The Impact of Home Availability on Fruit & Vegetable Consumption in Low-Income Minorities

SOLTERO EG, MAMA SK, and LEE RE

Texas Obesity Research Center; Department of Health and Human Performance; University of Houston; Houston, Texas

ABSTRACT

Purpose: High availability of grocery stores and supermarkets has been positively associated with increased fruit and vegetable consumption, yet some studies have reported that the relationship between availability and consumption is equivocal or inconclusive indicating that availability does not directly translate to increased consumption. The purpose of this study was to investigate the mediating effect of home availability of fruits and vegetables on the relationship between neighborhood availability of supermarkets and grocery stores and fruit and vegetable consumption in low-income, ethnic minority neighborhoods. **Methods:** Data used in this study was taken from the Healthful Options Using Streets and Transportation in Our Neighborhoods (HOUSTON) study, which aimed to identify and assess relationships between environmental factors and dietary habits in African Americans (N=216) residing in 12 public housing developments in Houston. Participating residents completed the National Institute of Health fruit and vegetable screener to measure consumption. Neighborhood availability of grocery stores and supermarkets was assessed using the Goods and Services Inventory (GASI). Home availability of fruits and vegetables were measured using a survey. **Results:** Participants averaged 4.76 (SD= 5.52) servings of fruits and vegetables, total servings of fruit and vegetables available in the home averaged 21.12 (SD= 7.09), and the mean total of grocery stores and supermarkets was .04 (SD= .03). Bivariate correlations found that fruit and vegetable consumption was correlated with home availability ($r= .352$, $p< .01$). Neighborhood availability was not associated with consumption ($r= -.027$, $p<.69$) or home availability ($r= -0.036$, $p< .6$). Linear regression analyses showed that neighborhood availability of grocery stores and supermarkets was not associated with home availability or fruit and vegetable consumption, but home availability was associated with fruit and vegetable consumption ($p< .05$). **Conclusions**: Home availability is an important predictor of consumption in low-income neighborhoods, but does not mediate the relationship between neighborhood availability and consumption of fruits and

vegetables. A limitation to this study was the use of a mean number of grocery and supermarket stores for each housing development limiting our ability to observe the impact of neighborhood availability on home availability or consumption.

KEY WORDS: Food Environment, Fruits & Vegetable Intake, Home Availability