Reviewer’s report

Title: The associations of perceived neighborhood disorder and physical activity with body mass among African American adolescents

Version: 4 Date: 23 November 2012

Reviewer: Joellen Wilbur

Reviewer’s report:

Although the authors have addressed many of the issues that arose in the first review some concerns remain.

Major:
1. The conceptual framework is better placed in the background. The framework suggests that perceived neighborhood disorder indirectly affects obesity risk through psychological distress which leads to less PA. These relationships need to be spelled out a little more carefully or simply note that there is no measure of psychological distress (?stress). In the discussion it says that neighborhood disorder was an indirect measure of stress. In this model it does not seem to function that way.

2. The hypotheses now in the methods on page 5 is better placed at the end of the background along with the purpose.

3. There are two outcome variables being used (BMI percentile and obesity status). This becomes somewhat confusing. It appears these are based on the same data. It probably is best to just use one of these.

4. Measures: for body weight measures clarify the terms BMI percent and obesity status. The term obesity status is not used in the measures section.

5. It would be interesting to be told what the children's' perceptions were of physical disorder, social disorder, and prosocial neighborhood environment. Currently it is difficult to tell. Also, provide some information on of PA and weight so one knows what their levels are on these variables. Table 1 does not provide the unit for physical activity. Some of these issue could be addressed by providing descriptive statistics on all of these variables in table 1 in a total column.

6. It appears based on the types of variables that are in table 1 that analyses are primarily Chi squares and not ANOVAs. Please provide F statistics and p values. It isn’t common to provide bivariate analyses for the continuous level and the nominal level of the same variable (e.g. neighborhood disorder).

7. See above related to the two outcomes (BMI percent and obesity status). Since these are from the same data it would be best to pick one of these for the meditational analysis. Then provide one figure.

Minor

1. Suggest starting methods with the design.
2. Best to provide the eligibility criteria followed by power analysis and then recruitment efforts. The order is somewhat difficult to follow.

3. All data on subjects (eligibility, power, recruitment) could be placed under a heading “subjects” to set it off. End this section with the number deemed eligible (145) and of those invited to group meeting (not clear if this was a group or individual meeting with parent and child) how many came (116). It is best to put power analysis before recruitment.

4. It still isn’t clear how the interested participants contacted the researchers. For example, was there a number on the flyer for them to call the investigators?

5. There are sections in the methods related to procedures that might best be grouped together under procedures (e.g. at the meeting informed consent and assent were taken; ordering of instruments, payment).

6. Start results section with telling about the complete data.

7. Check to see if this should be “mediation model” versus “meditation model” throughout.

8. An additional limitation was the lack of a measure of stress measured with self-report.

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

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

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I have no competing interests.