Reviewer's report

Title: Low patient activation levels in frail older adults: a cross-sectional study

Version: 0 Date: 09 May 2017

Reviewer: Rebecca Palm

Reviewer's report:

Thank you for giving me the opportunity to review this article, which deals with an interesting topic. The article has a clear focus and the methods are appropriate to answer the research question. However, the quality of writing and reporting can be improved to enhance understanding of the study.

The text structure of the background section needs to be improved, as it is difficult to read, because the authors are hopping between topics within one paragraph. Please try to structure the text with more paragraphs; each paragraph should deal with one topic (epidemiology of frail people in the society/ Concept of frailty/ Living situation of frail people in NL; changes of the government regarding the living situation; problems resulting from these changes...).

The concept of patient activation, which is in the focus of the empirical investigation needs to be explained a bit more in detail for readers who are not familiar with the concept. What are the theoretical underpinnings of the concept? Why is the concept of interest regarding frail older people (what is the problem?)

You should also give more precise explanations about the concepts that you expect to be related to PA. Especially the concept of "quality of life" is not sufficient explained in the background. QoL is a very complex construct, and during the whole article, it is interchangeably used with health. It is questionable, if the SF-12 can be used as a QoL instrument or if one rather should stick with what it measures: physical and mental health.

In the background, you cite several studies that report empirical findings on patient activation. It would be of interest, if all these studies refer to the same concept of Patient activation and if they used the same instruments to measure it. If not, this needs to be mentioned.

In the last paragraph of the background section, the aim and the research questions should clearly be stated, including the independent variables of interest. It should also be mentioned that this is an explorative study that did not aim to test hypothesis.
Methods:

It is not clear to me, if residential homes are the same like nursing homes. For international readers, it may be helpful to give more information on these homes. Please give information on the cut-off scores of the PAM-Score already in the text.

Is the study sample a convenience sample?

How do you calculate the PAM-score?
The statistical analysis seems unusual to me: normally one performs a univariate regression analysis to reduce the number of variables for the multivariate analysis. You included the same variables in both models. Why do you perform uni- and multivariate models then? What is the benefit of performing so many models (also because this is multiple testing and needs to be considered in the interpretation of the results)?

You did not report, if the PAM-score is normally distributed. If this is not the case, which I assume because you report the median in table 1, the model assumptions for linear regression are violated and you can't use a linear model. It is in any case worth to consider using the PAM-categories as a dependent variable and not the score, because this may produce more distinct results that are easier to interpret.

On page 7 line 162 you write that you control the model for personal characteristics, but you name all the variables you put in the model. You have to distinguish more clearly what are personal characteristics and what are independent variables of interest. Please consider this also for formulating your research questions and explain them in the background section.

Results:

The first sentence about the participants is confusing. I guess you mean that 757 people were invited to participate in the study but only 201 accepted and fulfilled the inclusion criteria. Please give more information, who the 757 people are, how many declined to participate and how many did not fulfill the inclusion criteria. Consider to show a flow diagram.

The results that are shown in table 1 don't need to be replicated in the text.

In line 185-186 you report findings of a comparative test, that is not reported in the methods. Which test did you use to compare community-dwelling patients and care home residents? The comparison of these groups was not formulated as an aim, resp. a research question. If this is of
Discussion

Results should be summarized at the beginning of the discussion but not replicated.

A section about ethics should be inserted in the methods section and should contain information how the informed consent was obtained.

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

No

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:

Acceptable
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