Reviewer's report

Title: What do adolescents want in order to become more active?

Version: 1 Date: 28 May 2013

Reviewer: Palma Chillón

Reviewer's report:

This manuscript addresses an important public health issue, i.e. the adolescent´s preferences for becoming more physically active. The manuscript is clear and well written, and the topic is quite new in the scientific literature. Some major and minor issues regarding mainly the methods and discussion might be addressed, to improve the current status of the manuscript. See the comments below.

Major Compulsory Revisions:

1. It is recommended to reorganize the information within the methods, attending the three first headings of study design and setting, participant recruitment and data collections procedures. It seems that the information is mixed. There is information about “participant recruitment” in the “data collection procedures” (i.e. “All participants with valid home… boost recruitment”; “Due to low recruitment…”); there is information about “study design and setting” in the “data collection procedures” (i.e. “Participants were invited to be measured on three… “–this information should be at the beginning for a better understanding of the measurements and then, explain that data for the 3rd measurement was used-) and there is information about “study design and setting” in the “participant recruitment” (i.e. “Data in this paper are from the 3rd measurement of this cohort in 2011..”). Moreover, the information provided about the participant recruitment at baseline might be reduced, since it has already been described in other publications.

2. The outcome variable of the list of 6 activity/sports includes the category of “using a gym”, which is a location and it is not an activity. People can go to a gym and have fitness classes or dancing, or even martial arts; and these activities belongs to other categories. So, the information reported by adolescents might be overlapped, and the continuous variable of the sum of all activity types might be overestimated. Consequently, it is suggested to run the analysis eliminating this category (using a gym) from both variables (categorical and continuous) and modify the results (manuscript and tables).

In the results, when reporting the percentage of adolescents using the gym, there are example of activities in the gym such as treadmills and weights. But it seems that this information, about activities that you can do in the gym, was not included in the questionnaire.

3. Discussion. It is suggested addressing two main interests related with the results:
a) The manuscript provides information about the adolescent’s preferences; as a supplement it is important to know why they do not achieve these preferences (i.e., the barriers). The lack of time due to study, has been a 1st barrier among Spanish adolescent’s population. It is suggested including data about the UK adolescent’s barriers for practicing physical activity. This idea will improve the discussion in the last paragraph (just before “strengths and limitations”).

b) Authors should address more deeply the utility of this research into the implementation of real interventions and provide ideas about how and where implement these. It seems that school is the most suitable setting to implement interventions through adolescents; however, it might be difficult to attend the individual differences (sex, weight status, socioeconomic status…) of the students, because the organization of schools is group-based (i.e., 1º A, 1º B, 2º A…).

Minor Essential Revisions:

1. Methods.

The method should be reorganized regarding the previous major comment. There are minor comments to address (the location of these changes in the manuscript is indicated regarding the current non-organized structure of the methods):

- Participant recruitment, 3rd sentence. It is suggested clarifying the meaning of Year 5 children. It seems to be a grade or level but it might be confused with the children age. Since readers could not be familiar with the UK educational System, a clarification might be included.

- Data collection procedures, 1st sentence. It is suggested indicating the year of every measurement within each parenthesis after the children age.

- Outcome variables, 2nd line. It is suggested using “participants” instead of “volunteers”.

- Objective physical activity measurement. It is suggested eliminating the subheading of “Physical activity data processing”.

- Statistics, last line. It is suggested replacing “secondary school” for “school”, since it has been previously used in the whole manuscript.

2. Results.

- Third paragraph, 4th line. It is suggested to move the parenthesis of (mean(SD)) later in the sentence: “The number of activities (mean(SD))…”.

- Table 3.
  - Enumerate correctly the table 3 (it is enumerated as table 2 now).
  - Eliminate the free line space after dance.

- Table 4.
Enumerate correctly the table 4 (it is enumerated as table 3 now).
Eliminate the free line space after “at a local community centre”.

**Level of interest:** An article of importance in its field

**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'