Reviewer's report

Title: Race and region have independent and synergistic effects on dietary intakes in black and white women

Version: 1 Date: 1 July 2011

Reviewer: Maureen Murtaugh

Reviewer's report:

Major Compulsory Revisions

1Abstract-
Black women in the belt consumed 2.9% of energy from trans fat where in other regions it was 2.8 or 2.9, Therefore there seems to be an error in the last sentence of the results.

2. The conclusions are too general to be of any take home importance. They do not indicate the nutrients.

Consider the wording- race and region were associated with—Why not intake varies with race and by region or differs by as stated in the objective paragraph.

Lines 173-174-- This statement is not true. Trans fat was not different between blacks and whites in the stroke buckle. Alcohol consumption differences were at most 0.3% of energy.

181- 183, black women in the buckle region also had higher cholesterol intake than whites in the buckle region.

Table 5 is difficult for the reader to digest as is— beta weights vs lsmeans for regions/rages. Providing adjusted means for the different areas would allow the reader to judge better whether there is any clinical significance to the differences.

Line 184 suggests that race was a significant predictor for all nutrients, but table 5 indicates no significance between races for the 2 of the regions for both saturated and trans fats.

The way the discussion is written it implies that race itself and region itself are the reasons for differences in diet. Whereas other factors such as food availability, culture and custom may be associated with race and region and therefore we see associations.....

Line 222 This reviewer is not convinced that the adjusted mean differences in intakes between whites and blacks are clinically significant. Statistical significance is not interesting and is misleading. Adjusted means should be presented. The unadjusted means were 1.5 g different between whites and blacks.
Line 229—this must be an adjusted mean as in table 3 blacks had 12.8 g fiber per day??

231 and 232—this reviewer is not sure the clinical significance of 1 g fiber difference between whites and blacks in table 3.

The authors suggest that there is little risk of reverse causality. While this reviewer agrees that there would not be reverse causality related directly to race or region, reverse causality related to higher rates of disease by race or region and the resulting dietary advice is still possible. Is it not?

Finally, on line 292 clinical import is mentioned. However, statistical difference is not the important difference here. Focusing on statistical differences is not only not interesting but potentially misleading.

Discretionary revisions

Introduction: Differences in published reports of diet in blacks and whites may also reflect temporal differences.

The last two sentences of the introduction are redundant- suggest removing the first more generic sentence.

Line 55, does the author mean that data from 12,111 women was available?

256-258 are confusing—“In another study in the REGARDS cohort, Cushman et al [19] also showed smaller regional differences in stroke risk factors such as blood pressure and hypertension compared to the effect of race” -- are the authors trying to suggest that the differences are genetic related to race??

Conclusions—again please consider wording- as worded effect of region was modified by race is obtuse to the reader.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

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