Reviewer's report

Title: Age-Period-Cohort Analysis for Trends in Body Mass Index in Ireland

Version: 1 Date: 29 April 2013

Reviewer: JARA VALTUEÑA

Reviewer's report:

Reviewer comments:

The authors have studied the effect of age, period and cohort on the trends in obesity as measured by body mass index by analysing the results collected from a large cohort of subjects in Ireland at different years. It is an interesting and well written paper. The use of partial Least Squares (PLS) add value to the work, due to it can predict and obtain linear effects of age, period and cohort on obesity. PLS analysis revealed a positive period effect over the years and it allows for a better understanding of age and generation effect on BMI. Some interesting associations have been identified.

Major Compulsory Revisions

The paper is mainly focus on the statistical method. Please add what the clinical significance, if any, of the associations might be around the text.

The methods part should contain more details regarding to sampling methodology: mean age of the sample, age groups, egg…

There needs to be significant revision of the discussion in particular a detailed review regarding the actual strength of associations observed and also limitations of the study should be stated.

The revision extends to the discussion of the results of the present study and the comparison of these results with previous reports.

The results are clearly presented.

Please follow the journal instructions for authors; Three to ten keywords representing the main content of the article should be provided after the abstract section. A list of abbreviations can be provided, which should precede the competing interests and authors' contributions.

Your results and conclusions reveal that older men and women had in general higher BMI than yougthers, that is physiologically normal. Have you corrected BMI according different ages?

And regarding to previously said, you also conclude that you have a better understanding of the different risk groups which allows for effective public intervention measures. That it means that should be only targeted for older
ages?
What’s about childhood prevention?

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

**Quality of written English:** Acceptable

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