Author's response to reviews

Title: Social and cultural factors underlying generational differences in overweight: a cross-sectional study among ethnic minorities

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Version: 2 Date: 13 October 2010

Author's response to reviews: see over
Dear Miss Gabriella Anderson,

Thank you for your e-mail informing us that our manuscript entitled “Social and cultural factors underlying generational differences in overweight: a cross-sectional study among ethnic minorities” (MS: 8053634024040707) may be considered for publication after this revision.

We are grateful for the useful suggestions of both reviewers and the additional comments of the editor. We have revised the original manuscript accordingly.

As suggested we updated the references and the final version has been corrected by a professional English corrector. Below are the comments of reviewers (bold) and our detailed responses to the reviewers’ comments (italic).

Kind regards,
Dr. Karen Hosper

Reviewer’s report (1)

Title: Social and cultural factors underlying generational differences in overweight: a cross-sectional study among ethnic minorities

Version: 1 Date: 3 August 2010

Reviewer: Seeromanie Harding

Reviewer’s report:
This paper examines generational differences in overweight among Turkish and Moroccan people living in the Netherlands. It is of aetiological and policy relevance as it could provide clues about the potential influences of the host environments on culturally patterned lifestyles related to overweight.

Major points
The conceptual framework could be developed further. Obesity is related to energy balance but the discussion of how cultural or environmental (social or physical) factors may affect generational differences in energy intake (habitual diets) or energy expenditure (physical activity) is not sufficiently developed. Are there generational differences in residential patterns (e.g. do the first generations tend to live in ethnically dense areas more so than the second)? These issues have relevance for the nature of acculturation not only for peer relationships but also for the maintenance of traditional lifestyles (dietary and physical activity behaviour).

The reviewer states that the discussion of HOW cultural and social factors may affect generational differences in energy intake or physical activity could be developed further. We adjusted the text to make the underlying assumptions more clear. We mention that the social and cultural factors influence lifestyle and also mention why this influence might be different for first and second generation and for men and women (e.g. norms regarding bodyweight and wish to be thin).
It is an interesting suggestion of the reviewer that generational differences in residential patterns (e.g. first generation living in ethnically dense area's) may be related to acculturation and therefore influences lifestyle. However, as we do not have any data on ethnic density in this study and we did not find any studies on the topic, we decided not to discuss this particular issue in the introduction.

Another key issue is that although the focus is on generation status, conceptual justification is required for combining Moroccans and Turks. Turkish men appeared to be more at risk of overweight than Moroccan men. It would be useful to test ethnic specific effects in all of the models using an interaction term.

We added this information to the method section. In fact, we did test whether there was interaction. In first instance, all analyses were performed separately for Turks and Moroccans. We found that all associations between social and cultural factors and overweight were in the same direction in both groups. Also the associations between generational status and overweight was similar in both groups for women as well as men. Then we decided to combine Turks and Moroccans as ethnicity would not effect the associations.

The historical and cultural heritages of these populations differ enormously. Are there differences in dietary habits?

Although we did study diet within this population, due to limited space we did not elaborate on this in the introduction. An additional study in a subsample of our study indicated there are no overall significant differences in dietary intake between Moroccan and Turkish young adults. Both groups did not meet the Dutch norm for fruit and vegetable intake; their consumption of total and saturated fat was similar to members of the ethnic Dutch population, as was their consumption of carbohydrates and protein.


In addition, we found strong similarities in the socio-cultural determinants of the diet, including the relevance of hospitality and religion in shaping dietary patterns.


What is the prevalence of overweight in home countries and is there any evidence on the social patterning of overweight in these countries?

There is other evidence that the social patterning of overweight varies between and within populations over time (e.g. Matijasevich et al BMC Public Health 2009, 9:105).

We added information on social patterning in the home countries, which shows that social patterning in overweight differs for men and women in these countries. Thank you for the reference of Matijasevich, we used this reference as well as references to one Turkish and one Moroccan study. It shows how SES might have different associations with overweight for girls and boys in developing countries. See discussion page 14.

