Reviewer’s report

Title: Examining trends in cardiovascular disease mortality across Europe. How does the introduction of a new European standard population affect the description of the relative burden of cardiovascular disease?

Version: 0 Date: 07 Sep 2018

Reviewer: Ian Neethling

Reviewer's report:

The paper needs a grammar edit.

Aim

P4. Line 17. The aim is not quite clear. What is meant by "impact".

Methods

A description is needed on the study design either at the start of the Methods section or at the end of the introduction.

P4. Line 51-56. Please state why it was needed to analyse the effect of population standard on CVD between different European Union membership and European regions

P5. Line 15-25. S1 Table. I do not think it was necessary to do the analysis be membership and region, however the different countries should be added to this table

P6. Line 14. What is meant by change - i.e. change in direction or change in both direction and intensity?

Results summary

Some results are unnecessary, i.e. by membership and region. It does not add anything beyond the analysis by country and only muddles the results.

Also the analysis by life expectancy does not add anything beyond the analysis by ASMR as these measures are related.

I am also not sure why supplementary table 2 and table 6 is needed. It is sufficient to state these results in the text only
The joinpoint results are interesting, however the variables in Table 7 and 8 needs to be described, i.e. what is the difference between the average annual percentage and joinpoint percentage change. It would also help to describe the average length of each segment.

Results Specific points

Table 1. Why does the data range differ from the total years of data available? Also why does the % CVD deaths for males and females not add up to 100?

Table 2. As in table 1: explain why the % CVD deaths does not add up to 100%

Table 3. What is the number in brackets next to the total rate for?

P10. Line 15. Are you referring to all EUM categories or specific categories

P10. Line 22. Spelling error differently should be different

P10. Line 22. Which regions are you referring to?

P10. Line 27-34. This sentence is not easy to understand and requires reconstruction.

S3 Table. This should be in the main body of text and not as supplementary as it is an part of your main aim? Add columns on ranking change, and order on ranking change from highest to lowest

Table S4 and Table 5 are the same. Does the n refer to the number of males and females in Europe over 60. It seems quite small?

P14. Line 21-45 Be consistent with wording either decreasing trend or negative trend.

Discussion

The Discussion is inadequate. It is mostly a repeat of the results and lacks an answer to the aim of what the "impact" of the new population standard is e.g. what the consequence to policy makers is. Are there merits of regularly revisiting the standard population? Why cant the world population standard be used for Europe?

Maybe it would help to state specific research questions at the end of the Introduction section, which can be used to guide the discussion
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