Reviewer’s report

Title: Dietary patterns and nutrient intake vary among low-income Hispanic and Black preschool children in Atlanta: A cross sectional study

Version: 1 Date: 8 May 2012

Reviewer: Nalini Ranjit

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Review of “Dietary Patterns and nutrient intake vary among low-income Hispanic and Black pre-school children in Atlanta, Georgia”.

This is a valuable analysis of dietary data obtained from low income, minority pre-school children. Dietary data on preschool children are useful to establish if unhealthy eating patterns are already evident at this age; this study serves that purpose admirably, and addresses a gap in the literature.

The data are obtained from two clinics whose usual clientele are low-income; it would be useful if the authors had some data on the actual socio-economic status of participants, for eg., if they are are WIC or SNAP eligible. Three day dietary recall data are used to assess food patterns. The authors lost more than half the sample because of dropping children with fewer than three days of data. This seems drastic, and may lead, additionally, to selection bias, as it is possible that parents who are compliant in maintaining food diaries are also different in the kind of food they make available to their children. I would recommend retaining children with 2 days of diet recalls in the analysis, or alternatively, performing a sensitivity analysis with all available data (include children with 1 or 2 days of data).

The logic of analysis seems reasonable – the authors examine the composition of total food intake in terms of percent of specific food groups; they also evaluate the nutrient composition of intake against RDA. That said, the analysis approach could be substantially improved.

The introduction and discussion are well-written and referenced, and support the data.

MAJOR COMPULSORY REVISIONS:
(a) Add sensitivity analysis OR include children with 2 days of diet recalls in your sample.

(b) The extensive detail on median, q1 and q3 for each food group and subgroup is not informative, and should be dropped. Instead, the authors could stratify the sample along the MEDIAN TOTAL INTAKE or into TERTILES OF TOTAL INTAKE, and examine the percent distribution of food groups within each level of TOTAL INTAKE. Thus, we could learn if fat consumption is disproportionately higher among children who are consuming large amounts of food compared to those whose total intake is small. Race, sex and age could be included in these...
models as covariates, and estimates obtained by race.

MINOR ESSENTIAL

(a) For Table 2, I would like to see some information on the actual number of total servings per day.

(b) Table 3 has too much repetition of data from Table 1. Drop the median and quartile information. The column titles should be food group as % of total servings per day (Blacks), subgroup item as % of total servings per day (Blacks) and subgroup item as % of food group (Blacks); repeated for Hispanics, for a total of 6 columns.

(c) Table 4 – the title says “children at or above RDA level”; the numbers show children below RDA level.

(d) For table 5, please indicate adequate distribution alongside the macronutrient, or as a footnote.

(e) In title, use the word “across”, rather than “among”

(b) Page 8, Line 7 – you want to say “complementary”, not “complimentary”

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare I have no competing interests