Reviewer’s report

Title: The theoretical and empirical basis of a BioPsychoSocial (BPS) Risk Screener for detection of older peoples' health related needs, planning of community programs, and targeted care interventions

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Reviewer: Na Ling

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BMC Geriatrics

The theoretical and empirical basis of a BioPsychoSocial (BPS) Risk Screener for detection of elders' health related needs, planning of community programs, and targeted care interventions

Review:

This is an interesting paper that validated a risk stratifying tool by measuring the association of BPS scores and various health outcomes, including falls in the past 12 months, cognitive function, number of diseases, hospitalizations, ED visits, and length of stay. The paper has practical value and I believe would contribute to service planning for vulnerable older adults.

I have several questions about the methodology in this paper.

1. What language version(s) of the survey was used?

2. Please indicate the scale of responses to the 35 questions used in the exploratory factor analysis (table 1a-c). Are they binary responses (yes vs no) or Likert-scale questions (3, 4, or 5 points)? In lines 253-254, the authors indicated that the questions were ordinal variables, please state clearly the scales of these variables, especially for the social domain questions.

3. In lines 257-258, the authors kept the items with factor loadings of 0.5 or above, and all cross-loadings of 0.3 or above. I wonder if it's a typo: should it be cross-loadings of 0.3 and below?

4. Lines 261-269: Please define the thresholds for binary covariates: education and income. How were these variables dichotomized as good education vs. no formal education, poor vs. not poor. Please also specify the health outcomes you would like to study in this section, and specify which ones were treated as binary (how they were dichotomized) and which were count variables.
5. Lines 265-264, count data were explored with Poisson modeling. Did the author test the mean and variance assumption for Poisson modeling? If the assumption is violated, a negative binominal model would be more reasonable.

6. Lines 291-298: All test indices were reported except the Root Mean Square Error (of Approximation);

7. Results tables attached at the end of the manuscript have the same title. It is not quite clear to me which tables match which results. Please indicate specific outcomes in the table title.

8. Results model section: I assume that the B, P, S domains were put into the same model, adjusted for other covariates, rather than that each was used in a separate model, adjusted for covariates. Please clarify this in the methods and results sections.

9. For the outcome of number of diseases, please indicate what diseases were included.

10. Discussion section: Can the authors comment on the phenomena that those with overwhelming problems did not show poorest performance for several outcomes?

11. Limitations: cross-sectional study design, health service utilization was self-reported instead of using claims data, thus it was subject to recall bias.

12. Please comment on the different functions of the tools (BPS domain scores vs. managing scores), and the medical context best suited for each tool.

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.

Yes

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

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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