Reviewer's report

Title: Ethnic differences in perceptions of body satisfaction and body appearance among U.S. schoolchildren: a cross-sectional study

Version: 1 Date: 22 February 2012

Reviewer: Frank Elgar

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Major Compulsory Revisions

1. The literature review is far too brief to identify the knowledge gap that the researchers have tried to address. There are many studies on ethnic and racial differences in body dissatisfaction, BMI and underweight/overweight. The aim of this study could be more convincing with a systematic review of what is known and what is now known about how these variables interrelate.

2. The survey methods from the HBSC study are described well. But it is unclear why physical appearance was truncated from an 5-point ordinal variable to a dichotomous variable, or why “very good looking” responses were compared against “quite good looking, about average, not very good looking, not at all good looking” responses. Wouldn’t the middle category (about average) be a more logical cut-point?

3. Same question for body dissatisfaction “…much too thin, a bit too thin, about the right size, a bit too fat, much too fat. For the analysis, this variable was dichotomized into too fat (a bit too fat and much too fat) versus the three remaining categories.” The introduction refers to ASSOCIATIONS between these variables, so why not test their associations, perhaps using an ordered probit model?

4. The following statement on Page 5 is inaccurate “Self-reported BMI correlates with measured BMI making it suitable for examining associations in population Studies [12-14]” The correlation statistic does not test validity – it measures the significance of association between two variables. The 3 studies cited here actually found that self-reported BMI is grossly inaccurate and probably should not be used at all. Limitations of self-reported BMI data should be acknowledged.

5. It is not obvious how to interpret age differences in ZBMI given that BMI was converted to age- and gender-adjusted Z-scores (Page 5). On page 6 the authors write, “Across the age groups studied, there was no increase by age in the mean z-transformed BMI, apart from a slight increase in the proportion of overweight White girls (data not shown).”

7. Finally, I could not find the statistics that support the description of trends and differences in the Discussion. Figure captions refer to significant trends and logistic regression models, but where are the results?
Minor Essential Revisions

1. This sentence needs editing for greater clarity: “age was calculated from the date of birth and date of the completion of the questionnaire and rounded to one decimal place.” The statement is ambiguous because the unit of measurement is not specified (One decimal place of what? Months?)

**Level of interest:** An article of insufficient interest to warrant publication in a scientific/medical journal

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

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

**Declaration of competing interests:**

I declare that I have no competing interests