Author's response to reviews

Title: Metropolitan-level ethnic residential segregation, racial identity, and body mass index among U.S. Hispanics: a multilevel cross-sectional study

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Author's response to reviews: see over
Dear Editors:

We are pleased to re-submit the original contribution entitled “Metropolitan-level ethnic residential segregation, racial identity, and body mass index among U.S. Hispanics: a multilevel cross-sectional study” to BMC Public Health. We feel our manuscript has been strengthened by addressing your comments and the reviewers’ comments, and we feel this manuscript is now suitable for publication.

Our responses to all comments are detailed below. We look forward to your decision.

Sincerely,

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Editor:

- The manuscript remains somewhat difficult to read, in part because of inconsistent terminology. I am not familiar with socially acceptable terminology regarding ‘race’ in the USA but I suggest the following be used throughout for consistency, cultural sensitivities notwithstanding: non-Hispanic Black, Hispanic Black, non-Hispanic White, Hispanic White, Hispanic Other race.

We see your point and have now used non-Hispanic Black, Hispanic Black, non-Hispanic White, Hispanic White, Hispanic who identified as some other race (per reviewer #2’s suggestion) throughout the manuscript.

- Is the use of "Hispanics" as a noun acceptable as a vernacular substitute for "Hispanic People" or similar? I would have thought not;

Thank you for bringing this to our attention. It seems that at least some dictionaries (e.g., Oxford and Merriam-Webster) list Hispanic as both a noun and an adjective. In addition, we have seen it written this way in several public health articles, so we do think it is an acceptable substitute for Hispanic people.

- the Abstract should include some reference to the social theories underlying the effects of segregation;

We have now made reference to the social theory we were testing, the segmented assimilation theory, in the abstract. Specifically, we have included the following: “The segmented assimilation theory, which suggests patterns of integration for immigrant groups varies by social factors, may provide an explanation for these mixed findings. In this study we examined whether one social factor, racial identity, modified the association between ethnic residential segregation and body mass index (BMI) among Hispanics.”
We have now rephrased this sentence to say the following: “We also examined the distribution of non-Hispanic Black and White isolation index scores among Hispanics living in the lowest quartile of the Hispanic isolation index score. This was done to examine whether there was evidence of segmented assimilation patterns among Hispanics living outside ethnic enclaves by race.”

- the meaning of last sentence on page 14 is unclear. Does "high Hispanic segregation areas" mean "highly-segregated Hispanic areas"?

We have now modified this sentence to say the following: “Another key finding of this paper is that race differences in BMI were substantially smaller for those living in highly segregated Hispanic areas than those in less segregated areas.”

- the References contain numerous inconsistencies with respect to inclusion of issue numbers, absence of city of publication for books, and instances of the word "In" in inappropriate places.

We have updated the references to make them consistent with the sample references on the BMC Public Health website.

Reviewer 1:

My one remaining substantive suggestion has to do with the interpretation of the Table 4 results for women, the attenuation of the hispanic segregation-BMI association after adjusting for education and language. Currently, this finding is not well interpreted, it’s simply explained as attenuated after adjustment for individual level factors. While this is technically accurate, I think that with cross-sectional data on such a macro-level phenomenon such as segregation that it is difficult to sort out mediators vs. confounders. I personally think that education and language could both be mediators here, especially if ethnic enclaves delay English-language use and/or track kids into inner-city (poorer quality) schools. I think that failure to explain this as potential mediation oversimplifies the results, especially for those unfamiliar with segregation, leading them to believe that tight adjustment for individual-level SES and acculturation factors necessarily leads to a better answer, when in fact we have less than perfect data.

We completely agree and have now included a sentence in the methods section describing that these factors could be confounders but could also be mediators. Specifically, we have added the following on page 8: “These factors could be confounders, but given that segregation is hypothesized to contribute to health disparities by influencing opportunities for socioeconomic mobility (e.g., through poor quality schools), these may also be mediators.” We have also added the following sentence to the discussion on page 12: “Among women, the association between segregation and BMI was accounted for by acculturation and education, individual-level factors that may be on the causal pathway linking segregation to BMI.”

One other suggestion is to clarify, in the last paragraph of the results (top of page
Thanks for pointing that out. We have now made the suggested clarification.

Reviewer 2:

1. Instead of referring to other race or other race Hispanics, consider rewriting to be consistent with the way the U.S. census refers to this demographic (e.g., Hispanics who identify as 'some other race'"

Thank you for pointing out this distinction. We agree it may be useful to the reader if we use the terminology used by the U.S. census and have made this change throughout the document.

2. It would still be helpful to point out a major difference between the Census and the BRFSS. A major limitation of the BRFSS is that is a phone survey with a very strict script. The script does not include "some other race" as choice that is read as an option as a matter of course so the data on "some other race" is underestimated and the data on "white Hispanic" may be overestimated.

We have looked at the BRFSS questionnaires for the years we included (2003-2008) and the option of “other” was indeed read to participants. The only options listed under “Do not read” in the questionnaires were No additional choices; Don’t know/Not sure; and Refused. The ‘other race’ category was no longer read out loud to participants in BRFSS 2013, but these data were not included in our analyses.

3. It may be helpful if the authors include simple descriptive statistics on the race-gender demographics (actual numbers of participants) of the BRFSS sample (e.g., Hispanic Men that Identify as White vs. Hispanic Men that Identify as Black, Hispanics Men that Identify as Some Other Race vs. Hispanic women that Identify as White vs. Hispanic Women that Identify as Black and Hispanic Women that Identify as Some Other Race? This would be helpful in terms of assessing whether there is an adequate number of Hispanics by gender who identified as "Black"; "Some Other Race" or "White." While I don't have the statistical expertise do a power analysis of the work, it is not uncommon for the BRFSS to have very small sample sizes for underrepresented minorities. Moreover, the majority of BRFSS respondents (in every racial and ethnic group) are women. I am again particularly sensitive to the potential for very small Ns for racial and ethnic minority men.

The sample sizes for Hispanic men and women by racial identity are included in Table 1. We too were concerned with small n’s, particularly for black Hispanic men and women, which is why we combined data from 2003-2008. As you indicated, there are more women than men in every category, but we believe the sample sizes are large enough for our analyses.