Reviewer's report

**Title:** Designing questionnaires: Healthcare survey to compare two different response scales

**Version:** 4  **Date:** 17 May 2014

**Reviewer:** Sunghee Lee

**Reviewer's report:**

I appreciate an opportunity to review the revised version of the manuscript. While I see the authors’ attempt to improve the paper, I still find the following left to be desired.

**Major compulsory revisions:**

1. **Previous comments on compulsory revision**

I find the previous comments for compulsory revision are fully reflected in the current version. For instance, the definition of ceiling and floor effect are still absent and I do not find statistical significance tests with the results. For instance, on pg. 10, the authors state, “Patients who completely filled out all questions (Webappendix: Additional file 3) were representative in baseline characteristics for those who sent back the questionnaire (table 1).” Where is the statistical test that supports this statement? Not providing statistical tests seriously limit readers’ understanding of the extent to which the findings of this study apply.

2. **Presentation of the response order**

With the full questionnaires, I see that two difference between NS and LS questionnaires. One is the number of the response points that the authors indicated as an experimental factor; and the other is the order of response options. For instance, responses to a question, “How would you rate the quality of treatment received?” were ordered from poor to excellent in the NS questionnaire but from excellent to poor in the LS version. It is well documented that order of response options matter as respondents are more likely to choose those presented first (e.g., Carp, 1974; Chan, 1991; Krosnick and Alwin, 1987). This is clearly shown in the domains of question to physicians, question to nurses, and respect and dignity reported in Table 2. Because the differences between two versions are product of both the number of the response points and the response order, the findings between NS and LS are the product of the two. In other words, the response order differences may confound what the authors planned to examine. This should be further examined or pointed out as a potential confounder.

**Minor essential revisions:**

1. Does “lower confidence interval” on pg. 11 mean the lower bound of
confidence interval?

2. What do “within-centre” and “between-centre” mean in the last sentence of the abstract?

References

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests.