Reviewer's report

Title: A comparison of two methods for estimating odds ratios: Results from the National Health Survey

Version: 1 Date: 1 August 2008

Reviewer: Joanna Stewart

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General comments
While this paper is simply applying the method proposed by Moser and illustrating its benefits through example as done by Moser, it does add another practical demonstration of the method and exposes it to a wider audience. As such, although not novel it would be of interest to many readers. There does, however, seem to be a little tension between whether the paper is primarily intended to demonstrate the utility of Moser's method via an example, or to report the factors related to BMI in the Iranian study. Given the journal it has been submitted to it may be more appropriate to reduce some of the detail of the results of the study. It could also be considered whether the explanation of Moser's proposed method, which has been taken from his paper, could be streamlined and the reader referred to Moser's paper.

Major Comments
1. Some of the construction of the sentences needs to be improved. There are also many instances of the omission of small words, making the sentences hard to read.

Some examples are the second sentence of the abstract, the first sentence of the results section of the abstract, the conclusion in the abstract. These are only examples. There are many more throughout the paper.

2. I do not believe the sigma should be present as a multiplier of the denominator of equation 1.

3. As the outcome of interest in this paper is BMI it does not seem relevant to provide a test of significance of the difference in age and education in those from an urban and rural region in this paper. (table 1) It also is not appropriate to present tests of significance of the difference in obesity level in urban and rural regions for each of the levels of the other explanatory variables separately. (table 2) Both table 1 and 2 are useful to describe the population so that generalisation of the results of the study can be assessed. Given that the clinical interpretation of the results of the study is being included in this paper, the contents of table 1 and 2 are useful, without their p values. However table 2 would be more useful displaying the sample numbers in each category, rather than the numbers who are obese. The numbers obese on their own are uninterpretable. The numbers in the cells can be calculated using the % obese but it would be much simpler to quote these in place of the number obese.
4. P10 3rd paragraph. A comparison has not been made between lower middle and the 2 higher classes and so it should not be commented on. Also the difference in the estimates of the odds ratios are much too small compared to their confidence intervals to have any indication of a difference

Minor Essential Revisions
1. There is a typo in the subscripts of the OR on page 4.
2. P8 4th line - education is not in table 2
3. P9 1st dot point – compared to non smokers – also as smoking status is categorical rather than numeric it is not sensible to refer to an inverse relationship with smoking status
4. P10 – 1st line - more obese

Discretionary revisions
1. P7 second to last sentence under statistical methods – would be clearer if it said confidence interval rather than just interval.
2. Table 3 may be easier to read if the odds ratios calculated in the 2 different ways were under separate heading rather than with the dichotomised one in brackets. It would be helpful if the direction (which was the numerator and which the denominator) was given for the CI ratio. If p values are to be quoted anywhere this is the table where they would be informative (from the combined model with the one for economic status for the combined variable, not for the individual contrasts). It probably would be helpful to state the comparator for the categorical variables in this table too.

Level of interest: An article of limited interest

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