Reviewer's report

Title: The Global Activity Limitation Indicator and self-rated health: two complementary predictors of mortality

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Reviewer: Karen Siu Lan Cheung

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Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

1. The authors fail to provide a theoretical framework of how both global measures the GALI and SRH can be predictors of mortality. It is well known that SRH is subject to social and cultural variations in reporting, and its association with other measures may therefore be influenced by age, culture, social background, etc. Individuals may interpret limitations in usual activities differently, independently of their disability situation. Thus, if GALI is considered as a useful global instrument for measuring activity limitations in the similar fashion with self-rated health assesses general health status, then both global instruments should originate in an active cognitive process and cannot be properly understood without understanding this process. The answers to the GALI and SRH questions sometimes are more intuitive, sometimes more consciously reflective. The evaluation necessarily involves the processing of information, interpretation of meanings, and selection. Although an individual, subjective process, it is embedded in a given social and cultural environment and makes use of the conceptual resources and patterns of representations provided by this environment. Individual’s judgment is based on a mental representation of personal health that consists of semantic and episodic knowledge, as well as information about change. The theoretical model should include not only the sociodemographic (i.e. age groups, gender, education), but also personality factors and cognitive/cultural processes that influence the outcome of the evaluation.

Some previous studies also showed that this increased risk of death associated with poor self-rated health was greater than that associated with poor life satisfaction, low income and being male. See below some references:

Mossy and Shaprio(1982). Self-Rated Health: A Predictor of Mortality Among the Elderly


Foraker et al. (2011) Socioeconomic status and the trajectory of self-rated health

As the authors found that the predictive power of the GALI and SRH on mortality did not vary with gender, age or education. The authors should discuss the reasons behind these mixed results found in different settings and different
2. How do you define GALI? For instance in pages 3 and 5, the authors wrote: The Global Activity Limitation Indicator (GALI) refers to a single-item measure of functional status where individuals are asked to rate their limitations in usual activities due to a health problem[1-3].

“For the past 6 months or more have you been limited in activities people usually do because of health problem? Yes strongly limited / Yes limited / No, not limited”[2].

What does “Limited in activities” mean and refer to? Please specify.

3. Since the authors used Poisson regression models (odd ratios) to estimate the effect of the GALI and SRH on the mortality rate during the follow-up period. Thus, to avoid confusions, they should not use “moderate” this word in page 4 “Our study also aims to investigate how gender and socioeconomic status moderate the relationship between mortality and the two global measures, and to evaluate if these relations are affected by the length of follow-up period.”

4. In page 6, the authors said “We did not use other measures of health and functioning to adjust the relationship between the GALI or SRH and mortality.” Can they explain why? As there might have some interaction effects between the GALI or SRH with other measures of objective health and functional limitation.


It wrote that “because of the low numbers reporting themselves as severely limited, severe and moderate limitations were merged into one category (limited)” Did the authors encounter similar reporting problem? Like in Table 1, the distribution of the sample in GALI and SRH are very small. A dichotomous variable (any limitation vs. none) to be constructed seems more appropriate.

6. Please provide mean age, SD, min-max age for this final HIS sample on 8,583 individuals. In page 5, apart from the 4 age groups (i.e. persons aged 15-49 (reference category), persons aged 50-64, persons aged 65-74 and those aged 75 or more), it is a bit problematic to cluster those aged 15-19 (like youths / young adult) into adult age group such as 20 – 49. Would the results be affected by the cutoff of each age group? Any justifications?

7. Is there any correlation between GALI and SRH – like collinearity and their associations with those examined variables? Can the authors provide the tabulations of the GALI and SRH by age groups and gender?

8. In page 7, the authors wrote “This study shows that the Global Activity Limitation Indicator and self-rated health are strong and complementary predictors of mortality in the Belgian adult population. Although the two indicators share some traits, they predict mortality concurrently, with a somewhat stronger
effect for SRH.” Can they discuss why there is a stronger effect for SRH to predict mortality?

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited

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

Declaration of competing interests:
I declare that I have no competing interests