Author's response to reviews

Title: Prevalence of cardiovascular disease and risk factors in a rural district of Beijing, China: a population-based survey of 58,308 residents

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Author's response to reviews: see over
Dear Editor,

The 2\textsuperscript{nd} revised manuscript (MS: 1915141033586087) entitled “Prevalence of cardiovascular disease and risk factors in a rural district of Beijing, China: a population-based survey of 58,308 residents” is resubmitted to your esteemed office for your re-evaluation.

We appreciate the helpful comments made by the reviewers regarding the last version of the manuscript. The new version of this manuscript has been revised according to these comments and we have responded to every point in the revised manuscript, as detailed in the responses below. We believe the manuscript has been improved as a result of the changes, and we hope that it is now judged to be worthy of publication. If you still feel it necessary for more revision, we are pleased to do it accordingly.

We appreciate your efforts for this manuscript.

Yours sincerely,

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This study should be published if the first two points can be addressed:

1) This study is based on self-reported prevalence of CHD and stroke --- the self reported prevalence is then verified and modified by medical record review. The initial fact of this being self reported prevalence is still unclear from the current methods (It is in fact, just as ‘self reported’ as the diabetes prevalence except that they have got round the problem of ‘over-reporting’ by medical record verification. However this does not get round the problem of ‘under-reporting’). It is not unreasonable for the author to use record-verified self-reported prevalence but they need to be upfront about this. They may also wish to mention this in the limitations.

Previous studies in a British cohort showed that 50% of men with definite infarction the ECG did not report CHD by questionnaire --- see Shaper et al. “recall of diagnosis by men with ischemic heart disease” in British Heart Journal 1984….this figure may vary from population to population…but it may be a factor affecting the results of this study.

We agree with the reviewer’s comment, and have clarified in the updated and revised manuscript that our CVD prevalence was based on self-reporting, and then verified by medical record review (please refer to Methods - Data Collection and Results Para 2). In addition, we have also discussed the measures to limit over-reporting and under-reporting of CVD prevalence in the limitations (please refer to Discussion Para 8). Since this is a cross-sectional study, whether the difference on recall of diagnosis by gender will affect the CVD prevalence, could hardly be clarified at this stage, but surveillance data were scheduled to be added in our further study as we mentioned in the final limitation.

2) The age standardized prevalence of CHD is now reported as being higher in women over 65 than in men (although for stroke it seems the opposite is true). Is this CHD prevalence true or is it the result of some sort of differential artifact of over/under reporting?

Note that CHD mortality is higher in men than in women in almost every country in the world and that CHD prevalence in higher in men than in women in England in every age group including over 75. See [http://www.bhf.org.uk/heart-health/statistics/morbidity/living-with-heart-disease](http://www.bhf.org.uk/heart-health/statistics/morbidity/living-with-heart-disease)
I am not sure of CHD prevalence in other countries – but the finding of higher rates in women than men does seem a bit odd. If true, the reported figure of 12.5% in women compared to 9.1% in men is worth commenting on in the findings with some possible explanations.

We really appreciate the additional material given by the reviewer. Our finding of higher CHD rates in women than men does seem a bit odd, while in western countries the CHD prevalence was higher in old men than in old women. However, to our knowledge, Chinese population is quite different from western populations in terms of nutrition and lifestyle, therefore the variation of CHD prevalence among different genders in China might be different from western countries as well. Although lack of other recent data on CHD prevalence in Mainland China for comparison, an earlier population-based cross-sectional study in Hong Kong also reported a CHD prevalence rate of 9.7% in Chinese women aged 65-74 years, much higher than men in the same age group (5.1%) (Lam TH, et al. Atherosclerosis. 2000, 149: 443-449). These results were actually inversed from data in the material given by the reviewer (the CHD prevalence among men and women aged 65-74 years in England, Scotland and Northern Ireland). Thus, our results, rather than a set of biased data, probably revealed a novel CHD prevalent pattern between two genders, which is different from the western world; however it should be clarified in the next stage by our surveillance data and other further studies in Chinese populations as well. We have discussed this and added the reference by Lam TH, et al. in the newly revised manuscript (please refer to Discussion Para 6).

3) The clarity of the text would benefit from a little proof-reading/restructuring of the English.

Yes, a native English speaker has been invited to improve the clarity of this text.