**Reviewer’s report**

**Title:** The role of children and their socioeconomic resources for the risk of hospitalisation and mortality – A nationwide register-based study of the total Swedish population over the age 70

**Version:** 0  **Date:** 17 Feb 2019

**Reviewer:** Atsushi Miyawaki

**Reviewer's report:**

Thank you for giving an opportunity to review this paper. The association between the number of children and mortality and the association between children's education/income level and mortality in old age have been investigated in several studies. In this context, the present study used hospitalization, readmission, and mortality after admission, as well as mortality, as outcomes. This attempt may help us understand part of the mechanism in the effect of having children on mortality. However, the reviewer thinks there are some problems as indicated below in the interpretation of the results.

**Major comments**

1. Throughout the text, the authors regard hospitalization as the onset of diseases. Is there any study that validates this interpretation in this Swedish cohort? If not, the reviewer does not agree with this interpretation. Hospitalization is a result of several factors including onset of disease, the kind of diseases, social supports, knowledge of health, available financial resources, etc. For instance, those who did not have children would not or could not go to the hospital until the disease conditions become severely worse because children cannot take them to the hospital. In this case, the hospitalization should be regarded not as the indicator of diseases onset, but as lack/insufficiency of social support. Even though the authors know and refer to this problem in the Discussion section, the reviewer recommends that the authors should regard hospitalization as just hospitalization, not the onset of diseases throughout the text.

2. In this context, the author can refer to the increasing effect of having children on hospitalization might be explained by more availability of social supports or resources from children (for example, in P9, L204-207)

3. The argument in P10, L209-211 is saying too much. The survival after hospitalization would depend on the cause of admission. In this case, the selection effects might still explain the survival after hospitalization via the cause of hospitalization.
4. To refute the argument stated above (point 3), if possible, the authors can consider focusing on hospitalization with diagnoses of some specific diseases (for instance, acute coronary syndrome or cerebral infarction). This attempt will also resolve the point 1 in part because hospitalization with diagnoses of severe acute diseases are less likely to depend on social supports, knowledge of health, available financial resources compared to the hospitalization of chronic diseases.

Minor comments

In No. 21 of the reference list, "Social Science & Medicine" appears twice.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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