Author's response to reviews

Title: Dairy products and calcium intake during pregnancy and dental caries in children

Authors:

Keiko Tanaka (k-tanaka@fukuoka-u.ac.jp)
Yoshihiro Miyake (miyake-y@fukuoka-u.ac.jp)
Satoshi Sasaki (stssasak@m.u-tokyo.ac.jp)
Yoshio Hirota (hiro8yoshi@med.osaka-cu.ac.jp)

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Author's response to reviews: see over
Dear Dr. Gabriel:

Thank you for your email. We are pleased that you are interested in our manuscript for possible publication as an Original Article in Nutrition Journal. We appreciate the thoroughness with which the reviewers have considered our manuscript. We have addressed the comments raised by the reviewers and have carefully revised the manuscript.

I am sending the revised manuscript with changes highlighted in red.

Specific revisions and responses to the each reviewer are described below.

We thank you in advance for your consideration.

Yours sincerely,

Keiko Tanaka, DDS, PhD
Reviewere 1  
Dr. Ingegerd Johansson

I have read the revised paper and the answers given by the authors. The changes and especially adding information of children’s intake has improved the paper substantially.

However, in my point of view one aspect remains to be pointed out clearly. It seems the authors misunderstood the comment on the low intake level of calcium and dairy products. I did not question the accuracy of the reported intake as such, through the present addition that the reported levels are in agreement with Japanese population intake supports validity and should be kept. What I meant is that the results obtained in this population where intakes are very low in comparison with the Western world cannot be generalized worldwide. To search for associations in populations where the variation in comparisons with these Japanese data varies from high to very high is a completely different story. This should be made clear in the discussion.

Response:
We appreciate your careful review and helpful comments. As you indicated, our results cannot be generalized in the Western world where people consume large quantities of dairy products and calcium. We added the following sentences to the Discussion “The difference in consumption of dairy products between Japanese and Western populations should be taken into account when interpreting our results. A clear protective association of dairy products and calcium with dental caries may exist in populations with high intake of dairy products and calcium. The results obtained in the present study, therefore, are not likely to be generalized worldwide.” (page 13, lines 15-19 in the revised manuscript)

Reviewer2  
Dr. Carlos Camargo

MAJOR COMPULSORY REVISIONS
1. 31% PARTICIPATION RATE – Both reviewers commented on the low participation. I ask that the authors compare included/excluded groups and include a table with these results. The authors write that it would be “prohibitively difficult” to create a table comparing the two groups and that they decided to not include the requested table. They then present the tables in
the response letter only (ie, they were created but just not shown to manuscript readers). The tables lack significance testing, however, which hinders the ability of reader to see where the groups differed (at least in statistical terms). Given that the study subjects are clearly older, of higher socioeconomic status, have higher intake of yoghurt and calcium, and are less likely to smoke…I don’t think it’s correct to say that there were “no material differences” (new text on page 8). I don’t want to harp on this point but I do think it will help readers to see these inclusion/exclusion data with formal testing for differences.

Response:
We appreciate your careful review and helpful comments. In order to compare included/excluded populations, we newly created Table 1 which included statistical terms (P values). As we had already mentioned in the Results in the first revised manuscript, regarding the distribution of gestation at baseline or maternal intake of total energy, milk, or cheese during pregnancy, there were no statistical differences between two groups. On the other hand, compared with the excluded subjects, study subjects were more likely to have older mothers, report higher family income, have parents with relatively high educational levels, and have high intake levels of yogurt and calcium, while they were less likely to have been exposed to maternal smoking during pregnancy. (page 8, lines 14-22 in the revised manuscript)

2. BIOLOGICAL PLAUSIBILITY – I would have liked a better explanation about why cheese would be protective and not milk…but it appears that the authors have no explanation. They do acknowledge that an earlier paper suggests that children’s intake of yogurt—not cheese or milk—is inversely associated with dental caries in children. These findings, and the lack of any biologically plausible mechanism or underlying theory, do suggest that it would be prudent to highlight multiple testing and “chance” and as another explanation of the observed results.

Response:
Thank you for your useful suggestions. As you indicated, we have no immediate explanation for the potential mechanisms underlying our observed inverse association between maternal intake of cheese during pregnancy and the risk of dental caries in children. Our observed results might be attributed to a consequence of multiple testing and/or “by chance”. We added the following sentences to the Discussion:

“We have no immediate explanation for the potential mechanisms underlying the
observed inverse association between cheese intake and dental caries.” (page 11, lines 10-12 in the revised manuscript)

“Our observed results may be merely a consequence of multiple testing and/or chance.” (page 12, lines 4-5 in the revised manuscript)