Reviewer’s report

Title: The Prevalence of General and Abdominal Obesity according to Sasang Constitution in Korea

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Reviewer: Yiqing Song

Reviewer’s report:

This manuscript aimed to investigate the prevalence of general and central obesity in Korean adults stratified by Sasang constitution using a cross-sectional study. The study purpose is clearly stated and quite reasonable. The study applied different indexes for defining abdominal and visceral fat obesity and the results are interesting. However, such cross-sectional study design cannot allow them to address the incidence and age or time trends of obesity. The results were prone to potential bias from confounders beyond age, for example, socioeconomic status, smoking, physical activity, and psychosocial factors, and therefore should be interpreted cautiously.

General Comment:

1. Without adjustment or adjustment for age only in their main analysis must have a serious impact on the validity and explanation of their results. Thus the observed associations may simply be due to residual confounding from other unmeasured lifestyle or socioeconomic variables.

2. One important weakness in this study is the use of cross-sectional data at one single time point on individuals stratified by different ages for age-trends. The results do not necessarily reflect age-dependent trends.

3. There was no formal test for gender-difference in the prevalence rates of obesity.

Specific comments:

Introduction:

It would be valuable to add some information on the theory of Korean Sasang constitution? It is unclear what are the rationale or criteria for classifying individuals by SCM? Any solid evidence for efficacies in Korean populations?

Definition of Obesity

Please clarify the WHO diagnosis criteria for overweight and obesity defined by BMI.

Results
Overall, the prevalence of WHR AO was much higher than that of WC AO. Are there any reasonable explanations? Is there any evidence for ethnicity-specific cutoff levels?

Discussion:

Page 12, paragraph 2: obviously this is not the first study showing the association of SC with obesity. Please tone down this statement.

Tables:

Table 1: No information is available on basic demographic, lifestyle, environmental, and psychosocial factors, which could potentially confound the SC-obesity association.

Table 2: please indicate the methods for P value comparing the differences among three groups. P value from a Chi-square test is for the two-group comparison.

Table 2 and 3: It would be important to present P value for gender difference.

Figure 2: older women tended to have higher prevalence of both general and central obesity; would this observation reflect the impact of menopause?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests