Reviewer’s report

Title: Identifying the determinants of premature mortality in Russia: overcoming a methodological challenge.

Version: 2 Date: 6 August 2007

Reviewer: Maria Melchior

Reviewer’s report:

General
This article presents the method used in a case-control study based in Izhevsk in Russia to study the association between alcohol drinking and premature mortality. Data regarding cases and controls were collected from the deceased’s spouses or family members. The authors had the opportunity to validate this information against external indicators of alcohol use and controls’ own reports. Given the public health burden of premature mortality in Russia, but also in other countries, and the difficulty of obtaining valid information on alcohol consumption, this topic is potentially of interest to a wide audience of public health researchers.

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

1. This article would be even more useful to other researchers if the authors described in greater detail the data collected and the ways of reconciling information from several sources. So, what questions were used to ask the proxies about the proband’s alcohol consumption? Was the emphasis on acute effects of alcohol consumption or cumulative effects? How were the data from proxies and administrative records combined, particularly if these two sources were inconsistent (such as the data presented in Table 3)? What other measures were collected from the proxies?

2. Similarly, regarding the outcome, how were data from official records and autopsies combined and how were discrepancies reconciled?

3. As shown in Table 2, for cases the proxy was less likely to be the spouse and more likely to be the mother - is this a problem?

4. In the introduction, the authors describe the advantages of the case-control study design over a cohort study design. They should also discuss the relevance of a case-crossover design, which applies to the study of sudden and rare events.

5. By design, the study only excluded individuals who were isolated. Does the risk of premature mortality or excessive alcohol consumption differ according to whether individuals live with someone or not? If yes, what is the extent of bias in the selection of the study population?
Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

6. In the abstract, a description of the method used to address the shortcomings of previous research would be useful (ie indicate the design that was used).

7. In the discussion, could the authors indicate how the method they describe could be used in other settings? Could it be used to collect information on exposures other than alcohol consumption?

8. In the introduction, the authors mention an earlier study conducted in Izhevsk. What were the findings of that study?

9. If the aim is to collect data on alcohol use, it is not clear what table 4 on smoking status adds to the paper. This information could perhaps be replaced by alcohol use.

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential 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, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.