Author's response to reviews

Title: Food venue choice, consumer food environment, but not food venue availability within daily travel patterns are associated with dietary intake among adults, Lexington Kentucky 2011

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Author's response to reviews: see over
Editor in Chief

Nutrition Journal

Thank you for the opportunity to revise and resubmit our manuscript titled “Food venue choice, consumer food environment, but not food venue availability within daily travel patterns are associated with dietary intake among adults, Lexington Kentucky 2011”. We have responded to reviewer #1 and #2 comments and suggestions and have aimed to improve the manuscript suitable for publication. We appreciate the expertise and hope that the revised version meets the standards of Nutrition Journal.

We have revised the table format and included more detailed information within the methods and discussion. We have provided a point by point comment below based on reviewer comments.

Thank you again for your time and energy in reviewing our manuscript.

Regards,

Dr. Alison Gustafson

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Reviewer #1

Thank you for the opportunity to make corrections to improve the manuscript for publication. We have strived to make all necessary changes with a point by point commentary for each suggested revision. While trying to add depth and detail to the manuscript we have also tried to remain within the word limit. We hope the following additions have added to the robustness of the manuscript.

Compulsory Revisions:

Lines 77-78, provide a conceptual definition for “neighborhood”. It is hard to believe that an individual’s activity space is their neighborhood and does not include areas outside their immediate neighborhood.

- We have added a conceptual definition for neighborhood. We also agree with your comments about including areas outside their immediate neighborhoods. We recognize the need for use of GPS to understand travel patterns while also measuring neighborhoods organically since individuals’ define their neighborhood not with census or geographically derived boundaries.

Critical variable is omitted: household composition

- We agree that ideally we would have number of children in household as well as co-habiting, single, and other domestic arrangement as a cofounder in analyses. We have added this as a limitation.

It is incorrect to suggest that the use of census tract equates to “neighborhood.”

- We agree with your comment and insight. Previous research has used census tracts to define neighborhood while in this study we are exploring the use of daily travel patterns. We have reviewed the manuscript to make sure it’s clear that census tracts are not being equated with neighborhood.

How accurate is the 3-day travel logs to “usual travel”?

- This is a very valid point and one that needs to be addressed in future studies validating the use of GPS as usual travel relative to other technologies as well as the length of time needed to determine usual daily travel patterns. We have added this as well to the limitations. Line 402-404

Provide greater explanation for dietary variables, such as what constituted sugar-sweetened beverages.

- We have added the following explanation from the NHANES 2009 dietary screener. meat [pork, beef, ham, or sausage], high fiber cereal [cereal name was given and fiber content was assessed with diet database to determine grams of fiber], baked good and sweets [doughnuts, pastries, chocolate, ice cream, cookies, cakes, pie, or brownies] and sweetened beverages [regular soda or pop but not diet soda, sweetened fruit drinks,
sports or energy drinks, such as KoolAid, lemonade, HiC, cranberry drink, Gatorade, Red Bull or Vitamin Water, and coffee or tea that had sugar or honey added to it).

Provide rationale for construction of dietary cutpoints based on distribution of data instead of dietary recommendations.

- We ideally wanted to use Dietary Guidelines but the distribution of the data did now allow since there would have been zeros for several categories. Thus the categories were created based on median cut points. We have added the following: The data were skewed and not evenly distributed amongst the various categories and thus the median value was used for each food category.

Discuss shared behaviors, such as fruit and vegetable purchase and purchase of other healthy foods.

- We have added a discussion of shared behaviors in the discussion section. The following has been added:

This manuscript did not capture the complex behavior of food purchasing clustering habits. Individuals who purchase large amounts of fruits and vegetables most likely purchase lower calorie, nutrient dense items at the same time. This type of dietary pattern was not captured and be more reflective of a healthy lifestyle rather than focusing on one food group.

The authors must include a discussion of trip-chaining and the clustering of activities when traveling.

- Thank you for your suggestion and the following has been added:

Additionally, the GPS data logger did not capture more complex travel behavior such as tours and trip chains.[36, 49] Trip chains or tours often involve such complex travel behavior as traveling from home to a coffee shop, dry cleaner, grocery store, and ending at the office. Future studies need to capture and examine travel patterns for purchasing food to improve our understanding of how individual travel patterns influence food venue choice.

Minor Revisions

Abstract:

Line 34, what type of interactions?

- We have changed this word to more explicitly state the following: individuals’ food shopping behavior and activity within the retail food environment.

