Author's response to reviews

**Title:** Impact of air pollution on pulmonary function and respiratory symptoms in children during different seasons of the year. A cohort study.

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**Version:** 2  **Date:** 19 September 2009

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September 19, 2009

Scott Edmunds PhD
Senior Editor
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We enclose the second version of the manuscript number 1571216295273858 entitled “Impact of air pollution on pulmonary function and respiratory symptoms in children. Longitudinal repeated-measures study”.

We added evaluation of PM10 in both schools considering the air pollutant levels at the closest fixed-site monitor to each school. Schools were located within 2 kilometers from one of the 3 selected fixed-site air pollution monitoring stations.

We appreciate and list the changes suggested by the reviewers as follows:

Reviewer 1

Major compulsory revisions

1) We changed the title according to the main purpose: “to determine the impact of air pollution on the prevalence of pulmonary function alterations and respiratory symptoms in school-age children in a longitudinal repeated-measures study”.

2) It was specified in table 1 that baseline evaluation was performed in winter and it explains the no significant differences in most variables.

3) We adjusted discussion according to the new statistical evaluation of data.
4) Tables 4 and 5 were modified and all gaseous pollutants included such as the reviewer suggested.

5) We eliminated the variable “season” from the analysis, in case of the variable “school”, that place with the lowest pollutant levels was the reference school.

6) Children # 9 years and their parents answered together the ISAAC questionnaire, whereas older children answered for themselves.

7) We reviewed and corrected units of gaseous and pollutants values in table 2. Also season-specific pollutant levels were added in this table.

8) All symptom frequencies were added in table 3.

Minor essential revisions

1) We did the multivariate statistical analysis over (table 5).

2) Terminology was reviewed.

3) Methods used to measure air pollutant levels were given.

4) Title was changed according to the aim purpose.

5) Figure 3 was eliminated because this information was included in table 2.

6) We changed “hoped” to “predicted”

Discretionary revisions

1) Statistical analysis was specified.

2) “NS” was eliminated in tables.

3) Numbers of decimal places are now consistent in all tables.

Reviewer 2

1) Definition for restrictive pattern was specified; however, TPC was not evaluated in our study.

2) It was added in methods how pollutants were assessed (pages 7-8).

3) We agree that it is necessary a bigger sample size to evaluate prevalence according to the ISAAC questionnaire and we changed “prevalence” to “frequency”.

4) Statistical analysis was specified.

5) Atopy was defined.

6) In tables it was specified “active smoking”.

7) We discuss the external validity of the results according to specific environmental and geographic conditions in Salamanca city.

Sincerely Yours
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