Reviewer's report

Title: Temporal Trends in Sensitivity and Specificity of measured and self-report based body mass index - findings from three population surveys in Ireland

Version: 1 Date: 22 January 2010

Reviewer: Margot Shields

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Temporal trends in sensitivity and specificity of measured and self-report based body mass index – Findings from three population surveys in Ireland

This manuscript provides information about differences in obesity estimates based on self-reported versus measured height and weight and how the bias has changed across time in Ireland. This is an important study given that many countries rely on self-reported data to monitor trends in obesity. My primary concern is that the literature review is not adequate and in some cases inappropriate citations are made.

Major compulsory revisions

1. Page 2 background – second paragraph
More references should be cited. There have been two systematic reviews of the literature:


The statement that “men tend to overreport their weight” is based on dated references and is not substantiated in the systematic review.

2. Page 12 – comparison with other studies.
This needs to be expanded. Other studies have been published.


3. Page 11 – principal findings
I do not believe that it is correct to say that the findings reported in this study are contrary to the American study. In American study, sensitivity for the obese category was substantially lower than it was for the normal weight category. Sensitivity for the obese category was higher than it is in SLAN 07, but the results of the two studies are not discrepant.

4. Page 11 – comparison with other studies
There are more appropriate references that can be cited to document how the misclassification bias can alter our understanding of associations between BMI category and obesity-related diseases. The cited study does not examine how these associations are affected and it is not clear in the text how these associations would be affected (i.e., would we expect the use of self-reported data to diminish or exaggerate associations between obesity and obesity related conditions?).

The following references are recommended.


Chiolero A, Peytremann-Bridevaux I, Paccaud F. Associations between obesity and health conditions may be overestimated if self-reported body mass index is used. Obesity Rev2007;8:373-374.


5. Page 12 - First sentence
It is stated that contrary to previous studies (reference 8), variations across surveys were identified. The cited study did not examine variations across survey.

Minor essential revisions

1. The BMI range for the overweight category should be 25 to less than 30 kg m-2

It is not clear if the details provided on how height and weight were collected apply only to the 2007 survey or to the previous surveys as well. If there were any differences in collection procedures (i.e., in the way that measured and/or self-reported height and weight were collected) this should be mentioned in the limitations. Were respondents aware that their height and weight would be measured (i.e., was this mentioned in any information provided to respondents prior to measurements being taken)?
3. Page 8 – BMI trends
It is not clear if the reported increases/decreases in obesity/overweight prevalence were tested for statistical significance.

4. Page 11 – comparison with other studies
In the first sentence, it needs to be clear that the percentages reported are differences in the prevalence estimates based on measured vs. self-reported data.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

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