Author’s response to reviews

Title: Predictors of overweight/obesity in a Brazilian cohort after 13 years of follow-up

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Author’s response to reviews:

December 20th, 2017.

Rachel Engler-Stringer, Ph.D.
Associate Editor
Nutrition Journal
Dear Dr. Engler-Stringer,

Please find enclosed the revised manuscript after reviewers’ comments entitled “Predictors of overweight/obesity in a Brazilian cohort after 13 years of follow-up”, for publication at Nutrition Journal if accepted.

The authors would like to thank the reviewers’ suggestions that from our point of view really improved the manuscript.

All changes made in the manuscript are highlighted in yellow color.

A point to point response to the comments made by the reviewers is also provided as following:

Reviewer #1: The paper written by Souza and collaborators is original and interesting. The present work sounds: the experimental protocol seems to have been well executed and the analytical procedures were correctly conducted. However, the manuscript is advised to revised by an English native Speaker or a person with good written English to correct typing errors. Furthermore, table 2 should be divided into two parts to be more readable. In the same way, also figure 1 should be split in two.

The manuscript was revised by an English native Speaker and corrections were made along the text, tables and figures. As suggested by reviewer #1, Table 2 was divided in two (tables 2 and 3 in the new version). Figure 1 was also divided in two (figures 1 and 2 in the new version).

Reviewer #2: This article focused on identifying factors associated with the risk of an adult subject becoming overweight/obese after a 13 years follow-up in rural Brazil. I commend the authors on use of prior published study instruments and specification of their statistical methodology, and for applying these for an underrepresented area in the nutrition literature for obesity trends in rural South America.

I list the following minor proposed revisions to strengthen the already commendable manuscript:

Please specify why your study sample's geographic location was selected, justifying your decision in relation to similar prior studies;
The authors specified in the Methods why the study sample’s geographic location was selected as following:

“This geographic location was selected because Brazilian epidemiological data on cardiovascular risk at time of phase 1 were missing in some regions of the country17”.

In your methods please specify for t-test and chi-square tests which type of variables (i.e. interval vs. categorical) you used them on;

We specified in the Methods when Paired T-test and McNemar test (instead of Chi-Square test) were used.

“Paired T-test (continuous variables) and McNemar test (categorical variables) were used to verify differences between the two moments of data collection”

Please specify why you used chi-square instead of McNemar and repeated measures logistic regression because respectively they are used for independent variables with 2 and >2 levels when your dependent variables are categorical which I presume you wanted since your sample included multiple observations from the same subjects (i.e. longitudinal trial), and thus Chi-square may not be the most appropriate test in the way you used it;

We incorrectly reported in the statistical analyses description that we used the Chi-Square test when actually the test we used was McNemar. The authors would like to thank the reviewer for the comment and apologize for the mistake. The correct description is in the Methods as following:

“Paired T-test (continuous variables) and McNemar test (categorical variables) were used to verify differences between the two moments of data collection”

Please justify your use of stepwise backward regression because despite its strengths it is increasingly critiqued for its statistical weaknesses and thus not typically a main-stream approach;

The authors recognize the stepwise backward regression limitations, particularly regarding its inability to identify possible collinearities when all variables are incorporated to the model. Despite that, we chose to use this approach given that the number of variables we included in the model and our sample size can mitigate these limitations.
Please specify in your discussion your study's strengths/weaknesses to allow interpretation of your results relative to your study's internal/external validity.

The strengths and limitations of our study were highlighted in the end of the Discussion, as following:

“The scarcity of longitudinal studies focusing on overweight/obesity incidence compromised the comparison with similar data and was a difficulty the authors of this study faced. Although the impossibility of finding all individuals from the initial sample was a limitation, it was minimized by the baseline characteristics comparison of individuals not found with those with complete follow-up. By comparing the subjects assessed in phase 2 (n = 685) and the non-assessed (losses and exclusions = 482) no differences were observed between groups characteristics (p>0.05). Non-paired T-test and Chi-Square test were used for this analysis.

Facing such a complex problem as overweight/obesity and finding conflicting results in the literature leads to the conclusion that more longitudinal studies are needed addressing weight gain and its predictors. Cohort studies with multiple evaluations throughout the years are excellent options and need to be encouraged. These contemporary cohorts, exposed to the nutritional reality from westernized countries (abundant energy-rich processed foods availability)37 will help the healthcare community to better understand the causes of obesity, leading to a more effective management and control of the condition.

It is clear, on the other hand, that public health actions to prevent obesity must be implemented focusing on individuals at younger ages, as well as including alcohol consumption as part of the problem. This approach will probably be more effective in educating the population to adopt health behaviors that in the long term will change the incidence of overweight/obesity and avoid it epidemic condition as seen nowadays.”