Author's response to reviews

Title: Validation of the Intermountain Patient Perception of Quality (PPQ) Survey among Survivors of an Intensive Care Unit Admission

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Author's response to reviews: see over
Dear Dr. Morrey and colleagues,

We are grateful for the insightful reviews of our manuscript and describe our revisions in light of these reviews in this document.

We have coded reviewer comments as E, R1-R4, to represent editor and reviewers 1-4. We also include the comment number. Thus the second comment from reviewer #2 is coded R2C2.

Reviewer 1

R1C1 The authors do mention the construct validity, neither the experts who participated in its validation, for example: therapist, nurse, general practitioner, etc.

Initial construct validity was performed previously and the report of them is cited in the current manuscript. We have included a brief summary of those findings in the revision, in the background on page 1, lines 11-23.

R1C2 Results of the pilot test done before the application of the scale are not mentioned.

This is an important point. We combined our response to this comment with R1C1 above, as well as page 2, lines 24-26.

Reviewer 2

This paper is likely to be of interest to those with an interest in the field.
This study has a good sample size.
However, for those with limited statistical skills it is not easy to follow.

R2C1 More explanation of PCA in particular would be useful.

We have revised our discussion of PCA on page 3, lines 59-68.

R2C2 Cronbach alpha is reported for each of the sub domains but not for the questionnaire as a whole. Given that many respondents tend to answer most questions the same way, this should be added. A high Cronbach alpha of over 0.9 usually means that two or more questions are asking essentially the same question using different words, and thus the number of questions might be reduced. This is stated in the conclusions, but more detail should be provided.

We have added an overall Cronbach alpha as requested. We agree that there may be opportunities for simplification. However, given the results of the correlation matrix, we think it is reasonable to leave the instrument items without change. We have added Table 3 and expanded the discussion. See page 6, lines 129-31.
R2C3 It is not clear from the analysis how well correlated each item is within and between domains. It is stated that the nursing component explains 58% of the variance! implying that $r \approx 0.76$. A correlation matrix showing all inter-item correlations would make this clearer.

It was the first principal component of the overall data that explained 58% of the variance rather than any specific nursing variable. In order to make this point clearer, we have added a correlation matrix (as Table 3) to the revised manuscript as requested. In general, there was appropriate correlation. See response to R2C2 above.

R2C4 The questionnaire is provided in supplementary material. The presentation would be clearer if more details of the questionnaire were provided in the text, such as the number of questions asked and the word count, to indicate the level of respondent burden (which may help explain the relatively poor response rates in spite of up to 5 attempts to contact).

We have added this discussion as requested. See page 2, lines 35-40.

R2C5 It would be useful to report response rate distributions for whatever part of the sample this was available for. It would be useful to have some comment about this.

Unfortunately, we do not have the formal disposition records that would be required for this analysis. We agree that it would be useful. We have expanded the sentence describing this limitation (page 8, line 178-81).

R2C6 The paper mentions differences between different raters, but does not provide detailed figures about these differences. In unpublished studies in which I have been involved (not in ICUs), we have found significant differences between patients own ratings and those of proxies. References to the literature on this might be useful.

We agree that this is an important observation, and have mentioned this fact in the manuscript and included literature on differences between patients and proxies. Unfortunately, we did not simultaneously obtain responses from both patients and proxies. We did, however, add a discussion of differences in scores by respondent type, on pages 6-7, lines 137-44.

R2C7 Although outside the stated scope of the study, it would have been useful to know whether the instrument was sensitive either to differences between ICUs or over time. Clearly if the instrument did not identify such differences, it would be difficult to justify its use.

We agree that this is an interesting question, and added a paragraph. The Intermountain privacy board did not want specific designation of scores by individual ICUs, so in the discussion we referred only to the p value. We do mention the change in mean scores by year. See page 7, lines 145-47.

Sincerely,

Samuel Brown, MD MS FASE