Reviewer's report

Title: Nutritional status of Palestinian school adolescents and associated sociodemographic characteristics: cross sectional study in Ramallah and Hebron governorates.

Version: 3 Date: 29 June 2009

Reviewer: Bernard Maire

Reviewer's report:

- Major Compulsory Revisions

1) It is written in the Background part of the Abstract that “Population based studies measuring nutritional status of adolescents in the West Bank do not exist.” However a quick look at Medline shows that at least two papers have been published dealing with the nutritional status of Palestinian adolescents, including those of the West Bank, which were based on representative samples (Al Sabbah et al., J Hum Nutr Diet 2008; Al Sabbah et al. Int J Eat Disord 2009). These authors report results of a survey done in 2003/4 while the paper submitted here refers to a survey done in 2005. If the last one of these 2 published articles was probably not yet published when this paper was submitted, the first one was certainly already known. As a matter of fact, it is mentioned in the Background (Introduction) section of the paper, coming into partial contradiction with the statement written immediately before.

In any case, from now on, they cannot be ignored and should be mentioned, and the background presentation of the Abstract should be changed accordingly. Furthermore these articles deal also with sociodemographic characteristics of these children.

Then the exact interest of the newly submitted article needs to be more precisely justified. I believe that the interest of this paper relies on the full description of the nutritional status of the adolescents, including stunting and underweight (and not just overweight and obesity as in the previously mentioned papers). But also, it relies on measured anthropometry while the above cited papers used declared measures of weight and height, with 27.5% missing data for BMI in final. This is important, as the prevalences found differ somewhat (with an inversion for instance of the ratio of overweight for boys vs. girls), as well as the relationships with sociodemographic characteristics. This should probably be better emphasized.

2) The authors chose to limit their logistic analyses to the relationship between overweigth/obesity and sociodemographic variables; if they would do this kind of analyses for stunting and underweight, at least for boys as it appears rather prevalent for them, it would strengthen the interest of the paper.

3) But beyond this, what is the exact aim of the paper: to present contrasted results from two different areas having acquired a different level of
demographical, economic and epidemiological transition? (as suggested briefly in the ‘Study Design and Population’ part of the Methods section)

Or is the aim to consider in some kind the two areas globally as rather representative of the situation in the WB and to discuss it as such, comparing with other situations, as is done in the discussion part? Or both? (but the sample is not representative of the West Bank, only of two Governorates (among 11). Why these governorates? Why only two? For those readers who are not familiar with Palestine, this should be better explained.

Some ambiguity remains in the paper as sometimes results are taken together and discussed globally, sometimes they are presented and discussed separately, as if they were solely representative of each of the surveyed areas. This should be better structured.

- Minor Essential Revisions

1) In the ‘Study Design and Population’ part of the Methods section, it is written “In a comparison of demographic …; Ramallah and Hebron cities represented two distinctive modes …higher standard of living” (end of paragraph): there are obviously major differences between the two cities, but according to what is mentioned elsewhere, there are also major differences between the two rural areas, the nature of which should be presented as well in this part (and the ‘;’ before Ramallah should be changed).

2) Table 2 gives only separate results for Ramallah and Hebron, but Table 3 gives results for the Total. Either it has no sense to give results for the Total, but only by surveyed regions, and then it should not be given and commented as such in text (either in the Results or the Discussion part), or it makes sense – see above, comment 3 - (- for reasons of representativeness of the rest of WB? - For global comparison between B and G, - between rural and urban, - or else ?) and then it should be presented already in Table 2 in a first series of columns (total, B, G, p)? It should even be the only results in Table 2, avoiding systematic repetition of more than 15 data between Tables 2 and 3.

3) CI should be given for prevalence in each main category (stunting, overweight, etc.), either in text or (better) in Tables to allow further comparisons with other data sets.

- Discretionary Revisions

1) Perhaps instead of “… Ramallah and Hebron governorates” the title could be modified in “… two major West Bank governorates”?

2) Background: you can now cite Hussaini et al. (Lancet March 21 2009:373:1041-9) for the epidemiologic transition in the Occupied Palestinian Territory.

3) How much % of adolescents are going to school at these ages?

4) Results: Are stunted children predominantly underweight, normal or overweight?

5) Tables: ‘Sample and population size weighted results’ should be added to the
legends.

6) Discussion: There is a higher prevalence of overweight/obesity in girls compared to boys and a similar example from Brazil is cited, but more regional references could be cited and discussed as probably more specific cultural and societal factors are at play in the region (and some are already suggested here)?

7) In the 'limitations' section, actual measurement of weight and height should be presented among the strengths of the study.

**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