Reviewer’s report

Title: Habitual food consumption of the Belgian population in 2014-2015 and adherence to food-based dietary guidelines

Version: 0 Date: 13 Jan 2019

Reviewer: Ariane Dufour

Reviewer's report:

General comments
About foods groups:

o use the same order of the food groups in the results section and in the different tables 1,2,5
o harmonize the group names in tables 1,2,5 and paragraph titles; ex: dairy products in table 1 and dairy products and calcium enriched soya products in table 5 and text; use « potatoes, rice, pasta » rather than « potatoes and substitutes »

o choose if you leave the 2 different groups « fruit » and « fruit (including fruit juice and olives) » or if you keep only one in accordance with the recommendation; rename in « total fruit (including fruit juice and olives) » and « fresh fruit » to better distinguish both groups

o why don't you present the nutrient-poor food in g/day as the other food groups?

o in total, do all the food groups cover the entire diet?

About age groups stratification: it would be better to present all results (tables 3,4,5 and figures) with the same age groups used to define the daily recommendations of the Flemish active food triangle (table 1)

Comparison of habitual consumption with recommendations: explain which cut-off is used when there is a range? ex: 100-200g for fruit in 3 to 5-years old check GloboDiet's writing all over the article with a capital D check tables numbering and references to tables in text; see more details for each table below.

Details comments
Words underlined are suggestion to add.

Page 2, L31: add « software » after Globodiet
Page 4, L66: including children above 3 years old;
Page 4, L75: when were the nutrient reference updated? add a reference;
Page 4, L79: could you define exactly what you mean by « nutrient-poor food »? give some examples
Page 4, L79: last sentence is not clear; it seems a verb is lacking;
you could also add the pilot Paneu study as another reference: Ambrus A., Horvath Z., Farkas Z. et al. Pilot Study in the view of a Pan-european Dietary Survey - Adolescents, Adults and Elderly, Report n° EN-508

3297 persons is number of the final sample of participants; I suppose much more individuals were randomly selected because not everyone participate to the survey.

Which is the reference year for the use of the National population register?

I presume that there are other questionnaires in addition to the FFQ; you can briefly mention them also.

Please check all the sample size of the population mentioned in the paper and the coherence with the tables. Here, we understand that there are 3146 participants among adolescents and adults (10 to 64). In table 5, n=3146 for 3-64 years old ??

Add precision before the reference like following « Globodiet… was used as recommended by EFSA [5] »

Quantification instead of quantities

did you make all the photographs of your picture book or did you use photographs from previous picture books such as PANCAKE and EPIC-Soft picture books? If so, mention it.

Did you also use the other quantification methods proposed in Globodiet such as shapes and thickness, weight, volumes?

specify the sample size of the 3 to 9 years old children sample

how were the day for completing the one-day food diary chosen?

I suggest to add precision in the sentence: the first registration was made by telephone…and the second registration was conducted face-to-face …

Which is the reference year for the belgian Food Composition Database?

If you only used the 2-part model option with the data, it wont be necessary to mention the 1-part model. You can maybe reformulate this paragraph.

remove parenthesis « from the FFQ »

table 1 summarizes all dietary recommendations considered in this paper for the different food groups and age classes.
Page 8, L165-167: deplace the sentence « 95% CI … FBGD » after the next sentence (analyses were weighted …); For tables 2 to 5, 95% confidence intervals were provided …

Page 8, L168-170: you mention « day of week » twice. Simplify.

Page 9, L186: mean habitual consumption=1168 ml/day in the global 3-64 years old population. In table 5 last column, result for 3-64 males is 1165 and result for 3-64 females is 1155. I don't understand how the average of 1165 and 1155 can result in 1168?

Page 9, L188: add « in individuals over 6 years old » at the end of the line

Page 9, L191-193: add « especially the girls » at the end of the sentence

Page 9, L193: but still remains higher than …

Page 12, L217: change the begining of the sentence as following: after the age of 6, a large majority of …

Page 13, L239-241: add « especially the girls » at the end of the sentence

Page 13, L245: between both BNFCS2004 and BNFCS2014 …

Page 14, L249: add « and did not differ according to gender » at the end of the sentence.

Page 14, L250: « above 6 yrs old » rather than between 6-64 years old

Page 14, L251-252: simplify as following: there were no significant differences between 2004 and 2014 in the consumption of vegetables. The result concerning the gender is added line 249.

