Reviewer’s report

Title: The effects of fatty fish intake on adolescents' nutritional status and associations with attention performance: Results from the FINS-TEENS randomized controlled trial

Version: 0 Date: 09 Nov 2017

Reviewer: Dylan Mackay

Reviewer’s report:

In this manuscript, the authors present the result of The Fish Intervention Studies-TEENS (FINS-TEENS, a randomized trial comparing the intake of fish, meat, and omega-3 fatty acid supplement, on attention performance assessed by the d2 test of attention, and red blood cell fatty acids, 25-hydroxy vitamin D, s-ferritin and urinary iodine concentrations in adolescents in secondary school. 12 weeks of the intervention led to an increase in DHA and the omega-3 index in the supplement group compared to the fish and meat groups, and in the fish compared to the meat group. No differences between groups was seen in the attention performance measured by d2 test of attention, and no changes in the other biomarkers mediated performance in the d2 test of attention. These findings further contribute to a mixed body of evidence related to the impact of omega-3 fatty acids and/or fish intake as it relates to cognitive performance. It is therefore critical to publish the results of this study to avoid publication bias which often favors papers with "statistically significant" results. Overall the manuscript is very well constructed, but could benefit from the consideration of the following:

All comments below refer to the authors' numbering (i.e., that associated with the double-spaced lines)

1) Abstract line 49: what and how long the intervention was would fit better under the methods subheading rather than the background

2) Abstract line 59: inserting the NCT number in the abstract would be helpful

3) Line 61: replace "gave" with "resulted in"

4) Line 134 and throughout: replacing "subject" with participant better reflects the ethics statement above, where the term "participant" is actually used

5) Line 174: the authors could explain why age, weight, height no measured directly

6) Line 215: could you state which standards or how many standards were used in the fatty acid analysis

7) Line 339: there is a space missing between group and gave, and "respectively" and "associations" are spelled incorrectly.
**Level of interest**
Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests

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

Acceptable

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