Author's response to reviews

Title: Hospital outpatient perceptions of the physical environment of waiting areas: the role of patient characteristics on atmospherics in one academic medical center

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Author's response to reviews: see over
Dear Editor:

This revised manuscript has been revised as requested from two reviewers’ comments and your board. All revisions have been shown point-by-point responses to the reviewers’ comments in the following. And this revised manuscript has been edited by English professional for language corrections already.

Thank you for your help!

Sincerely,

Blossom Yen-Ju Lin
Reviewer: editor

1. Copy-editing - We recommend that you ask a native English speaking colleague to help you copyedit the paper. If this is not possible, you may need to use a professional copyediting service.
   A: The revised manuscript has been edited by a native English speaking colleague (Jeffery Conrad) in my school already.

2. Ethics - Experimental research that is reported in the manuscript must have been performed with the approval of an appropriate ethics committee. Research carried out on humans must be in compliance with the Helsinki Declaration (http://www.wma.net/e/policy/b3.htm), and any experimental research on animals must follow internationally recognized guidelines. A statement to this effect must appear in the Methods section of the manuscript, including the name of the body which gave approval, with a reference number where appropriate. Informed consent must also be documented. Manuscripts may be rejected if the editorial office considers that the research has not been carried out within an ethical framework, e.g. if the severity of the experimental procedure is not justified by the value of the knowledge gained.
   A: This is a non-experimental study (survey study). This study was conducted by the approval of Superintendent Cheng-Chieh Lin, M.D., Ph.D. in China Medical University Hospital (the studied medical center) for providing the study setting. The respondents were surveyed by the trained reviewers and informed consents were obtained from all of the respondents. Furthermore, around one-third respondents automatically left their names, mailing addresses, or e-mails to ask for sharing our research results. The name files were secured and centralized in the research room.

3. Formatting checklist
   A: The revised manuscript has been checked for the manuscript formatting.
Reviewer: Andrew M Garratt

1. Introduction. This should start with some information relating to the importance of the physical environment and the waiting area in particular. Evidence from previous studies should then be introduced before leading into methods of measuring patient satisfaction or experience with the waiting area.

A: The text in the Introduction/Background have been re-organized and rewritten to point out importance of the physical environment, followed by the previous literatures, and the purpose of this study. (p. 4-6)

2. The authors have missed some important literature relating to the role of patient characteristics and their association with patient satisfaction. Crow is a huge review that has found a number of variables to be consistently associated with satisfaction across multiple studies.


A: Thank you so much for providing three knowledgeable literatures relating the role of patient characteristics. We learned not only from the concepts but also the methodology issues. We have added these three references in the background and method parts (p. 5, 8, 9). In addition, the paper done by Danielsen K, Garratt AM, Andresen Bjertnæs ØA, et al. (2007), is very useful for the writing model in the presentation of the table results of multiple regressions. (p. 24-25, Table 3)

3. Questionnaire development. I would like to see more information relating to the development of the questionnaire. References are provided but how and why were the 15 items or areas chosen. How were the items constructed? To what extent did the literature or existing questionnaires inform development? How many researchers were involved? Was there some sort of a group consensus? Were the items pre-tested with patients? Did all of the items include a not applicable option or just some?
A: More information relating to the development of the questionnaire has been added to the section of study instrument (p. 7-8). For example, we added the information of how the questionnaire was developed from the previous literatures and from practical managerial perspective. The structured questionnaires were first drafted and then examined by two academic professors and two hospital administrators for theoretical accuracy. Then one pilot study was pre-tested for 25 patients. The wordings and meanings of each question item were revised to assure content validity. All individual question items provide one scale as “not applicable” when the respondent had no experience in individual items.

4. Did the authors consider undertaking some form of multivariate analysis. It is possible that there are confounding variables in the analyses that are presented. Multiple regression analysis could be used with the 15 items are regressed on the remainder of the variables after considering the number of cases available for analysis. Two of the references above have undertaken such analyses.

A: We have performed multiple regression analyses and it leded to more accurate results. Fifteen multiple regressions have been done in the revised manuscript in Table 3 (p. 24-25) and the relevant texts have been revised (p. 9-10). We modified the format based on the two of the references mentioned above.

5. Did the authors consider developing a summated rating scale based on the items that make the most important contribution to an overall measure of waiting room environment? This would involve undertaking an exploratory principal component or factor analysis to assess which of the variables make the most important contribution. It is possible that several components/factors may be found each comprising several items. Provided they are supported by theory or previous research, they could then be used to construct rating scales based on classical test theory. This would involve the use of item-total correlation and Cronbach’s alpha.

