Reviewer's report

Title: Trends in childhood obesity and central adiposity between 1998-2000 and 2010-2012 according to household income and urbanity in Korea

Version: 5 Date: 20 October 2015

Reviewer: Malavika Subramanyam

Reviewer's report:

I applaud the authors for making substantial revisions to the manuscript. A major compulsory revision which is still required is to add supporting citations to the following sentences:

"However, this would not be the case for South Korean boys. Rather, adolescent urban environments which allowed better access to high caloric western food might have contributed to an increase in adolescent obesity prevalence among South Korean boys aged 10-19 residing in urban areas. Weight misperception might have been less important in reducing obesity in South Korean boys as in South Korean girls."

The citations should support the claims and also provide a clearer conceptual description explaining these results. For instance, why do the authors think that weight misperception might have been less important in reducing obesity in South Korean boys?

In general, the discussion section needs to situate in the Korean context conceptual statements such as "Another possible explanation is that these gender differences might have originated from earlier childhood." The authors go on to describe what other studies have found. It would help to first describe how the early socioeconomic conditions might differ among groups in the current study.

Another claim that needs to situate in the context of Korea is: "Meanwhile, girls are more vulnerable to the stigma of obesity than boys." The reference cited does not seem to refer to the Korean context. Do we know how stigma related to obesity works in Korea? Is it different in rural versus urban areas of Korea? I performed a quick web search and found newspaper stories that discussed how prevalent fat-shaming is in Korea. The authors may be able to locate scholarly work that can be cited.

Minor essential revisions

"Weight misperception might have been less important in reducing obesity in South Korean boys as in South Korean girls." Recommend changing this to "Weight misperception might have been less important in reducing obesity in South Korean boys unlike in South Korean girls."
**Level of interest:** An article of importance in its field

**Quality of written English:** Not suitable for publication unless extensively edited

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