**Reviewer's report**

**Title:** A Three Models Comparison of Quality Satisfaction and Loyalty Relationships: An Empirical Study in the Chinese Healthcare system

**Version:** 2  **Date:** 20 August 2012

**Reviewer:** Oyvind Bjertnaes

**Reviewer's report:**

The authors state that the main purpose of this study is to analyze perceived quality and its relationship with patient satisfaction and loyalty intentions in mainland China’s healthcare system. Three different conceptual models are tested and compared.

I find this article interesting, and it is also quite novel in this field. However, there are several conceptual and methodological problems.

- **Major Compulsory Revisions**

  1. **Theoretical background and research hypotheses:**

     - One problem with the article is the lack of inclusion and discussion of relevant literature and concepts from the health service research (HSR) field. The authors need to situate their approach within the current HSR field on patient experiences and satisfaction. For instance, the concept patient-reported experience is well established in HSR, a distinct but related concept to patient satisfaction. It is unclear how patient-reported experience relates to quality, as used by the authors, and this should be elaborated. In fact, relevant concepts and frameworks from a range of relevant publications on the quality-satisfaction-loyalty relationship within HSR should be considered for referencing, introduction and discussion in relation to the conceptual model in this study, including:

       - Fitzpatrick R. Capturing what matters to patients when they evaluate their hospital care. Qual Saf Health Care 2002;11:306
       - Bjertnaes OA, Sjetne IS, Iversen HH. Overall patient satisfaction with hospitals: effects of patient-reported experiences and fulfilment of expectations. BMJ Qual

- I think theory and research in this field will point strongly to the H1 hypothesis in this study. The novel part seems to be the actual test of these interrelations using SEM. The two other hypotheses could be mentioned briefly, but are less interesting.

- The authors also need to discuss the general importance of expectations in their conceptual model, especially since some hospital patients might have unstable or unclear expectations. This could be the case for instance when patients are admitted acute or when patients adjust expectations to experiences (response-shift). See Crow et al. above.

2. Methods

- Most of the above studies are lacking from the literature review. The search strategy in the current study should be better described (purpose, key words, databases, results).

- Data collection should be better described, for instance: how was the sample approached? Where and when did the patients fill out the questionnaire? How did they return the questionnaire?

- Measures: translation, (cognitive) testing and so on is not described. This is important for documenting content validity, and should be addressed. Furthermore, it is unclear whether 22 items or 44 items were used (both perceptions and expectations?). All included items should be placed in an appendix with descriptives (n, means, SDs). It is also unclear how quality was computed: difference between perceptions and expectations, only perceptions or what? If difference score: discuss this concept versus patient-reported experiences, and discuss reliability of difference score in relation to this study: Prakash V. Validity and reliability of the confirmation of expectations paradigm as a determinant of consumer satisfaction. J Acad Market Sci 1984;12:63–76.

3. Results/Discussion

- Study 1: the process from 22 (or 44?) to 5 items should be much better documented. Furthermore, this reduction is highly questionable from a content validity perspective, and should be much more discussed in the Discussion. The distinction between formative and reflexive constructs is important in this context. I would argue that this uni-dimensional scale consisting of five questions hardly can be considered valid for inpatients in hospitals: all existent validated measures for hospital inpatient experiences are multidimensional. Therefore, the instrument might have good psychometric properties, but poor content validity. All in all, I think that the instrument part of this study is of minor interest for health service research (as a valid instrument for hospital inpatients), and advice the authors to focus more on the SEM part of the study.

- Implication 1: this paragraph needs to be clearer (also, what does “…managers actions” mean?).

- Implication 2: should also be related to the concept of content validity. If you measure and try to improve important health care aspect for patients, you increase the probability of satisfied patients, which in turn give better chances of
loyalty. This is why qualitative work is so important for securing content validity – you only measure and try to improve what is important for patients, that is – aspects stressed by patients in qualitative work and with a consistent empirical association with satisfaction and other important outcomes.

- Implication 3: as mentioned I am not sure whether your instrument is one or two scales, see also third point under Methods.

- Implication 4: I am not sure about this implication, since inpatient experiences are multidimensional. Should be more thoroughly discussed, formative versus reflexive constructs.

- Conclusions: be more clear what the first conclusion mean in a health care setting, maybe using the patient-reported experience (PRE) concept (PRE with health care structure and processes of care). Possible to relate the second conclusion to implication 2 above?

- The conceptual model should be discussed in relation to relevant literature from HSR, see first and third point under Theoretical background above.

- Focus more on the SEM/structural part throughout the study. The only study I know of in this field using SEM for a similar purpose is the following (this study should also be discussed in relation to the current study, including differences in the analytical model like the inclusion of socio-demographics):


- All in all, I think the article would be more interesting as an Introduction article about how to use SEM in a patient satisfaction health care setting (similarities and differences between SEM and multivariate linear regression, advantageous of SEM and so on).

Discretionary Revisions

1. Results, model 2: check p-values, according to the text both should be statistically significant.

**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.