Reviewer’s report

Title: Effects of a physical education intervention on cognitive function in young children: randomized controlled pilot study.

Version: 3 Date: 17 July 2011

Reviewer: Mai Jeanette Maidy Chinapaw

Reviewer’s report:

The authors did a good job in revising the manuscript but I still have a number of issues left.

Abstract:
I suggest including the ICCs and the between group difference including 95% CI in the text

Introduction
P4 line 6,7 I suggest to change this sentence into: These studies need to establish which interventions are practical and what is the optimal dose of PA.

Methods
Text says n=184 while figure 1 states n=185

Results
Page 12 line 5 between group difference (instead of change)
Page 12 line 7: please add the beta and 95% CI instead of p-values
Page 12 line 7 In the unadjusted analysis (add analysis)

Discussion
Page 12 line 1: revise into: physical activity (including PE)
Line 6-8: I suggest removing this sentence or placing it somewhere else in the discussion explaining what you mean to say

Page 13 line 5: I suggest adding the ICCs
Line 13,14. I suggest changing to: adequate to detect effects of this magnitude. And delete from which could not be…

Page 14
Study limitations line 3: I suggest changing into: and sufficient to inform power calculations for more definite RCTs.
The lack of consensus on the accelerometer cut points should be added to this section of the discussion. The authors chose a quite high cut point for sedentary behaviour. This may explain the high percentage of time spent sedentary in the
PE classes.

P15 1st paragraph: I still miss information on the reliability study of the CAS: Was that population similar in terms of gender, age, SES, education, ethnicity, culture etc? was the time between test and retest also 3 weeks? What difference between the CAS and the other two tests could explain different findings regarding reliability?

Table 1 median and IQR can be omitted from the title

Table 2 median and IQR can be added to the title and omitted from the table

Table 4 Please provide between group differences and confidence intervals instead of p-values this is much more informative. Notice the text now states between group difference in change this is not correct.

The numbers provided in the table are not included in the CIs (e.g. 0.01 (3.29)) this makes no sense.

Figure 1 CPRS:S about half of the parents did not return the questionnaire which is also an important finding regarding the feasibility of this measure.

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

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**

I declare that I have no competing interests