Reviewer's report

Title: Burden and Correlates of Non-Communicable-Diseases among rural residents: A cross-sectional study in Hebei, China.

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Reviewer: Luis Silva

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Title: Burden and Correlates of Non-Communicable-Diseases among rural residents: A cross-sectional study in Hebei, China.

Authors: Weiming Tang, Wenya Yu, Qiang Zhou, Tanmay Mahapatra, Lei Chen, Yiqiu Li, Xiaoyan Zhang, Sanchita Mahapatra, Junjun Yang and Yuying Yan

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- Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

1. It seems unacceptable the omission of Confidence Intervals in what constitute the more solid results (prevalence estimations). Confidence Intervals are present only in relation with odds ratios whose use is rather conflictive because of the cross-sectional nature of the study and the temporal ambiguity that prevented the authors from drawing causal inferences, as they themselves pointed out in their discussion.

- Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

2. In the section named “Recruitment” there are a couple of little problems:

a) We can read: “In order to get precise and valid estimates from a representative sample, at the design phase, we decided to select 1 person per1000 residents of rural areas of Shijiazhuang using stratified sampling with probability proportional to size.” However, the strata mentioned there are not mentioned later. How was this stratification?

b) In the next sentence, it is said: “According to the 2010 population census of China, there were 7,355,238 persons living in the rural areas of Shijiazhuang, and about 5.5 million of them were aged 15 years or more[11] (Reference).” I don’t understand what does the allusion to “Reference” mean.
3. When informing about “Correlates of NCDs”, the authors use the abbreviation OR sometimes and COR in other occasions. Since “COR” is not defined, I guess it means “crude odds ratio”. In any case, a uniform notation would be mandatory.

4. I do not think it is convenient to repeat results in the discussion section. For instance, the entire first paragraph of this section could be eliminated.

5. I suggest to reconsider the use of the expression “our sampling technique … was planned for recruiting a representative population” (page 19), which sounds rather rare.

- Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

6. The authors include explicit p values in the foot of table 3, and implicitly when the say more than one time that results lacked statistical power. It seems that the later resource is the way they have chosen to explain the fact that nullity is within the interval confidence. Concerning the first of these things, I strongly suggest reconsidering use of p values. They are not necessary at all. The authors do not need to use p values (presently undervalued) which are considered inconvenient by most of the present standards, as it easy to corroborate looking at International Committee Of Medical Journal Editors Uniform Requirements For Manuscripts Submitted To Biomedical Journals. Some recent papers and guides are recommended to be read by the authors in this concern. For example, the following four:

• Nuzzo R. Scientific method: statistical errors. P values, the 'gold standard' of statistical validity, are not as reliable as many scientists assume. Nature 2014, 506:150-152.


7. In relation with the second issue (mention to small power), it is certainly astonishing to read it, since the sample size was huge. The problem with this statement is that it is true; more specifically, it will always be true when no significant results are obtained, and, therefore, sterile. It is not fortuitous that it is impossible to come across with the opposite (and equally tautological) statement: “A significant difference between groups has been detected; however, perhaps with a smaller sample size, this difference would have proved to be not significant”. Such a double standard is itself an unequivocal sign of the ritual employment of NHST.
8. The number of significative figures in the tables should be the same. They usually opt for using two after the decimal point. But sometimes, only one is displayed. I suggest using only one along the whole paper.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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