Author's response to reviews

Title: Influence of the family nucleus on obesity in children from northeastern Brazil: a cross-section study

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Author's response to reviews: see over
Thank you for peer reviews of our manuscript: **Influence of the family nucleus on obesity in children from northeastern Brazil: a cross-sectional study (MS: 8290560461178433)**, and as follows we answer the questions separately, by reviewer:

A - Reviewer: Anthony Kafatos

1 – Major Compulsory Revisions

Effect of socioeconomic status:

a. A new table was created and includes information on the role of ethnicity and social economic class in the nutritional status. For these analyses, nutritional status was defined on the basis of the BMI (page 4, lines 11-14). The results are shown in Table 2 and then discussed.

b. As expected, blacks were the poorest subjects, followed by the mulatto individuals. The description of the socioeconomic characteristics was included in the Methods section (page 4: lines18-23; page 5: lines 1-4) and the results shown in Table 2.

c. Table 2 shows a significant difference in the prevalence of overweight and obesity between public and private schools; underweight rates were very similar to the obese rates. This point was mentioned in the Discussion section.

2 – Minor Essential Revisions

Discussion: We reorganize the discussion following the suggestions.

a. New knowledge presented by this paper: Most of the results are confirmatory but, interesting issues have been pointed out in this paper: 1) different behavior patterns and risk factors for obesity inside the same country, confirming that independent of cultural and geographic characteristics, the socioeconomic status
definitely plays a role in obesity development; 2) the high misperception rate of excessive weight affecting parents and guardians of obese/overweight children.

b. Prevalence of obesity and malnutrition in other cities and populations of Brazil are added together. The major problem is the differences in terms of methodologies, which make comparisons difficult to be done. (References: 10, 21, 22, 23, 25. A previous study from our group showed overweight and obesity prevalence of 9.3% and 4.4% respectively (10). A prevalence of overweight was 15.2% in a group of Brazilian adolescents (22) and 10.2% at the age of 4 years (23). Another Brazilian study conducted in the southern region showed an increase in the rates of childhood obesity especially in the families with low and middle incomes (24) even though the education level was not analyzed. The finding of 8.5% underweight in the present sample, confirmed the presence of a nutrition transition stage in Brazil.

c. Low prevalence of obesity in Brazil in comparison with USA and Europe: We cited information obtained from a perspective published in The New England Journal of Medicine, 2007, which affirms that chronic diseases in countries with low income are on the rise (Reference: 21);

b. We have not analyzed the diet of these children, so we can not make any affirmation about the calories or the constitution of the meals usually eaten by the families.

Table 1: According to the suggestion of the second reviewer, the sample was stratified into 2 groups based on the school type. The term children’s school was eliminated.

Clarifying: The mothers’ and fathers’ obesity data were self reported (see page 5, line 4) and determined through an interview done by a trained team of nursing students, so in the “yes group” there are probably some subjects with obesity and others with overweight

B - Reviewer: Manfred J Muller

1 – Major Compulsory Revisions

Data about parental weight and socioeconomic status:

a. The information about this topic is included in Table 2;
b. Data about biological and life style: these informations were previously described, but we have added this data in the Result section and in the new Table 2;

c. Data characterizing social area code: as we described in the Methods section, we selected the schools randomly, based on the educational system characteristics to ensure that we would have a representative sample of the population with heterogeneous biological and socioeconomic characteristics. Thus the results could be transferred to the entire population. Now we have analyzed the same variables, classifying the children into two groups based on school type (see Table 1);

d. The representativity of the sample was better described in the Methods Section (page 3, lines 16-21; page 4, lines 1-5) and this is a representative sample of the population, because its calculation was based on the educational system characteristics. The numbers of schools was obtained from the local Culture and Education Departments and the proportionality between the schools were preserved;

e. We have the knowledge that the treatment of childhood obesity is not easy and the results are not so good, especially as regards maintaining the weight lost. But we tried to describe our reality, and based on our own data reinforce the necessity of the inclusion of the family to improve outcomes;

f. The Discussion was shortened and concentrated in important aspects of this study.

Sincerely,

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