Reviewer’s report

Title: Nutrition transition among adolescents of a south-Mediterranean country: dietary patterns, association with socioeconomic factors, overweight and blood pressure. A cross-sectional study in Tunisia.

Version: 1 Date: 4 December 2010

Reviewer: Hélène Delisle

Reviewer’s report:

• General comments

The paper addresses a relevant topic, nutrition transition in adolescents. It is well written (although some further English editing may be advisable), statistical methods are impressive and the illustrations elegant, data analysis is thorough, and the reference list is complete. The “modernization” scale is an interesting finding. The paper is however fastidious to read, as it is very long with lengthy description of statistical procedures, too many results and tables overly packed with data. As a consequence, the salient findings of the study are lost.

1. We strongly recommend that the paper be shortened and the main results highlighted.

• Minor essential revisions

2. The authors do not discuss the use of DQI-I, which is based on USA recommendations, whereas they refer to WHO recommendations (ref 51).
3. Data were collected in 2005: further changes may have occurred since.
4. Description of statistical methods is very long.
5. Were the rejected subjects (N~200) in any way different from those retained for the analyses?
6. Under “Food consumption and physical activity”, para 1: “total sugars” refers to free sugar, not total carbohydrate.
7. There is no information on how salt and spices were quantified.
8. In Fig 2, spices, other condiments, harissa, tea, coffee and water could be excluded, which would make the figure more legible. We question the relevance of including these as “food groups”.
9. Under “results”, “modern dietary pattern score”, it is suggested to describe the first axis as the modern pattern score early on, rather, than in the last paragraph of this section
10. The second axis, named “Meat-fish pattern”, does not appear as well defined as the first axis, which can be interpreted as a scale of “modernization” of the diet. Is the second axis of any interest?
11. In view of the inverse association of the modern diet score with blood
pressure, it would have been interesting to also show intakes of zinc, folates and vitamin B12.

12. In the abstract results, the third sentence is unclear, beginning with “vegetables”.

• Minor corrections
13. In the section “Food consumption and physical activity, reference 48 is wrong
15. Discussion, para 4, line 3: FOOD and not nutritional point of view
16. Table 2: Physical activity level should be in a separate table. Footnote 2 is unclear.
17. Table 3: too much data for one table. Please select the most meaningful. Footnote 4 is unclear.
18. Fig 1: “socio-cultural psychological factors”: is this circle supposed to be there?

**Level of interest:** An article of importance in its field

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

**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