Reviewer’s report

Title: The impact of food reformulation on nutrient intakes and health. A systematic review of modelling studies

Version: 0 Date: 03 Sep 2018

Reviewer: Gabriel Masset

Reviewer’s report:

Dear BMC Nutrition editors,

I thanks you for the opportunity of reviewing the review article entitled "The impact of food reformulation on nutrient intakes and health. A systematic review of modelling studies". I believe the manuscript is clear and well written, the review methodology is well described, and the results are correctly summarized. Although the topic of food reformulation has gained interest in the recent years, evidence regarding its potential impact on public health still appears quite limited. The submitted manuscripts thereby gives a good overview of current studies and highlights adequately their limitations. Yet, I feel the discussion could include more recommendations from the authors: they list limitations and should give more emphasis on possible solutions or further research needs. This would allow to better use the manuscript as a guide for future research. Also, the tables need some editing to make easier for an external eye. I would recommend that this paper is being accepted for publication, following such improvements. A few minor comments are listed below.

p. 3, ll. 17-9. The definition of reformulation is a bit unclear, and the reference is quite odd. I thought reformulation meant changing recipes of food and beverages product. If you apply a public health version of the terminology, it could be stated more clearly.

p. 4, ll.4-26. I would recommend that you merge all these sentences in one paragraph. Without returns at the end of l. 9 and l.15.

p. 6, l.13: why () around "weighted"?

p.7 ll. 15-19: add references everywhere - or just make a link to the tables.

p.7. l. 49: It isn't really clear what is meant by 'the strength of the reformulation'.

p.8. l 17. It's unclear what is meant by ' % salt reformulated in the models'.

p. 8. L.44: The MI abbreviation isn't explained and I'm not sure all readers would understand

p.9. ll. 19-23: this comparison is maybe rather for the discussion section.

p. 9. L.44: is the lowering for all types of fats?
P.10. ll.1-2: these absolute death reduction estimates do not mean much without context - what does it mean in terms of death rate reduction? Maybe the original study does not provide such estimates, which would a limitation to point out on these modeling works. Absolute estimates are good, but they should also be compared to some reference scenario.

p. 10. L.12: 7% for transparency and provision of technical documentation… I guess that's a typo?!

p.10 ll.21-23: Maybe you should re-explain what do you mean by relevance here. It's not really clear how you assessed this criterion, and most readers will not check the supplementary materials. It could also help making the link with the discussion section.

p. 10. L 55. "might" affect policy results is maybe a better wording here?

p. 11. Ll. 25-34. This paragraph could be linked to the 'liking' section. General limitations of the reviewed studies on parameters that are not taken into account.

p.11. ll. 36-49. What would be your recommendation to ensure a better comparability between studies in the future, and more refined assessments of long-term impacts?

p.12. ll. 1-2: This sentence comes a bit out of the blues; and it took me a while to understand what you meant. There is the need for a deeper discussion on the assessment of public health nutrition strategies, of which reformulation is one aspect.

p.12 ll. 15-28: Again, what would be your recommendations, especially considering the wider context mentioned just above?

Tables 1-3: Some editing is clearly needed

- An extra row of table headings would help the reader understand what are inputs (methods) and outputs (results) of the reviewed studies.
- There is a need to add abbreviations in footnotes of each table. E.g. QOL, AMI, etc. In general, there may be the need to better explain some columns/results in the footnotes.
- Why are some cells blank, and some cells "not reported"?
- Either use use symbol or text to express reductions or increases, but not a mix of the two
- Could you add the information on the time horizon? As it is a quite important topic of your analysis (I would try to capture the same elements in the tables as in fig 2)

Table 3: Some missing headers.
Figure legends:

- Legend of Figure 2 is missing - numbers are mixed up. To revise

Prisma checklist: why is the risk of bias not applicable to your review? Some of these studies were funded by the food industry - they would have an interest in showing the beneficial effects of product reformulation. (And you have already listed the information in the supplementary file 4).

Quality assessment tool:

- For point 5 "outcomes", I would maybe rephrase to health outcomes or something similar. As according to your assessment a study may receive a bad score even though it describes very clearly the 'outcomes' it considered.

- Point 9. Relevance. I still do not understand what is measured here - check my comment earlier.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

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

Acceptable
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If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I was employed by Nestec SA, the funder of this study, between 2014 and 2018. Nonetheless, I have not been involved in the reviewed study. I am not employed by Nestec any longer.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

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