Reviewer's report

Title: Predictors of long-term change of a physical activity promotion programme in Primary Care

Version: 2  Date: 6 November 2013

Reviewer: Kadri Suija

Reviewer's report:

Many thanks for kindly inviting me to review this interesting paper, which addresses socio-demographic and clinical characteristics associated with greater improvement in physical activity among sedentary patients in primary health care.

1. Is the question posed by the authors well defined?
   Yes, it is.

2. Are the methods appropriate and well described? (Major Compulsory Revisions)
   The methods are not described with sufficient details.

   On page 6 authors describe recruitment procedure, which is quite complex. In my opinion authors should think about using flowchart.

   There were 16663 patients in the initial sample, however only 4927 patients completed the measurements. For example 999 of the patients refused to participate. How these people differ from others who completed the study? Patients who gave their informed consent were probably more motivated than those who refused to participate. Could it influence the results? In my opinion this issue should be discussed in the discussion part.

   On page 6 authors write that some people were excluded to do cardiovascular disease, severe emotional stress etc. Who decided it and what were the exact exclusion criteria?

   On page 6 authors write that the negative answer to the screening questions used by doctors to identify active patients had a predictive value of 87.6%. What was the screening question? Is it already finding?

On page 7 authors write about the intervention used in the study. I think it is important to clarify how it was done and how do we know that it was done in a
similar way by all the physicians? What does mean structured advice? Did the physicians use some well-known method, for example motivational interviewing?

On page 7 authors write that control group physicians delayed any systematic intervention related to PA. How this aspect was controlled? I mean that if he/she already gets feedback from the physician that his/her PA level does not fulfil minimum recommendation, it is already intervention.

On page 7 authors write that the primary outcome measure was the change in PA from baseline to 6, 12, and 24 months after the start of the intervention. What change was clinically relevant?

On page 8 authors describe the statements used to describe the readiness to change. I think these questions are good but did they also ask why he/she does not intend to start exercise. Maybe there is some important but modifiable reason?

On page 8 authors write that cardiovascular risk factors were reported by the family doctors. What data was used, because if the patients had just visited his/her family doctor and heard that laboratory results are not good he/her may be more ready to make a change. On the other hand if the patient has not been in the tests for long time or refused to do tests, it illustrates his/her readiness to change.

3. Are the data sound? (Minor Essential Revisions)

On page 11 authors write that being older than 50 years old, male gender and pertaining to the lowest social class was positively associated with a greater increase in activity dose. According to the confidence intervals (Table 2) only male gender and measurement season (spring) are significant.

Interestingly the baseline readiness to change at the 12 month follow-up was higher than in 24 month follow-up (Table 2, the readiness to change in action phase). Why?

4. Does the manuscript adhere to the relevant standards for reporting and data deposition? (Discretionary Revisions)

The literature review in Background is fine. However, I recommend that the aim of the study should be stated clearly in the last paragraph of the background.

On page 11 Figure 2 should be Table 2.

5. Are the discussion and conclusions well balanced and adequately supported by the data? (Minor Compulsory Revisions)

The discussion is adequately supported by data. However, some of the limitations in study methods should also be discussed in the discussion.

Please cover the limits on the generalizability of your findings.

6. Are limitations of the work clearly stated?

Yes, they are.

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

8. Do the title and abstract accurately convey what has been found?
The title and abstract are fine.

9. Is the writing acceptable?
The writing is acceptable and the organisation of the paper is fine.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests: 'I declare that I have no competing interests'.

Conclusion:
In conclusion the subject addressed in this manuscript is worth of investigation. However, the manuscript needs minor revisions before being published.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**
I declare that I have no competing interests.