**Reviewer’s report**

**Title:** Impact of three different plate colours on short term satiety and energy intake: a randomised controlled trial

**Version: 0 Date:** 28 Nov 2017

**Reviewer:** Bohdan Luhovyy

**Reviewer's report:**

This is the interesting study aimed at investigating the effect of environmental sensory stimuli such as plate colour on the appetite and food intake. To improve the clarity of the paper, the following comments and questions arose.

* The introduction reports the similar study conducted by Genschow et al, 2012 mentioning that in this study the food intake was lower when food was served in red plates compared to blue plates. White plates are not mentioned. However, in Genschow's study, the participants "ate less snack food from a red plate than from a blue or white plate (Study 2)''. [https://www.ncbi.nlm.nih.gov/pubmed/22245725](https://www.ncbi.nlm.nih.gov/pubmed/22245725). Considering that in the present study no blue plate was used but only red, black and white, the omission of white plate seems to be unusual, especially considering the difference in the results obtained in these two studies.

* There is no information on the food composition that was served at the lunch meal. The paper mentioned pasta (line 121) however it is not clear whether the pasta was served alone or with a sauce or other ingredients? If other ingredients were used, how the uniform energy density of the product was assured?

* What types of soft drinks were served? What was the energy density of the soft drinks?

* Does energy intake reported in Table 3 reflect the intake of solid food or solid + liquid? If latter is true, then the intake of pasta meal and soft drinks should be reported separately as they may have different determinants such as appetite/hunger for the solid food and thirst for the soft drinks.

* Was the thirst measured?

* How the soft drinks were served? In the containers of the same colours as the plates (i.e., red, black and white)? Please note that in Genschow's study mentioned in the Introduction, both plates and cups were of the same colour.

* What was the material of the plates? Plastic, porcelain, paper, aluminum, etc.?
* Instead of expressing the individual parameters of appetite assessed by VAS, consider calculating an average appetite score that can be expressed in one figure instead of four.

* There is not enough discussion on the different results obtained in this study compared to Genschow's study which showed the opposite effect: food intake was lower with the red plate.

* The measured "desire for sugary snack" may not reflect the immediate sensitivity to the sweetness. If the goal was to assess how plate colour affects the sensory attributes, then probably the intensity of the sweetness of a served soft drink could be measured instead?

* The colour of the plate may make the product on the plate looking more appealing (see Hirsh AR, Nutrition and Sensation, CRC Press, 2015, p.150). Did you consider measuring any sensation(s) related to the aesthetics of the plate presentation?

* Line 47: what is "therapeutic manipulation"?

* It is unclear what the second visit is? Is that simply refilling the plates?

* If participants ate ad libidum, how their plates were served? Were they pre-filled with an excessive amount of pasta meal? Alternatively, participants could take as much as they wanted?

* The "contrast interaction" is mentioned in the Conclusion, however, there was no definition what is the contrast. In the present study, the black colour was considered a contrast to red colour but it is also a contrast to white colour.

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