Reviewer's report

Title: Self-reporting and measurement of body mass index in youth: refusal, validity, and contributions of socioeconomic and health-related factors

Version: 1 Date: 12 November 2012

Reviewer: Anastase TCHICAYA

Reviewer’s report:

Reviewer’s Report
Title: Self-reporting and measurement of body mass index in youth: refusal, validity, and contributions of socioeconomic and health-related factors

Version: 1 Date: 10 November 2012
Reviewer: Dr. Anastase TCHICAYA

Reviewer’s report:

General remarks:
The text deals with an important issue of public health such as overweight and obesity in adolescents in school in a developed country like France. The methodological approach is interesting and could be replicated elsewhere on a larger scale. Here, the number of schools (3) is rather limited. This manuscript is newsworthy because it presents the results of interest to all those working in this field of research.

# Major Compulsory Revisions

No

# Minor Essential Revisions

Abstract

Background:
1- "Body mass index assessment with self-reported height / weight ..." Replace '/' with 'and'.

Methods:
1- There is a lack of the age limits of the target population of the study. The adolescent age is not very well defined in Table 1.
2- In the last sentence, add ‘regression’ before ‘models’

Results:
1- The authors have to improve the presentation of results in order to facilitate understanding by the reader without the need to refer to the tables at this stage.
For example, what are the following figures:
Line 5 (age-gender-adjusted odds ratios 1.96-3.48), line 9 (1.52-3.95), line 11 (1.53-10.95)? Is confidence intervals of OR or variation of a measure of OR to another? Clearly, this is the second option after careful examination tables.

Main text:

Background:
1- The authors could provide more information to the reader particularly as regards to the percentages of prevalence overweight and the period in question in reference [2] the following sentence:
"Among adolescents, the overweight prevalence has tripled since 1960."
2- The last sentence is not necessary at this point and the first part of the sentence is not clear on the type of the social gradient in which the authors refer to the choice of schools. Would it, for example, an index of social deprivation or any other measure?

Methods:
1- Methods, Study Design: In the first sentence, the authors suggest that schools were selected to reflect a social gradient. However, they do not specify how they can talk about social gradient in schools.
In this section, we also expect that the authors define better the target population, particularly the age of teenagers studied. Therefore, it is necessary to define the age of the target population.
2- Measurement protocol: first sentence, to add ‘Demographic’ between "Socioeconomic characteristics".
3- Methods, Measurements: Income variable has not been defined.
What are the criteria used to consider that income is insufficient or is not?
4- Statistical Analysis: To add ‘Regression’ in the phrase "To study the combination between ... were performed three logistic models ..."

Results:
1- Table 4: Given the small number of variables of interest, particularly as regards to the reporting refusal (n = 56), the results should be considered with caution.
2- To complete the sentence "Table 6 evidences some discrepancies between BMIsr and BMIm ..., and behavioral factors".

Discussion:
The following sentence "An important finding is that because of reporting refusal, measurement refusal, and estimation errors ... using BMIsr and BMIm" is not clear. What can tell?

Discretionary Revisions:
The title of the article could be slightly modified. It may not be necessary to include the terms of rejection and validity in the title.
**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:**

No competing interests