Reviewer's report

Title: Home Exposure to Arabian Incense (Bakhour) and Asthma Symptoms in Children: A Community Survey in Two Regions in Oman

Version: 3 Date: 31 January 2009

Reviewer: Girdhar Agarwal

Reviewer's report:

Review of paper “Home Exposure to Arabian Incense (Bakhour) and Asthma Symptoms in Children: A Community Survey in Two Regions in Oman” by Omar A. Al-Rawas, Abdullah A. Al-Manir and Bazdawi M. Al-Riyami

This paper has been reviewed by other referees and subsequently revised by the authors. So I shall concentrate on methodological and statistical Issues.

1. The primary outcome measures are defined as (i) Prevalence of current asthma and (ii) Parent’s response to question “Does exposure to bakhour affect child breathing?”. In my view, there should be only one primary outcome measure. Every other outcome should be secondary. The reason is that the sample size is calculated on the basis of primary outcome. The authors have not talked about the sample size calculations in their article.

2. I am concerned about the definition of “Effect on child breathing”. This seems to be too subjective as it depends on parent’s response. It may vary from one parent’s judgment to another. This is very important as it will change the results.

3. I have question on the other outcome “asthma” also. This is also evaluated by the parent’s response only and not substantiated by any clinical examination.

4. In this study, there is no need to report the unadjusted odds ratios (Table 2 and Table 3). The authors are calling these to be simple logistic regression, which is inappropriate.

5. What is the difference between “Ever had asthma” and “Current asthma” (Table 1). Are these two groups mutually exclusive or they may have common subjects?

6. What is the outcome variable for multiple logistic regression results in Table 2? This will decide the title of the Table. The title should be “Multiple logistic regression for identifying the risk factors of outcome variable”.

7. Delete the column “unadjusted odds ratios” in Table 2.

8. For dichotomous variables, there is no need to show the odds ratio 1. Actually for each dichotomous variable, there is only one odds ratio. For example corresponding to variable “gender”, in the column of “adjusted odds ratio”, it
should be reported as 1.31 (1.07-1.61). There is no need to show value “1”.

9. In Table 2, the number of subjects under “Bakhour use per week” is 2035, whereas the total sample size is 2041.

10. In Table 3, also change the title as done for Table 2 (See comment (6)). Delete the column of unadjusted odds ratios and delete the value 1 in “adjusted odds ratios” column corresponding to dichotomous variables.

11. Some typographical errors:
(a) Result section, line 2: main age (SD)……mean age (SD)
(b) Table 1 (last-but-one line): Bakhour use the child room…..Bakhour use in child room

Unless the above queries are addressed, I can not recommend the publication of the paper.

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

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

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
'I declare that I have no competing interests'