A: All 15 question items were analyzed by factor analysis for construct validity and were located major on one common factor with the loading values ranging from 0.543 to 0.738 shown in Table 2 (p.23) and the Cronbach α value for these 15 items referring as physical environment of outpatient waiting area was 0.903. (p. 8)

6. The English requires some attention throughout the paper and should really be given to an organization offering such a service. There are also author names
within the text.

A: The revised manuscript has been edited by a native English speaking colleague (Jeffery Conrad) in my school already.

7. In addition to the 15 items, how many other questions were included and how were they scaled?
   A: In terms of the items for the physical environments in the waiting areas, 15 items were designed as closed questions. In addition, we also provided some possible ancillaries to improve the overall physical environments, such as TV walls, newspapers, health education brochures, water, wheel chairs, or other factors (p. 8). Some respondents have responded us some expectation and the results were shown in the end of the Result section. (p. 11)

8. The number of patients that declined to participate should be reported.
   A: Overall, the reviewer rejected rate in the surveying process was around 10%, which were relatively low for Taiwan people, because the reviewers wore the student IDs and it leaded to the increased trusts from the public. Finally, 680 patients with informed consents were recruited to respond in this study, 40 patients from each of individual outpatient waiting areas. (p. 7)

9. Please check the use of decimal places conforms to the journal requirements.
   A: Thank you. The use of decimal places has been checked to conform the journal requirement.

10. I would have liked to have seen the number of not applicable and missing data in Table
    A: The number of “not applicable” data has been shown in Table 1 (p. 22) and Table 4 (p. 26-27).

11. Issues of social desirability bias should be discussed. There is some evidence that patients completing patient satisfaction questionnaires have higher levels of satisfaction compared to those receiving questionnaires in the post.
    A: The issue of social desirability bias has been mentioned in the Discussion section. (p. 14)

12. Was the questionnaire given to the patients before or after they had a consultation.
How long did they wait before receiving a questionnaire. This is an important consideration given that they will have needed time to appraise the waiting room.

A: In our study, we did not record and ask how long the respondents waited before receiving the questionnaire. It is indeed a very important point about whether the respondents have sufficient time to appraise the waiting areas. One method we used to overcome this possible pitfall through adding “no applicable” for the individual question items in case that the respondent had no experience in individual items. We added this possible limitation in the Discussion section in the revised manuscript. (p. 13-14)
Reviewer: Stefano Tabolli

1. The format of questionnaire is not presented (it is not crucial)
   A: The question item of the questionnaire was shown in Table 2 (p. 23). And the relevant scales were counted and calculated as frequency and mean, using 5-point Likert scale. (p. 8)

2. Tab 4 could be deleted and few statistically significant data could be inserted in the text.
   A: The key descriptions of Table 4 have been inserted in the text (p. 10-11). The original purpose of setting up Table 4 in the paper was aimed to be more readable for readers and hospital administrators in the studied medical center to make the improvement for the individual waiting areas of various specialties. Therefore, if the room of paper publication is enough to carry it on, we might expected to leave it in the table section and it might provide the readers a method or a presentation style for analyzing the similar issues in the future.

3. Sometimes it is better to consider only the strongly satisfied (5 Likert point and unsatisfied all the others) usually patients in a waiting room for visit are positive and less realistic (positive bias)
   A: The presentation format for the measurement of individual question items in Table 2 have been revised into five scale counting to provide the readers more information instead of the three scales [i.e., Satisfied (Likert 5 & 4), Fair (Likert 3), and Dissatisfied (Likert 2 & 1)] in the original paper. The revised part might provide more information for readers. (p. 23)

4. "Atmospherics" have different standards in different Countries. Such information has to be monitored and added to the quality perceived by patients if we need to improve it.
   A: In Taiwan, there are no specific rules for the health care providers in any official documents and facility accreditation to design their outpatient waiting areas. From the marketing perspective, however, the concept of “atmospherics” has really pervaded in the provider side and has been viewed as a method to provide the customers (patients and visitors) more friendly and humane healing environment to attract patient flows under the freedom of patients in choosing health care providers in
Taiwan. The idea of this study was originally aimed to raise the issue of physical environments in the health care industry not just from architecture or interior design perspectives, but from a user (patient) perspective. We put these wordings above in the revised manuscript to make this article and issue more readable (p. 5-6)