Reviewer’s report

Title: Swimming pool attendance is related to asthma among atopic school children: A population-based study

Version: 2 Date: 12 March 2015

Reviewer: Laia Font

Reviewer’s report:

The authors have answered all the comments and address them in the text. I have some further comments.

Major compulsory revision:

1. A main limitation of the current study is that, in part from being cross-sectional, there is only information on current exposure. All previous studies on childhood asthma, but one, are cross-sectional but they report retrospectively swimming pool attendance during the first years of life, which is supposed to be the critical period. The current study describes a significant association with current swimming and both current asthma and doctor-diagnosed asthma. Since asthma is usually diagnosed much before than the age of the studied children (11-12y), the association detected with diagnosed asthma can be causal only if those children currently swimming more already did it at early ages. This lack of data on early swimming is an important limitation that should be clearly mentioned in the paper.

2. Results, first paragraph. Please, report the prevalence of swimming in the original categories, since it is relevant for comparison of the exposure between countries and studies. It would be informative to also present the results for the exposure variable in 3 categories to assess a dose-response. Since there is enough room, I would suggest adding them in another table.

3. Results. It is misleading that there is a detailed description of the unadjusted ORs in paragraphs 3 and 4, while the ORs on table 2 are the adjusted ones. Although it is mentioned that the adjusted and unadjusted ORs are similar, it would be clearer for the reader if the ORs reported in the text are mainly those find on the table. Since the adjusted ORs are more relevant, I would detail them in the text.

4. Discussion. A potential confounders that has not been analyzed and can be relevant is physical activity.

Discretionary revisions:

5. Abstract: Last sentence in the results (No association was found between current pool attendance and wheeze), I suggest to add “sensitization, rhinitis or eczema”.

6. Results, table 2. Please, specify the variables included in the multivariate
models as a footnote. Also the swimming categories that are being compared.

7. Discussion, first sentence. Please, add “currently” before “attending indoor swimming pools”.

**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.