It is difficult to adequately assess the quality of the data. The response rate seems to be between 26%- 30% (former based on total sample as denominator and latter on traced sample, aged 10-30y so this will be an underestimate as 10-14y olds were omitted in final sample).
In the method section we gave response rates for the total sample of our study (10-30 year olds), which is 57% for the Turkish sample and 55% for the Moroccan sample. In this paper we choose to include the 15-30 years olds (see method section page 6 for more details). I do not understand the calculation of the 26%-30% rates which are mentioned by the reviewer.

People with missing or invalid data were omitted but there is no discussion of the potential bias by key explanatory factors, generation status and gender.

We assume that the reviewer particularly refers to the missing data on weight. There is no reason to assume that the participants without data on weight differ from the participants with data on weight as the cause of missing data was due to logistical problems which were completely random (not related to participants characteristics).

Similarly the use of self-reported height and weight data could be biased by generation status.

We tested whether this was the case. We found no significant differences on any of the variables used in the analyses between both groups (self reported and the measured group). We added this information in the method section (page 7-8).

Was a standard definition used to obtain occupational status? If so a reference is needed.

A standard classification method was used. Reference is added to the method section (page 8). (Standard Classification of Occupations - Standaard Beroepenclassificatie, CBS, 2001.).

It is also difficult to assess the appropriateness of Berry’s model of acculturation as the items used to derive the schema is insufficiently described.

We added an example of the items to the text (see page 9).

The model building could also be better described.

We adjusted the section on analyses including the model building (see page 10).

Minor points

The abstract could be improved, particularly in terms of how social and cultural factors were measured.

We added this information to the method section of the abstract.

There are a few grammatical errors which proof reading should pick up.

As suggested, the written English of the paper has been corrected by a native speaker.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Proof reading by a native speaker has improved the written English.
**Statistical review:** Yes, and I have assessed the statistics in my report.

*Please see our comments on the specific statistical questions of the reviewer.*

**Declaration of competing interests:**
I declare that I have no competing interests
Reviewer's report (2)

Title: Social and cultural factors underlying generational differences in overweight: a cross-sectional study among ethnic minorities

Version: 1 Date: 12 August 2010

Reviewer: C Schooling

Reviewer's report:

Minor Essential Revisions
The 4th and 5th sentences of the introduction should be deleted because they do not follow the flow of the rest of the paragraph, which is about differences in adiposity by migrant generation, not differences between migrants (of any generation) and their host populations.

In this sentence we intend to refer to the differences between first and second generation. We clarified this sentence by explicitly mention the first and second generation (see page 4).

The third sentence of the second paragraph of the introduction is unclear. Do you mean that second generation migrants have lower rates of overweight or might be expected to?

Here we suggest that a higher socioeconomic position might account for the lower rates of overweight among the second generation women in particular (as mentioned in the first paragraph). We reformulated the sentence to clarify this (see page 4).

Results

First paragraph:
- “marriage or family reunion” not “marriage of family re-union”.

Corrected.

Please update the references, and ensure that all the references are referred to consistently in the text. For example reference 3 says submitted when it corresponds to a paper published in EJE in 2007.

Corrected.

Major Compulsory Revisions

The introduction provides a rationale for examining whether social and cultural factors ‘explain’ differences in the prevalence of overweight between migrant generations. However, the authors have already shown in this sample that the trends in overweight by migrant generation are in opposite directions for men and women (Hosper et al EJE 2007), so they also need to give a rationale as to why these social and cultural factors would also be expected to have different effects in men and women. They should also make the findings of their previous study clear in the first paragraph of the introduction.

As suggested by the reviewer we made the findings of our previous study clear in the first paragraph of the introduction. We also explained why the socio-economic and cultural factors
might have different effects for men and women. Thank you for this suggestion, it improved the line of the paper. See page 4.

