Reviewer's report

Title: Association of obesity with socioeconomic status among adults of ages 18 to 80 years in rural Northwest China

Version: 5
Date: 28 November 2014

Reviewer: Lifoter Navti

Reviewer's report:

Major Compulsory Revisions:
I think there is a problem in the interpretation of data in this study.
Firstly, I would like to state that an odds ratio of less than 1 is protective and greater than one indicates risk.

The authors indicate that there was a clear gender difference in the association between SES and obesity. From their findings, being a woman, the person has a higher risk of being abdominally obese (OR 1.08, and this was not statistically significant) compared to a man. However, the same data indicate that being a woman is protective (OR 0.77) against overweight/obesity. It is important to state the parameter of obesity (BMI or waist circumference, WC) which is associated to SES.

Secondly, the association between SES and obesity was statistically significant only when BMI was used for the female population, meanwhile a significant association was observed in males for both parameters (BMI and WC).

Thirdly, the authors are talking about prevalence in Table 3. The frequencies (prevalence) of overweight/obesity and abdominal obesity in the different categories of education level for example, are not indicated in Table 3. I do not understand why they have to say (line 212 to 215) that among youngest participants, the medium and high educational level participants had a higher prevalence of overweight/obesity compared to those of the low education level. Did the authors want to say that these participants (medium and high education groups) are at risk of being overweight/obese compared to those at a low educational level?

Or, if the authors intended to say that belonging to the medium and high education groups are associated to higher frequencies (prevalence) of overweight/obesity, then it will be nice to also include the frequencies of overweight/obesity to the corresponding categories of the different variables in Table 3.

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.