Author's response to reviews

Title: Effects of Self-Care, Self-Efficacy, Social Support on Glycemic Control in Adults with Type 2 Diabetes

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

We have to thank you and reviewers for your constructive comments and suggestions. We have revised the manuscript, and would like to re-submit it for your consideration. We have addressed the constructive comments raised by the reviewers. Point by point response to the reviewers’ comments is listed below this letter.

We hope that the revised version of the manuscript is now acceptable for publication in BMC Family Practice.

I look forward to hearing from you soon.

With best wishes,

Yours sincerely,

Junling Gao

Replies to Reviewer 1

Comment 1: There are some (minor) language errors: 'foo care' (just before reference 13); 'most of them were central obesity' (results section)

Response: the two co-authors (Regine Haardörfer, Michelle C. Kegler) from the USA revised the manuscript again to correct all language errors.

Comment 2: 3.1. The introduction is rather long, very 'open door' (world prevalence of diabetes...) and not very to the point. It should be more directly orientated towards the key question.

Response: we have shortened the introduction and focused on the purpose of the study according to reviewer’s constructive suggestions.

Comment 3: 3.2. That key question is not always clear, what is the 'place' of this study in the 'wall of knowledge'? Is it a confirmatory study based on literature? Is it a 'Chinese' study (relatively few conducted)? Are there arguments that Chinese patients differ from international literature?

3.5. Please answer: what is the key question you want to answer with this study and why is the answer to this question important to be published? In other words, what is your key message?

Response: Based on literature review, we found that a number of studies have examined whether self-efficacy, social support and PPC are associated with glycemic control, but relatively few was conducted in China and few studies have examined these variables in one conceptual model. So we have clarified “the purpose of the current study is to explore the relationships of self-efficacy, social support and PPC, and their effects on self-care behaviors and glycemic control among Chinese patients with type 2 diabetes in a whole model” in revised manuscript.

Comment 4: 3.3. It seems rather evident that the SDSCA is associated with better glucose control because it contains some key elements to it (medication adherence, foot intake, exercise).

3.4. However, the model is only as strong as its components. Other elements may confound or interact with the measured variables: co-morbidity (e.g. depression), medication type (insulin vs. oral antidiabetics), education level. Please comment on these possible biases in the model.
Response: as reviewer mentioned, our model may omit some important factors related to glycemic control in previous manuscript. We have added duration of diabetes and waist-to-hip ratio to the model based on univariate analysis. We also described this limitation.

Comment 5: 3.6. I think your conclusion is 'a bridge to far'. Your study showed that in this group of patients higher levels of self-efficacy, PCP and social support were associated with better diabetes self care that was in its turn associated with better glucose control. Your conclusion states that "Based on the findings of this study, health care providers and educators should strive to increase patients' self-efficacy, help them mobilize sources of support in their lives, and improve their communication with patients." However, I did not read that physicians' improved efforts to (1) increase patients' self-efficacy, (2) enhance social support and (3) improve their own communication is efficient to improve patients' self care. Maybe patients with reported better self-efficacy, better social support and better communication are the high educated patients who are better off to manage their diabetes. Maybe it has nothing to do at all with physicians' efforts. Anyway, his study does not allow this conclusion, so please put some nuance. If you do find arguments in literature, please mention.

Response: thank you very much for your valuable suggestions. We have revised the conclusion in the revised manuscript as:

"Despite these limitations, this study is the first to our knowledge to show the direct effect of self-efficacy, social support and PPC on self-care behaviors, and their indirect effect on glycemic control via self-care behaviors in a Chinese sample with type 2 diabetes in a whole model. Specifically, having better PPC, having higher social support, and having higher self-efficacy was associated with performing diabetes self-care behaviors; and these behaviors were directly linked to glycemic control. Chinese patients usually rely on the physician's suggestions for disease treatment, and receive health care services from primary health care providers. So providers and educators need to enhance patients' self-efficacy, ability of getting social support, and PPC skills in their daily admissions, or tailor educational programs including these strategies. Such interventions are likely to be more effective at producing behavior change than ad-hoc, knowledge-based programs alone."

Replies to Reviewer 2

Comment 1: More than half of the participants were equal to or over 60 years. Considering that the aim of the present study was to investigate the effects of psychosocial factors on glycemic control and to develop efficient intervention for patients with type 2 diabetes, the participants were too old. In addition, 70% of the participants already had some complications.

Response: as reviewer mentioned, the demographic characteristics of participants are limitations of our study, which has been described in the revised manuscript.

Comment 2: The definition of "complications" in Table 2 should be described.
Response: Thanks a lot. We have described the complications in the revised manuscript.

Comment 3: According to Table 2, duration of diabetes seems to have association with HbA1c. Therefore, duration should be included in the model of the path analysis. 
Response: duration of diabetes has been added to the model. Data has been analyzed again.

Comment 4: According to Table 2, participants with complications significantly had higher PPC score than those without complications. How was the interpretation of the result?
Response: Thank you very much. We think the reasons may be “Chinese patients usually rely on the physician’s suggestions for disease treatment [reference 10]. Furthermore diabetic patients with complications need to visit physician more frequently than those without complications, which may improve patients’ knowledge, and help physician understanding them comprehensively resulting to fluent patient-physician communication.”