Reviewer's report

Title: Estimating Neighborhood obesity risk: the value of maternal height and weight data available from birth certificate records

Version: 1 Date: 9 March 2009

Reviewer number: 1

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The goals of this study are clearly stated. This area of research has important implications for public health, and is under-studied. Some issues with the study are listed below.

MAJOR COMPULSORY REVISIONS

1) The terms 'risk' and 'prevalence' are used in combination in the title, abstract, and body of the manuscript. These terms have very different meanings, and in the context of this research, what is being assessed is obesity prevalence (based on BMI >25). Unless obesity risk is being defined as BMI>25 - which is typically recognized as being 'overweight' rather than 'obese' (BMI>30). In either case, it is unclear what the distinction between risk and prevalence may be, and how these relate to BMI.

2) There is no definition of BMI, or accompanying units associated with this measure anywhere in the manuscript. These would be helpful for the reader, and could be included in the third paragraph of the introduction.

3) The selection criteria for the census tracts ensures each neighborhood had 50+ live births for statistical purposes. Is there any chance these do not represent the 'average' neighborhood? That is, there is a chance that using this criteria selects a particular type of neighborhood (e.g. relatively lower age group, particular income class), which could be why some of the neighborhood-level variables did not emerge as significant. It would help the reader to see how these areas compare to city/national averages based on the contextual-level variables used at the CT level to make some determination of this fact, either through use of a table, or some written explanation.

MINOR ESSENTIAL REVISIONS

1) Several spelling/grammar mistakes.

Abstract: (1) "the percentage of all residents in census tracts WIT"

Introduction: (1) 3rd pgh, 2nd sentence - remove 'have' before 'occur'; add 'and' before 'follow'

Methods: (1) 1st pgh, 2nd sentence - should be 'resident live births'
(2) Last pg, last sentence - should be capitalized

Discussion: (1) 2nd pg, observation is surrounded by quotes, with no apparent function; last sentence - should read 'multiple years of birth certificate'
(2) 3rd pg, 2nd sentence - should not have a comma after 'fully'
(3) Last pg, 3rd sentence - 'could attempt TO validate'; Last sentence - "To the extent the are able to do so interest in"?

2) Results: 1st pg, 2nd sentence: There is no reference to the phrase "moderate to strong linear relationship", making the qualifier 'moderate to strong' arbitrary.

3) Quotation marks around dependent, and independent seem unnecessary.

DISCRETIONARY REVISIONS

1) See comments in MAJOR COMPULSORY REVISIONS regarding the potential for adding a comparative chart between CTs/city/national averages of contextual-level data. Again, this would provide the reader with some context to evaluate the results presented here.

2) May be useful to include the R-squared value somewhere on Figure 1.

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.