Reviewer’s report

Title: Examination of Dietary Habits Among the Indigenous Kuna Indians of Panama

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Reviewer: Amanda McClain

Reviewer's report:

Summary: This study aimed to describe the dietary intake of Indigenous Kuna Indians of Panama, which has not been done since the 1990s. The authors found that while a high proportion of Kuna Indians daily consume nutritious food groups, like fruits, cacao, and fish, a high proportion also daily consume fast food, sodas, and fried food. Furthermore, consumption of nutritious versus non-nutritious foods varied by demographic characteristics.

1. Ethics: present and adequate

2. Title: The title does not fully capture the aims of the manuscript. Also, 'dietary patterns' can be a bit misleading, as most of the peer-reviewed diet and nutrition literature refer to dietary patterns as those taking a whole-diet (and not single-nutrient or food studies) approach characterized by dietary scores derived either a priori or through data-driven approaches. This does not appear to be the focus of this paper, so I suggest that authors revise the title accordingly.

3. Abstract:

* The aim listed in the Background section needs to be updated to better reflect the aims of the study, which go beyond reporting diet practices and also look at sociodemographic differences.

* Authors should include at least some details as to the type of food consumption data collection methods (e.g. FFQ, 24 hour-recall, etc.) they used, and what types of foods were the focus for these analyses (e.g. away-from-home foods, food groups, macronutrients, etc.)

* The last line in the Methods section of the abstract describes the study population and location and should be moved to the beginning of the paragraph (and include a total sample size).

* Unclear why the authors are referencing cacao in the conclusion paragraph when no reference has been made prior in the abstract
4. **Introduction:**

* The introduction is well written but would benefit from additional information about the current environments, lifestyles, and health outcomes of Kuna Indian communities, which may better justify the need to conduct a dietary assessment in these communities. Kuna-specific information seems to be lacking; the authors refer to trends among indigenous communities worldwide, which is okay but does not help the reader understand, specifically, the livelihoods of the Kuna Indians today.

* The authors should also revise their sentence on their study aims (lines 25-29) to include looking at differences by sociodemographics.

5. **Methods:** Overall, readers need much more information regarding the methods for this study and the analyses in order to determine the quality of the study. Notably, I have not seen the sample size listed in the manuscript, which should be done in the abstract and methods sections. The study design should also be stated in the methods section.

* **Data collection**

  i. Authors need to provide more details about data collection methods, and not only a reference to a previously-published paper. Notably, readers will need to know the type and description of the paper-based survey (and if it was a valid and reliable tool), how long the survey took to complete, how it was administered (read aloud or the participant completed it), and specifically what psychosocial, demographic, and health outcome measures were collected.

* **Recruitment**

  i. What clinic? This is the first time this is referenced in the manuscript and needs to be explained

  ii. Did participants receive incentives to participate?

  iii. This is the first mention of biological measures being collected, which should be explained in the data collection section above.

* **Outcomes**

  i. I presume that total caloric intake was not collected?

* **Statistical analysis**

  i. I would like to see the authors engage in a more rigorous statistical approach, particularly covariate-adjusted models. Currently, the results are strictly descriptive and there is an
opportunity to observe some of the relationships of sociodemographic factors with diet intake in adjusted models.

ii. Likewise, there are additional nuanced ways to present this data that may provide more meaningful results, especially for developing interventions/programming. For example, Table 1 could present characteristics by sex, as the authors later note that men often travel off the island for work and would, therefore, be differentially influenced when it comes to dietary intake.

6. Results:
* I am not sure it is necessary to repeat data in the manuscript that is already reported in Table 1. Instead, I suggest the authors summarize Table 1.
* For the paragraph describing Table 3 (and throughout the manuscript where appropriate), I suggest the authors switch the order in which they talk about the associations/correlations (e.g. 'age was correlated with vegetable consumption'), so that the outcome (food group) is reported after the predictor (sociodemographics), which is more intuitive. I have found that this writing practice makes comprehension easier for the reader.
* The report of findings from Table 3 needs to be presented in a more organized way, and without repeating what is already reported in the table.

7. Discussion:
* The authors need to incorporate more discussion about potential reasons that intake of Western foods is high among Kuna Indians, including but not limited to secular trends in the island areas where they live, lifestyle changes, environmental changes, etc.

8. Tables/Figures:
* Table 1:
  i. Please include the sample size in the title and corresponding sample sizes for the table cells
  ii. Educational attainment and monthly income need to be defined in a footnote
  iii. Physical activity can be added to this table, as it was discussed as a covariate. Are there other available variables to describe the population, like health status, etc.?
Table 2:

i. Results would be better represented in a bar graph

ii. Also, I presume the authors are reporting daily consumption of each of the food categories? This needs to be reflected in the title.

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Please indicate the quality of language in the manuscript:

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