Reviewer's report

Title: Sex- and age-differences in blood manganese levels in the U.S. general population: National Health and Nutrition Examination Survey 2011-2012

Version: 1 Date: 3 August 2014

Reviewer: Yangho Kim

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Major Compulsory Revisions
I have one major concern.
The authors showed that higher blood manganese levels were observed in females, younger individuals, participants from Asian background, and in pregnant women.
The common thread throughout females, younger individuals, participants from Asian background, pregnant women, and cadmium exposure level seems to be iron status.
The authors adjusted for serum iron levels rather than for serum ferritin. I wonder why they adjusted for serum iron levels rather than for serum ferritin, although serum ferritin is a more sensitive measure of iron deficiency than serum iron.

Minor Essential Revisions
The authors use Mn and manganese inconsistently. Please use the abbreviation after first appearance of manganese (Mn)
During pregnancy iron deficiency is remarkable in 3rd trimester than in other trimester. If they compare those in trimesters, it might be more informative.

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.