

Reviewer's report

Title: Road traffic noise and hypertension: results from a cross-sectional public health survey in southern Sweden

Version: 1 **Date:** 9 June 2009

Reviewer: Wolfgang Babisch

Reviewer's report:

General remarks

The paper addresses the association between road traffic noise and hypertension in a population survey.

The study is well described, the literature is adequately considered, and the statistical methods are appropriate. Only minor changes are needed, which are concerned with the order of the appearance and the presentation of the results, which in some instances are not properly placed, or are not explicitly shown in the text (only in Tables).

Specific remarks

1) Page 5, 2nd paragraph

Response data and Figure 1 should move to the Results section

2) Page 7, end of 2nd paragraph

Add a sentence saying that the noise exposure refers to the most exposed façade (which is not necessarily the side of the house where people have their living or bedroom; implication: underestimation of effect estimates)

3) Page 7, last paragraph

Describe the annoyance scale (4 categories) and explain why the internationally standardized ICBEN scale for the assessment of noise annoyance was not used (which was available when the study was carried out).

Move the results and Figure 2 to the Results section

4) Page 8, second half

Disturbed sleep was considered in the statistical analyses. However, it was not mentioned in the Methods section. The wording of the questions should be given on page 7 where the annoyance question is given.

5) Page 9, end of 1st paragraph

The results (odds ratios) should be shown in the text (not only in Tables).

6) Page 9, 2nd paragraph

Add "significant" to "A finer stratification of age indicated that significant exposure effects..."

7) Page 9, end of 2nd paragraph

Again, please show results (odds ratios) in the text.

8) Page 10, 2nd paragraph

I do not quite understand in which respect the additional analyses differ from the original analyses (Table 2). Both models adjusted for the same covariates. Please explain the difference more precisely.

9) Page 11, first paragraph

The authors are too critical regarding their response rate (57%). It may be low for Sweden, but is within the upper range of what can be achieved in Europe in random population samples, nowadays.

10) Page 11, end of page

The remark regarding bias towards the null is true for the odds ratio (which was calculated). The risk ratio, however, would not be affected.

11) Page 12, second half

"%" is missing: "...and 8% at 40-44 dB(A) ..."

12) Page 13, second half

"to" is missing: "...relative to other risk factors..."

13) Table 1

Noise level 0 dB seems to be unrealistic due to background noise. I would suggest a cut-level.

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