Reviewer's report

Title: Increased prevalence of asthma and other allergic conditions in Colombia

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Reviewer: Leticia Grize

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Manuscript name: Increased prevalence of asthma and other allergic conditions in Colombia
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This manuscript presents results of a cross-sectional study carried out in 6 cities in Colombia in the academic year 2009-2010. It compares results of this study with those of an earlier survey (1998-2000).

MAJOR COMPULSORY REVISIONS

1.) Title:
- The title implies that the prevalence of the described allergic diseases is compared at least to an earlier point in time. This is not the case, even if in the discussion symptoms prevalence from an earlier study are given. Please adjust the title to your results or present a comparison of results of the present study with those from the previous (your reference 16). Please see comments on the Results part (main text).

2.) In the abstract:
- The objectives of the study given here (apart from the first) are different as those given in the main text at the end of the ‘background’. Please re-state your objectives in the abstract and in the background.
- In the conclusions, it is said that the symptoms prevalence of the described diseases are higher than a decade ago but it is not indicated which were the prevalence a decade ago. Please complete the results.

3.) In the methods:
- Please be sure that you show all the relevant questions for the definition of the allergic disease or disease symptoms. Table 4 gives the prevalence of diagnosed asthma but it is not indicated that this question was posed and how it was posed.
- Results for disease severity are given, but how was this determined? Which were the questions posed? If the questions were exactly the same as those of one of the ISAAC phases, please give the appropriate reference, if not please
write them in this section.

4.) In the results:
- Because of the manuscript title, it is expected to have a certain “time” comparison of the presented symptoms prevalence. These comparisons should be presented in the results. The same methodology should be used for both surveys, weights should be calculated for the first survey and then comparisons made. This, only if the “measurement methods” were the same (relevant questions to each disease symptoms) in both surveys.
- Related to the above, the reader should have numbers from the previous survey at hand. He/She should not be forced to look for the given reference. Besides, some of the numbers cited (in the discussion) are not given in reference 16, but one can get them by averaging results in the tables.
- Since “allergic conditions” are different for different age groups and for sexes at different stages of their life, an overall prevalence adjusted by the available socio-demographic factors should be presented. From the manuscript text, it would be assumed that the weights would take care only of sample demographic issues.

5.) In the discussion:
- Was the questionnaire in the present survey similar enough if not identical to the first survey to compare both of them? In the previous survey, the definition of asthma is based in two questions (Have you had wheezing… and Has your physician ever told you…)(Ref 16) while in the present study it is based only on the first question (it is stated as such in the methods). This is the same with rhinitis and eczema.
- In addition, the prevalence in this manuscript are (survey) weighted but not in the results from your reference 16 (it is stated that they were sex-adjusted). The comparisons are not quite fair. Specially that, on Atopic Eczema, since in the first study (Ref. 16) it was asked “Have you (or your child) had an intermittent itchy rash for AT LEAST 6 MONTHS in the past 12 months?” which does not seems to be the case in the present manuscript. Besides it seems to be quite a difference on the distribution the education level.
- The classification of atopic subjects based on specific IgE levels is based on tests to different allergens (Blomia tropicalis in this manuscript and Blattella germanica in the earlier survey, in addition to D. pteronyssius), here also, comparisons are not fair.
- Sentence on “Differences of allergen sensitization between cases and controls could be greater if we had included….”, should be part of the study limitations.
- Please, if you would like to make the point that in developing countries, allergic conditions prevalence are still increasing compared to developed ones, please give some numbers from the cited references, so the reader gets an idea of dimensions of the leveling off in industrialized countries (even if most of the readers have an idea).
6.) In the conclusions:
- Please rephrase the first sentence “… these conditions..” to “…allergic conditions…”
- The conclusions should reflect what is reported in the results. The results do not shown any kind of increase on the symptoms prevalence. Please change discussion or complement results.

MINOR ESSENTIAL REVISIONS:

1.) In general:
- There are few syntax errors in the English, please re-check language.
  (Example: first sentence in background “… that suggests the disease burden…” should rather read “… that suggests that the disease burden…”)

2.) In the tables:
- Could you please add the sample size to the titles of the tables so the reader does not have to add or wonder if there are missing values?

3.) In the References:
- Please check that all references are listed in the format required by the journal (example of differences are: references 4, 20, 21 and 29 have a ‘;’ after the year, reference 23 a ‘.’ and all others a ‘,’. Also, the issue number is given in references 3, 15, 16 and 29 while all others do not.

4.) In the methods:
- Under ‘Atopic Eczema’, first phrase is irrelevant. Please remove it.
- It is stated that the prevalence of AE symptoms was greater in females, was this statistically significant? Just looking at the numbers in the table is does not seem so (maybe borderline significant?). Please rephrase sentence if it is necessary.. “was”? “tendency”?

5.) In the results:
- Under ‘Asthma’, it is stated that “Similar variations were found for the life time…. but not by physician diagnosed asthma”, then the prevalence are given. Tables 2, 3 and 4 show, approximately, the same variations but not the same prevalence. Please rephrase, one or another or if both, make two different sentences.
- Under ‘Disease burden’, the “(67% of subjects)” should read “(67% of asthmatic subjects)”
- Under ‘Atopy’, “We were able to collect samples…” should read “We were able to collect blood samples…”. In the last sentence, please remove “in the past year” since it is stated “with current symptoms”

DISCRETIONARY REVISIONS
1.) Key words:
- Perhaps it is not relevant, they should be written all in small case? Or in capitals?
- Numbers in thousands are sometimes separated by a coma and sometimes not. They should be written using only one format. Which is the one that the journal uses?

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**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.