Reviewer's report

Title: Guidance strategies for a participatory ergonomic intervention to increase the use of ergonomic measures of workers in construction companies: a study design of a randomised trial

Version: 2
Date: 20 December 2013

Reviewer: Lars L. Andersen

Reviewer's report:

This study protocol describes the design of a study to evaluate the effectiveness of the face-to-face guidance strategy and the e-guidance strategy on use of ergonomic measures. It is not easy to perform research in this occupational group and I want to compliment the authors for doing this. Finding ways to reduce the workload is important, and I think this study could potentially contribute in this field. Furthermore, the authors plan a thorough process evaluation, which strengthens this study. The inclusion of cost-benefit analysis is also important as many employers will find the cost-benefit aspect critical in their decision to use this intervention. I am looking forward to seeing the results when the study is done. The dates of the trial registration suggests that the data collection is almost done, so I don’t feel it would be right for me to suggest changes to the design. Thus, I will only make comments that may help in the study presentation.

I have a few comments:

Please provide the CONSORT checklist as a supplementary file. At least I was not able to find this with the manuscript.

Abstract: “13 email contacts”, it is not clear why 13 is mentioned here? It should rather be in the methods

Introduction:

You may find this reference useful for the Introduction: PubMed ID 24337669, as it shows that physical exertion among blue-collar workers is related to objectively measured relative muscle loading (measured with EMG).

Methods:

“The study protocol did not met the criteria of the “Act medical-scientific research with human participants” and therefore, the Medical Ethics Committee of the Academic Medical Center Amsterdam (AMC) was not asked for approval of the study protocol. “

Who decided this? The researchers or the ethical committee? Could you provide a link to this act? I guess there would be a website link.

Primary outcome: “Construction workers will be asked at
baseline and after six months whether they used ergonomic measures during the last two months during their work (yes or no)

This seems like a rather crude measure. Are there no questions about the frequency of use?

Sample size: you anticipate that the intra cluster correlation is quite small, ICC = 0.01. What is the reason for this assumption?

Randomization: Not optimal, but probably the most realistic way in this setting

Statistics: This section should be more clear. Which variables do you refer to when you say the ‘independent outcomes’? Further, you state that you will use a linear mixed model to test differences in the outcomes. Yet the primary outcome as described in the methods is a dichotomous (yes/no) outcome. Thus, logistic regression would be more appropriate? But then again you have the nesting effects, so what you really would need would probably be a ‘generalized linear mixed model’ rather than a ‘linear mixed model’. Overall, I think you should consult a statistician about this and make this section clearer

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I have no competing interests