Reviewer’s report

Title: Clustering of non-communicable diseases risk factors in Bangladeshi adults: An analysis of STEPS survey 2013

Version: 5 Date: 22 February 2015

Reviewer: Suzanne McKenzie

Reviewer’s report:

Major Compulsory Revisions

This is an article of interest to policy makers and health care planners in Bangladesh. What makes this study of interest to a wider audience. How does it build on what we already know about the clustering of risk factors and the increasing prevalence of risk factors in developing nations?

Your aim in the abstract is different to the aim in the body of the text. While the aim in the body of the text is to examine the extent to which Bangladeshi adults have clustering of NCD risk factors, almost all of your discussion is about the prevalence of different risk factors.

Your introduction could strengthen the argument about why it is important to investigate the prevalence of risk factors and clustering of risk factors.

Methods:

You mention municipalities, divisions and corporation areas in the sampling strategy - would you explain what these are and why they were used in the sampling; Sample size calculation does not mention power and I assume that 3% margin of error is a 97% confidence- is this correct. I suggest using standard statistically language when outlining your calculations.

Reporting of response rate should be in the results not the methods.

Survey instrument- it is not clear how the questionnaire was adapted and the reference does not refer to the WHO STEPS. You say that all core questions were used but in the abstract say you did not include alcohol. You should say this in the methods and justify the exclusion (I assume it is because of cultural reasons but you should explain).

Data collection- it is not clear whether self report of "diabetes" was accepted. How did you classify people with "diet controlled" diabetes or those who had not yet started medication?

Results:

Table 1 describes the demographics for your sample- how does this compare with the Bangladesh population? You should include this information and comment about it in the discussion about strengths and limitations of your study.

Table 3- this is not qualitative data (line 177). It is quantitative data. Both table 1 and table 2 are descriptive data.
Line 183- reports that median physical activity was 1510 but table 2 says 1680; which is correct?

Figure 1 is not mentioned in the results

Discussion:

Most of your discussion is about the prevalence of individual risk factors yet your title and aim say you are examining clustering of risk factors. It is not clear how your findings build on what is already known about the prevalence of individual risk factors in your population. For example how do your results compare with the study reported in reference 14.

You have examined the use of smokeless tobacco- what is the significance of this- does it confer the same or more risk compared with smoking tobacco?

You have a paragraph about Obesity and report that your study has found a prevalence of 11%. Why did you not include this in the results? I would add another variable in the tables to account for this.

You report that elevated blood pressure is a recognized risk factor- this needs a reference to substantiate the claim.

Figure 1 is referred to in the discussion- this should be outlined in the results and then discussed. The discussion about this does not make sense.

Line 278- you seem to infer that diabetes may be caused by a stressful life- please substantiate this claim or remove.

The one paragraph in the discussion about clustering states you did a sub-sample analysis- again this should be in the results; what are the limitations of this type of analysis? Your discussion about clustering being associated with less education is not supported by your data in table 5 (it was not statistically significant in the logistic regression)

You have very limited discussion about the limitations of your study and no discussion about the strengths. I suggest you add a specific paragraph that addresses both of these.

Conclusion: You have outlined some implications of your findings for health care providers in Bangladesh however is there a wider implication. Clustering raises risk by more than a summation of risk factors. Your findings suggest that Bangladesh could expect a significant increase in NCD in the next xx years and what is the implication of this- increase in health care services required, loss of productivity due to loss of life at peak working age etc.

Minor Essential Revisions

Define abbreviations with first use in the body of the text- eg. NCD, WHO, MET

Review grammar and make corrections accordingly.

STEPS survey is mentioned in the introduction- should be referenced here

Kish table (line 94) requires a reference

Smoking control act 2005 requires a reference
Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests