Author’s response to reviews

Title: Social factors associated with centenarian rate (CR) in 32 OECD countries

Authors:

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Version: 6 Date: 22 February 2013

Author's response to reviews: see over
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Author’s response to reviews:
We appreciate the careful comments of the two reviewers and have modified the manuscript as requested. Our responses to each Reviewer are noted below:

Reviewer: Natalia Gavrilova

Reviewer's report:
The ms is significantly improved and is readable now. There is a need to improve the methods section. It should be clarified that the authors used Pearson correlation coefficients. The title of table 2 is not clear. It should probably be changed to Centenarian rates in 32 OECD Countries." In Table 3 it should be clarified that Correlations mean "correlation coefficient" and that P menas "p-value."

We have modified the following: the title of table 2 and “p-value” in table 3.

Reviewer: Malgorzata Mossakowska

Reviewer's report:

General
The paper has been significantly improved, however I still request a further revision. In my previous review I did not comment on the discussion part, because it has been constructed based on false data. In this version, I hope the data are properly retrieved, however they are still not presented in table 1. The authors resigned from the HBP variable and did not replace it with another one. This change impoverished the paper. In the Discussion the proposed models are not analyzed - they need in-depth
discussion of the results, especially that there are no significant differences between the models. It is probably caused by the fact that the three independent chosen variables (FTS, EGDP, HDI) are correlated.

We have modified the following:

(Page 12)
The data has properly retrieved, they have presented in table 1.

(Page 11)
We have resigned from the HBP variable and did replace it with GGEH (general government expenditure on health as a percentage of total government expenditure in 2006).

(Page 16, Page 18)
Discussion the proposed models have analyzed.

Minor Essential Revisions:

May be it would be better to use HEGDP instead of EGDP as it is the abbreviation of Health Expenditure as a share of GDP,

(All Pages)
We have modified the following; HEGDP instead of EGDP as it is the abbreviation.

The CR is properly described in Formulation of the CR but in the text CR instead of CR (50-54) is frequently used.

Eg.

Page 1. Objectives
“This study estimates the CR and elucidates the influence of social factors on successful ageing and the CR, examining 32 member countries of the Organization for Economic Co-operation and Development (OECD)”.

Or page 3
“An advantage of using the CR is that it enables the control of potential confounders that affect the number of centenarians, such as infant mortality, and overcomes the problem of migration inherent to changing nationalities”
“The CR, as an indicator of longevity, differs from the longevity index in that it is characterized by unchanged age-specific fertility and the absence of migration in its population.”
The CR(0) as well as CR(20) are affected by migration and the first also by infant mortality.

(All Pages)
We have modified the following; CR (50-54) instead of CR.
Page 4
“The centenarian rate (CR) was suggested as an indicator of longevity by Robine and Caselli [10], as a result of the longevity index having been used in certain countries [2, 9, 10].” The above sentence is unclear. Maybe the author meant “in response to imperfection of longevity index.”

(Page 4)
We have modified the following; the centenarian rate (CR) was suggested as an indicator of longevity in response to imperfection of longevity index by Robine and Caselli [10].

Page 8
“A total of 32 countries and areas were selected for this study.” Which areas were selected???

(Page 10)
We have modified the following; a total of 32 countries were selected for this study.

Page 12
“Table 2 shows the highest and lowest CRs in the 32 OECD countries studied.” Table 2 shows CR (50-54) for all 32 countries.

(Page 13)
We have modified the following; Table 2 shows the CR (50-54) for all 32 OECD countries.

In the Results part fig. 2 has not been mentioned. The results presented in table 3 could be put in fig. 2 as they only describe the regression plots; table 3 should be then removed.

(Page 13)
We have modified the following; in the results part fig. 2 has been mentioned. The results presented in table 3 put in fig. 2 as they only describe the regression plots; table 3 (correlation coefficient) removed and presented in fig. 2 (correlation coefficient).

“Significant positive correlations were found between the CR (50-54) and the entire social factors of HEGDP ($r = 0.411$, $p < 0.021$), GGEH ($r = 0.474$, $p < 0.006$), FTS ($r = 0.489$, $p < 0.005$), and HDI ($r = 0.486$, $p < 0.005$) (Fig.2).”

(Page 13)
This fragment should be in Results part.

“Scatterplots of the country characteristics against the CR (50-54) are presented in Fig. 2 in order to indicate the strength of the correlations between these social factors and the rate of successful aging.”
We have modified the following; this fragment has moved in Results part.

Page 14
“The poor mortality rate that....”
It would be better to use the phrase „high mortality rate”. “Switzerland and Germany are likely to have high correlations between FTS and longevity because these variables are reflective of generally high levels of government investment, either in health or telecommunications infrastructure.” The correlation is a parameter related to the whole group, not to specific countries.

We have modified the following; the high mortality rate that...

We have modified the following; generally, OECD countries are likely to have high........

I appreciate the careful comments of the two reviewers.

Thank you.