Author's response to reviews

Title: Quality of life associated with treatment adherence in patients' with type 2 diabetes: a cross-sectional study

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Version: 3 Date: 14 June 2008

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Reviewer's report:

1. There must be a robust limitations section to any study, but particularly an observational, cross-sectional study like this (e.g. cannot conclude direction of association, which is really a major limitation). The authors should provide a limitations section in the discussion which, at the least, includes limitations related to the study sample, study design (cross-sectional; cannot conclude direction of assn), and potential for unmeasured confounding. An additional potential limitation to note is that the visiting of patients could have influenced their adherence behavior.

   We agree with your observation, therefore we included a limitations section which has the information regarding study sample, study design, home visits unmeasured, and confounding factors. This information is on pages 13 and 14.

2. Although it was brought up with the initial review and the authors say that it has been clarified, it was still not clear to this reader whether (or how) the two questionnaires were developed and validated.

   We expanded the information regarding the development and validation of the two questionnaires. This information is on pages 6 and 7.

3. While it was responsive of the authors to multivariable regression in response to earlier reviews, stepwise selection should generally not be used. It has been shown by multiple statisticians (e.g. Frank Harrell) to be fraught with problems including inaccurate estimates of association. The authors are encouraged to run the multivariable regression either using all candidate variables (table 1) or using either backward or forward regression to be sure the results found with stepwise regression hold.

   We took into account your suggestion. First, we used the forward regression with candidate variables which yielded the same results as stepwise regression confirming that stepwise regression is a modified version of forward regression, as Kleinbaum et. al. mention ¹. Therefore, we used backward regression which gave a better result because serial analysis was hold in five of the six domains unlike the stepwise and forward that only hold it in four of the six domains. The changes are on pages 8, 10, and 26.