Reviewer’s report

Title: Environmental barriers, person-environment fit and mortality among community-dwelling very old people

Version: 1 Date: 4 May 2013

Reviewer: margaret G stineman

Reviewer's report:

- Major Compulsory Revisions

The author must respond to these before a decision on publication can be reached. For example, additional necessary experiments or controls, statistical mistakes, errors in interpretation.

1- A statistically significant association is noted between the absence of hand rails and lower mortality. This is maintained after adjustment. The importance of this seems clinically plausible however with multiple comparisons of many barriers to the single outcome (mortality), this could easily be statistically significant purely by chance. The authors recognize this appropriately and have taken a Bonferroni correction. Please specify more exactly how that correction is taken given there were so many independent variables.

2- An analysis of affect modification might also further clarify findings. The impact of person environment misfit/environmental barriers on mortality could depend strikingly on function.

3- Limitations must be stated

- Minor Essential Revisions

The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.

1- In abstract “Among the specific environmental barriers that generate the most PE fit problems, lack of handrails in stairs at entrances was associated with the higher” the word higher should be “highest”.

2- In the abstract, the study design and type of analysis should be stated.

3- The PASW statistics version 18.0 (SPSS Inc., Chicago, IL) was used for baseline descriptive and to analyze the association between weighted environmental barriers and mortality please explain what that is.

4- Some of the patient descriptive statistics (age, % women) under project contexts and participants on page45 should be listed in the results section.

5- Why was the communication barrier collected but not used on page 5?
6- How was use of mobility device recorded on page 6?

7- On page 7, please explain what the PASW statistic is and also how the environmental barriers were weighted.

8- P7. Clarify the following statement: “… all five environmental barriers generating the most P-E fit problems in each housing section were included in the models at once and the models were adjusted similarly as for the number of environmental barriers….” Was the same approach taken for all domains of the HE instrument i.e. all domains of barriers including outdoor?

9- Tables: Fix label formats as example “Difficulty in interpreting information” should all be on one line in table 1. Also so English language problems need editing.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**

I declare I have no competing interests.