

Reviewer's report

Title: Psychosocial Correlates of Dietary Fat Intake in African American Adults: A cross-sectional study

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Reviewer: Eileen Anderson

Reviewer's report:

Understanding the psychosocial correlates of nutrition behavior among underserved and at-risk populations is a priority. Social cognitive theory is especially useful as it accommodates diverse settings, cultures, and individuals. The authors have access to a large psychosocial and nutritional dataset from a random sample of African American adults that has the potential for furthering the understanding of fat intake in this population.

The methodology used had limitations but enabled the authors to reach a large and randomly selected sample adding considerable strength to this cross-sectional study. Although the version of social cognitive theory that informed the construction of the survey they administered is somewhat obscure – I could find no other research studies using it listed in a PSYCHINFO search – the items clearly tap familiar social cognitive constructs. The major weakness is the brevity of the survey.

My major concern with the paper is that even though the PRECEDE-PROCEED “model” is touted as appropriate and fitting for this population, the authors generally ignore the model and instead focus on individual psychosocial variables. The brief description in the paper suggests that the PRECEDE-PROCEED model posits that higher self-efficacy will lead to healthier behavior which will garner positive outcomes (incentives). One assumes that greater knowledge (an enabler) would also lead to higher self-efficacy healthier behavior, but perhaps only if coupled with beliefs/attitudes. Did this configuration of influences hold in the sample; was higher self-efficacy associated with more positive beliefs, higher incentives and better knowledge?

Major Compulsory Revisions

The authors must address the PRECEDE-PROCEED model (as opposed to individual variables) more fully in the introduction and then in the analysis and discussion. How does the model operate in this population – does it add anything beyond classical SCT to the understanding of their higher fat intake?

Since the variables are classic SCT variables – self-efficacy is almost universally found to be an excellent predictor of behavior – the paper's true potential is in showing how the variables relate to each other in influencing behavior in this important population. If the PRECEDE-PROCEED configuration is not successful (as the very low r-squared values reported in the paper suggest), then what role

should PRECEDE-PROCEED play in future endeavors? Does a statistical model more consistent with classical SCT do any better in predicting behavior? What are the implications of this (almost certain) failure? Even with the limitations discussed by the authors, there seem to be important points to make about the theories' shortcomings; see: Ogden, J. (2003). Some problems with social cognitive models: A pragmatic and conceptual analysis. *Health Psychology*, 4, 424-428.

It is unlikely that multiple-regression is the appropriate analytic approach, but it is difficult to tell from the description of the theoretical model provided. The sample size is large enough to employ structural analysis, which could test the assumed posited relations between the theoretical variables.

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

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests'