Reviewer's report

Title: An update on general and abdominal obesity in rural Northeast China: from lifestyle risk factors to cardiometabolic comorbidities

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Reviewer: Yan Liu

Reviewer's report:

In the present article, the author analyzed the data from 11579 participants in rural areas in Liaoning Province to update the prevalence of obesity in the northeast China. The question was defined clearly and the discussion also seemed reasonable. As far as I know, no falsified or manipulated data or duplication were found in this article.

However, there are still some problems needs to be solved and the language of this article needs to be further improved.

Major Compulsory Revisions:
1. Compared with lots of data listed in tables, the method used in the present article is relatively coarse. For example: “study population”: why the age >35 were chosen? Are the area chosen and 11579 participants representative for the Liaoning area?

2. In the result part of "Baseline characteristics of study population", the Ethnicity was also considered to be a factor. However, since there are so many ethnicities in China, and the sample size of ethnicity of “others” was too much smaller than that of “Han”, the information and conclusion from “others” should be carefully considered.

3. Combined effects of general and abdominal obesity on the cardiometabolic comorbidities were analyzed and listed in Table 4. However, the reason for combined effects should be described in the background or the method part. Also in that Table, only abdominal obesity was combined with other factors, the correlation of general obesity with cardiometabolic factors should be also addressed.

4. The title of the article should be reconsidered since overweight was also involved and the correlation between body weight and cardiometabolic comorbidities were quite less studied.

Minor Essential Revisions
1. The topic of this article is about obesity and cardiometabolic factors, however, no detailed information could be get in the result part of the abstract, the relationship between obesity and the cardiometabolic factors was even not mentioned in the conclusion.

2. In the method part, the definition for diabetes was also not strict, type 1
diabetes and some other endocrinological diseases such as Cushing’s disease or hyperthyroidism that may cause body weight alteration should be also excluded in this study.

3. In results, the information in Tables is quite difficult to read, and the descriptions of the result are poor. More rigorous and scientific language should be used.

4. Figure 1 is not necessary for the article since the data from urban areas seems nothing to with the data in this research.

5. In figure 2, did “obesity” refer to “general obesity”?

Discretionary Revisions
None.

Level of interest: An article of importance in its field

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

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