Page 14, L261: children (37% in 3-6 years old)

Page 14, L263-264: separate the 2 informations (gender and evolution 2004/2014) in 2 sentences since they refer to 2 different tables

Page 14, L267: check value 301 g/day in 3-5 years old and M=295 F=279 in table 5. Not possible that the average is higher than the mean in males and females …

Page 14, L268: no significance differences between males and females \not true in the table 5 for the 6-9, 10-13 and 14-17 years old children (95%CI were not overlapping in these age groups)

Page 14, L270: children complied more often with the recommandation \I don't think it is important to insist on this since the difference is only few percentages.
Page 15, L274-75: was higher in males than in females; the sentence suggests that there are differences for every age groups but there is no significance difference in table 5 except for 18-39 years old; reformulate the sentence.

Page 16, L297-300: add « data not shown »

Page 17, L327-329: you mention the contribution of the group to the total energy intake. We don't see it in table 5.

Page 20, L388-389: as you underline this result for red meat, it would be good to present the result in detail in table 4. It is maybe more interesting to present the habitual consumption in the different types of meat between 2004 and 2014 instead of habitual consumption in the different types of meat in 2014 by age groups.

Page 21, L413: the HELENA study conducted in xxx …

Page 22, L438-439: Golberg cut-off method [29], revised by Black [27-28]

Page 22, L449-450: why don't you add the education level in your weighting factors?

References

Update the accessed dates for internet links, especially for 11 and 12 accessed in 2015

Tables

I suggest some precisions in table's titles and re-numbering the tables as following:

Table 1 - Daily recommendation of the Flemish active food triangle, by age groups
Do values for the line « Fruit » refer to « fruits including fruit juices and olives » or only « fresh fruit »? be more precise

Is it important to distinguish spreadable and cooking fat in recommendations while the results relate to all fats together?

You should precise that the daily recommendation are sometimes the minimum amount to reach and sometimes the maximum value to reach.

Table 2 - Mean habitual consumption of major groups (g/day) in the 15 to 64-years old Belgian population, 2004 versus 2014-2015 --> renumbering in Table 3

Add a general warning in a footnote for reading the « % below recommendation » because it has not always the same signification: 100% of individuals below recommendation for spreadable and cooking fat in 2014-15 means that the guidelines is well respected but 99% of individuals
below recommendation for dairy products in 2014-15 means that a large proportion of population is not reaching the guidelines.

Table 3 - Mean habitual consumption of different types of bread (g/day) in the 3 to 64-years old belgium population, by age groups --> renumbering in Table 4

Indicate « years old » in the first column for each line
Change line « total » into « All (3-64 years old) »
Change title in « Habitual consumption (mean and 95% CI) of different… »

What are the numbers for each types of bread ?
The sum of white breads+brown breads+wholegrain in all 3-64 years old represent all bread consumed ?

I wonder if it is necessary to add the footnote ? You have already specified it in the methods section.

Table 4 – Mean habitual consumption of different types of meat (g/day) in the 3 to 64-years old belgium population, 2014-2015, by age groups --> renumbering in Table 5

Indicate « years old » in the first column for each line
Change line « total » into « All (3-64 years old) »
Change title in « Habitual consumption (mean and 95% CI) of different… »

What are the numbers for each types of meat ?

I wonder if it is necessary to add the footnote ? You have already specified it in the methods section.

Table 5 - Mean habitual consumption of major groups (g/day) in the 3 to 64-year old Belgian population by age groups and gender, 2014-2015 --> renumbering in Table 2

Add a line « All » (i.e. Male and Female together) for each food group

Be careful, the sum of the numbers of all age groups (3160) does not correspond to the grand total (3146) : check the « n » for each age group the footnotes ** and *** are a bit confusing ; ** means not meeting the guidelines *** means meeting the guidelines ; Can you explain ? Maybee precise that on one hand some guidelines are a « minimum to reach » and on the other hand « a maximum not to exceed ».

Indicate M=male F= female on a separate line in the footnotes
Indicate « % above cut off point » rather than « % below cut off point » since you often comments this one in the text?

Figures

Why don't you present a figure for the 6-13 years old children?

Is it necessary to represent the base of the triangle with physical activity in the figures since you do absolutely not mention it in the article?

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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