Author's response to reviews

Title: Association of socioeconomic status with overall overweight and central obesity in men and women: the French Nutrition and Health Survey 2006

Authors:

Michel Vernay (michel.vernay@univ-paris13.fr)
Aurelie Malon (a.malon@smbh.univ-paris13.fr)
Amivi Oleko (amivi.oleko@ined.fr)
Benoit Salanave (benoit.salanave@univ-paris13.fr)
Candice Roudier (c.roudier@invs.sante.fr)
Emmanuelle Szego (e.szego@invs.sante.fr)
Valerie Deschamps (valerie.deschamps@univ-paris13.fr)
Serge Hercberg (s.hercberg@uren.smbh.univ-paris13.fr)
Katia Castetbon (katia.castetbon@univ-paris13.fr)

Version: 3 Date: 15 May 2009

Author's response to reviews: see over
Dear Editor,

Please find enclosed our revised manuscript entitled “Association of socioeconomic status with overall overweight and central obesity in men and women: the French Nutrition and Health Survey 2006”.

You will find enclosed a cover letter giving a point-by-point response to the comments.

We therefore hope that our revised manuscript will comply with your expectancy.

Sincerely Yours,

Dr. Michel Vernay on behalf the authors
Reviewer's report

Title: Association of socioeconomic status with overall overweight and central obesity in men and women: the French Nutrition and Health Survey 2006

Version: 2 Date: 21 April 2009

Reviewer: Marie Aline Charles

Reviewer's report:

Major compulsory revisions
1) Number of subjects included in the description in table 1 needs to be provided:
Is it based on the 3,115 adults who participated in the food consumption survey, on the 2,413 subjects with anthropometric measurements or on the 2,204 subjects with complete anthropometric and SES characteristics?
We agree that it was unclear. The table 1 presents the characteristics (raw and weighted data) of the 2,388 subjects with complete anthropometric data, after exclusion of pregnant women (n=25). In the present analyses, prevalences of overall and central obesity have been estimated using all available anthropometry data, therefore calculations were based on 2,388 subjects after exclusion of pregnant women. Since estimations of prevalence were based on the 2,388 subjects, demographic and socioeconomic characteristics (raw and weighted) were described using the same sample, as presented in the table 1.
The legend of the Table 1 has been modified as follows: “Social and demographic characteristics of the 2,388 adults aged 18-74 years (pregnant women excluded) with complete anthropometry measurements, compared to national census data”.

2) The weighing corrected distortion between the sample and national data only for age, educational diploma and presence of a child at home. It is therefore important to compare the sample of the 2,204 subjects with complete anthropometric and SES characteristics to the closest national reference for other major sociodemographic characteristics such as gender, region of residence, size of the city of residence, occupation (and again on age and diploma if description in table 1 is not restricted to subjects with anthropometric data.
Compared to the national census data (data added in the table 1), sociodemographic characteristics of the weighted sample (n=2,388 subjects) were rather comparable. Moreover, according to raw data, there was no significant sociodemographic and anthropometry difference between the 2,204 subjects with complete sociodemographic data we used in the second part of the analyses (associated factors with overall and central obesity) and the 2,388 subjects with complete anthropometry data we used to estimate the prevalence of overall and central obesity (data not shown in the manuscript).

In order to clarify this point, we modified the manuscript as follows:
The Table 1 has been modified to present national characteristics from census data and to allow comparison between the characteristics of the weighted sample of 2,388 subjects with complete anthropometry data and the French general population.
Page 6: we added one sentence to precise that prevalences were calculated using all available anthropometry data. “Prevalences were estimated in the sample with complete anthropometry data excluding pregnant women.”

We added another sentence at the same page: “Census data available on the web (http://www.recensement.insee.fr/RP99) were used to compare the characteristics of the weighted sample and the French general population”

Page 7: we modified three sentences as follows:
- “In addition, 25 pregnant women were exclude; therefore 2,388 subjects were included in the present analyses.”
- “According to raw data, young adults and subjects with a low level of education were poorly represented in the sample of 2,388 subjects with complete anthropometry measurements (Table 1)”.
- “Demographic and socioeconomic characteristics were mostly comparable between the weighted sample and the French general population, except for occupation.”

Page 8: we added one sentence: “According to raw data, sociodemographic and anthropometry characteristics were comparable between the 2,204 subjects with complete data and the 2,388 subjects who underwent anthropometric measurements (data not tabulated).”

Page 13 (discussion):
- We modified one sentence, as follows: “Moreover, the proportion of subjects who did not take a holiday trip during the past twelve months and distribution according to birthplace, marital status and area of residence were mostly similar in the weighted sample and in the national census data, despite a few differences in age range”.
- We added one sentence: “The potential distortion between the distribution according to occupation was not sufficiently important to substantially modified the estimated association between SES and outcomes.”

3) As age is strongly associated with overweight and obesity, tables 2 and 3 should be presented with adjustment on age as a continuous variable. As acknowledged by the authors in their response and in the discussion, with such an adjustment, there was no longer an association between the risk of overweight and retirement in men.
The excess risk associated with educational level in women or holiday trip during the past 12 months may also be affected by a better age adjustment. It is not clear from the authors’ response whether it has been checked or not.
As suggested, Tables 2 and 3 have been modified to be presented with adjustment on age as a continuous variable.
As previously mentioned in the first modified version, only the association between the risk of overweight and retirement in men has been changed by modifying age adjustment. The other associations remained unchanged.

Minor Essential Revisions

1) Conclusion of the summary: the sentence “The prevalence of overweight and obesity was found to be lower in France than in most industrialized countries”
needs to be replaced by the corresponding sentence in the conclusion of the article: “The prevalence of overweight and obesity was found to be similar to that of several neighbouring western European countries, and lower than the UK and eastern Europe”

The manuscript has been modified as requested.

2) I find the added sentence p 10 ‘a low employment position is associated with less time for leisure and physical activity’ unclear. Low employment positions are associated with higher occupational physical activity. On the other hand, it is not obvious that they are associated with less time for leisure activities as time spent at work is usually shorter than for higher socioeconomic positions but time spent in house chores is usually longer.

The sentences have been modified as follows: “Occupation is considered to reflect job control, and a low employment position. Besides, a low job control has been shown to be associated with less leisure-time and physical activities [25-27]” and two supplemental references have been added.

3) Sentence about measurement location p 8 needs to be moved to the method section.

The referee #1 suggested to add this sentence there.

Level of interest: An article whose findings are important to those with closely related research interests

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