Reviewer’s report

Title: The association between sedentary behaviour and risk of anxiety: A Systematic Review

Version: 2
Date: 19 March 2015

Reviewer: Karin Proper

Reviewer’s report:

This review describes a review to the association between sedentary behavior and anxiety. The topic of sedentary behavior is of importance and research to the health impact has increased attention in the past recent years. The authors have performed a systematic search to relevant literature but only identified ten studies, of which the majority was cross-sectional in design. Despite my interest in the research to the health effects of sedentary behavior, I have several serious concerns about the design of the review performed, see below.

Major concerns

The authors have evaluated the methodological quality of each study using a tool assessing six methodological components. However, it remains unclear why did assessed the quality. In the description of the results, or the conclusions about the evidence on the association between sedentary behavior and anxiety, the methodological quality has not been taken into account. In this context, I also wonder how the authors came to a conclusion. The use of a best evidence synthesis could have been applied, or would be strongly recommended.

Another concern relates to the inclusion of an experimental study. As the aim is to study the association between sedentary behavior and anxiety, I would not include an intervention study, except for when analyses had been done in the control group, or when baseline data of the total group had been used. Otherwise, the effect of the intervention on anxiety would have been studied, and not primarily the relation between sitting and anxiety.

Finally, in the introduction, but also in the discussion, the authors have referred to literature about the relation between sedentary behaviors and various health outcomes. However, the authors describe a too ‘positive’ association, by only referring to studies that showed an association between sitting and adverse health outcomes. I miss a couple of systematic reviews in this field that have concluded either inconclusive, insufficient evidence or limited evidence for sedentary behavior being a risk factor for certain health outcomes.

Minor comments

The authors apply the term risk of bias and methodological quality. These terms imply the same, where the quality items refer to items that indicate the risk of bias: a high methodological quality implies a low risk of bias.
In case the component was not described, the authors decided to give a weak rating. Instead, authors of the papers could have been contacted.

Lines 148-149. The symbols are not readable.

Line 216. The author name (ref 37) has not been written correctly.

The results were described separately for screen-time (including TV, computer and electronic games), TV viewing, and computer use. I got confused in the reporting of the studies on TV viewing and computer use. Where were they described? Moreover, in the paragraph about TV viewing and computer use, there were two references (31 and 36) that were not described in the paragraph on screen-time, i.e. TV viewing and computer use. Please, explain this.

Lines 290-299 are about the link with depression, i.e. another mental disorder, and in my opinion not relevant in this section.

**Level of interest:** An article of limited interest

**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