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: 14 March 2012

Reviewer: Russell Rising

Reviewer's report:

General comments:

1. In the Methods section please provide a rationale for the use of RDA when DRI is the most common criteria used. The Food and Nutrition Board (2006) recently held a workshop regarding this issue (National Research Council. Dietary Reference Intakes Research Synthesis: Workshop Summary. Washington, DC: The National Academies Press, 2006). The DRI for this specific age group should be used to express requirements whenever possible.

2. There was no mention of physical activity during the subject questionnaire process. It would have just required another part for the questionnaire and should have been included in the data acquisition and analysis. This might explain some of the results in regards to macro nutrient intake and obesity between the two ethnic groups.

3. Eliminate the entire section regarding sample size. Since the author did not have enough subjects to meet the initial sample size criteria, it is suggested to just state the number of subjects that were recruited and the number that were utilized for analysis. Furthermore, no references as to the formula used for the calculation of sample size were provided. Moreover, it is not appropriate to use zinc intake as the basis for calculating sample size since the magnitude to determine significance may not be the same as that for one of the macro nutrients.

4. It is suggested to double check with a scientific technical writer, or with the Journal, to determine if the use of “Black” is appropriate in regards to describing this ethnic group. Usually, “Afro-American” is the term used to describe this ethnic group.

5. Please provide some evidence as to the accuracy of the three day diet diary as described in the Methods section. Moreover, please explain the make-up of the “care givers”. Typically, biological mothers provide the best dietary recall for their children. There might be some inaccuracies in the data if Nanny’s, baby sitters or step-parents were recording their children’s diets. Please research and provide some reference to vouch for their accuracy if there is a variation on whom is recording the children’s diets. Their accuracy in recording the child diet might be questionable since they are not biological parents and might have less incentive to adhere to the experimental protocol. This might explain the “15
kcal/kg/day” low energy intake reported as part of this range in the Results section.

6. Page 8: There is no reference as to the energy intake requirements for these children. This is one of the most important nutrients in regards to future obesity. This should be included in the data analysis.

7. On page 9, Please explain why such a large gab in regards to the proportion of obesity between the Hispanic and Black children was not significant. Moreover, please explain the wide range of caloric intake. In this age range having a caloric intake of only 15 kcal/kg/day seems very low. Moreover, energy intake data for the children in both ethnic groups should be compared to that recommended (DRI specific for age group).

8. Page 12, it is possible that differences in physical activity might explain the results obtained between the non-obese and obese children as described. Reference to the differences in activity levels as related to ethnic group should be provided.

9. Page 13: Some references to appropriate fruit juice consumption should be provided. Please review the manuscripts published by Cole C. (Cole C, Rising R and Lifshitz F. Are there consequences of incomplete carbohydrate absorption from fruit juice consumption in infants? Arch Pediatr Adolesc Med 1999; 153:1098-110.)

10. Page 14: References to activity contributing to the cause of obesity in this age group should be provided. Please see manuscript published by Rising et al (Rising, R. Lifshitz F. A lower metabolic rate in infants from obese biological mothers. Nutrition J 2008; 7:15) that discusses infant obesity. There should be some discussion that obese infants might lead to obese preschoolers due to lifestyle, etc.

11. Page 15: Suggest not recommending reducing protein intake if requirements are met. Only suggest a change if protein intakes are excessive. These children are growing and as long as requirements are met, no changes should be recommended.

12. Page 15: In the recommendations there was no discussion concerning fast food. It is well known that fast food is a major contributor to childhood obesity. A discussion in this regard, as well as recommendations, should be provided. Suggest reviewing the manuscript (Lee H, The role of local food availability in explaining obesity risk among young school-aged children. Soc Sci Med. 2012 Feb 10. [Epub ahead of print]) This is just one of many manuscripts that have been recently published regarding this topic.

Minor comments

Page 1. line 42: Phone number not written correctly should be “513-636-7805”

Page 2, line 6: change “is” to “are”
Page 2, line 20: here and throughout the manuscript “calories/kg/d” should be calories (kcal/kg/day).

Page 9, line 6: “SD” values should be XX.X ± XX.X throughout the manuscript and including all Tables.

Table 1. Not necessary to provide two levels of significance (p<0.01 and p<0.05). For this type of study, p<0.05 is sufficient. Please rewrite accordingly.

Table 4. There appears to be an error in the table. The title is “….percentage of children at or above RDA level…” but the table has a line “Below RDA Level”. Please explain.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

No