

## **Author's response to reviews**

**Title:** Dietary intake of Senegalese adults

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**Author's response to reviews:** see over

Dear Editor,

Thank you for the opportunity to resubmit our manuscript titled “Dietary Intake of Senegalese Adults” for publication as a Short Report.

We thank the reviewer for a thoughtful review, and for bringing several matters to our attention. The re-submitted manuscript is much improved. Our response to the reviewer is shown in the text below the reviewer’s comment.

- 1. Abstract: The conclusion is not supported by the results of the study. Gender comparisons amongst an all male sample is limited.**

Gender comparisons were not done and we removed the reference to gender comparisons in the Abstract.

- 2. Introduction: The rationale for the study is not clear. The authors refer to the effect of diet on health risk, but do not measure any health risk factors of the subjects. The rationale for the study should be reformulated.**

On pages 4 and 5, we clarified our rationale by emphasizing that this work is only to describe the diet and it precedes a more formal investigation that would examine the effect of diet on health risk. As the reviewer correctly pointed out, the primary objective of this study is not to look at the effect of diet on health risk. It is to describe the Senegalese diet as a prelude to a more formal examination that would help in understanding the relative influences of dietary factors on common disease risk in both the developing and the developed world.

- 3. Subject selection: The subjects were selected from a hospital (by referral) and from a neighbouring rural area. It is not clear why they were referred from the hospital. Were these subjects healthy? No health information is provided. Were these subjects representative of a more urban population? The results should be presented as rural vs. urban, particularly in light of the effect of urbanization on nutrition practices. Are these groups comparable? Why were only men included? The major problem with the study is the very small convenient sample size which is not representative of the Senegalese population. This is compounded by the fact that the subjects are of a very broad age range and a wide tribal diversity. It is expected that dietary intake would change over the age range. There are 8 different tribes represented in the small sample, which precludes comparison of dietary intake between tribal groups. The sample size should be increased and include sufficient numbers in each tribal group, which would reflect the tribal breakdown in Senegal, as well as the different age ranges.**

Re- selection of participants from hospitals and urban area: On page 5 we clarify that although participants were selected from the hospital they were healthy and not hospitalized. We also report on page 5 that the sample is representative of a more urban population with 40 out of the 50 men being from Dakar.

Re- examination of rural and urban differences: We agree with the reviewer that differences in residence are important to examine. We analyzed the data for differences by residence. On page 6, we describe this aim. We did not present the p-values for comparison by residence because we found that there were no statistically significant differences in consumption of each food by urban/rural residence. This is described on page 7.

Re- selection of only men, wide age range, tribal diversity and small sample: We included only men because this study was conducted within the context of a prostate cancer case-control study and only men are involved in that study. Although we have a small, convenient sample size that is not representative of the Senegalese population, our study sample is representative of the population from which our cases were drawn. While we were unable to have a larger sample size in this study, follow up work would allow us to include sufficient numbers in each tribal group and across age ranges. We describe this limitation on page 8.

- 4. Methods: A single 24hr dietary recall was used to assess dietary intake. This has its obvious limitations, particularly in light of food insecurity and seasonal changes. Why was this method chosen? This method should be validated against a more standardised approach such as 3X24hr recall, 3-day dietary record or a food frequency questionnaire. The ‘honesty’ of the subjects is not sufficient to warrant this method.**

A single 24hr dietary recall was chosen because it was most practical and feasible for this study, and we expected good compliance because of the relatively small amount of information processing that is required of participants. We used a trained interviewer to conduct the 24 hr dietary recall interview to ensure high quality data. It was not possible to validate this method in this small study, but validation would be desirable in future studies. Another factor in our consideration of using the 24hr recall is that there are no standardized dietary assessment instruments (e.g., FFQ) for use in Senegal. We now acknowledge this on page 8 when we discuss the limitations of this work.

- 5. Results: It is not clear what is meant by ‘mean daily consumption was calculated for the top 25% of food items reported in each food group.’ Please clarify.**

We clarified this on page 6. For example, if a food group had a total of 12 items, the 3 items that were reported most commonly would be presented in Table 3 (3/12 ~ 25%). As a result, there are food items in each food category that are not reflected in Table 3. For example, the milk/dairy food category only shows cheese, and this is one of 4 reported and reflected in Table 2.

- 6. Pg 7, para 2, last sentence: It is not valid to compare consumption of each food by the variables listed with such a small sample.**

We agree with the reviewer that our sample size limits our power to detect statistically significant differences in this sample set. We note this on page 8. Given the strong hypotheses around the variables we list, we felt it was important to examine them even in this small study.

- 7. Discussion: The results of the study are important in relation to a health outcome. The authors should be encouraged to measure some health risk to increase the applicability and relevance of their study.**

We agree with the reviewer. In subsequent studies we will be able to measure health outcomes and also be able to relate diet to health risk.

#### Minor Comments

- 1. Table 1. Compare rural vs. urban subjects.**

Our sample size limits our power to detect statistically significant differences in this sample set. Analyses revealed no differences so these comparisons are not shown.

- 2. Table 3. Vegetables- is it possible that someone will eat 10 cups of carrots or okra per day, or 277 tablespoons of sauce? Please check these numbers and their impact on the mean values. It is not clear what the "items" in column 1 refer to.**

We checked our numbers. We updated Table 3 to show median values and the interquartile range. The median is not influenced by extreme values. The reported median is low for some vegetables and this is likely due to participants' consumption of mixed dishes where vegetables are not the main focus of the dish. We also updated text on pages 6 and 7 to correspond with the updates in Table 3.