Reviewer's report

Title: Perceived Barriers and Facilitators of Using Dietary Modification for CKD Prevention among African Americans of Low Socioeconomic Status: A Qualitative Study

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Reviewer: Sarah Goff

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Review: Perceived Barriers and Facilitators of Using Dietary Modification for CKD Prevention among African Americans of Low Socioeconomic Status: A Qualitative Stud

*Major revisions
** Minor revisions
***Discretionary revisions

General: This study reports the results of a qualitative analysis of three focus groups (n=17 participants) held with low SES African American adults who had a family member with ESRD in Baltimore, MD. The manuscript is well written and is a topic of interest for anyone involved in health promotion and disease prevention. I think it would be helpful to the reader to quantify what the absolute risk for developing CKD is for first degree relatives of ESRD patients in this population to have better context for the risk participants face - perhaps in the Introduction. I was a bit confused as to the evidence behind the assertion that following the DASH diet reduces risk of developing CKD. Even though it seems common sense, the authors point out that the evidence that exists is primarily related to reducing decline in kidney function in patients with renal disease. Please clarify what the current evidence is for the DASH diet preventing CKD and what gaps this study addresses. It seems general barriers to healthy eating in this population are fairly well-described and perhaps the primary contribution is that these barriers are similar in this population. I wonder if these focus groups were done to inform a planned intervention to further develop the evidence base about diet efficacy (or effectiveness) – if so it might be useful to state that in the Methods. Finally I had several questions about the methods which are detailed below.

Abstract:

1. **Although income <25,000/year is listed as a criterion, the income categories in Table 2 cross over $25,000 making it hard to see what percentage of participants qualified based upon this criterion. Is it possible to change Table 2 to clarify this?

Introduction
1. **Line 69 – here might be a good place to put in the absolute (or relative to general population risk for developing CKD for patients with a family hx of ESRD and one or more risk factors)

2. *Line 70 – are there any other studies that show an association between diet and incident CKD? Any that looked but did not show an association?

3. Line 78-81 – this demonstrates that there is some baseline knowledge about barriers to following healthful diets in this population, which begs the question as to whether grounded theory is the most appropriate method for this study – please see Methods section for specific questions about description of methodology.

4. **Line 81 – should citation #29 also be in here – looks very related to the question being addressed by the current study.

Methods

1. **Are the authors familiar with the COREQ guidelines for reporting qualitative research results? – Much of the recommendations have been met in this manuscript, but it is helpful for the reviewer to see the 32 items in this checklist explicitly addressed.


3. *Was there a target number of participants/groups? If so, how was this arrived at, if not please explain further whether the number included was strictly a function of available participants or other reason.

4. *Please comment on the theoretical saturation – hard to reliably achieve with 3 groups, but were there reasons the authors felt this covered the breadth of themes for this population (e.g., homogeneous population, no or few new themes in the third focus group, etc.)

5. *Was there any stratification of groups (by gender/age/comorbidities/other)? If not, please comment on the strengths/weaknesses of this methodological choice in limitations.

6. *How was the interview guide developed? Was it pilot tested? If so, with whom, if not, why not? Was there flexibility to amend the guide based on experience in the previous focus group?

7. **The use of the educational prompt about kidney disease was a good plan. Was any health literacy data collected on participants? Assessment of the literacy level of the materials given to participants to read made?

8. *Are the questions in Table 1 the extent of the Interview Guide? If not, it might be useful to provide the whole Guide as an appendix rather than a table. I am wondering if relatively standard focus group tools such as ground rules, warm up questions, closing questions, etc. were used.

9. *Were the focus groups analyzed sequentially or conducted, transcribed, then analyzed all together?

10. **Were the audio recordings transcribed professionally, by a study team member, other?
11. **Citation #25 does not appear to be the right one for grounded theory.

12. *As the analysis section reads, it seems that each coder developed their own set of codes after reading the three transcripts but it is not clear when these code lists were converged...presumably some time before inter-rater reliability was assessed. Please clarify this process. Also, was line coding performed, coding of “chunks” of text, other. Please describe the process of identifying units of data to analyze.

13. *Were any anticipated concepts identified a priori based on prior literature?

14. *The analysis described does not seem to fully fit with grounded theory principles. There was some existing knowledge about barriers to healthy eating, self-risk assessment, etc. I wonder if the authors would agree that this is more of a “Directed Qualitative Content” analysis. It does not diminish the findings in any way, just better explains your approach I think. [Hsieh and Shannon Three approaches to qualitative content analysis]

Results
1. *How many were invited to participate?
2. *What was the inter-rater reliability?
3. **I am curious why obesity was defined as >30 pounds overweight (vs self-reported ht/wt to calculate BMI) – perhaps sensitivity to stigma?
4. I found the rest of Results well-organized, informative and interesting, with mostly well-selected quotes.

Discussion
1. *It is not entirely clear to me whether the recommendations participants made were in response to prompts or evolved organically – seeing the interview guide, including prompts would be helpful to understand these findings.
2. **Paragraph starting line 362 – it would be helpful here to know the relative/absolute risk for the participants in this study developing CKD – e.g., if their risk is 4X that of the general population but is only 10%, patients may (arguably appropriately) not perceive that as “high risk” even if health care providers do.
3. *It is not entirely clear (to this reader) what new contributions to the literature this study makes. It seems there is a good corroboration of previously identified barriers (one of the aims of directed qualitative content research) and maybe some new insights into ways to surmount barriers, but this should be clarified.
4. ***There is much in the obesity literature about barriers to healthful eating and wonder if there is a role for including some of this literature in framing what was found in this study.
5. **Limitations as mentioned previously and would consider commenting on the lack of evidence base for incident CKD prevention when following the DASH diet.
6. *Would suggest making clear in the Discussion that this study design is hypothesis generating primarily and that additional concepts or themes might be
generated by interviewing additional participants in the study area or participants in other settings.

Tables/Figures
1. *As previously, would consider putting the full interview guide/focus group protocol in as an Appendix rather than a table.
2. **As previously, would consider reorganizing the income data to show how many are in the <25K cutoff used as a criterion for eligibility.

References
1. **As previously the reference listed for grounded theory (#25) seems inaccurate.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

i have no competing interests.