Reviewer’s report

Title: Sasang constitutional types for the risk prediction of metabolic syndrome: A 14-year longitudinal prospective cohort study

Version: 0 Date: 20 Apr 2017

Reviewer: Jennifer L. Kuk

Reviewer's report:

The constitutional types as names are not very useful and I would suggest renaming or at least more description in the abstract for ease of comprehension.

Is it expected that there would be no type TY in your sample? Is this due to the rarity of the TY type, limitations in your methodology or survey or some other factor?

What is your repeatability and reliability for your SC typing?

A general description of each subtype is needed in the methods.

Were the models tested for collinearity?

What test did you employ to determine that the changes in AUC were sig? To say that the model is significantly improved is not the same thing as the model is significant. The p-values for the model change should also be listed in the text where appropriate.

If the primary aim is to examine SC types, then it should be entered at the first step.

Given the sex differences in some of the variables (i.e. HDL, allowable alcohol cut-offs, etc), sex stratified models should be conducted.

You should use standardized estimates so that the model variables can be better compared.

Table 3 is difficult to read and impossible to compare as the variables that entered in each model are different. Please use an enter model.

Another point that is unclear is whether SC type can change or if it is permanent. Given that the authors did not assess this until the 5th cycle it is important to know if the SC type is a surrogate for some of the MetS factors or whether they are separate and distinct characteristics. Further, given the change in AUC with the addition of the SC types in model 4, it is unclear how beneficial SC type would be given that it seems to be a very onerous and subjective process.

Are the methods appropriate and well described?

If not, please specify what is required in your comments to the authors.
No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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