Reviewer’s report

Title: Educational inequalities in mortality and associated risk factors: German vs. French Switzerland

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Reviewer: Tony Blakely

Reviewer's report:

This paper is interesting, but lacking in many respects. It promises an interesting comparison of mortality inequalities with parallel inequalities in risk factors, but then finds many reasons (often probably plausible) to dismiss non-consistent data as due to errors in the health survey. Thus, the paper inhabits an uncomfortable middle zone: it does not live up to its promise; and it is not a thorough methodological critique of the health survey data.

For these reasons, I do not think it is publishable in its current form. It simply does not gel together.

Nevertheless, the mortality data is strong – and interesting. I wonder, therefore, if a paper focusing more on the mortality differences might be more appropriate. It would be even better if it could then be compared against health survey data that is corrected for many of the biases that are suspected in the current paper, or older health survey data that better allows for time lags. Or a shorter paper pared back to the interesting mortality differences by education might be interesting.

Another approach would be to use the 1992/93 health survey data as just one point of comparison, and also look at earlier health survey data, official statistics on tobacco consumption (if available), and historical considerations of the differences between FS and GS as possible determinants of the current variations in mortality inequalities.

There are some minor issues:

- on page 8 it is stated that 10.51% * 11 = 115% difference across education. True, but if education is in years in the Cox Prop Hazards model, then the difference from least to most education will be \(1.105^{11} = 2.99\) fold difference, or a 199% increase
- there are several grammatical errors
- the Discussion is quite stilted in its flow.

Level of interest: An article of limited interest

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