Author's response to reviews

Title: Cardiovascular Disease Risk Factors and Socioeconomic Variables in a Nation Undergoing Epidemiologic Transition

Authors:

Rajah Rasiah (rajah@um.edu.my)
Khalid Yusoff (k.yusoff@salam.uitm.edu.my)
Rishya Manikam (rishyaman@yahoo.com)
Mohammadreza Amiri (amiri.mra@siswa.um.edu.my)
Makmor Tumin (makmor@um.edu.my)
Shabnam Khademi (shabnam.khademi@gmail.com)
C. SANKARA K. CHANDRASEKARAN (drcskumar@um.edu.my)
Najmin Abubakar (najminabubakar@gmail.com)

Version: 2 Date: 20 June 2013

Author's response to reviews: see over
Thank you very much for your suggestions and for relaying me the helpful comments by your referees. We have now made the necessary revisions and are now resubmitting the paper for your kind consideration.

Our response to the constructive comments by referees 1 and 2 are also attached.

We have now carefully reformatted the paper using the journal’s style. I shall answer the remaining questions as per the numbering you used.

1. Copyediting:

We have now carefully revised the paper to improve the quality of English used. It is our hope that the quality of English now meets the journal’s standard.

2. Title page:

We have now included a title page at the front of the manuscript containing the names, institutions, countries and email addresses of all authors, and the full postal address of the submitting author.

3. Ethical Approval: Please include the full name of the ethical committee that granted approval, listing a reference number if obtained.

We have now included the ethics committee approval letter, and have also referenced it in the paper.

4. Headings: Add heading for the sections Background and Authors' Contributions.

We have done this now.

5. Abstract: Please change the heading 'Interpretations' with 'Conclusions' in the abstract. Also,
please ensure that your Abstract contains the context information of the study in the
Background section.

We have done this now.

6. Appendixes: Please move the appendixes in the file Additional Files.

We have now inserted all tables in the paper.

7. Structure: Please check the instructions for authors on the journal website to ensure that
your manuscript follows the correct structure for this journal and article type.

We have done this now.

8. Tables as additional files: We notice that you have included tables as additional files. If you
want the tables to be visible within the final published manuscript please include them in the
manuscript in a tables section following the references. Alternatively, please cite the files as
Additional file 1 etc., and include an additional files section in the manuscript.

We have removed the appendices now.

We would be grateful if you could address the comments in a revised manuscript and provide a
cover letter giving a point-by-point response to the concerns. For an example of how we would
like you to format your cover letter, please see the links below.

http://www.biomedcentral.com/imedia/2041411268621582_comment.pdf
http://www.biomedcentral.com/imedia/1865654785489471_comment.pdf

We have answered the queries now. They accompany this cover letter. In doing so we
have inked the revisions made in the paper to take account of TY Wong’s comments in
green and Garry L Jennings’ comments in yellow.

Please also ensure that your revised manuscript conforms to the journal style
(http://www.biomedcentral.com/info/ifora/medicine_journals). It is important that your files are
correctly formatted.

We have done this now.
We look forward to receiving your revised manuscript by 28 June 2013. If you imagine that it will take longer to prepare please give us some estimate of when we can expect it.

You should upload your cover letter and revised manuscript through http://www.biomedcentral.com/manuscript/login/man.asp?txt_nav=man&txt_man_id=2897094199484067. You will find more detailed instructions at the base of this email.

**Many thanks for all the helpful comments and suggestions.**
Please don't hesitate to contact me if you have any problems or questions regarding your manuscript.

With best wishes,

Rajah Rasiah
Reviewer's report
Title: Cardiovascular Disease Risk Factors and Socioeconomic Variables in a Nation Undergoing Epidemiologic Transition
Version: 1 Date: 14 May 2013
Reviewer: T.Y. Wong
Reviewer's report:
Dear authors:
Thank you for allowing me to review your paper. This is a paper looking at the association between socioeconomic factors and cardiovascular risk factors in Malaysia and serves as an important study in planning health promotion activities.
I have the following comments:
Major Compulsory Revisions

(1) I am not certain if there was supposed to be a section to discuss your findings. This is important to discuss some of your findings and provide possible reasons why your findings are similar / different from other published studies.

We have now discussed our findings under the section, “Results and Discussion”. Our results are also likely to differ from past studies on Malaysia because of the geographical spread and size of the sample, which is far wider and involved a much larger number of participants than most other studies on Malaysia.

(2) In your "conclusions" section, I am unsure about some of the statements made:
- Risk factor of diabetes can be reduced by improving socioeconomic status (SES). In this instance, I can think of other confounding factors leading to a rise in proportion of diabetic patients. For example, obesity is related to diabetes and is increasing in the developed world. Reducing diabetes is not simply just improving SES as you mentioned.

