Reviewer’s report

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

Version: 5 Date: 4 February 2013

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.

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,
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

“This 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.

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 7-8 significant fragments of the Method better fit the Introduction part.

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

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
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
“Scatterplots of the country characteristics against the CR(50-54) are presented in Fig. 2 to indicate the strength of the correlations between these social factors and the rate of successful aging.”
This fragment should be 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.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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