Reviewer’s report

Title: Social inequality in mortality: gender and socioeconomic differences in a Brazilian city

Version: 1 Date: 12 October 2011

Reviewer: Gwenn Menvielle

Reviewer’s report:

This paper deals with socioeconomic inequalities in mortality in a big city in Brazil. The authors use a large dataset and study mortality during a recent period. They use a deprivation index to measure SES. This manuscript provides new results on a topic less studied.

I have several comments.

Major revisions

1. In the abstract, add the CI with the RR. Please also add the RR for breast as well as its CI. Then we’ll see if this RR is statistically significant.

Background

2. Second paragraph. Please be a bit more specific. The authors mention that “disagreements can be found in the literature”. Is this found for total mortality? For some specific causes of death? For all causes of death?

3. Fourth paragraph. The authors refer mostly to Brazilian literature. I can understand it, as some results are likely to have been disseminated only locally. However, most readers will not be able to find and read these studies. Therefore, the authors should also give the main message/conclusions of the cited manuscripts.

Methods

4. Third paragraph. The authors use a deprivation index. Has this index been used and validated before? Did the authors test the robustness of their results using other definition of the deprivation index?

5. Fifth paragraph (page 5-6). The text is not clear. What makes the understanding difficult is the use of two different age bands for total mortality (all ages) and for cause specific mortality (20+). Why did the authors use two different age bands? What is the rationale underlying this choice? This is never explained, and it is not clear what the results for the age group 0-20 for total mortality add to the paper.

Discussion

6. Page 10, second paragraph: When you refer to Brazilian literature, please explain which factors you are mentioning, as the literature will not be found and
understood by most readers.

7. Page 11, paragraph on smoking: I do not totally understand the reasoning of the authors. They mention higher smoking prevalence among people with lower education. Then we would expect higher lung cancer mortality rates among people with low SES. This is not reported. Maybe the higher prevalence is reported only among young people whereas among older people the reverse situation is still observed? In any case, more explanation is needed.

References
8. Please translate the titles in English.

Minor comments

Methods
9. Sixth paragraph. The analysis for the 5 ICD chapters is conducted among people aged 20+ (table 3). This is not mentioned. As it is, it seems that these analyses are conducted among all ages, and only the analyses for more specific causes of death are computed among people aged 20+. Please combine this paragraph and the following, and clarify the text.

Results
10. First sentence. Not clear. Which strata is mentioned?

11. Last paragraph. The authors say that the rate ratios are generally very large in women when compared to men. I would tone it slightly done and simply say “larger”.

12. Page 11, first row: the word “familiar” is not appropriate here.

13. Page 12, second paragraph: It could be shortened.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.