Author’s response to reviews

Title: The Association of Patient Trust and Self-Care among Patients with Diabetes Mellitus

Authors:

Denise E Bonds (dbonds@wfubmc.edu)
Fabian Camacho (fcamacho@wfubmc.edu)
Ronny A Bell (rbell@wfubmc.edu)
Vanessa T Duren-Winfield (vwinfiel@wfubmc.edu)
Roger T Anderson (randers@wfubmc.edu)
David C Goff (dgoff@wfubmc.edu)

Version: 2 Date: 2 July 2004

Author’s response to reviews:

Iratxe Puebla
Assistant Editor
BioMed Central
Middlesex House
34-42 Cleveland Street
London W1T 4LB
Tel: +44 (0)20 7323 0323 ext 4808
Fax: +44 (0)20 7580 1938 or +44 (0)20 7636 4296
email: editorial@biomedcentral.com

July 2, 2004

Ms. Puebla,

I have addressed the reviewers' comments for the manuscript entitled "The Association of Patient Trust and Self-Care among Patients with Diabetes Mellitus" and have attached a document outlining our response to this document. The locations of changes (page and paragraph) in the manuscript are noted and I have included a copy of the text.

Thank you

Denise Bonds
Assistant Professor
Wake Forest University School of Medicine
Department of Public Health Sciences
Medical Center Boulevard
Winston-Salem, NC 27157
Telephone: 336-716-6012
Fax: 336-713-4300
Email: dbonds@wfubmc.edu
Response to Reviewers:

Reviewer: Ann- Louise Kinmonth

1. Additional references in introductions:
   We have replaced reference 3 and 4 with the relevant clinical trial references. Reference 7 has been replaced with a quantitative review of the literature on patient adherence. References 14-19 have been rearranged to better reflect the subject matter they cite. (page 2 and 3)

2. Clearer link between trust and self-care
   We have added support in the background section for the link between trust and self care along with other studies that have examined this issue.

Background (page 3, paragraph 1)
Limited studies have been done examining the relationship between patient trust and medical outcomes. Safran et al found that adherence to physician recommended lifestyle changes was significantly associated with patient trust levels. Higher levels of patient trust have also been associated with lower hemoglobin A1c levels in patients with type 2 diabetes.

3. Lack of inclusion of physical activity in hassles scale
The hassles scale is a scale developed by the National Committee for Quality Assurance to measure diabetes care. We agree that physical activity is appropriate for inclusion in the scale but we felt that during the development of the survey that it was important to use the original instrument. Physical activity is included in the difficulty in completing care activities scale which was also included in the paper.

4. Possible confounders of trust
We did include several independent variables that have been shown to be associated with patient trust in the original analysis. We have added the length of the relationship with the doctor or clinic that the participant received their diabetes care and the number of visits made for diabetes care in the last year and have included this information in table 1. In bivariate analysis, neither of these proved significant, nor did they substantially change the values obtained in the multivariate analysis. We have added text to the methods and results describing the addition of these variables.

Methods (page 7, paragraph 1):
The length of the relationship with the health care professional and the number of visits to a provider for diabetes care were obtained from the telephone survey.

Results (page 8, paragraph 1):
Twenty four percent of the sample had insulin listed as a treatment in their medical records. When asked about the length of time they had been seeing a provider or clinic, 15% responded less than 1 year, 21% 1-2 years, and 65% more than 2 years. The average number of visits to a provider for diabetes care in the last 12 months was 3.

Results (page 8, paragraph 3):
In bivariate analyses, a higher levels of hassles was associated with younger age (p<0.001), non-white race (p=0.03), and lower score for mental health. There was no association with gender, insurance status, co-morbidities, use of insulin, physical health, length of the relationship with the provider, or the number of visits for diabetes in the past year. A higher difficulty in completing care activities was associated with younger age (p=0.002), female gender (0.003), non-white race (p=0.03), worse physical health (p<0.001) and worse mental health (p=0.001). There was no association with insulin use, co-morbidities, length of relationship, or number of visits in the past year. Better self rated ability to care for diabetes was also associated with older age (p=0.004), better physical health (p=0.02), and better mental health (p<0.0001). There was no association with gender, race, co-morbidities, use of insulin, length of relationship, or number of visits in the past year.

We agree with the review that variables such as empathy and self efficacy would be helpful in an analysis such as this. Unfortunately, these were not included in the original survey nor was the education level of the participant collected. We have added language to the discussion section describing these as potential limitation of the analyses.

Discussion (page 12, paragraph 1):
We also did not collect information on several important mediators of patient trust and self-care such as the empathy level of the health care provider, educational level of the patient, and patients' overall perceived self-efficacy. These additional factors may provide further elucidation into the relationship of patient trust and ability to complete self care task.

5. Dimensions of Trust
As the reviewer points out, the questions included do omit certain aspects of patient trust. The longer versions of the Wake Forest University trust scales do include question on listening and advocating patient views. Unfortunately, space limitations required use of a shorter version of the trust instrument. We have added a section to the discussion section describing this limitation of the study.

Discussion (page 12, paragraph 1):
The shortened trust instrument we used lacked the important dimension of patient-centered care. Patients who feel their concerns are listened to and work in partnership with their health care provider may be more likely to attempt new self care activities. It is likely that the inclusion of this dimension through questions such as the providers' ability to listen to or advocate for the patient would strengthen the association of trust
with reduced difficulty in completing self care tasks.

6. Normal range for HbA1c
We are unable to list a single reference range for hemoglobin A1c. A variety of labs were used by the clinics and each lab has their own reference range.

7. Discussion of degree of effect of trust on self care outcomes
We have removed the comparison to blood pressure and have instead compared the difference to other variables in the study to provide a comparison for the readers.

Discussion (page 11, paragraph 1):
This improvement is equivalent to the difference in self care scores seen between a 60 year old patient and a 30 year old patient. Additionally, trust was significantly associated with all self care measures while insulin use was not.

8. Use of the term medical outcomes
We have removed the term "medical" from the paper

9. Discussion section
Please see the additions described above. We have added a section on patient enablement and self-determination.

Discussion (page 10, paragraph 2):
Patients who are actively engaged in their medical care and jointly make health care decisions with their provider may have less difficulty and hassles in performing self-care activities that they had input on. These patients may also have higher trust levels because they have been engaged as an active participant in the health care decision by their provider.

Additionally, we have added section describing areas of further study.

Discussion (page 12, paragraph 1)
Further studies comparing strategies for measuring trust, measurement of trust at multiple points in time and the linkage of patient trust with clinical outcomes are needed.

Reviewer: Audiey C Kao

1. Inclusion of insulin as a modifier of effect
We analyzed the effect of insulin use on the self-care measures and found no relationship in either bivariate or multivariate analysis. We have added information to the methods and results section on this inclusion.

Methods (page 7, paragraph 1):
The use of insulin by the patient was collected from the chart review and was included in the analyses.

Results (page 8, paragraph 1):
Twenty four percent of the sample had insulin listed as a treatment in their medical records.

Results (page 8, paragraph 3):
There was no association with gender, insurance status, comorbidites, use of insulin, physical health, length of the relationship with the provider, or the number of visits for diabetes in the past year.

2. Response rate
The response rate for the telephone survey was 67%. We have added that information into the results section.

Results (page7, paragraph 3):
The response rate for the telephone survey was 67%.

3. Discussion of degree of effect of trust on self care outcomes
Please see the response to #7 above