Reviewer's report

Title: Development and Psychometric Properties of a Brief Measure of Subjective Decision Quality for Breast Cancer Treatment

Version: 1 Date: 5 September 2014

Reviewer: Isabelle Scholl

Reviewer's report:

Many thanks for the opportunity to review this paper. It is a well written manuscript. Short measures are needed in the field of shared decision making and this paper adds to the currently available measures. However, I have a range of comments and suggestions to strengthen the manuscript.

Major Compulsory Revisions

1. Please adhere to the COSMIN checklist for reporting your results.
2. What the authors define as “subjective decision quality” (Introduction, p.4) has often been described in the literature as decision process and decision outcomes. Many measures of those aspects exist (e.g. Decisional Conflict Scale, Satisfaction with Decision Scale, Decision Regret Scale, SDM-Q-9 and many more). The manuscript lacks any acknowledgement and discussion of this prior work. The authors should be more clear why a new measure is needed, i.e. that there is a lack of short measures. It also remains unclear why convergent validity was not assessed by the use of these available measures. This should at least be noted in the discussion section.

3. A main flaw of the current manuscript is the lack of description of scale development. The title suggests that the manuscript will report on the development of the tool, but this is not mentioned in the aims of the study nor is the scale development adequately described. However, this is extremely important to be able to appraise the quality of the measure in terms of content validity (see COSMIN checklist or textbooks on scale development). How were the items created exactly? Did the authors involve patients in the scale development? Where pre-tests (cognitive debriefing, etc) done? Etc

4. It remains unclear what the item “right for you” means. Has this been checked beforehand in pre-tests? The results also indicate that it might have been difficult to understand this item.

5. Please discuss the ceiling effects.

6. In the conclusion you should clearer point out the need for further psychometric testing, both convergent and divergent validity, as well as sensitivity to change and other aspects of psychometrics.

Minor Essential Revisions

7. Please provide the developed questionnaire as a table, rather than just plain
text.

8. Please add keywords related to scale development and psychometric testing.

9. The abstract needs revision, especially its conclusions. I struggle with the sentence “Appraisal of breast cancer treatment decisions comprises six dimensions”, as you found only one factor in your analyses. This should also be revised in the discussion. Also, I think that you should add to the conclusion that further psychometric testing of the measure is necessary.

10. Methods: Please explain the dichotomization of demographic characteristics.

11. Methods: How long where the decisions ago? Couldn’t there be a recall bias?

12. Are the decisions to undergo surgery, chemo and radiation really independent decisions? I would doubt this from a clinical perspective. Does it than make sense to ask to rate them separately? Could the association of scores be due to association of treatments?

13. In the Discussion section, the authors describe an “ordering effect” (p.12). Please report this in the Results section.

14. Is “time since diagnosis” the right indicator to assess whether scales vary or could it also be time since decision or time since treatment? (p.12.)

Discretionary Revisions

15. The term “objective” (Introduction, p.3, line 42) is often associated with observer measures. You could clarify that you talk about patient-reported measures to avoid confusion.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests