Author's response to reviews

Title: Measured body mass index, body weight perception, dissatisfaction and control practices in urban, low-income African American adolescents

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Author's response to reviews: see over
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RE: manuscript 2696823072297148 entitled “Weight perception, dissatisfaction, control practices and their associations in low-income African American adolescents.”

Dear Editor,

Enclosed please find our response letter and revised manuscript. We’ve addressed each of the reviewers’ comments and made related changes. Our main revisions are highlighted in yellow in the manuscript. Thank you very much for your assistance.

Sincerely yours,

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Authors’ response to editor’s and reviewers’ comments

**Editor:**

- Please clarify informed consent. Informed consent must also be documented. Manuscripts may be rejected if the editorial office considers that the research has not been carried out within an ethical framework, e.g. if the severity of the experimental procedure is not justified by the value of the knowledge gained.

Response: Done, see end of “Overview of study design.”

- Please include a 'Competing interests' section between the Conclusions and Authors' contributions. If there are none to declare, please write 'The authors declare that they have no competing interests'.

Response: Done.

- Please include an Authors’ contributions section before the Acknowledgements and Reference list.

Response: Done.

Please also ensure that your revised manuscript conforms to the journal style (http://www.biomedcentral.com/info/ifora/medicine_journals). It is important that your files are correctly formatted.

Response: Done.

**Reviewer 1**

This manuscript reports the results of low-income African-American adolescents’ actual body weight status, self-perceived body weight, weight dissatisfaction, weight control practices and the associations of the former mentioned. The results are based on the cross-sectional data collected from 448 adolescents in four public schools.

The authors conclude that a gender difference in weight perception and in body dissatisfaction exists, and that one-third of these low-income African-American adolescents couldn’t appropriately classify their weight status. The authors also state that the diet or physical activity did not significantly differ among the adolescents who were trying to lose weight and the adolescents who were not. The basic correlates of weight control practices were – again – self-perceived overweight and body dissatisfaction.

The study design has several strengths including measured weight and height, and comprehensive measurements of the adolescents’ dietary habits. The manuscript is
generally well-written, and addresses important questions. In my opinion, there are only two major compulsory revisions and few discretionary revisions that should be noted.

Response: Thanks.

Major Compulsory Revisions

I The main title, page 1, line 1
The aims of the study are well defined by the authors on the introduction (line 88 onwards), but the main title of the study “Weight perception, dissatisfaction, control practices and their associations in low-income African American adolescents” is not totally in line with the contents. The first aim of the study was to examine the associations between actual body weight status, body weight perception and body dissatisfaction, weight control intention and practices, and actual behaviours in low-income AA adolescents, and later on, the authors report the prevalence of overweight and study the associations between overweight based on the BMI and weight perception, body dissatisfaction, and weight control practices (see table 1). Comparisons based on actual body weight status are continued in tables 2 and 3, where actual body weight status is one of the factors in multinomial logistic regression models. Actually, all the comparisons are made against actual body weight status, except in table 4. Therefore, BMI or actual body weight status should be mentioned in the main title because the title is otherwise somewhat misleading.

Response: Done.

II Page 12 and table 2: Kappa
The authors have used Kappa with 95% confidence intervals in table 2. This should be mentioned already in the section of statistical analysis. In addition, authors should mention a reference for their statement that Kappa value of 0.44 is moderate as well as other intervals on page 12 lines 226 – 227. A reference about this disputable matter would be recommendable.

Response: Done.

Discretionary Revisions

I. Abstract, page 3
I.I Abstract, line 47 and measures, page 8, lines 135-138: the classification of overweight and at-risk of overweight
The authors use 2000 CDC Growth Charts to define adolescent at risk of overweight (85th percentile # BMI < 95th percentile) and overweight (BMI#95th percentile). The definition itself is accurate, but there is newer reference for the American grow charts (see Kuczmarski et al. 2002. 2000 CDc growth charts for the United States: Methods and Development. National Center for Health Statistics. Vital Health Stat Series No 11). On the other hand, the IOTF Workshop on Childhood Obesity concluded in 1997 that the criteria used to classify overweight and obesity in children and adolescents should be in
accordance with the criteria in adults: Cole et al. published international cut-off points for BMI for overweight and obesity in children and adolescents in 2000. The Authors should at least to mention, if not use, these newer classifications. Accordingly, the term of overweight needs more explanations: adolescents with BMI above 85th percentile are called overweight (and pre-obese when 85th percentile # BMI < 95th, not at-risk of overweight), and above 95th percentile obese in several publications. Comparison of the cut-off values in these different sources would also be recommended.

Response: Done in abstract and other sections of the paper when appropriate. Note that the corresponding author is aware of the related literature and has some related publications (e.g., Wang and Wang, 2002; Wang, 2004; Wang et al, 2006, please see below).

I.II Abstract, line 52:
The authors could use a clearer expression than ‘overall’ in this sentence. The reader has to be very sharp to avoid misunderstanding, i.e. from which group these percentages are calculated from, especially, when the earlier presented results concern adolescents with overweight.

Response: Done.

II Introduction, page 5 onwards
II.I Introduction in general
In my opinion, the introduction is the weakest section on this otherwise elaborate and stylish manuscript. It’s hard to establish a context, to review previous research and to advance the present research within the limited space. However, I suggest the authors make the message featuring in figure 1 more accessible to the readers. The basis and the purpose of the study are presented there: to report body weight status based on BMI (i.e. prevalence of overweight and obese) and perceived weight status (the first leads to the second), obesity leads to self-perceived overweight, which leads to intended or reported weight control. Weight control practices should be revealed as changes in the PA and diet, which may cause weight reduction.

Response: Done.

II.II Introduction, page 5, line 80
I suggest that the authors would consider revision of the lines 80 –82. Is there really limited understanding of underlying causes of prevalence of overweight? In addition, the sentence is not stylishly associated to the following sentence “It is important to explore the impact of body weight perception and dissatisfaction on behaviours and their implications for obesity prevention and management”.

Response: Done.

III Methods, line 113
Why was it essential to take 24 students from the pilot with in the study? Further description of this group should be included.

Response: Done.

IV Results, page 10 onwards
The manuscript does not need to be seen by a statistician; however I have consulted a statistician during the making of my review. No major revision is needed.

Response: Thanks.

IV.I Results, Page 12, line 226
Is the Kappa tested – is it truly statistically significantly lower among boys?

Response: Yes. It is because the 95% CI of weighted Kappa among boys (0.22, 0.42) did not overlap with that among girls, or (0.44, 0.62).

V Discussion, page 13 onwards
The discussion and conclusions were adequately supported by the data. There are few things I would like to be added.

Response: Thanks.

V.I. Discussion, page 16, lines 328-329
I would have liked to see more discussion on the finding that the weight-related concerns and behaviours were more prevalent among the non-white boys than among the white boys. Why is the pattern contrary to females?

Response: Done.

V.II Discussion, page 19, line 391
Discussions on the validity of measurements, for example measurements of dietary habits, are non-existent, apart from the mention that they were self-reported. Could this explain why the study failed to find differences between participants trying to lose weight and those of not trying? In addition, although exercising and attempts to change eating habits are the most common means to control weight, the authors could have discussed if the information about the other means could have influenced the results.

Response: Done.

V Tables, page 24 onwards
Although the number of students in the subgroups can be calculated from the presented percents elsewhere in the manuscript, it would be pleasant to see the Ns in the tables, especially those concerning participants with overweight.

Response: Done.
V.I Table 1, page 25
Why do the authors present overlapping groups of participants with BMI#85th (i.e. at risk of overweight and overweight) and BMI#95th (i.e. overweight)?

Response: To increase sample size and power and to simplify the presentation.

V.II Table 3, page 28
The authors could discuss the existing high upper confidence intervals and reasons for those somewhere in the text. Those don’t weaken the results per se, but have to be considered in the interpretation.

Response: Done.

VI Figure 2 Comparison of the discrepancies between measured and self-perceived body weight status: the HEALTH-KIDS and HBSC studies. The presented HBSC study source is old – the reference is from the year 1991. Newer and wider HBSC references of body image, weight control and body weight status are available. See for example 2001/02 International Report: Young People’s Health in Context (http://www.hbsc.org/publications/reports.html) or journal articles on the same web pages.

Response: The website provided by the reviewer has body dissatisfaction, weight control and actual body weight status for children at three different ages (11, 13, and 15 yr). However, it does not have the comparable data as ours, or the comparison of measured and self-perceived body weight status in adolescents. Therefore, the authors agreed to keep the reference that was published in 2006.

Minor Essential Revisions

Page 8, line 141: Body image—

Response: Done.

In conclusion: Based on my assessment of the validity of the manuscript, I advise that the manuscript should be accept after the authors have responded to the two major compulsory revision and few discretionary revisions which the authors can choose to ignore.

Response: Thanks.

Level of interest: An article whose findings are important to those with closely related research interests

Response: Thanks.

Quality of written English: Acceptable
Response: Thanks.

Statistical review: No, the manuscript does not need to be seen by a statistician.
Response: Thanks.

**Reviewer 2**

Overall comments:
This is a clearly-written and interesting paper about an important topic. Overall I think this paper has something to add to the literature, I just have some possible amendments to improve the manuscript:

Response: Thank you.

Discretionary Revisions:
• Page 6 line 78: It would be useful to discuss what the ethnic and gender differences are in the prevalence of overweight in African American adolescents.
Response: Done.

• Page 6 line 90: Rather than using the term "actual behaviors" in the aim, it would be clearer to state the specific behaviors you aimed to examine e.g. dietary intake, physical activity and sedentary behaviors.
Response: Done.

• Page 6 line 98: Figure 1- Given that the first aim was to examine the associations between actual body weight status, body weight perception and body dissatisfaction etc, I am wondering if Figure 1 could also include body dissatisfaction to show how this variable fits in to your conceptual framework.
Response: Done. Body dissatisfaction was added to the conceptual framework.

• Page 6 line 110: I am unsure what a "student body that was not highly mobile means". Could this be described for non-American readers.
Response: Done.

• Table1. Given that the sample size changes for all participants, participants with BMI<85th percentile, BMI # 85th percentile and BMI # 95th percentile, it would be
useful to include the sample size for each of these categories, rather than stating it up the top just for the whole sample.

Response: Done.

• It would add to the literature to explore body weight perception and weight control practices for those classified as underweight. This information could be included in Table 1.

Response: Unfortunately only a very small number of our study participants were underweight, which does not allow us to conduct any meaningful analysis.

• It would be interesting to see descriptive statistics for the eating, physical activity and sedentary variables, especially as a highlighted strength of the study in the discussion is the detailed information regarding the participants’ eating and physical activity patterns. Also were there any outliers for these variables and if so how were they managed?

Response: Subjects with extreme values (e.g., energy intake <600 kcal or >6000 kcal) were excluded from these analyses. We have reported it in previous publications (e.g., Wang et al, 2007) and we have two other manuscripts under review that are related to these adolescents’ eating, physical activity and sedentary variables. Thus, we feel such results should not be reported in the current study.

• Consider deleting either figure 2 & 3 or the percentages reported in text to make it less repetitive.

Response: We deleted some of the percentages reported in text.

Minor Essential Revisions

• Table 1. Participants with BMI<85th needs to be changed to BMI<85th and Include the word percentile.

Response: Done.

• Page 13 line 269: Include body dissatisfaction rather than satisfaction to keep consistent with the aim.

Response: Done.

Level of interest: An article of importance in its field

Response: Thanks.

Quality of written English: Acceptable
Response: Thanks.

Statistical review: No, the manuscript does not need to be seen by a statistician.

Response: Thanks.

**References mentioned in the response letter:**


