Author's response to reviews

Title: The importance of social support in the associations between psychological distress and somatic health problems and socio-economic factors among older adults living at home: A cross sectional study

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Author's response to reviews: see over
Dear Chief Editor,

MS: 6225743015881825
Enclosed please find our revised manuscript, entitled “The importance of social support in the associations between psychological distress and somatic health problems and socio-economic factors among older adults living at home: A cross sectional study”, originally submitted for consideration for publication in BMC Geriatrics.

We are grateful to the referees for further constructive comments and we have now revised the manuscript in light of the comments. As concerns the additional editorial requirement of the name of the committee which gave ethical approval for the study, it is already reported in the manuscript under Ethical approval, page 15. The language is edited by a native-English speaker with scientific expertise. Changes are marked in the paper with yellow ink.

This cover letter gives a point-by-point response to the concerns:

Major Compulsory Revisions:

Reviewer 1 had two points of major compulsory revisions:
1. The main point of this study is to explore whether social support mediates or moderates the association of psychological distress with somatic health problems. Figure 1 is now corrected according to the literature references and the data analyses. The path between Psychological distress and Somatic health problems is now bidirectional.

2. We know from the literature review that low socio-economic status is associated with psychological distress and low social support (ref 17,18 page 4, and Figure 1). Therefore it was necessary to explore whether socio-economic status confounded the role of social support as a moderator/mediator on the relationship between psychological distress and somatic health problems. In Model 1, Table 4 there is a strong association between socio-economic factors measured by income and psychological distress (see also Figure 1). It is not realistic that this path is bidirectional since these older adults will have welfare arrangements already and therefore psychological distress will not affect their income.

Adjusted for all variables in Model 4, Table 4 there is still an association between income and psychological distress even if it is somewhat weakened. The high level of income is still associated with low psychological distress, which is the dependent variable in these analyses. We could have made regression analyses with social support as dependent variable and socio-economics as independent variables but since the main focus in this study is on
whether social support mediates or moderates the association between psychological distress and somatic health problems, we choose not to do this in the present paper.

Conclusively, we hope that this explanation of how the analyses in Table 4 examine and support the hypothesized confounding relationship of socio-economic factors with the other variables is satisfactory.

**Minor Essential Revisions:**

3. Reviewer 1 pointed out the need of corrections of the titles of tables 3 and 4: The titles are revised according to the comments. The text, in line 3-4 page 8 is revised too.
4. Line 1, Page 9 is revised according to the comment and Table 2.
5. Page 9: in the middle paragraph both lower and upper limits of confidence intervals are now shown.
6. In table 2 sample size by gender and “n (%)” are added in the upper columns. Also upper and bottom lines are added.

**Reviewer 2** had further recommendations which are now changed:

1. Page 3, para 2, the correct expression is ‘self-rated health’
2. Page 3 para 2, has now got a clarifying last sentence.
3. Page 3, para 3, lower adequacy of social support is defined
4. Page 3, para 3, “The two alternative causal models, the direct...of” is explained
5. Page 4, para 2, last sentence is moved to para 1 page 5 with the statements of the hypotheses
6. Page 4, last para, “distress” is changed to “results in”
7. Page 5, new para with following “The objective of the study.....
8. Page 5, Methods, para 1, “years” inserted
9. Page 5, Methods, para 2, “material” replaced with “sample”
10. Page 5, Methods, para 2 “forms” replaced with “questionnaires”
11. Page 5, Methods, para 2 “material” replaced with “analysis”
12. Page 5, Methods, para 3 “distribution of the data” replaced with “study population”
13. Page 6, Variables, para1, correction: “Data were”
14. Page 6, Psychological distress “mental health” is deleted
15. Page 6, Psychological distress, last sentence is rephrased
16. In Tables 2 and 4 “Demographics” is replaced with socio-demographics or socio-economics

The co-authors of the manuscript are in agreement with the changes of the manuscript.

We thank you for reconsidering this manuscript and hope it still will be of interest and that the corrections are implemented to your satisfaction.

Yours sincerely,

[Signature]
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