Reviewer’s report

Title: Self-rated literacy level does not explain educational differences in health and disease

Version: 1 Date: 25 September 2013

Reviewer: Nicolas Berger

Reviewer’s report:

The article deals with educational differences in health and disease in The United Kingdom. The authors assess the impact of literacy as a mediating variable in socioeconomic inequalities. The authors use regression analysis to predict the occurrence of a disease or the level of health depending on the socioeconomic background, literacy and other control variables. The authors show that the effect of socioeconomic level does not dramatically decrease when controlling for the level of literacy.

Major Compulsory Revision:
1. From the literature reviewed by the authors (citations 5 to 14) it appears that literacy in health (most of the time measured using the Rapid Estimate of Adult Literacy in Medicine) is a relevant measure for explaining health inequalities. The authors, however, use a much stricter measure of literacy, i.e. confidence in reading written English. The relevance of that measure is not suggested by the literature reviewed. I suggest the authors to make clear that their study is about literacy and not health literacy, and to give arguments and references explaining why “literacy has increasingly been considered as a mediating variable in socioeconomic inequalities in health”.
2. An ordinal variable is treated as numeric variables in ANOVA analysis without any justification. I suggest the authors to use appropriate techniques of analyses.
3. Other statistical techniques such as path analysis or structural equations would be more appropriate to study the mediating effect of literacy.

Minor Essential Revisions:

Introduction
4. Sentence: “Although literacy has increasingly be considered as a mediating variable in socioeconomic inequalities in health” : give references for the statement

Methods
5. Sentence: “Computer-assisted self-interviewing…”: Is the subject of the sentence missing? The sentence does not make sense.

Interview and Measures:
6. Educational level: specify the meaning of “GCSEs/O” and “5 at grades A-C”
7. Educational level: 2 categories are defined, whereas 3 categories are used in the results.

Analysis

8. It is not clear how the variables are used in the models. How did you treat age? Literacy? Education (2 or 3 levels?), Ethnicity?

9. Ordinal regression analysis: are you using a proportional odds model? If so, did you test the proportional odds assumption?

Discussion/Conclusion

10. Sentence: “the minimal contribution of self-rated…”: a dot is missing at the end of the sentence.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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