Reviewer’s report

Title: Waist circumference cut-off values for the prediction of cardiovascular risk in Chinese school-aged children: a cross-sectional study

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Reviewer: Alessandra C goulart

Reviewer’s report:

- Major Compulsory Revisions

The manuscript written by Liu et al, “Waist circumference cut-off values for the prediction of cardiovascular risk in Chinese school-aged children: a cross-sectional study” is very interesting. However, this issue is not original, and it was previously evaluated in other Chinese based-population samples of children (Sung et al 2007; Yan et al 2008 and Ng VW 2007). Further, some issues regarding to the outcome, methods and results need to be clarified:

1. According to the author “the purpose of the present study was to develop WC percentiles for Chinese children from both the North and South of the country, and secondly, to explore the optimal WC cut-off values for predicting CV risk in this population”.

The second objective is not totally clear, since that the association evaluated was a combination of cardiovascular risk factors (LDL-cholesterol, HDL-cholesterol, fasting glucose, triglycerides and blood pressure) defined by the author (# 3: high cardiovascular risk factor) and WC for boys and girls, respectively. The author should clarify this issue in the title and in the whole manuscript rewriting “cardiovascular risk factors” instead of “cardiovascular risk”.

2. Methods: It is not totally clear if the OR was adjusted by age.

3. Results: the author mentioned about “the optional threshold of WC for boys and girls was the 90th and 84th percentiles, respectively. Further, the odds Ratio (OR) of a higher CV risk among boys at the 90th percentile of WC and higher, and 84th and higher percentiles of WC in girls is 10.349 (95% confidence interval (CI) 4.466 to 23.979) and 8.084 (95% CI 3.147 to 20.767) compared with their counterparts”. However, he never mentioned about these WC values for both boys and girls. Indeed, its not clear if the author misled the word “optional”. The correct word should not be “optimal” ?(see in the introduction section)

- Minor Essential Revisions

The titles are missing in the figures (1-3).

- Discretionary Revisions

The figures one and two should be added as a supplemental material. Further, the figure three should be removed since its part of discussion and not the
results.
The author should consider analyzing the relationship of each cardiovascular risk factor in separate with WC; and then putting everything together analyzing the association between metabolic syndrome and WC in boys and girls, respectively.

**Level of interest:** An article of limited interest

**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.