Reviewer's report

Title: Prevalence of and factors associated with asthma in adult male leather tannery workers in Karachi, Pakistan. A cross sectional study.

Version: 1 Date: 16 July 2006

Reviewer: Eva Andersson

Reviewer's report:

General
The health and working conditions of people in developing countries are of great interest and an important scientific subject. But it is often a hard task to do good studies of many different reasons such as economic, lack of general data about the people and health status, lack of acceptance from industries and so on. This study suffers (as the authors are aware of) from general knowledge of prevalence and incidence of asthma in Pakistan. They could have used a control group from the "colonies where workers lived" or in the surroundings to get people with similar socioeconomic conditions. One could always wish for more information from studies and answers of questions that were not asked, as here: when did their asthma start, did they have asthma as a child, did it start after they began their work within leather tannery, what kind of exposure do they suspect give them symptoms at work?

Occupational asthma is also a subject of interest of which much is known but still much is left to explore.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. This is a journal of Public Health and the readers could not be assumed to know about the process of leather tanning. The process and exposures should shortly (but more than now) be dealt with as should which exposures that could be related to asthma. If the paper grows to long the general information about asthma could be shortened. A comment on different kinds of chromium and which ones that are found in tanneries.

2. Why leather tannery workers were chosen as study subjects are not clear and it could not be stated that "asthma among leather tannery workers has been shown to be a major problem" there are some indications but not more. But the data described in the introduction could support a need to further study the problem which is a better start than if it was already shown.

3. The aim was to study prevalence and to identify the risk factors of asthma in leather tannery workers, the authors could not reach that aim with the study design they have. The aim must be changed to identify some determinants or risk factors.

4. Sex of the study subjects is not clear, probably males but that should be declared.

5. Part of the workers were interviewed at the factories, how many of the 641 and did the results from them differ from the others?

6. Several of the information in Results is also in the tables. There is also a lot of information in table 1 that also appears in table 2. Revision in tables and text?

7. In the discussion there ought to be more about relation to work and what would have been appropriate to know about the subject's asthma and exposure to be able to discuss the problem in a more causal way. Not only determinants (with the exception of allergy) as now. Something about the possibility to get a physician to diagnose asthma among the workers (that is what are their access to health care) and the proportion of the subjects classified as asthma that had had that.

8. The discussion on ethnicity/illiteracy should focus more on socio-economic differences, I think, if there are any. Do they have the same type of work, are Pathans more illiterate, could some of the determinants for asthma be proxies for something else not asked for (which is a question for the other factors as well)? Do the educated have better jobs, less exposure? I think you could say in western countries there is a trend towards more asthma among highly educated at least not less.
9. Some words (more than generalization) in the discussion of limitations due to the sample of convenience and non-responders, proportion of workers in factories and living areas that were asked but not agreed to participate.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

10. Abstract: R(row)2 â€œ prevalence of adult asthmaâ€, better: prevalence of asthma, as it could be mistaken for adult-onset which is not studied.
R2 â€œ the risk factorsâ€, better: some risk factors, or determinants.
R11 â€œ illiterate workersâ€ wereâ€œ or cancel â€œ more likely to have asthmaâ€ (stands in the ending of the sentence, that by the way not is ended with a point.
R17 cancel â€œ atâ€ I will not go into that detail in the rest of the paper.

11. P (page)4, R10, if all factories were contacted (in the Korangi industrial area) it must be known how many they are, please add the number.

12. P4, R12 and 15 40-50% and 50-60%?? The difference between the sentences are not clear.

13. P11, paragraph 2, there are also studies not showing association of asthma and smoking particularly with some occupational factors, short sentence about that maybe.

14. Table 1, expression of one of the symbols used is missing.

15. Table 2, Type of house are presented twice, as third and fifth variable.

16. Table 3, if all the variables have been in the same regression-model this way of presenting the result is not familiar to me, it could be mistaken for each factor adjusted for age.

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Discretionary Revisions (which the author can choose to ignore)

17. Abstract: R10 would be interesting also with proportion or number that thought their asthma was work-related.

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What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests