Reviewer’s report

Title: Psychometric evaluation of an interview-administered version of the WHOQOL-BREF questionnaire for use in a cross-sectional study of a rural district in Bangladesh: An application of Rasch analysis

Version: 0 Date: 09 Jan 2019

Reviewer: Tatjana M. Gazibara

Reviewer's report:

This study used the Rasch analytic approach to assess the psychometric properties of the WHOQOL-BREF questionnaire for the first time in the rural population of Bangladesh in Bengali language. This study is relevant and important and the manuscript is well-written. Overall, results need more discussion as to what are the alternatives to the excluded items, particularly in social domain, as one of core aspects of life in good health. Specifically, because of metric inadequacies, what are possible solutions for preserving the original questionnaire structure to enable cross-cultural uses of dataset in Bengali?

Specific comments:

Abstract, Conclusion paragraph: "The WHOQOL-BREF Bangla version.." please check if Bangla is correct, or should it be Bengali version?

Body of the manuscript

1. When quoting other resources please add page where this particular text can be found next to the reference number.

2. Sentences should not start with abbreviations. Please correct throughout the manuscript.

3. Part "it was difficult to obtain information about QOL from the respondents" appears not to be a good fit for the entire sentence. Please correct.

4. The sentence "The WHOQOL-BREF contains 26 items: two items, one from the overall QOL and one item from the satisfaction of health. In addition, …" should be reworded in such a way that the authors first describe the 24 items forming 4 domains and thereafter to describe 2 items not included in domains.
5. Please add the pattern of scoring for The WHOQOL-BREF.

6. Why were adults aged 60-64 categorized as older adults, when it is generally accepted that people aged 65 and above are classified as "older persons"? Please provide reference to support your claim.

7. Please spell out M and SD, as well as PSI when used for the first time.

8. Social domain indeed was the weakest subscale in this research. This is likely due to socio-cultural norms and no. of missing responses (quite likely due to person-to-person interview which is not the most convenient mode of data collection on personal and intimate aspects). But also, this scale is composed of less no. of items compared to the other three domains, and it is well-established that less items in one domain decrease the values of Cronbach's alpha i.e. internal consistency. I suggest that the authors propose how to bridge this gap in social domain for Bengali speaking population other than omitting these items. For example, what could be substitute items when a person does not respond to the original items, i.e. what other aspect of social functioning are relevant for the rural population of Bangladesh that could be used instead?

9. Similarly, omission of work capacity is problematic. Work capacity could be linked to the demographic structure of the population given that 1 in 4 participants did not have any formal education and 39% have only completed primary school. These findings suggest that many rural residents in Bangladesh could be illiterate which strongly influences their position/potential in the job market. This, in turn, can also affect the perception of home environment, access to health care and transportation pertaining to the environment domain. The authors need to address these issues.

10. Personal beliefs in rural areas could also be deeply rooted in the cultural patterns and traditional gender roles. Because personal beliefs constitute important aspect of "one's perception on their position in life in the context of the culture in which they live, have goals, expectations, standards and concerns (3)". How would the authors alternatively formulate a more appropriate item instead of excluding it?

11. Exclusion of items in such a widely used questionnaire worldwide based on the Rasch analysis indeed represents a drawback, because it fails to provide data for cross-cultural comparisons, that has been previously performed a number of times using the WHOQOL BREF. The authors should address this issue in study limitations.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

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