Reviewer's report

Title: Successful aging defined by health-related quality of life and its determinants in community-dwelling elders

Version: 2
Date: 24 June 2014

Reviewer: Francisco Felix Caballero

Reviewer's report:

The manuscript "Successful aging defined by health-related quality of life and its determinants in community-dwelling elders" is focused on successful aging and determinants, considering a sample from Taichung City, in Taiwan. This is an interesting study which could be published if some points are clarified and some methodological aspects are addressed. My specific comments are below:

Major Compulsory Revisions:

1) Maybe the most important issue is the definition of 'successful aging'. As you define it now. Some evidence for choosing this cut-off point should be provided or some sensitivity analysis, assessing different cutoff points, should be conducted.

2) Apart from age, other socio-demographic or socio-economic information should be reported.

3) The significant differences found in the comparison among elders who were and were not aging successfully, could be due to the large sample size. Effect size measures should be provided to assess the magnitude of these differences (for example, according to the Cohen’s guidelines). The fact that the size (and the standard deviations) of the two groups are very different, should be also taken into account.

4) It is supposed that the strategy conducted in the main analysis is a nested logistic regression, but it should be specified in Methods. It would be necessary to compare the fit of the different models to show if subsequent blocks (or variables added) are really useful to predict successful aging. This can be done by means of the Likelihood Ratio (LR) test or the Adjusted McFadden's R-squared change.

5) The strengths of this study should be emphasized in the Discussion, adding some sentence about the new contributions of this study to the research on the relationships between successful aging and its determinants in elders.

Minor comments:

1) In the description of SF-36, the sum of the items (10 + 2 + 4 + 3 + 5 + 4 + 2 + 5) of each one of the eight domains is not 36.

2) It is said in Page 10 of PDF "four logistic regressions". It should be said "four logistic regression models". Other mistakes (for example, footnote in Table 1)
found in the main text should be corrected.
3) Table 4 is not clear: it should be indicated which is the reference category.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.