

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Predictors of health-related quality of life among diabetic patients on follow up at Nekemte Specialized Hospital, Western Ethiopia: A cross sectional study
AUTHORS	Feyisa, Bikila Regassa; Yilma, Mekdes; Tolessa, Belachew

VERSION 1 – REVIEW

REVIEWER	Adesola Olumide Institute of Child Health, College of Medicine, University of Ibadan and University College Hospital, Ibadan, Nigeria
REVIEW RETURNED	31-Dec-2019

GENERAL COMMENTS	<p>Thank you for asking me to review the paper on, "Predictors of health related quality of life among diabetic patients on follow up at Nekemte Specialized Hospital, Western Ethiopia: A cross sectional study".</p> <p>The topic studied is an important one and relevant in developed and developing settings. The manuscript however requires revision and substantial English language editing to improve clarity. Suggestions have been provided.</p> <p>Detailed review is below and additional comments have also been made in the attached PDF copy of the manuscript.</p> <p>Thank you</p> <p>Abstract All sub-sections of the abstract require revision.</p> <p>Main outcome measured: Authors should provide information on the minimum and maximum obtainable scores that can be obtained using the 36-item Short form health survey so that readers can better understand the HRQoL scores presented In the abstract, the authors mentioned that HRQoL, was assessed using the Medical Outcome Study 36-item Short Form Health Survey, however, in the main text, they state that the WHO QoL instrument was used. Kindly ensure information presented is the same.</p> <p>Conclusion: Please revise</p> <p>Additional comments and suggestions are indicated in the PDF copy of the manuscript.</p> <p>.</p> <p>Strength and limitations of this study</p>
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	<p>Strengths “The tools used was validated across different cultures” – Suggest that this be deleted as the details of the validation across different cultures are not presented in the current paper</p> <p>“Eight domains of HRQoL and two component summary scores were used to make the measurement more specific”. Suggest delete or modify this as it is not sure how this is a strength</p> <p>Limitation The sentence below requires revision as it is currently difficult to understand what this means)</p> <p>“The cross sectional nature of the study design made the result of the study difficult to identify either the cause or the effect comes first”.</p> <p>Introduction This section needs to be revised to improve clarity. Examples of statements that require revision are below:</p> <p>“Diabetes mellitus is becoming a confronting problem of the time that have a considerable impact on health status and quality of life. It is considered an urgent public health problem because it has a pandemic potential, which can influence the HRQoL negatively [2, 15, 16]”.</p> <p>“Health-related quality of life is not only concerns subjective but also objective measurements of the individual with certain conditions”.</p> <p>“Studies have identified that diabetic patients’ HRQoL is decreased by different domains such as role limitation due to the disease, emotional disturbances, pain, and fatigability. Different factors related to health related quality of life among diabetic patients also affect both quality and quantity of life”.</p> <p>The study aim needs to be revised</p> <p>Additional comments are noted in the PDF copy of the manuscript</p> <p>Research Design and Method</p> <p>Eligibility criteria</p> <p>“All known type I and type II DM patients who have been on follow up for at least one year and age greater than 18 years at NSH were included while diabetic patients who were seriously ill and could not respond to the interview were excluded from the study”.</p> <p>Please provide a concise explanation of “seriously ill”</p> <p>Sample size and sampling procedure The authors stated, “the sample size was determined assuming a normally distributed independent mean, taking mean age value with standard deviation of 15.208 from previous study...”</p> <p>Did authors use the mean age or mean HRQoL score obtained from another study? They should provide the mean and standard deviation of the score used.</p>
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	<p>The statement below needs to be revised. It is not clear as it is. , “Systematic random sampling was used to select the study participants. The sampling interval was developed from the identification number of the patients from the facility register and calculated by dividing the total number of diabetic patients on follow up by the calculated sample size.”</p> <p>Data collection procedure “Data was collected using interviewer administered structured questionnaire which was adopted from the WHOQOLBREF tool”</p> <p>Authors need to review the information in the abstract which mentions a different tool was used to assess HRQoL. The WHO tool needs to be referenced.</p> <p>The authors mentioned that, “four data collectors and one supervisor were recruited”. They should provide information on the highest qualification of these research assistants and whether they were trained in the use of the tools</p> <p>Instruments The section on “Instruments” needs to be revised to aid comprehension</p> <p>Instruments The section on “Instruments” needs to be revised to aid comprehension</p> <p>Data processing analysis Authors mentioned that they carried out logistic regression analysis. Additional information about this is required and should be provided in the methods section.</p> <p>Requires revision for clarity</p> <p>Results</p> <p>Suggest that figures are rounded off to one decimal place, for example: 17.7 instead of 17.70.</p> <p>Socio demographic characteristics Suggestions are indicated in the PDF copy of the manuscript</p> <p>Health related quality of life of the study participants This sub-section needs to be revised to improve clarity. I suggest reporting the HRQoL scores to one decimal place.</p> <p>Report the overall HRQoL score first and then the mean scores for each domain. Then the domains with the highest and lowest scores.</p>
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	<p>This sentence is not clear. “Two component scores of the HRQoL was also generated by PCA with the total variance explained 66.77%. The higher mean score was found for the mental component score (51.77 ± 16.72) with the maximum score of 80.75.”</p> <p>Predictors of health related quality of life of diabetic patients Revise this section to improve clarity. It is currently rather difficult to understand.</p> <p>Authors should provide an explanation for their choice of variables included in the logistic regression model in the methods section of the paper.</p> <p>Discussion This requires revision. I suggest that the authors focus on the predictors that were statistically significant in the logistic regression analysis and also discuss important factors which were not but which are important influencers of HRQoL. Authors also need to provide clear explanations when there are differences in their findings compared with other published studies. Authors mention socio-economics and culture as possible reasons for some differences observed, however, they need to explain how these would affect HRQoL</p> <p>Information on the STROBE checklist not seen Conclusion and recommendation These also require revision</p> <p>References Requires some formatting</p>
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REVIEWER	Given Hapunda University of Zambia Department of Psychology Lusaka, Zambia
REVIEW RETURNED	03-Jan-2020

GENERAL COMMENTS	<p>A. SUMMARY</p> <p>This paper is an attempt to investigate predictors of quality of life among individual with diabetes in Ethiopia. Using a cross sectional design, data was collected using the HRQOL. Results showed that overall HRQOL was moderate</p> <p>B. STRENGTH OF PAPER</p> <ul style="list-style-type: none"> • Sample size is relatively big to allow for complex statistical analysis • Considered both type 1 and 2 which could allow for comparability of the two on HRQoL
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- Used an established tool with good psychometric properties

C. WEAKNESS OF THE PAPER

- Authors did not compare differences between type 2 and 1 diabetes. These two have different etiology and manifestation making comparison very important. Authors only attempted to do so in one analysis (table 4)
- Procedure of the study is inadequate. In fact, what is under procedure is not procedure at all
- Results are not completely described. E.g. no PCA have been added
- The authors found two components (factors) but did not use them in their analysis instead went ahead and used a unidimensional factor for analysis making these results null and void
- QoL and HbA1c are highly correlated but no data on HbA1c were collected and analysed
- The interpretation of the analysis is questionable. Most results are surprising – negative behaviours predicting better QoL. I wonder if the authors transformed this data correctly. In addition, no adequate discussion has been made to explain why results are the way they are.
- In regression, we report standardised beta not unstandardized as the authors have done
- Table 3 shows min- max score are in extreme ends which is not possible in a study like this one. A person can not score 0 and 100. This suggest social desirability.

D. OVERALL ENTHUSIASM

I enjoyed reading this paper and I think that it can add value to the discourse of HRQoL especially in African patients an area that has not been adequately covered yet. However, a number of issues have to be addressed before it can be published. Therefore, I recommend accept with major revision

E. ADDITIONAL COMMENTS

1. The paper has numerous grammatical errors.
2. In regression analysis, authors should use demographic as

	<p>control variables if determine if clinical variables remain significant. This could help reduce the current picture that has surprising results.</p> <p>3. This paper is in the 30th percentile. The authors have to meet the above to make the paper acceptable for publication.</p>
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REVIEWER	James Bentham University of Kent, UK
REVIEW RETURNED	27-Jan-2020

GENERAL COMMENTS	<p>The authors have presented a valuable study of predictors of health-related quality of life in diabetic patients in Ethiopia. I have carried out a statistical review and have the following major comments:</p> <ol style="list-style-type: none"> 1. The data processing section should contain enough details that the analysis could be repeated. For example, the authors should explain more clearly how the scores in each domain are derived, and then adjusted for comparability. There should also be a detailed explanation of the PCA. For example, is it carried out using the questionnaire data, or using existing loadings? How are the PCS and MCS derived? How many components are used to say that 66.8% of the variance is explained? 2. I'm not sure why age has been used in the sample size calculation. The authors should explain the items used in this calculation more fully, and describe why they were selected. 3. There are various spelling and grammatical mistakes in the manuscript, so it should be proof-read thoroughly. 4. Some of the results described in the text are not in the tables, and should be added - see the "Medical history and health conditions" section in particular. 5. On p7, there is a p-value of 0.046 with a CI that includes 1. This should be checked carefully, as it seems to be a mistake. <p>I also have some minor comments:</p> <ol style="list-style-type: none"> 1. Results should be presented to an appropriate number of decimal places. For example, the overall HRQoL in the abstract should be reported as 50.3 +/- 18.1. 2. The ordering of the references should be checked. See paragraph 2 of the zintroduction with "[2,15,16]". 3. The number of items in the "Instruments" section adds to 35 rather than 36. This should be corrected. 4. A reference should be provided for Cronbach's alpha. 5. What is the maximum value of the variance inflation factors? A threshold of 2.5 is often used to be conservative. 6. In Table 2, "Other" should be 2.9%. 7. The domains in the text don't match those in Table 3. See "vitality" on page 6, for example. 8. The p-value at the bottom of p7 should be 0.04. 9. All statements in the discussion that refer to other research should have a corresponding citation. 10. The references should have full details of the papers, including journal names.
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VERSION 1 – AUTHOR RESPONSE

For Reviewer #1

Thank you very much for your notes.

We have incorporated all the comments accordingly.

The mean used finally to calculate the largest sample size was the mean HRQoL. We have calculated the sample size for both objectives separately. In Objective one, we have used the mean HRQoL and for objective two we have used the mean age, as age was one of the variables. Finally, we have used the largest calculated sample size.

For Reviewer #2

Thank you very much for your comments. We have incorporated all the comments accordingly.

For Reviewer #3

Thank you very much for the thorough comments.

We have addressed all the comments accordingly.

We have conducted PCA using loadings and derived two components PCS and MCS after all the assumptions met.

Age was used in the sample size to calculate for the second objective, predictors of HRQoL, as it is one of the potential variables to affect HRQoL.

VERSION 2 – REVIEW

REVIEWER	Adesola Olumide Institute of Child Health, College of Medicine, University of Ibadan and University College Hospital, Ibadan, Nigeria
REVIEW RETURNED	17-Mar-2020

GENERAL COMMENTS	The authors have addressed most of the comments. A few are yet to be addressed and these are noted in the PDF copy that will be uploaded. The paper needs to be edited by a native English language speaker. This will greatly improve the paper overall and facilitate comprehension by an international audience
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REVIEWER	James Bentham University of Kent, UK
REVIEW RETURNED	27-Feb-2020

GENERAL COMMENTS	The authors have responded to most of my comments, and only minor changes now need to be made to the paper. These mostly relate to the text, and I have attached a PDF with my suggested changes. This includes a comment that some of the numbers in the text appear to have been rounded down when they should have been rounded up, so this should be checked. Also, many of the references do not contain the full set of information required: author names, title, year, journal, volume, and page numbers. I've marked some of this in the attached PDF, but the references should be changed so that they are in the journal's preferred format.
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VERSION 2 – AUTHOR RESPONSE

For reviewer: 3

We have corrected issues related with spelling and grammatical problems.

We have also corrected the issues of referencing as compatible with the journal.

For Reviewer :1

We used grammar application to help us some of the grammar issues. The authors also checked it. Regarding information on SF-36, it was indicated under the sub-section 'Data processing and analysis' indicating the ways the SF-36 scores were interpreted. The scores were categorized based on literature as low, moderate and high HRQoL after it was changed in to the linear scale on 0-100 scale. Accordingly, HRQoL equal or below 45, 46-65 and above 65 regarded as low moderate and high HRQoL.

VERSION 3 – REVIEW

REVIEWER	Adesola Olumide Institute of Child Health, College of Medicine, University of Ibadan and University College Hospital, Ibadan, Nigeria
REVIEW RETURNED	01-May-2020

GENERAL COMMENTS	<p>Some of the paragraphs are too short. I had mentioned that the manuscript would benefit from English language editing.</p> <p>Some editing issues are highlighted below:</p> <p>Page 4 of 31</p> <p>Merge sentences in lines 1 to 8 into one paragraph</p> <p>Merge sentences in lines 9 to 15 into one paragraph</p> <p>Merge sentences in 16 to 26 into one paragraph</p> <p>Merge sentences in lines 27 to 34 into one paragraph</p>
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REVIEWER	James Bentham University of Kent, UK
REVIEW RETURNED	05-May-2020

GENERAL COMMENTS	<p>The paper is nearly ready for acceptance and I do not need to review it again.</p> <p>The order of the references will need to be checked during the proof stage, and paragraph 2 of the discussion refers to ref 35, which isn't in the list of references.</p> <p>There are also a few typos to be corrected:</p> <ol style="list-style-type: none">1. p3, line 9 should be "was used for the final model".2. p4, line 25 should be "in due course affect the patients' HRQoL".3. p5, line 7, missing space in "1st February".4. p5, line 18, missing left bracket.5. p7, line 6, should be to 1dp, i.e., 99 (46.0%).6. Table 3. All numbers should be to 1 dp.7. p11, paragraph 6, should be "The findings from other parts of Ethiopia".8. p12, paragraph 3, should be "Smokers are more likely"
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VERSION 3 – AUTHOR RESPONSE

For Reviewer: 1

Thank you in advance. I have incorporated all the comments accordingly.

For Reviewer: 3

Thank you. The issue of order and inappropriate reference number have been written wrongly. I have incorporated all the other comments. as well.