Author’s response to reviews

Title: Variations in the estimated intake of acrylamide from food in the Japanese population

Authors:

Kumiko Kito (de1801@azabu-u.ac.jp)
Junko Ishihara (j-ishihara@azabu-u.ac.jp)
Junpei Yamamoto (j-yamamoto@azabu-u.ac.jp)
Takayuki Hosoda (gaub.ubj.18120126@docomo.ne.jp)
Ayaka Kotemori (kotemori@azabu-u.ac.jp)
Ribeka Takachi (rtakachi@cc.nara-wu.ac.jp)
Kazutoshi Nakamura (kazun@med.niigata-u.ac.jp)
Junta Tanaka (juntatnk@med.niigata-u.ac.jp)
Taiki Yamaji (tyamaji@ncc.go.jp)
Taichi Shimazu (tshimazu@ncc.go.jp)
Yuri Ishii (yurishii@ncc.go.jp)
Norie Sawada (nsawada@ncc.go.jp)
Motoki Iwasaki (moiwasak@ncc.go.jp)
Hiroyasu Iso (iso@pbhel.med.osaka-u.ac.jp)
Tomotaka Sobue (tsobue@envi.med.osaka-u.ac.jp)
Shoichiro Tsugane (stsugane@ncc.go.jp)

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Author’s response to reviews:

February 13, 2020
Dear Editor:

Thank you for inviting us to submit a revised draft of our manuscript NUTJ-D-19-00352 titled, “Variations in the estimated intake of acrylamide from food in the Japanese population” for publication in Nutrition Journal. We appreciate the time and effort you and each of the reviewers have dedicated to providing insightful feedback regarding ways to strengthen our paper.

We have incorporated changes that reflect the detailed suggestions you have graciously provided. To facilitate your review of our revisions, we have provided a point-by-point response to the questions and comments in your letter. Changes to the manuscript are shown in yellow highlighted text.

We hope that our revisions and the responses we have provided here satisfactorily address all the issues and concerns you and the reviewers have noted. We look forward to hearing from you. Thank you in advance for considering our manuscript.

Sincerely,

Junko Ishihara

Department of Food and Life Science
Azabu University
1-17-71 Fuchinobe, Chuo-ku, Sagamihara-city
Kanagawa 252-5201, Japan
Phone and Fax: +81-42-769-2669
Email: j-ishihara@azabu-u.ac.jp
Reviewer reports:

Reviewer #1: Thank you very much for the comprehensive responses to my initial reviewer comments. My concerns have all been addressed except for two minor points below.

1. References 25 and 26 are both whole books. An indication of chapter, section or page number for these would allow the reader to easily find the required information. Reference 27 has not changed so my comment regarding this not being open access still remains.

Authors’ Reply:

Thank you for your advice.

We have added the cited chapter and page numbers to the previous references 25 and 26. Also, we have decided to cite the following open-access document and book that now appears as reference 25 in place of the previous reference 27, which is a non-open-access document.

Because of this replacement, the numbering of the references in our manuscript has changed. The newly cited open-access document is reference number 25, while the previous reference numbers 25 and 26 have changed to reference numbers 26 and 27, respectively.


Following these changes, there have been alterations to the in-text citation numbers in the following portions of the revised manuscript:
【Statistical analysis】

(Lines 179–182) We used untransformed data to analyze within-individual and between-individual variations because a previous study suggested that transformed data are likely to underestimate the number of days required for ranking individuals in a group [25].

(Lines 189–190) The number of days (D) needed to obtain a given unobservable correlation between the observed and true mean intake was calculated using the following formula [26]:

(Lines 193–194) The chosen value of r is dependent on the degree of acceptable misclassification [26].

(Lines 241–242) Therefore, the number of days for ranking was underestimated as a previous study suggested [25].

【Discussion】

(Lines 263–266) Although there have been no reports of the within-individual and between-individual variations of acrylamide intake according to DRs, many other nutrients tend to have larger within-individual variations than between-individual variations; for example, the variance ratios are 1.0–2.2 for energy, 1.6–3.1 for protein, and 3.2–5.4 for fat [25, 28-30, 32].

2. Line 231. I am still struggling with this sentence regarding underestimated means. I initially thought it referred to the 5th percentile in Table 2 (0.05 and 0.07 for men and women). Following the authors rewording it appears this is referring to the final (%) column of Table 2. In which case the numbers should be 7% for men and 5% for women - rather than what is stated in the text (5% for men and 7% for women).

With these minor revisions I would be willing to accept this paper for publication.
Authors’ Reply:

We thank the reviewer for the careful review of the manuscript and apologize for the confusion caused by writing the incorrect numbers in the manuscripts. Your observations are true; hence, we have made necessary corrections in the revised manuscript as follows:

【Results】

(Lines 229–230)

The percentage differences in the means estimated by DR and FFQ were underestimated by 7 % and 5 % for body weight of men and women, respectively.

We also carefully reviewed the whole manuscript to ensure the correction of all errors. While performing this review, we found that there were three mistakes. The first was related to the numbers of food items containing acrylamide in FFQ, the second had to do with the numbers of food items in FFQ, and the third was about the values we cited from the references. We have corrected these errors in the revised manuscript as follows:

【Methods】

(Lines 144–149)

Of the 172 food items considered, the following 36 (21%) were designated as acrylamide-containing foods: rice, miso, beer, baked eel, baked fish paste, fried fish paste, bread, rice cake, Japanese-style confectionary, rice crackers, cakes, biscuits and cookies, chocolates, potato chips, peanuts, fried tofu, roasted and ground beans, sesame, sencha (a type of green tea), bancha (a type of green tea), oolong tea, black tea, coffee, instant coffee, soup, potatoes, sweet potatoes, onions, bean sprouts, asparagus, sweet peppers, squash, cabbage, eggplant, snap beans, and broccoli.
【Discussion】

(Lines 263–266)

Although there have been no reports of the within-individual and between-individual variations of acrylamide intake according to DRs, many other nutrients tend to have larger within-individual variations than between-individual variations; for example, the variance ratios are 1.0–2.2 for energy, 1.6–3.1 for protein, and 3.2–5.4 for fat [25, 28-30, 32].

Reviewer #2: All my comments have been adequately addressed by the authors and I do not have further comments.

Authors’ Reply:

Thank you for your review.