It would be very helpful if the authors could, with reference to other studies, explain whether the findings of their previous study (Hosper et al EJE 2007) are a general finding, in which case it is valuable to understand how they arose. On the other hand, if the findings of their previous study are an isolated finding, contrary to the general pattern of findings from other similar studies, then it might be better to examine whether their findings could be the result of some methodological problem rather than a general phenomenon with a general explanation.

With regard to studies among other ethnic groups, we did not found studies that show a similar pattern, but most of these other studies did not compare first and second generation among this younger age groups or they did not perform separate analyses for men and women. Although one Dutch study confirmed that overweight among male Turkish adolescents is higher than among female Turkish girls within this age group, which is in line with our results [TNO landelijke groeistudie 2010]. We explained this in the discussion section and suggest that further research is necessary to confirm whether this is a general pattern that be generalised to other ethnic groups as well.

The association between socio-economic position and obesity is context specific. Reference 10 says this, and this information should be reflected in the text. Socioeconomic status and obesity (McLaren L. Epidemiol Rev. 2007;29:29-48) would also be a more appropriate reference than reference 10. Thank you for pointing out this reference. This review is an update of Sobal and Stunkards review on the relationship between SES and overweight/obesity. We replaced the former reference by McLaren (2007).

Methods

Please report how the participants compared with the target population. Please report how many heights and weights were self-reported and how many were measured.

The study sample appeared to be representative for the Turkish and Moroccan population aged 10-30 living in Amsterdam according to sex, generational status and city district and educational level. With regard to age, among the Moroccan male sample the 20-30 years olds were slightly under-represented compared to the general population of Moroccans in Amsterdam. We added this information to the methods section. We had measured data on weight and height of 57% (n=384) of the participants (which is we already mentioned in the method section page 7). The other 43% (n=289) of the cases had self-reported data on weight and height. We added this information to the method section.

Please report how many were missing an item on the cultural orientation scale, and then comment on the imputation in the limitations section of the discussion.

There were few participants with only one item missing. We mention the cases in the method section (page 10):
- cultural orientation scale: men 6 missings / women 7 missings
Please give a rationale for sex-specific analysis.

All analyses are performed for men and women separately as previous findings among this population indicate there are sex differences in prevalence of overweight between generations. In addition, there are indications that associations between several social and cultural factors and overweight differ for men and women. We explained this in the introduction of the paper.

Please also demonstrate that any observed differences of association between men and women are unlikely to have occurred by chance.

We think this information is less relevant to the research question. In this paper we try to explain the generational differences in overweight for men and women separately in this dataset. Even if the associations with social and cultural factors more or less have occurred by chance, they can still account for the association found in this study population.

Results

First paragraph:
- Please be specific about which associations were stronger in women than men as referred to in the final sentence of the first paragraph.

We added this to the first paragraph of the results, page 10.

Second paragraph
- Please be specific about which socio-demographic factors and socioeconomic factors were significantly associated with overweight among women not men. Ideally please also substantiate this statement with a test of effect-measure modification.

We adjusted the paragraph to clarify the results. All the significant associations are mentioned, but we did not conduct a test of effect-measure modification.

Discussion

Please compare your results with other similar studies.
Please consider whether your findings might be consistent with any other possible explanations which have recently been published, e.g. (Growth environment and sex differences in lipids, body shape and diabetes risk. Schooling CM, Lam TH, Thomas GN, Cowling BJ, Heys M, Janus ED, Leung GM; Hong Kong Cardiovascular Risk Factor Prevalence Study Steering Committee. PLoS One. 2007 Oct 24;2(10):e1070) or (A socio-biological explanation for social disparities in non-communicable chronic diseases: the product of history? Schooling CM, Leung GM J Epidemiol Community Health. 2010 Jun 1.)
We thank the reviewer for the interesting references. We used this in the discussion section to refer to the importance of historical and socioeconomic context that should be taken into account when studying explanations for disparities or generational differences in health.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests