Author's response to reviews

Title: Interventions aimed at increasing the level of physical activity by including organised follow-up: a systematic review of effect.

Authors:

Eva Denison (Eva.Denison@nokc.no)
Gunn E Vist (GunnElisabeth.Vist@nokc.no)
Vigdis Underland (Vigdis.Underland@nokc.no)
Rigmor C Berg (Rigmor.Berg@nokc.no)

Version: 3 Date: 11 April 2014

Author's response to reviews: see over
Interventions aimed at increasing the level of physical activity by including organised follow-up: a systematic review of effect.
Eva Denison, Gunn E Vist, Vigdis Underland and Rigmor C Berg

We thank the reviewers for their comments and we have revised the manuscript accordingly.

Please find a detailed account of our actions below.

Dr. Kousoulis:
1. In the final paragraph of the Introduction, the aims of the full study should be stated. Thus, an aim of the study is to systematically review the literature and then report the results. (MER)
   We have changed the aim, now stated “we aim to 1) systematically review and report the results concerning effects of organised follow-up on PA, and 2) discuss issues in data synthesis and interpretation of results from non-standardised reporting of PA outcomes and measurement in the included studies.”

2. Study design: It is not clear to me why the authors considered systematic reviews for inclusion in their review. In standard systematic reviews only primary research tends to be included, as secondary literature then has to be assessed for overlapping articles and is supposed to incorporate the former anyway. The authors do not include any reviews in their final list, however, this is a question that needs to be addressed. Additionally, it is not clear what is the study design of “overviews of systematic reviews”. (MCR)
   It is standard procedure at our centre, and others dedicated to conducting systematic reviews, to search for overviews of systematic reviews and systematic reviews in order to avoid unnecessary work. If reviews that match our inclusion criteria are not identified we carry out a systematic review of primary studies. We have revised as follows: “We considered first overviews of systematic reviews and systematic reviews. Then we considered randomised controlled trials, cluster-randomised controlled trials, quasi-randomised controlled trials, controlled before-and-after studies, and interrupted time-series analyses.”
   (An overview of systematic reviews is, according to the Cochrane Handbook, a systematic review of systematic reviews).

3. Population: An explicit list of the specific diseases needs to be included, instead of the two examples. (MCR)
   The protocol for the review did not specify a list of diseases other than the two examples. We kept the sentence in the Results section stating that “Twelve studies involved persons with low levels of physical activity, and two studies included persons with high blood pressure.”

4. Literature searches: Could the authors explain how these specific journals were selected? (MER)
   We have added an explanation on p 7 stating “c) the following journals that we expected to publish papers that could potentially match our inclusion criteria”.

5. Data extraction: The comment about heterogeneity of included papers is better suited in the Results section. How was heterogeneity assessed? (MER)
   We have moved the comment to the Results section now stating” Due to clinical heterogeneity of measurements of the primary outcome, data were synthesised descriptively”.
6. The authors include their keywords and search strategy in the Additional File, but it is not clear why numbers of retrieved papers for all keywords is important to include. More interesting to the reader are the combinations of keywords and algorithms along with numbers of retrieved articles in each database. (MER)

We have clarified the search process on p 7 as follows: “The search was updated by a search in MEDLINE in June 2012. The search strategy for the 2012 search is available in Additional file 1.” The Additional file we refer to contains the keywords and algorithms and retrieved publications in MEDLINE which was the database searched in 2012.

7. The Results section is not concise and generally hard to follow and at many points it feels that the authors are repeating a lot of the information contained in the tables. I would suggest to the authors to review this section and only include collective information, minimise repetition and delete the part on Secondary Outcomes since they are not discussed in later sections. (MER)

We have reduced repetition of information in the Results section by deleting text and referring to the tables as much as possible. In the section reporting on the effects of the interventions we have removed the outcomes. We wish to keep the number of comparisons and our ratings of confidence in the effect estimates because this illustrates the point we are making about the operationalization and measurement of physical activity. We don’t quote because it’s a long quote. Please refer to pp. 8-12.

