Reviewer’s report

Title: Childhood school segregation and later life sense of control and physical performance in the African American Health cohort

Version: 4 Date: 27 July 2012

Reviewer: Ross e O'Hara

Reviewer’s report:

First, I commend Dr. Wolinsky and his coauthors on an excellent revision of their manuscript, "Childhood school segregation and later life sense of control and physical performance in the African American Health cohort." I appreciate the authors’ responses to my original critiques and queries, especially the concluding paragraph that deals with the difficult task of analyzing the potential negative effects of school segregation. I have a few more comments regarding the study that I believe would improve its impact in this journal.

Major Compulsory Revisions:

1. The authors showed a negative association between school segregation and adult sense of control, followed by a positive association between sense of control and physical ability. However, the results presented do not suggest mediation; that is, the influence of segregation on sense of control did not appear to be the element of control that affected physical ability. The authors should discuss the implications of this finding.

2. The authors reported the results of a sensitivity analysis showing that the effects of school segregation were most prominent on denying control. This is mentioned again in the discussion, but the implications of this finding are not discussed. If it is to be included, the authors should discuss why segregation might influence denying control more so than claiming control, and what that might mean for changes in physical ability and health.

3. The authors mentioned in their letter that interactions with gender are no longer significant in the new analyses. First, this might be worth mentioning in the text or a note, as I think the nature of the study begs the question of gender differences. Second, it was unclear to me from the letter whether the authors tested gender differences in both sets of regressions, now that both sense of control and physical abilities are used as outcome measures. It might be interesting to look at gender differences in the relation from sense of control to physical ability as it relates to segregation.

Minor Essential Revisions:

P. 13. It is still unclear whether de jure segregation was more common in Missouri than other states. On p. 10, the authors stated that de jure segregation was well established in Missouri, but on p. 13 stated that this type of segregation was mostly in Southern states. It is confusing because Missouri is separated
from Southern states in the analyses.

P. 14. The mention of "the self-rated health question" was confusing because it sounded like it referred to something already discussed, which it did not. Please clarify the wording and scale used for this measure.

P. 15. The authors stated that perceived discrimination scale included 9 items, but the description only mentioned 5 items. I assume the scale had some redundancy, hence the discrepancy, but it is confusing. Also, a score of 9 on this scale would indicate "no" perceived discrimination, and not "minimal" discrimination, at least according to the scale anchors.

P. 23. The paragraph that begins this page regarding Buck's etiologic mechanism is redundant with the introduction. I recommend deleting or shortening to incorporate into the previous paragraph.

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

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

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

**Declaration of competing interests:**

I declare that I have no competing interests