We have now sorted out this and removed the recommendation.

- Malay men and women showed highest prevalence of hypercholesterolaemia, demonstrating a need to 'review the diet of Malays". Again, I feel that you need to show that the diet of Malays is different from the other races or the difference could be due to other lifestyle factors (eg exercise).

We have now sorted out this and removed the recommendation.

- The higher prevalence of diabetes in EPM just means what you have observed. You should substantiate what you mean by residents must 'reduce their consumption of sugar’ as you have not shown a difference in sugar consumption compared to the rest of the country.
We have now sorted out this and removed the recommendation.

- Could you explain what you mean by "panel" data?

Panel data refers to data collected from multiple but using the same respondents over time. Following the work of the Nobel laureate, Granger, this is the technique currently considered the most robust when establishing causation statistically. We have included it in the paper with a reference now.

- You will be aware that this is a cross-sectional prevalence study and it is difficult to assess causality from such data

Indeed, that is why we noted this as a limitation.

(3) Appendix 2A
The numbers in the "technical" section tended to be smaller compared to the other categories. Did you consider if this group could be analysed together with the University or secondary group?

In educational level terms, this group fits into the secondary group. However, we kept this group despite its small size because its prevalence levels varied from those of the university and secondary educated. Nevertheless, we have absorbed your comment by removing it when analysing the relationship between the CVD risk factors and education level, which is now noted in the methods section.

Thank you again for allowing me the opportunity to review your paper.

We benefited considerably from your comments, and hence, many thanks to you.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Needs some language corrections before being published
Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests: I declare that I have no competing interests
This is an important study and the results of this survey will be useful in informing public health policy in Malaysia.

Major compulsory revisions:
The discussion should be expanded to cover strengths and limitations of the study in a little more detail. The strength is the number of subjects surveyed, the standardised techniques and the geographical and cultural breadth of the study population. However some discussion is needed on how generalisable this sample is to the Malaysian population. The ethnic mix of participants does not reflect that of the entire population of Malaysia and is dominated by Malays. This leaves relatively small numbers of Chinese, Indian and other racial groups in some of the categories when the study population is broken down. There is quite a significant number of ‘low income other’. I presume these are aboriginal Malaysians or other special groups and some comment on the special nature of these groups would be worthwhile.

We have now explained the sample details further and compared it with the breakdown of the population. We have also explained the methodology used in greater detail and have cited the example we followed [Salim Yusof et al 2012]]. The others category includes non-Malay Bumiputeras in Malaysia – which exceed the share of Indians in Malaysia. It is true that the number of Chinese are smaller than their share in the national population. The others in the sample are dominated by non-Malay Bumiputeras. However, community-based surveys that include pledges of over 15 year monitoring are more likely to attract large responses, especially when a large number of participants will have to take leave to attend health screening. We have explained these now in the methods section. Another issue relates to the cross racial comparison of obesity. A body mass index of 27.5 was chosen as a cut off but there is other evidence for example that lower levels are more appropriate for Chinese subjects.

We agree with this point and have now noted it in the methods section. However, we did not take different measures of BMI by ethnic groups because of the use of cross-statistical comparisons undertaken in the paper, and also because past work by ethnicity on Malaysia uses the same thresholds. This is even more important for us now because we discuss the results against past findings.

Minor essential revisions:
In the table legends it is stated that numbers in brackets are P values. It is not clear what comparison these P values relate to. Cholesterol and glucose cut off are referred to as ‘mean’, but I expect these are taken from a single
P-values refer to statistical significance of the prevalence level, which are in percentages. If we used a p-value of 0.001 it means that the prevalence level falls 99.99% of the time in the acceptable region. The percentage levels indeed are single figures of CVD risk factors exceeding the cut-off points. However, p-values refer to the statistical significance of the percentages, which takes account of the distribution of the sampled data.

Discretionary revisions:
The report could be improved by adding information on any co-morbidity that was recorded in the population. As referred to above, breaking the groups down into so many categories for comparisons with education, income, age, racial groups, urban and rural introduced a lot of noise into some categories. From a public health point of view it is more important to consider overall risk and future burden of disease than single risk factors. It might be possible to choose an appropriate method of calculating absolute risk given the data available from this survey. If not, even comparisons of people with one, two, three or more cardiovascular risk factors would be helpful in helping understand the significance of the individual risk factor data reported.

Many thanks for this important recommendation. Given the length of the paper now we have decided to do this for a different paper on cumulative risk factors. We also realise that our study will be the first for Malaysia when we do the cumulative risk factors paper.

Finally, was the measurement of blood pressure standardised across the population? It would be useful to state this either way.

Yes, it was standardised. We have stated this now.

Level of interest: An article of importance in its field
Quality of written English: Acceptable
Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:
I declare that I have no competing interests