

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Development and psychometric evaluation of a Positive Health measurement scale: a factor analysis study based on a Dutch population.
AUTHORS	Van Vliet, Marja; Doornenbal, Brian; Boerema, Simone; van den Akker-van Marle, Elske

VERSION 1 – REVIEW

REVIEWER	Wim Peersman Odisee University of Applied Science, Belgium
REVIEW RETURNED	27-Aug-2020

GENERAL COMMENTS	<p>There is increasing interest in 'Positive Health', and in this paper, the authors try to convert a dialogue tool, used in practice, into a measurement tool that can be used as an outcome measurement instrument for Positive Health. An important but challenging objective.</p> <p>This is a well conducted study. The different steps of the research are clearly described. The discussion is balanced.</p> <p>I have a few questions, comments and suggestions.</p> <ol style="list-style-type: none">1. I suggest to give some more background to the objectives of the study. Why is it important to perform a factor analysis and to determine the factor structure.2. I suggest to start the results with a description of the response and non-response. At the moment those results are partially reported in the method section and the discussion. Results should be reported in the results section and discussed in the discussion. No new results should be introduced in the discussion.3. One dimension is measured with two items and all others with three? Would it be useful to develop and include another third item for the dimension 'Mental Functioning'?4. Is it not important to address in future studies also the responsiveness of the scale?5. I suggest to round correlation coefficients and Cronbach's alpha to 2 decimal places. More figures suggest an accuracy that is not there.6. Page 4, line 24: "insert figure 1 here" is not correct. There should be a reference to supplementary file 1.
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	7. Page 6, line 25 – 29: the strategy to determine the number of factors should be described in the method section.
REVIEWER	Dr. Michael Rieder University of Western Ontario Canada
REVIEW RETURNED	02-Nov-2020
GENERAL COMMENTS	<p>This manuscript describes a study exploring the potential of a dialogue tool (My Positive Health - MPH) used in the Netherlands as a measurement instrument. The authors conducted a study using the MPH and then explored the potential utility of MPH as a measurement instrument by conducting exploratory factor analysis followed by confirmatory factor analysis to determine fit of the extracted factor structure. Reliability and discriminant validity were assessed by Cronbach's alpha tests.</p> <p>The authors conclude based on their work that the MPH instrument is a useful tool to inform dialogue but is not suitable as a measurement instrument. They then propose a shorter (17 item) model which could be assessed as a measurement instrument.</p> <p>This is an interesting paper exploring cutting edge issues in the new dialogue as to what constitutes "health". The approach used employs valid and robust analytic and statistical methods.</p> <p>The authors note - and I would concur - the strengths of this study. They are somewhat less comprehensive as to the limitations of this study. The low response rate as noted is an issue. As well it would be interesting to know a little more about the demographics of the study population and how the demographics of the 708 respondents differed (or not) from that of the 3218 people who were approached, i.e. is there a selection bias among respondents?</p> <p>The authors note that the study is non-invasive and thus does not require formal medical ethics review and approval. With all due respect, I must disagree. While not commonly adverse, completing a survey can have consequences and hence I believe that some degree of ethical review by an impartial group is needed.</p>

VERSION 1 – AUTHOR RESPONSE

Reviewer #1:

* I suggest to give some more background to the objectives of the study. Why is it important to perform a factor analysis and to determine the factor structure.

We thank the reviewer for this good suggestion. In the introduction section of this manuscript, we have now added some additional sentences regarding the background of the study objective.

* I suggest to start the results with a description of the response and non-response. At the moment those results are partially reported in the method section and the discussion. Results should be reported in the results section and discussed in the discussion. No new results should be introduced in the discussion.

We have now moved information about the response and non-response to the results section.

Furthermore, some extra information is added regarding differences in demographics between responders and the general adult population of the region of Twente. We reflect on these results in the 'methodological considerations' section.

* One dimension is measured with two items and all others with three? Would it be useful to develop and include another third item for the dimension 'Mental Functioning'?

We agree that the scale would be more balanced if all domains were to consist of 3 items. We have addressed to this issue in an extra suggestion for future research in the 'methodological considerations' section.

* Is it not important to address in future studies also the responsiveness of the scale?

We agree that it is important to add a remark about the responsiveness of the scale for future research. We have therefore added a note about the responsiveness in our suggestions for future research.

* I suggest to round correlation coefficients and Cronbach's alpha to 2 decimal places. More figures suggest an accuracy that is not there.

We have adapted the rounding to 2 decimal places.

* Page 4, line 24: "insert figure 1 here" is not correct. There should be a reference to supplementary file 1.

Thank you for your keen eye. We have revised this reference accordingly.

7. Page 6, line 25 – 29: the strategy to determine the number of factors should be described in the method section.

We have moved this phrase to the method section.

REVIEWER 2:

* 'They are somewhat less comprehensive as to the limitations of this study. The low response rate as noted is an issue. As well it would be interesting to know a little more about the demographics of the study population and how the demographics of the 708 respondents differed (or not) from that of the 3218 people who were approached, i.e. is there a selection bias among respondents?'

Thank you for this good suggestion. We have added some extra information regarding differences in demographics between responders and general adult population of the region of Twente in the result section. In the discussion section we have reflected on these results.

* The authors note that the study is non-invasive and thus does not require formal medical ethics review and approval. With all due respect, I must disagree. While not commonly adverse, completing a survey can have consequences and hence I believe that some degree of ethical review by an impartial group is needed.

We agree with that completing a survey can have consequences for the respondent. Nevertheless, this current study is still exempt from ethical approval in The Netherlands (In Dutch: 'niet - WMO plichtig'). This was confirmed by a waiver that we have received from the Ethical Committee from Leiden University for a similar survey study. In this study, we distributed the same MyPositiveHealth questionnaire among a representative panel. This questionnaire was combined with other health

questionnaires (as golden standard) and focus group sessions (see attached documents for study plan and waiver for this similar study).