Reviewer's report

Title: Physical activity, cardiorespiratory fitness, and metabolic syndrome in adolescents: a cross-sectional study.

Version: 3 Date: 30 July 2011

Reviewer: Xiaolin Yang

Reviewer's report:

Dear colleagues,

You have revised your manuscript about physical activity, fitness and metabolic syndrome among the Brazilian adolescents. The paper has improved but still there is a question that may need a more thorough examination.

In abstract, the authors have concluded that the prevalence of metabolic syndrome is high among adolescents who are inactive and those with low cardiorespiratory fitness. However, the association between physical activity and metabolic syndrome are not significant in the result. the inconsistent result may be own to the dichotomous definition of metabolic syndrome. The continuous metabolic syndrome is also important because the power to detect an association between both physical activity and metabolic syndrome may be statistically more sensitive and less prone to error than dichotomous methods in children and adolescents, particularly in relatively small samples. I recommend the authors make just one more analysis using the continuous variables for both physical activity/fitness and metabolic syndrome and check whether the difference between two definitions of metabolic syndrome. This is also due to the fact that there is a linear significant relationship between the variables in Figures 1 and 2.

There is a minor correction in Table 2. 95% confidence interval is not complete in high blood pressure for both sexes, hypertriglyceridemia for males. Table 3 shall add the number of subjects in each category.

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.