Reviewer’s report

Title: Long-term effectiveness of physical activity interventions in adults aged 55 to 70 years: a systematic review and meta-analysis

Version: 1 Date: 25 January 2013

Reviewer: Manuela L Ferreira

Reviewer’s report:

This is a well-conducted systematic review on a timely and important public health issue. I have some comments and suggestions listed below:

Title: please include the outcome of interest and intervention type in the title. The way the title reads at the moment, it wrongly suggests the systematic review aims at establishing the effectiveness of physical activity on any type of outcome (i.e. obesity, quality of life, etc) in people aged 55 to 70.

Abstract: please also clarify the aims in the abstract, by adding intervention type and outcomes. Also explain in the abstract what the authors mean by physical activity behaviours. In the methods, add and clarify the sensitivity analyses conducted in the study. The results need to include 95% CIs.

Introduction: It is not until the end of the introduction that it becomes clear that the authors aim to assess the effectiveness of interventions to promote physical activity on PA behaviour. This needs to be addressed earlier in the manuscript.

Methods: Why were studies from 'less developed countries' excluded from the review? And how might that affect the generalisability of your results?

Why was the search conducted back to 2000 only? This needs to be justified as well.

The results report effects at 12 months. Do the authors mean up to 12 months, or were trials with follow-ups of shorter length excluded from the review?

Please clarify what you mean by narrative analyses. Is it vote-counting? If yes, please report mean differences and 95% CI for individual trials whenever possible.

How was risk of bias assessed?

Results: The results are focussed on types of outcomes, rather than types of interventions. The problem with this approach is that the reader is left with very little information on what type of approach is actually effective. There is no mention, except for one of the tables, of what the interventions were and which ones are effective and which aren’t.

On page 10, do the authors mean 'high attrition bias' in the last paragraph?

The report on trials comparing multiple interventions is vote-counting. Please see comment above.
Discussion: can results be generalised, given studies from lower income
countries were excluded? What is your target population?
There is high (95%) degree of between-trial heterogeneity in one of the analyses.
Could that be caused by the inclusion of heterogeneous interventions? Please
comment.

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a
statistician.

**Declaration of competing interests:**
I do not have any competing interests with the any of the authors or in relation to
the content of the manuscript.