Reviewer's report

Title: Relationship between Convenience Store Utilization and Access, and Nutrients Available from Household Food Supplies in Texas Border Colonias

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Reviewer: Stephanie Jilcott Pitts

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Overall:
This is an important study examining key steps on the causal pathway from access to food stores, use of food stores, and foods/ nutrients available in the household.

Title:
• The current title focuses on convenience stores only; however the purpose states “Thus, our study examined spatial access to traditional, convenience, and non-traditional retail food stores, food shopping habits, and nutrients available in household food supplies among 50 Mexican-origin families that reside in Texas border colonias.” I would suggest either broadening the focus of the title to include all food stores, or narrowing the title to be more specific to your results. (“Convenience store use and access is associated with less healthful household nutrient availability in Texas border Colonias” or something like that.)

Abstract:
• What does the term “both positively and negatively” mean in the following sentence? “These findings suggest access and utilization of convenience stores reflect, both positively and negatively, nutrient availability in household food supplies in Texas border colonias.”

Introduction:
• Perhaps a paragraph on what is known regarding the links between access to and use of / frequency of use of food stores and subsequent purchase or consumption behaviors is needed. It seems the logical flow goes from (1) food store access to (2) food store use / shopping patterns to (3) food availability in the household. Consider restructuring the introduction to include a paragraph on each of these.
• At the very least, start a new paragraph with “Household food supplies”…this seems to be a logical break in the story that is being told.

Methods:
• Consider restructuring the methods to be divided into “Study participants”, “food
store access”, “shopping patterns/ food store use”, and “household nutrient availability”.

• The methods could be improved upon by adding more detail. For instance, were the promotora-researchers who conducted the HFI trained? If so, how? Could the authors provide examples of foods included on the HFI? Was an IRR statistic calculated? How were available foods translated into nutrients? (I think most readers will know about NDS, but perhaps a simple phrase or two would help clarify.) What was the rationale for selecting the nutrients analyzed?

• A key question in my mind: Were the nutrients ‘standardized’ by the number of household members? It seems obvious that there would be more of all nutrients if there are more mouths to feed.

• When describing coverage, provide the different buffer sizes selected for analysis, and rationale behind selection of those buffer sizes (1, 3, and 5 mile buffers).

Results:

• The tables (particularly table 3) seem very focused on convenience stores. Was it that the investigation began as an analysis of all store types, but when researchers saw the number of convenience stores relative to other store types, they decided to focus more on those? I was expecting table 3 to be more about all the food store types, not just convenience stores.

• There are some sentences in the results section that should be moved to the Discussion section…such as “This suggests households that participate in NSLP may reduce their household food supplies since meals are provided for their children in school.” And “This may suggest that a similar behavior on the part of the parent.”

• Was access to stores associated with shopping behaviors? E.g., did those who lived closer to convenience stores shop more frequently at those stores?

Conclusions:

• I think I now understand what the phrase “both positively and negatively” means in the abstract and Conclusions section. Positively means that convenience stores are an important source of food for this group. Negatively means that access to and use of convenience stores is associated with less healthful food availability in the household. If this is the case, authors may want to either spell that out or delete the phrase.

• Exciting next steps!

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

I declare that I have no competing interests.