Reviewer’s report

Title: Temporal trends in misclassification patterns of measured and self-report based body mass index categories - findings from three population surveys in Ireland

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Reviewer: Margot Shields

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The authors make the statement that they found no other study that focused on the changes on self-reported biases across time. There is a published study making comparisons in the bias across time in Canada and the United Stated. I highly recommend that this study be cited and included in the discussion.

(I made this suggestion in my previous review --- perhaps the authors were unable to find it. The first author is S.Connor Gorber --- but in MEDLINE she is cited erroneously as Gorber SC). An abstract of the article is attached below.


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Abstract

The objective of this study was to determine whether the bias in self-reported estimates of obesity has changed over time and followed different patterns in Canada and the United States. Using age-standardized data from three waves of the National Health and Nutrition Examination Survey (NHANES) in the United States and the Canadian Community Health Survey (CCHS) and the Canadian Heart Health Survey (CHHS) in Canada, discrepancies were compared between reported and measured estimates of height, weight, and obesity (based on the BMI) from 1976 to 2005. Results indicated that obesity increased in both countries, but rates were higher in the United States. The discrepancy between self-reported and measured obesity was small in the United States with reported data underestimating measured prevalence by about 3%; this stayed relatively constant over time. In Canada, the discrepancy was large and doubled in the past decade (from 4 to 8%). In the United States, self-reported data may be more accurate in monitoring changes in obesity over time, as the estimates have consistently remained about 3% below the measured estimates, whereas in Canada, monitoring obesity based solely on self-reported height and weight may produce inaccurate estimates because of the increasing discrepancy between
self-reported and measured 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 no competing interests.