Author's response to reviews

Title: Development and psychometric properties of a new social support scale for self-care in middle-aged patients with type II diabetes (S4-MAD)

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Author's response to reviews: see over
Mr Victorino Silvestre
on behalf of Dr Fuschia M. Sirois

21 August 2012

Dear Victorino,

MS: 1080646941697410
Development and psychometric properties of a new social support scale for self-care in middle-aged patients with type II diabetes (S4-MAD)
BMC Public Health

Thank you for your e-mail. We found the reviewers’ comments very helpful. Please find the following point-by-point responses as requested:

Reviewer: Dr. Sepideh Omidvari
Minor Essential Revisions:
1. It seems that "test-retest analysis" should substitute for "t-retest analysis" (Abstract, second paragraph).
   Done.
2. It seems that "A 38-item questionnaire" or "A questionnaire containing 38 items" should substitute for "A 38-item questionnaire containing" (Abstract, third paragraph).
   Done.
3. In abstract (fourth paragraph) it has been said that the developed questionnaire is a "short" one but in background (second paragraph) it has been mentioned that existing measures for self-care social support had no focus on "all behaviors" and developing a "comprehensive" instrument was the second aim of the study. The word short in the Abstract was deleted.
   Done.
4. It seems that "It … contains the most significant diabetes related behaviors that need continuous support for self-care" should substitute for "It … contains the most significant diabetes related behaviors that needs continuous support for self-care" (Abstract, fourth paragraph).
   Done.
5. It seems reference numbers 18, 19, 20, and 21 should stand before full stops (Background, second paragraph and Methods, validity, second paragraph).
   Done.
6. Mentioned percents on gender in table 1 should be corrected into 73 and 27 (instead of 77.3 and 22.7, respectively).
   Thank you. This was corrected.
7. Considering "Authors' contributions", it is not determined that FZH, SSB, LMB, and ASM stand for whom.
   Sorry this was a mistake and was corrected.
8. Limitations of the work have not been stated.
   The following sentences were added to the Discussion as requested:
   This study however had few limitations. First, we did not perform concurrent validity in order to demonstrate that the instrument correlates well with a measure that has previously been validated in Iran. Secondly the cross sectional nature of the study might have some effects on the findings and thus making the results limited. Yet, the study
had a number of strengths. Notably we recruited two separate samples for the main study. In fact as recommended we used one sample for the EFA and another sample for the CFA.

Discretionary Revisions:
1. If "Duration" in table 1 implies "Disease duration", it can be substituted for "Duration". Done.

Reviewer 2
1. **Abstract**-Methods: Please check the spelling –"t-retest" analysis. This was corrected.
2. **Background**, first paragraph: Please cite the references for “It has been recommended that providing social support for self-care might have twofold advantages” This was provided (Ref. Number 5).


3. **Scale development**: Since this was a two-phase qualitative and quantitative study, and the preliminary aim of this study was to develop a tailored measure for self-care social support, you should describe the process and outcomes of the scale development. For example, how many subjects participated in the focus groups? How many focus group discussions were conducted? What was the interview guide? How to do the qualitative data analysis?

The qualitative phase further expanded as suggested:
(ii) A small-scale qualitative study to explore what does ‘social support for self-care’ mean to diabetic patients. For the purpose of qualitative phase, four focus group discussions were conducted with a sample of diabetic patients. Patients were recruited from a diabetes screening center affiliated to Tehran University of Medical Sciences. We have tried to recruit patients with different characteristics to ensure that patients from diverse demographic backgrounds are present in the focus groups. In all, 38 patients agreed to take part in the study. The characteristics of patients are presented in Table 1. All patients informed about the aim of the study and their informed consent was obtained. The discussions were hold in the screening center and all were tape-recorded. We stopped data collection until saturation was reached. Then, we transcribed group discussions and used a deductive method to analyze the data. Deductive content analysis is used when the structure of analysis is operationalized on the basis of previous knowledge [23]. Since we were concerned about five main self-care behaviors therefore the intention was to determine the frequency of sayings under five topics that were nutrition, physical activity, self-monitoring of blood glucose (SMBG), foot care and smoking. Finally, a list of items was prepared with their examples. Trustworthiness of the results also was checked. As suggested four criteria were considered for the trustworthiness: credibility, transferability, dependability and confirmability [ref.]. For credibility, we designed clear processes for drawing conclusions from the data. For transferability, we provided rich enough descriptions and data sets that other researchers can use them in the other contexts and settings. For dependability, we checked the consistency of the study processes and finally, we checked the internal coherence of the data and the findings for confirmability [ref].
(iii) Interview with a panel of experts: Experts were asked ‘What are the most important self-care behaviors in type 2 diabetics? Why these behaviors are so important? Why do you think the other behaviors are not as much important as your selected behaviors?’ At last, the data derived from the qualitative phase and from the interview with experts were crosschecked and in all 38 items were generated and consequently content and face validity were evaluated.

4. **Statistical analysis**: What kind of the statistical analysis program had been used in this study?
   The statistical programs were added to the Statistical analysis in the Methods section.

5. **Results- Exploratory factor analysis**: Please check the spelling – “Bartlet’s” test. Done.

6. **Results- Confirmatory factor analysis**: (1) χ2 / df ratio? (2) The p-value needs to be presented. (3) Were all items statistically significantly loaded on the construct of the instrument?
   (1). This was clarified. (2) This was added as suggested. (3) Yes.

7. **Discussion**: Please give more discussions about the constructs and items of the new scale (S4-MAD) compared with other scales.
   The following paragraph was added to the Discussion as requested:
   The main feature of the S4-MAD was the fact that it was developed for middle age diabetic patients (the main affected age group), and contained items on foot care and smoking. However, we did not include items on medications since neither patients nor experts did address the topic during the course of scale development. In addition a unique item (item 18) was included in this new instrument on reminding patients for blood glucose test every three months. The other characteristics of our questionnaire was related to the its wording structure. Unlike other questionnaires that contain short statements for each item we used prolonged and complete sentences in order to help patients to understand the items and avoid confusion. Finally, we believe without losing any important dimension on social support for self-care, the S4-MAD is relatively a short questionnaire and easy to use.

8. **Table and Figure**: (1) Tables and Figures should be indicated in the content (the result section) and be correct (for example, does the table 2 was used to present 72.3% of variance?); (2) Table 1: Mean & SD should be described in another column
   (1) Tables and Figure were indicated in the Results section. In addition we added a row to Table 2 to clarify the total variance observed. (2) The format was changed as recommended.

I hope you find the revisions satisfactory.
I wish you all the best.
Kind regards
Ali Montazeri