Reviewer’s report

Title: Multimorbidity and the inequalities of global ageing: a cross-sectional study of 28 countries using the World Health Surveys

Version: 2 Date: 30 April 2015

Reviewer: Anne Taylor

Reviewer’s report:

Major compulsory edits
1. The introduction (and the discussion) need more details on the problem with the definition (and therefore the prevalence) of multimorbidity.
2. The hypothesis is to test MICs and HICs but really only have 1 HICs (plus 1 ring-in). The focus of the study has to be broadened.
3. The lack of sample from Western Europe has to be discussed in more detail.
4. It would be helpful to the reader if the regions were classified as HIC, MIC, or LIC. A supplementary table listing which countries fit into which region and which level of country income would be beneficial.
5. No justification for the inclusion of ELSA has been included.
6. There is no justification for the inclusion of the ELSA 15 chronic conditions. This actually weakens the manuscript as it does not offer any additional meaningful information. It should be dropped from the paper.
7. The limitation of use of education as the measure of SES has to be strengthened.
8. I have problems with the selection of countries – it seems very subjective. How do you sample a minimum of 4 countries and end up with 6 from Africa, 5 from SE Asia, 8 from Eastern Europe – what was the criteria and reasoning?

Minor essential edits
Abstract – Results
1. Include the word multimorbidity in the first sentence.
Introduction
2. 1st paragraph – 5th sentence – drop ‘though’
Methods
3. 3rd paragraph – use of MM instead of multimorbidity.
4. Measures & variables – 2nd paragraph – change to ‘doctor diagnosed, self-reported, chronic conditions’
Results
5. Table 1 – add the mean figures as the final line. Add the ELSA details as the
comparison.

6. Table 2 – Make it explicit in the headings that the final prevalence figure is the standardised rate.

7. Supplementary table 1- add heading, make sure figures are consistently 1 or 2 decimal places.

8. Table 2 – figures to be 1 or 2 decimal places

9. Why was the ELSA 18-49 year old figures presented? There is nothing in the methods to suggest data were only collected from those aged 50 years or older.

10. If the mean estimates are going to be reported they could also be added to the table.

11. Figure 1 – drop the ELSA n= 15 and then the figure could be less clustered (limit multimorbidity to 0-20)

12. Figure 2 – the description of Figure 2 in the text is not correct – this one is for age category 1 (<55 years). The description of the gradient as ‘steeper’ in Western Europe etc compared to Africa etc seems out of place when the line is flatter. An in-appropriate use of words? This is the same for Figure 3 when the line looks steeper rather than flatter?

13. Figure2 – change title to be age category 2.

14. A label for the x axis is required

15. Table 3 & 4 - 1 or 2 decimal places; add by country in the title.

16. Table 4 – vertical lines between the various variables so that the table is easier to read

17. Explain OR and AOR in notes.

Discussion

18. 2nd paragraph – use of LMICs not previously explained; capital S in HICS.

19. Further limitations – does Spain really represent Western Europe?

20. Need to more fully discuss the limitation associated with only using education as the measure of SES.

References

21. Consistent referencing - use of full stops (at end and within reference) (see for example ref 3 & 6)

22. Format of references – for example #5, 15, 17 (what year), 20, 21, 22 (no capitals), 24? Etc

23. #43 – what journal

24. All references must be checked.

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

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests