Reviewer's report

Title: Individual and neighborhood-level socioeconomic characteristics in relation to smoking prevalence among black and white adults in the southeastern United States: a cross-sectional study

Version: 1 Date: 26 September 2011

Reviewer: Michael Livingston

Reviewer's report:

This is a well conducted multi-level analysis of the individual and community-level correlates of smoking among a large sample of relatively socio-economically disadvantaged people in the USA. The findings, that community level disadvantage has a modest positive effect on smoking rates above and beyond individual level disadvantage, are consistent with much of the previous literature in this area. The key weakness of the paper is a lack of clarity in the rationale and a limited discussion of the significance of these potentially interesting findings.

Major Compulsory Revisions

1. The background is very brief and doesn’t do a great job of situating this study within the rest of the literature. The previous studies that have examined specific effects by race and gender should be described in a bit more depth and an explanation for why examining sex/race effects across a wide age spectrum might be interesting and useful – just because it hasn’t been done doesn’t mean it’s a worthwhile gap to fill. A couple of sentences expounding why this analysis is important is necessary here.

2. As with the introduction, the discussion is a bit limited when it comes to what this paper is contributing to the literature. The sizable gap that is filled (race/gender specific models) is not really developed in any meaningful way beyond a sentence that says, “reasons for overall differences in neighbourhood level effects on smoking remain uncertain”. I think this is a bit half-hearted – the authors need to figure out why what they’ve found here matters, either in terms of future research questions or in terms of public health implications.

Minor essential revisions

3. The methods section is clear until the middle of page 6, when a lot of methodological steps are compressed in a few sentences. In particular: there’s no justification for why duration of residence was controlled in all models, the explanation of the random intercepts and marginal models was minimal – non-experts should at least be able to follow the broad decisions being made here.

4. Page 10, para 2: The discussion is stronger when focussing on the results
between high- and low-income groups, although the final sentence doesn’t quite justify the findings of the study where high-income people were actually more affected than low income.

5. I think the final para on page 10 should come earlier in the discussion section, laying out how the overall findings fit into the literature before drilling down into the race and gender specific results.

6. Page 11, para 2: these issues may explain inconsistencies across studies, but no attempt has been made to explain the internal inconsistencies of the current study – in particular the lack of association between neighbourhood disadvantage and smoking rates among white women. This incongruous finding needs to be discussed somewhere rather than ignored after being presented.

7. Page 11, para 3: I think the authors should at least consider here the impacts of using a largely disadvantaged sample – smoking prevalence of around 45% overall is about twice the US general population smoking rate. There must be some concerns about the generalisability of these findings that should be discussed here.

8. Page 11/12: The large time period between the US Census data used for the neighbourhood level data and some of the individual level data (2000 vs 2009) should be discussed as a potential limitation – neighbourhood level disadvantage may have changed significantly in some areas over the decade in question.

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests