Reviewer’s report

Title: Identification of an obesity index for predicting metabolic syndrome by gender: The Rural Chinese Cohort Study

Version: 1 Date: 22 Mar 2018

Reviewer: Edward Janus

Reviewer’s report:

Overall the previous issues have been satisfactorily addressed.

There are few issues that need further attention:

Results

Paragraph 1 - Suggest rewrite for clarity-

"Compared to those without MetS men with MetS were younger, more of them were drinkers, more had higher education, and they had somewhat lower levels of exercise and also lower HDL -C levels. As expected they had higher WC,......"

Please note the % of smokers is the same in both groups 70.14 and 70.16 so even if p<0.001 the difference is NOT CLINICALLY SIGNIFICANT. Some of the other comparisons were the other way round in the draft. Please check them all very carefully.

"Compared to those without MetS women with MetS were older, had similar low rates of smoking and drinking, lower levels of education, somewhat higher levels of exercise and also lower HDL-C levels, As expected the anthropometric differences were similar to those in men."

Please check final version of this paragraph very carefully for both genders.

Paragraph 2

Suggest you modify text slightly to match the table 2 legend.

In the unadjusted model (Model 1)....

On age adjusted analysis (Model 2)..

.. in the fully adjusted model (Model 3)..
Discussion

You need to add a bit more after the last paragraph of the discussion and before the conclusions section.

I suggest something like this

The WC cut offs of 83.30 cm for men and 76.80 cm for women from our study are quite a lot different from the 90 cm for Asian American men and 80 cm for Asian American women used in the AHA/NHLBI criteria.(24). In Japan specific cut offs of 85 cm for men and 90 cm for women were based on visceral fat quantitation on CT scan (reference to be added here). Thus country and ethnic specific criteria based on good local data are an appropriate approach. If the cut offs derived from our data are to be used in practice we may need to use 83 cm or even 85 cm for men and 77 cm or even 75 cm for women for simplicity but these would still be different from those used for American Asian subjects.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

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.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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I am able to assess the statistics

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

Needs some language corrections before being published

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