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: 30 July 2012

Reviewer: Diana Burgess

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In my opinion the authors have addressed all responses sufficiently. This has resulted in a high quality paper that I believe has the potential to make an important contribution to the literature on racial health disparities.

Major compulsory revisions

The only remaining question I still have concerns whether there is an association between school segregation and the physical performance outcomes. Reading the paper, I expected that the authors would test the following meditational model:

Childhood school segregation (A) -> (Greater) perceived control (B)-> (Better) Physical Health (C).

However, in the abstract the authors stop short of positing an explicit linkage between childhood school segregation and poorer physical health “We hypothesized that childhood school desegregation adversely affected the sense of control of in later life, and that this reduced sense of control accounts in part for reduced physical performance.” From this sentence it is not clear whether the authors expect that “reduced sense of control accounts in part of reduced physical performance” among African American students from schools that were more desegregated.

The analyses presented show that:

1. Childhood school segregation (A) is associated with greater perceived control (B) and
2. Greater perceived control (B) is associated with better physical health (C)
3. Greater perceived control (B) is associated with better physical health (C) even after controlling for childhood school segregation and potential confounders.

However, the following associations remain untested:

4. whether childhood school segregation (A) is associated with better physical health (C),
5. and if so, whether controlling for perceived control (B) reduces the association between childhood school segregation (A) and better physical health (C)(test of mediation).

These to me are important analyses that should be conducted, in order to
complete the argument laid forth by the authors. If there is not a significant association between childhood school segregation and better physical health, the authors should just state that and provide speculation as to why this might be the case.

Minor essential revisions
1. Take out statistics from results section

Discretionary revisions
Finally, the authors might be interested in citing research discussed in Kraus et al (Michael W. Kraus; Paul K. Piff; Rodolfo Mendoza-Denton; Michelle L. Rheinschmidt; Dacher Keltner; Psychol Rev. 2012 Jul;119(3):546-72.Social Class, Solipsism, and Contextualism: How the Rich Are Different From the Poor) in which they discuss how subordinate rank is associated with lower levels of perceived control. This provides a related explanation for these findings. African American students in desegregated schools might be more likely to have perceived themselves as subordinate in rank, whereas African American students in segregated schools, might have been less likely to see themselves and their racial group as lower ranking, resulting in greater levels of perceived control.

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

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare I have no competing interests to report.