Author’s response to reviews

Title: Inequalities and factors associated with adherence to diabetes self-care practices amongst patients at two public hospitals in Gauteng, South Africa

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Author’s response to reviews:

Reviewer reports:

We thank the reviewers for their useful comments and suggestions which greatly helped us to improve our paper. Below we explain how we have addressed each of the reviewers’ comments. Note that line numbers indicated below refer to the manuscript in track changes.

Susana Pedras (Reviewer 1):

Comments to Authors:

Title: I suggest adding the word "Adherence" to the title

Response: The suggested changes have been made to the title. Title. Line 1. Page 1

Abstract: the description of the prevalence of adherence to each self-care behaviors is confusing (e.g. behavior%, behavior%).

Response: We have changed the abstract to clarify this. Abstract. Line 38-40. Page 2

Introduction:

The introduction, is clear, objective and easy to follow but it would be better to update the references on diabetes incidence in South Africa but also in the rest of the world (see the latest IDF data).
Response: The references on diabetes incidence have been updated using the latest IDF data. Background section. Line 65-69. Page 4

In line 91, page 5, the authors mentioned "feet" but is there any reason for the authors not to study foot self-care? In my opinion, this is a major limitation of this study. Self-care with feet serves to prevent diabetic foot ulcers and, consequently, lower limb amputations.

Response: The reviewer’s comments have been noted and the exclusion of feet inspection by diabetic patients from the questionnaire is now mentioned as one of the study limitations. Limitations section. Line 423 - 426. Page 18

The relevance of this study in this population in particular, should be presented before the aim of the study.

Response: The reviewer’s comments have been noted and the suggested changes have been made. Introduction section. Line 105-108. Page 5

Also, the word "adherence" should be used in the text in relation to the practice of self-care behaviors, since it is actually an adherence process that we are talking about, right?

Response: The reviewer’s comments have been noted and the suggested changes have been made throughout the manuscript.

Methods:

The sample was collected in hospitals with diabetic clinics. How do these clinics work? Are there educational sessions for patients? How do they know which behaviors to adhere to? Do they have regular appointments? I think it would be important to contextualize readers about the health care available at these hospitals and in this country for diabetes patients.

Response: We agree that more information on how the clinics operate is needed. Below, we briefly explain how the reviewer’s comments were addressed in the text of the manuscript:

The diabetes clinics at the hospitals are open on specific clinic days during the week and operate on a structured consultation schedule. Patients are scheduled to attend the clinic every three months and at each consultation, a different focus is set such as foot examination, eye examination or dietician consultation. Health education at the hospitals is provided by a health education team consisting of the nurses, medical doctors and dietician. Methods study setting section: Line 124-131. Page 6
Why did the authors not use a valid and specific instrument in patients with diabetes to assess adherence to self-care behaviors? Like RSDSCA, for example?

Response: The study made use of an existing validated questionnaire that has previously been used to assess health and nutrition status in South Africa (South African National Health and Nutrition Examination Survey). The questionnaire is easy to administer and practical to use with illiterate populations and the elderly. We have now indicated this in the text of the manuscript as well. Methods data collection section. Line 148-156. Page 7

In the socio demographic characterization I have some doubts: why there are only individuals married or single? There are no widows or divorced? In the employment status, there are no individuals retired or students?

Response: We note the reviewers concerns. The suggested changes have been made as follows:

Marital status variable was included as a categorical variable as follows: single, married, divorced, widowed and co-habiting.

Employment status variable was included as a categorical variable as follows: unemployed, formally employed, informally employed, student and retired.

Methods study variable and analysis section. Line 236-238. Page 11.

Tables 1 to 3 are clear. The figure it is not essential. I suggest adding a table with the percentage of individuals in each category, according to wealth index and the number of behaviors to which they adhere.

Response: The suggested changes have been made. We now include a table that shows the distribution of self-care behaviors by wealth quintile. Results section. Line 271-275. Page 12. Table 3

Discussion:

In the discussion, the authors may focus more and be more objective in emphasizing the clinical implications of this study. What can health professionals in diabetic clinics do to increase adherence to self-care behaviors?

I think the authors did not explore implications for clinical practice. For example, the least accomplished self-care behavior was the physical activity. Thus, what can health professionals do?
Response: We note the reviewers concerns and agree that clinical implications of the study need to be emphasized. The clinical implications of the study have been included in the discussion section. Discussion section. Line 412 – 420. Page 17-18

Conclusions:

Overall, this is an important and useful study, especially for health professionals in South Africa, but also for professionals dealing with economically disadvantaged individuals. It is also important because it emphasized the relationship between adherence to self-care behaviors, wealth and social inequalities. Because these factors are not easy to transform, health professionals must find creative alternatives to increase adherence in populations subject to greater inequality.

September 3th, 2019

Best regards,

Reviewer 2 (Reviewer 2): PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

Yes - experiments and analyses were performed appropriately

STATISTICS - Is the use of statistics in the manuscript appropriate?

No - there are issues with the statistics in the study
INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

Yes - the author's interpretation is reasonable

OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?

Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS:
This is a well written paper that addresses a very important area of clinical research.
The paper is well structured and written in a scientific manner.

REQUESTED REVISIONS:
- The authors make reference to 'diabetic patients' on several occasions. I suggest that they rephrase this to 'people living with diabetes'.

Response: The suggested changes have been made throughout the manuscript

Methods
- Why did the authors settle for an age range beginning from 21 years (please provide the rationale).

Response: The primary objective of the study was to collect information related to the economic impact of diabetes. Individuals above the age of 21 are more knowledgeable regarding this aspect of diabetes. We have included a statement on this within the manuscript. Methods data collection section. Line 156 – 158. Page 7

- In line 21, reference is made to a 'pre-tested questionnaire'. Please comment on the validity and reliability of this questionnaire.

Response: Questionnaire development was guided by the 2012 South African National Health and Nutrition Examination Survey data collection tool and adapted to the South African public hospital context. The questionnaire was pretested with 8 patients at one of the hospitals to ensure
validity and reliability. Amendments were then made where necessary in the text of the manuscript. Methods data collection section. Line 148 – 156. Page 7

-What is the range of the DDS? (line 155 to 160)

Response: A nine-point scale was created using the number of food groups consumed by the individual. This has now been indicated in the manuscript. Methods study variables and analysis. Line 198-199. Page 9

Statistical Analysis

-Provide more details on how data was handled with specific reference to missing data, sample size calculation etc

Response: The suggested changes have been made. We now include details on how the sample size was calculated and how the resulting sample was used in this data analysis. Methods sample size section. Line 138-141. Page 7. Results. Line 246 – 248. Page 11.

-The analysis plan is to brief. It does not mention descriptive analysis but in the results section this is presented.

Response: Details regarding the methods followed in the study, have now been provided throughout the methods section.


-Table 1 (not common to report percentages and SD)

Response: The suggested changes have been made. SD have been removed from Table 1

ADDITIONAL REQUESTS/SUGGESTIONS:

No