Reviewer's report

Title: The relationship between school physical activity policy and objectively measured physical activity of elementary school students: A multilevel model analysis

Version: Date: 31 October 2013

Reviewer: Willem De Keyzer

Reviewer's report:

The authors report on the relationship between school level characteristics assessed using the School Health Environment Survey (SHES physical activity tool) and objectively measured physical activity of students using accelerometry. Therefore, a sample of 17 elementary schools comprising 856 students (PR: 50%) was studied.

The manuscript is in general very well written and data is presented in a sound scientific way.

• Major Compulsory Revisions

Discussion:

1. The authors mention the cross-sectional design of their study which prohibits them to investigate causal relationships between school environment and PA. This statement is valid, however, some practical implications of their finding that schools with written policies on PA were observed to have students who were more physically active should be provided. Obviously, increase of written policies alone will not increase the PA of students on any given school. Please elaborate also on the possible underlying mechanisms and potential for future research.

• Minor Essential Revisions

Background:

2. Consider revising the Background section by adding some information about the work performed by Leatherdale et al., i.e., how was physical activity assessed in that study? Also, in my opinion, the paragraph on the results from the study performed in Denmark and US would fit better in the discussion section.

Methods:

3. Please provide school level descriptives like measures of central tendency and dispersion of total number of students per school. This provides the reader with an indication of the size of the schools investigated.

4. Please elaborate on the sentence: “Given the conservative cutoff points adopted ….” This is unclear to me.

Results:

5. I feel that figure 1 adds little to the manuscript. The paragraph explaining the
figure is redundant (this point was already addressed in the preceding paragraph)

• Discretionary Revisions

6. Results: “Overweight/obese students had on average 5.27 fewer minutes…”

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests