Reviewer's report

Title: Stability and change in screen-based sedentary behaviours and associated factors among Norwegian children in the transition between childhood and adolescence

Version: 2 Date: 5 December 2011

Reviewer: Lenie van Rossem

Reviewer's report:

This paper concerns tracking of sedentary behaviors over a 2-year period in adolescents. The authors also look at correlates of tracking in this population. To answer the study question, a cohort design is used. Adolescents were recruited in schools and were followed-up twice to obtain information for the study questions.

The statistical methods seem appropriate. There is no single method to study tracking, and the authors have used several methods to build their statement.

Because the data collection was done at school level, a multilevel analysis should be considered. The authors explain that they checked for the clustering effect, but could not detect one. Therefore the analyses have not been adjusted for the school level, which seems a plausible explanation.

Major Compulsory Revisions

1. It is not clear for me why the authors have chosen to create gender-specific tertiles, and stratify the analysis for gender. Not stratifying will increase power, as confidence intervals are wide. Unless the authors have a good reason for stratifying for gender, I would recommend to analyze boys and girls together, and maybe put sex-specific estimates in a appendix.

2. Did the authors consider a GEE to evaluate tracking for repeated (>2) measurements? A GEE can adjust for continuous and categorical covariates.

Minor Essential Revisions

1. A minor issue is that the authors report means and SD, while they do not give a statement that the data are appropriate for that (i.e. normally distributed).

2. Results section: readers would benefit for a more concrete description of the beta's. For example, low parental educational level resulted in an almost 3 hour increase in TST per week.

3. Attrition analyses showed that the baseline measurements did not differ between participants and drop-outs. Although no more information can be retrieved for the attrition analyses itself, the inference of this analyses is not
It is relevant to consider whether drop-outs would be different considering their tracking.

4. Multinomial regression is used to assess predictors of tracking high sedentary behavior. This seems a dichotomous variable, so I assume the authors did a multiple binary logistic regression?

Discretionary Revisions

1. Reporting odds ratios is generally fine for a dichotomous/categorical outcome. However, because the event (high sedentary behavior) is very common, the odds ratios will be much higher than risk ratios. The authors could consider using risk ratios instead of odds ratios, to enhance interpretation and because it is easily performed in most statistical packages. However, odds ratios are measures of association, which is the main aim of this paper, and the description of the associations are correct.

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 declare that I have no competing interests