Reviewer's report

Title: Factor analysis of self-treatment in diabetes mellitus: a cross sectional study

Version: 3 Date: 4 September 2011

Reviewer: Fernando Rubinstein

Reviewer's report:

Methods

1) Questionnaire development (2nd paragraph):
From the cover letter sent by the authors, they selected the questions and refined the questionnaire based on the results of the pilot study and performed the factor analysis in the present study.

They describe with some further detail the development of the instrument, the selection of the questions of the survey and the crombach's alpha of the final questionnaire from the pilot study.

In my opinion, Authors still do not make a convincing case at explaining the arguments as to why this instrument should be used as a formal test based on a summative score from the questions of this survey to warrant its use as a valid measure of self treatment behavior.

2) Statistical analyses (last sentence) Please include a brief explanation of the assessment of the distribution of the scores and the statistical test used to evaluate mean score differences by the different characteristics.

done, thank you

3) Information provided on the use of non parametric tests to compare rank scores among different groups. The score is a result of the sum of each question based on an ordinal scale (from 1 to 4 points) across the survey. The mean self-treatment score of the participants was reported as 45.8 ± 8.8, but no information is provided regarding distribution of scores or theoretical different categories of self treatment behavior based on the scores.

done, thank you

4) The reported associations between self treatment behavior and education or the presence of hypertension or hyperlipidemia are based on a difference of 2.5 points. I was still unable to find an explanation about the meaning of those score differences, which are smaller than the reported standard deviation. Again, readers should know what magnitude of a difference is considered clinically relevant (and why), not just statistically significant
In addition, reports of the comparison of scores among different groups are based on crude analyses with no attempt to adjust for possible confounders such as education or age.

**Level of interest:** An article of limited interest

**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