

Author's response to reviews

Title: Reported food intake and distribution of body fat: A repeated cross-sectional study

Authors:

Benno Krachler (benno.krachler@medicin.umu.se)

Mats Eliasson (Mats.Eliasson@nll.se)

Hans Stenlund (hans.stenlund@epiph.umu.se)

Ingegerd Johansson (Ingegerd.Johansson@odont.umu.se)

Goran Hallmans (goran.hallmans@nutrires.umu.se)

Bernt Lindahl (bernt.lindahl@medicin.umu.se)

Version: 2 Date: 22 November 2006

Author's response to reviews: see over

20 November 2006

Dear Editor of the Nutrition Journal,

Many thanks for your kind reply and valuable comments and suggestions for improving our manuscript. Please find below our reply to the points raised by the reviewers.

Reviewer 1

1) There is a general use of the word "change/changes" in food intake, waist circumference, and hip circumference throughout the manuscript. I find this wording problematic as this, to me, implies individual differences between two time points. Instead phrases like "time trends" and "mean differences" would be preferable. This would avoid potential misunderstandings for the readers. This comment also applies to tables and figures.

We fully agree with your concern and corrected the manuscript, accordingly.

2) I recommend that the last paragraph on page 13 and the first paragraph on page 14 are included in the conclusion in order to emphasize the very interesting main findings of the study instead of hiding them in the general discussion.

We moved the paragraphs in question into the conclusions-section.

Reviewer 2

Your aim, the results and conclusion of this study are clearly written and it is very interesting. However, the method for statistical analysis is difficult to understand. We would like to ask you to explain the method more courteously for readers who are not familiar with multivariate analysis. We have raised the following questions.

In order to improve on the method-section we included a table illustrating calculations for one food item.

1) P 6, line 20. While you mention that model 1 was made from baseline data of 1986, coefficients represent the mean difference in each circumference (p 7, line 4). Do the coefficients really indicate the difference? The coefficients in the equation of p 7, line 15 cannot be recognized as the mean difference. How did you make the equation and how

did you calculate coefficients?

This is a valuable comment since the sentence 'The level of intake reported most frequently in 1986 was chosen as baseline (model 1)' is misleading. It should read 'The level of intake reported most frequently in 1986 was chosen as reference category.' Since that applies to both models we removed '(model 1)'.

We changed the description of the calculation procedure and integrated the illustrative example in table 2 including the syntax for calculating coefficients. Another sentence was added to clarify why level-specific correlation coefficients represent the difference in mean WC or HC attributable to that level of intake.

2) P 7, line 15. Do you mean "Association between circumference and levels of intake: HC or WC=..." ? "Hip/waist" may be confused as the ratio of hip and waist.

We changed the expression as suggested.

3) P 8, line 9-14. p 11, line 21- p12, line 8. These paragraphs are hard to understand. Please explain kindly and carefully.

We did our best to clarify these paragraphs, focussing on the main strengths and weaknesses of our approach and removing some parts of the discussion that are less relevant and difficult to elaborate within the scope of a single paper.

4) By your three-step procedure, you calculated the effect of individual food item on circumferences, and the values obtained from these calculations were shown as circumference changes (mm) in Table 2 and 3. Is it right? What do you think about the association between one food item and other food items? Although the circumference change is caused by the sum of the influence of many foods, your calculation does not seem to consider interrelationship between various foods.

This is the crucial question highlighting the main idea behind our approach. You are correct, what is shown in the tables mentioned is the estimated effect of time trends in single food items on circumferences. As pointed out in the discussion section, our analysis treats reported consumption of food items as markers of lifestyle rather than measurements of food intake. Therefore we considered every single level of reported food intake as an independent variable. This is the main difference with conventional approaches that either convert reported intakes into nutrients or adjust one marker for another. Since we calculated estimated effects for every single food item on the questionnaire the most important items should come out on top.

Associations between food items can be supplied as additional results if requested, but with this paper our main problem is an abundance of information and we did not want to add more.

Yours

Benno Krachler

BENNO KRACHLER
DEPARTMENT OF MEDICINE
KALIX HOSPITAL,
SKOLGATAN 1
S-952 82 KALIX
SWEDEN
FAX: (+)46 923 76564
benno.krachler@medicin.umu.se