Reviewer's report

Title: Overweight, physical activity, tobacco and alcohol consumption in a cross-sectional random sample of German adults

Version: 1 Date: 22 March 2006

Reviewer: Christian Meyer

Reviewer's report:

General

The paper reports original data on prevalence rates of several important health risk factors in a random sample from the adult general population residing in the south-west of Germany. A valuable database with a fairly large sample size seems to be a strength of the study. The cross-sectional survey comprises extensive examinations of the participants including laboratory analyses of blood samples, anthropometry, ultrasonography, and personal interviews. However, in my opinion the research question of the paper is not very well defined, leading to unfocused descriptions of several data and study details, and to vague conclusions. Regional prevalence data of health risk factors might be of some interest since regular surveillance measures in the field of health behaviours are not yet well developed in Germany. Unfortunately, due to the lack of information regarding methods and the absence of any statistics considering sampling error, interpretation of the results and comparison with other German epidemiological studies is not possible for the reader, so far. Since the research question and data analyses are restricted to simple descriptive reporting of rates it is hard to generalise some of the findings beyond the study region, e.g. co-incidences of different risk factors or regional particularities were not mentioned,. Therefore, the contribution to the scientific knowledge in the field of public health might be of limited interest.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1) Page 5 para. 2 (and other text passages); To me it is not clear how the issue of “Echinococcus multilocularis” relates to the aim of the paper. No findings or considerations regarding the findings later on in the paper refer to this issue. It should be considered to explain this background of the survey in the method section in one or two sentences.

2) The sampling region should be defined. Inclusion and exclusion criteria and reasons for non-response should be described more precisely. Reasons for non-response should be detailed.

3) Page 9; Giving an example for sources of assessment instruments is insufficient. It is not exactly clear what the authors have measured with respect to the self-reported data. Criteria used to define health behaviours and wording of items could largely influence prevalence estimates (e.g. did the data refer to alcohol consumption in the past week, the past day, the past weekend or past 12 months; was a quantity frequency index calculated and if yes, how;...). 

4) Page 10, last para.; In my view, information on the accuracy of the point estimates considering the given sampling design (e.g. SE or CI) is the minimum a paper on prevalence rates has to provide.

5) Taking into account the conditions regarding survey research in the general population in Germany and the ambitious study design/assessments, the response rate of 62.8% (nevertheless I
am not sure how it has been calculated) is respectable. However non-response could be a serious
source of bias, obviously. The analysis of non-response is not adequate. I am not able to draw any
conclusion from figure 1.

6) Socio-economic characteristics of the sample (exceeding age and gender) should be described in
more detail.

7) I am not sure if the findings from the ultrasound examination (gallbladder stones, polyps) match
the purpose of the paper outlined in the introduction.

8) Many conclusions in the discussion section regarding trends or regional variations are derived
from comparisons with different studies, without sufficiently considering the differences in
assessments, classification and sampling errors.

9) The discussion omitted a discussion of the limitations of the study.

-----------------------------------------------------------------------------------------------
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) Page 4, line 5; No reference stated.
11) The use of the term “subject’s history” should be revised.
12) Page 8 para. 2; please revise phrasing (epidemiological studies apply methods developed in the
field of e.g. clinical chemistry…)

-----------------------------------------------------------------------------------------------
Discretionary Revisions (which the author can choose to ignore)

13) Reference 1 focuses on diet and physical activity. GBD Study might be a more comprehensive
source including a ranking and total disease burden of all risk factors considered in the paper.

**What next?:** Reject because scientifically unsound

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

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

**Statistical review:** No

**Declaration of competing interests:**

I declare that I have no competing interests