the workforce that can deliver CBR, it was actually more broad.

We have amended the Conclusion to be more about ‘community rehabilitation’ as opposed specifically to CBR and the CBR guidelines.

We have also changed the title to:

A study of human resource competencies required to implement community based rehabilitation in less resourced settings

The second is a format/presentation issue. Results presented in the body of the article are very limited. Readers are referred to the extensive supplementary material. My concern is that in many cases, readers just print an article and expect the supplementary material to be just that (not crucial to understanding the results), but in this case they are. For example, when I read the CMOCs presented in figure 3 I found them unconvincing. It was not until I returned to the
article, retrieved supplementary File 2, that I realised they are actually substantial. I think this needs considerable thought and improvement.

Thank you for this point and reassurance of the work, and we completely agree about supplementary files.

We really thought hard about how to show this work more throughout the body of the paper, knowing that the whole data extraction tables could not be included within text.

We decided to replace table 2 with Supplementary file 3 – they both have the statements but now Table 2 also includes the evidence-support. Hopefully this will help show the reader how substantial the findings are, and hopefully encourage them to look further at File 2.

We also added a Box of the refined programme theories, which we hope expands on our results.

If you have any further recommendations regarding this important point we would be happy to work with them.

Some minor issues: The terms "mental disability" and "mental rehabilitation" are cumbersome and imprecise terms. They imply intellectual and cognitive disabilities (but appear to exclude these), and are not terms that are accepted by people with mental health problems.

Thank you for pointing this. We completely agree with this and regret not having noticed this ourselves. We have addressed this within the manuscript.

Sentence 319-321 is very confusing I have previously seen CMOC statements depicted as "Context PLUS Mechanism EQUALS Outcome" Your presentation of the relationships between C, M and O is not strong - they are presented more as three independent aspects. I think this requires clarification, or ideally, if you can more clearly portray these relationships, adding them in

Thank you for this. We have updated Figure 3 to better show the relationship.

We have also included within the revised methodology section:

“To do so they collate a wide range of quantitative, qualitative and mixed-methods literature specifically aimed at complex interventions, and develop working theories of ‘how things work’
through investigating how contexts trigger casual mechanisms and these relationships’ associated outcomes (C+M=O) [37-39].”

With these additions and edits, we trust that have sufficiently addressed the concerns of the reviewers and would once again like to thank them for their helpful comments. We believe this manuscript was much enhanced and strengthened as a result of their feedback. Should you have any questions regarding our submission or require any additional information please do not hesitate to contact me.

Thanking you in advance for your continued consideration

Brynne Gilmore
Centre for Global Health