Line 35, change six dietary variables to “dietary indicators”

- We have changed to dietary indicators
· Lines 47-53, provide numbers and OR
  • We have added in OR, 95% CI, and numbers for results
· Line 54, no connection in results with sugar-sweetened beverages statement in conclusions
  • We have removed the sugar-sweetened beverage statement within the first line and reworded the conclusion to the following:

Introduction
· Line 91, determinants of what?
  • Added dietary intake. Line 97
· Line 98, sell more unhealthy than what?
  • We have added: such as snack foods, cake, cookies, and other processed food
· Line 100, check marketing literature for “decision to buy”.
  • We have added a references to the buying decision in the introduction with the following: Impulsivity, marketing, place, promotion, price, family and culture all influence the decisional balance between a healthy item and an unhealthy item.[27-29]
· Line 106, which food venue?
  • We have changed this to now read:

where primary and secondary food shopping takes place,
· Line 107, add “who” between those and travel
  • We have added “who” line 114

Methods
· Line 166, it is not clear what is meant by “with a small urban center as the county seat.” This is contrary to author’s response that the Lexington is the entire county.
  • We have changed this to reflect that Lexington is a smaller urban city. We want the reader to know that Lexington is a small urban city with resources although the towns close by are rural.
· Line 130, change “are” to “were”
  • We have changed are to were. Line 137
· Line 134-135, is not clear
We have revised this to now read:

Participants were eligible if they met the following criteria: 1) have lived in Lexington for at least one year; 2) indicated that they were not moving in the next year; 3) 18 years of age or older; 4) and had no reported health condition which would preclude the participant from their daily living activities.

· Response rate is actually 153/1400 and completion is 121/1400. 79% is overstating the actual response rate.

· We have changed this to reflect 153/1400 -11% response rate

· Rewrite and reorder the section on Food venue availability

· We moved the food venue availability section in front of the GPS data logger section. We have revised this section for clarity.

· Line 185, Walmart is not considered a supercenter; however, Super Walmart is.

· We have added the word Super Walmart as that was the categorization from NAICS codes that we used.

· Provide justification for the exclusion of dollar stores.

· We have provided a justification for not including dollar stores with the following sentences and reference:

Dollar stores were not included in this analysis since the RFEI (described below) has not used this type of food venue before. However, future studies need to consider the use of this non-traditional food venue as a substantial source of calories and food purchases.[31]

· How did the activity space compare, weekday vs. weekend?

· We used all three days to create the average activity space. This allowed for us to create a usual pattern. However, we agree that this may not accurately describe usual activity as stated above and we have added this to the limitations. We agree that more work is needed to validate the reliability and validity of a three day record including weekdays and weekend day.

· Explain how price was standardized to include price per pound and per piece. Also, provide additional details, such as the lowest everyday price.

· We have added the following:

Price was given a score based on if the healthy item were equal or lesser in value relative to the less healthy item. Therefore the comparison was between products within the same category. Price was collected for example on the lowest priced milk of the same brand
across different sizes. In regards to produce price was collected for example on cantaloupe as either per pound or item depending on what was advertised. Thus, price was not all converted to ounces but was compared across categories of food.

Discussion

· Limitations section incomplete
  · We have added to the limitations with insightful comments from above and with additions which now include the following:

Table 1

· Check spelling (“separate” instead of “separate”)
  · Separated has been corrected

· Were was BMI in analyses
  · We did not conduct analyses on BMI for this manuscript

· Make three columns of data: percent, mean, SD
  · We have created three columns for Table 1 and Table 2

· Indent variables within bolded headings
  · We have indented variables

· Check spelling and capitalization
  · We have reviewed spelling and capitalization

Table 2

· Change title
  · We have changed the title to: Dietary and food shopping behaviors among study sample, Lexington, KY 2011

· Make three columns of data as suggested above
  · We have made three columns

· Change SD from (=/-) to (+/-)
  · We have corrected this mistake
· Indent as suggested above
  
  • We have indented as suggested

Table 3

· Mention in text and delete this table
  
  • Per reviewer #2 and previous suggestions from reviewer #3 these findings were included. We are open to removing this table however, other reviewers suggested including this table and including the null findings within the results. At this time we have retained the table within the manuscript.

Tables 4 and 5

· Reorient table with dependent variable across the top
  
  • We have reoriented the tables

· Explain bolded values and add * to legend
  
  • We have provided explanation of bold and * in legend
Reviewer's report:
This manuscript is much improved from the earlier version. One last suggestion pertaining to the results shown in Table 3 would be to state the findings, even if they were negative, and not simply say that no significant associations were found.

- We have included the null findings within the results section

My only other suggestion is that the authors may want to carefully review their manuscript for typographical errors. Specifically, I noticed some instances where the word "individual's" was incorrectly used instead of "individuals" or "individuals'". I also noticed a change in tense in some sentences in the methods section and the results section.

- We have revised the use of individuals and reviewed tense within methods and results