Author's response to reviews

Title: Using Direct Observations on Multiple Occasions to Measure Household Food Availability among Low-Income Mexicano Residents in Texas Colonias

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Author's response to reviews: see over
Response to Associate Editor

We thank the Associate Editor for taking time to review our manuscript and providing insightful comments and suggestions for improving our article. We will address the comments.

1. I re-examined the paper and I can not find arguments why it is so important to capture detailed changes over time of foods available in a household. The authors make the comparison with measuring food intake on the individual level. However on the individual level it is important to measure the variation as the foods are translated into nutrients and nutrient intake is associated with disease or health risks. To measure this association measuring the intra individual variation is important.

RESPONSE: We identify areas of the paper that make the argument for the importance of collected detailed changes over time.

a. 2nd paragraph of intro: “As French and colleagues point out, the household food environment is an intermediate level between the retail food environment and individual dietary intake [20]. Despite research that has found that the accessibility to foods in the home is one of the most important determinants of eating behavior [16, 23], the preponderance of published studies focus on access to the retail food environment [3, 24-36].”

b. We pointed out that most of foods consumed inside the home; therefore home environment is more important.

c. 3rd paragraph of intro: “Research has shown that the availability of foods in the home are important to nutritional health [22, 40-44], and may indicate dietary behavior of children, adolescents, and adults [16, 22, 42, 45-49].”

“However, a single HFI is unable to address intra-household variation during the month in food resources, which may be influenced by weekly or bi-weekly shopping trips, economics (e.g., income cycles), demands of work outside the home, household refrigeration and storage, family events such as celebrations or family traumas and emotional events, bouts of acute illness, transformations in domicile, and food store access [64-66]. As French and colleagues pointed out, a single HFI does not capture variation in household food availability over time, much like a single dietary recall would not capture variations in dietary habits [20, 67].”
d. Last paragraph of intro: “..the primary objective of this pilot study was to examine the feasibility and value of conducting weekly in-home assessments of household food resources over the course of one month among low-income *Mexicano* families in Texas *colonias.*”

2. When you want to measure nutrient intake on the group level (e.g. in epidemiological studies) measuring the intra individual variety is already less important.

RESPONSE: Our interest is ultimately in measuring nutrient intake on the individual level, where intra-individual and intra-household variety is important.

3. The paper does not make clear why it is important to capture the variation over time in availability of foods (e.g. is this for nutritional advice on the household level? Is it for research purposes and which purposes? Is it for policy purposes to make a point for decision makers?). The proposed methodology (several observations) is very time consuming and thus expensive, so we need good arguments to defend this methodology).

RESPONSE: The following was added:

a. Abstract conclusion: “Use of multiple household food inventories can inform the development and implementation of nutrition-related policies and culturally sensitive nutrition education programs.”

b. Introduction: page 5 – “...through nutrition education and policy.” The following was added to page 6: “Understanding intra-month variation in household food availability will better inform the development and implementation of nutrition education and nutrition-related policies.”

c. Discussion: “Understanding the variation over time in availability of foods in the household is critical to informing decision-makers, formulating nutrition-related policy, and developing and implementing nutrition education programs that facilitate the consumption of healthy foods.”

d. Discussion: “In targeting low-income and limited resource individuals and families, multiple household food inventories may be valuable for
informing decision-makers, developing nutrition-related policy, and improving nutrition education.”

4. Depending on the use of the information gathered with this methodology the paper can make its point with less tables and with less detail in the tables. Only when it is really important to know that e.g. bananas are always available in the household the detailed tables are useful. If it is sufficient to know that always fresh fruits are available, less detailed tables can be made.

RESPONSE: We respectfully disagree with the Associate Editor and believe that the detail provided in the tables is necessary. We also believe that this will become a frequently accessed and cited article.