8. The authors have made a good effort to discuss the results of the study, especially in terms of emerging issues in existing literature. Thus, I see that their review not only addresses the topic of physical activity interventions but also how relevant studies could be designed in better terms. This is a point that the authors may wish to raise in their paper. (DR)

Thank you for the good suggestion. We have added in the section on core outcome sets that “A related issue that would preferably be incorporated in such work concerns the time points for follow-up in evaluations of interventions to increase physical activity. Study designs should reflect existing knowledge regarding the acquisition and maintenance of behaviour change. “We also state this briefly in the conclusion: “The adoption of “core sets” of outcomes and planning of time points for follow-up according to behaviour change theory may therefore result in considerable improvements of the internal validity of future research results.”

9. Limitations: The authors identify only one limitation in the final paragraph of their Discussion. However, a number of other limitations are identified in previous paragraphs (e.g. heterogeneity, recall bias in the included studies, several included studies of borderline quality, 2nd paragraph in page 16). I suggest a slight restructure to collect all the limitations in one paragraph. (DR)

In the discussion about limitations we refer to limitations in the conduct of the systematic review, while the limitations suggested by the reviewer seem to refer more to limitations arising from the included studies. We would like to keep these two issues separate, thus we have not revised this part.

10. In their acknowledgement the authors state that MG and MM carried out the literature searches which contradict the statement in page 8. This point should be clarified. (MER)

We have clarified in the Acknowledgement that MG and MM carried out the literature searches in the electronic data bases.

11. The PRISMA statement is included but I do not see that it is completed. (MER)

We don’t understand this comment. Could it be that information got lost in the transfer of data files? The statement is completed as instructed and the Figure legend appears after the Reference list.
Dr. Tatsioni:
Major compulsory revisions

Background
1) Authors may consider shortening the length of the 3 first paragraphs to one paragraph
We have shortened the text and combined the first three paragraphs to one paragraph. We don’t quote this because it’s a long paragraph. Please refer to pp. 3-5.

Methods
1) Inclusion criteria: Was there any language restriction for the eligible studies?
We have clarified as follows: “There were no language restrictions for the literature search. Publications in other languages than English or Scandinavian have been translated if judged relevant.”

2) Literature searches: Was there any personal contact with investigators to provide additional data?
We have clarified that “There was no need to contact authors to provide additional data.”

Results
1) Interventions: Authors may consider expand on the characteristics of those delivering the intervention.
We have added information as follows: “The interventions were mainly delivered by exercise specialists.”

2) Interventions: Authors may consider provide information on adherence/ fidelity to delivery protocols, if they are available.
We have added information as follows: “Fidelity to the intervention protocol was reported in one study only [20] and ranged between 77 and 84 %.”

3) Outcomes and follow-up periods: For which questionnaires that were used to measure primary outcomes, psychometric characteristics were available?
We have added information as follows: “Data concerning psychometric properties of questionnaires were reported in one study only [28].”

4) Outcomes and follow-up periods: Did studies report harms because of the interventions?
We have added this information, as follows: “Harm was not reported in any of the studies.”

Discussion
1) Previous report suggested that medium-intensity counselling interventions on physical activity produced a 38-minute increase in physical activity per week.
The intensity of the intervention was categorized by total patient contact time as low (1 to 30 minutes), medium (31 to 360 minutes), or high (>360 minutes).
Authors may comment on the intensity of the organized follow up programs of the included studies, and whether this may be have interfered with the results.
We have added information on total participant contact, as available, at the beginning of the section describing the interventions: “Total participant contact time over 10-12 weeks generally varied between one and four hours, except for the supervised group PA which varied between 20 and 36 hours.”
We also added in the Discussion in the section on adherence to the intervention “This makes it difficult to attempt to assess whether total participant contact time would have had any influence on the results because planned contact time does not necessarily equal actual contact time.”

2) Authors may discuss on the potential advantages that a pragmatic randomized trial may have in addressing diversity concerning both the conceptualisation and operationalization of physical activity programs.

We agree with Dr. Tatsioni that pragmatic randomized trials have a great potential to improve the external validity of experimental studies while maintaining internal validity. However, we feel that this issue is somewhat beside the point we are raising in the report which is more about data collection than study design. Thus we have not revised this part.

Discretionary Revisions
Methods
1) Literature searches and study inclusion/exclusion: Authors may change this title to “Literature searches”
We have changed the title accordingly.