Reviewer’s report

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

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Reviewer: Temme Elisabeth H. M.

Reviewer’s report:

NUTN-D-18-00053

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

In this paper the authors aim explore the impact of reformulation on nutrient intakes, health outcomes and quality of life; and to evaluate the quality of modelling studies on reformulation interventions. Reformulation of processed foods has the potential to improve population diet, but evidence of its impact is limited.

These sentences include the main critique I have with the study. Many modelling studies have been carried out, most of them modelling potential effects on nutrient intake and selected health outcomes. In most papers, I think, rather unrealistic scenarios are studied. The realism of the scenarios must be checked from the perspectives of how likely is it that foods are changed, sold and eaten in the way is assumed in the models? How far are the modelled situations form the current food consumption patterns? To what level is this taken into account? Now many studies describe potential effects, but what are the actual (to be expected) effects?

Abstract:

Line 19: Evidence on reformulation policies was strong for sodium: what do you mean? Effective policies? Are the modelling studies looking at policies?

Non appropriate time-horizon: It is not clear to me what this means?

Background

Page 3: Line 49: scheduled .. and reached??

Page 4 and line 9: Extreme scenarios/models are used that model the potential effects of full implementation of measures… is this realistic?

Line 13: limiting as well realismlessness of outcomes for population health.
Quality assessment of studies

Include criteria (and results of this assessment) on realisticness of the scenarios studied and how much change is needed from the current food consumption patterns.

Page 7, line 57-58. You distinguish between voluntary and mandatory, level of implementations is maybe a better word to describe what you mean.

Page 8, line 12. Additionally including actual market shares in the models e.g. for foods with certain reformulation levels is another way of modelling more realistic situations like: Temme et al, 2010, PHN, Public Health Nutrition: 14(4), 635-644

Line 24, sometimes you refer to salt and sometimes to sodium, did you do re-calculation? Please use one of the two.

Line 28 … targeted foods and scenarios studied

Page 9, line 45: insert trans

Line 47: delete: more and from the same research group

Line 58 % of what??

Page 10, line 1 reducing SF by 15% by what type of scenario?

Discussion

Include some additional discussion on the quality and realisticness of the scenarios assessed and lessons that can be learned for the future.

See point before on voluntary and mandatory, please reword

Page 11, line 2, would be smaller… this is also confirmed by study mentioned above using current market shares.

Line 41, these studies are poorly informative, I do not agree, this type of studies give other valuable information on a cross-sectional level.

Line 43 dynamically.. mostly these models contain information of the food consumption surveys, that were found poorly informative in line 41.

Line 58: what do you mean? By external validation?

Page 12, line 4 sinking lid?
Line 11, this study reported potential effects of... on intake and health.

Tables can be made much clearer with respect to layout and content, see points raised above.

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

No

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

No

**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:

Needs some language corrections before being published

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