Personal and Environmental Factors Associated with Fruit and Vegetable Purchasing among Supplemental Nutrition Assistance Program (SNAP)-Authorized Stores in Pima County, Arizona

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Background
In Pima County, which includes Tucson AZ, 73 percent of the population does not meet the US Department of Agriculture guidelines for fruit and vegetable (FV) consumption.

Objective
To identify personal and environmental factors associated with the purchase of FVs.

Study Design, Setting, and Participants
In-person surveys with adult customers (N=72) were conducted at six independently owned SNAP-authorized food retail outlets in Pima County. The survey used a Likert scale (1-4, 4 being the highest) where participants rated the store’s environmental factors. Survey sites were purposefully selected based on SNAP-authorization, having three or fewer checkouts, and being within a 1-mile radius of a school. All adult customers (≥18 years) were invited to participate.

Analysis
Bivariate and multiple logistic regression models were used to test for an association between FV purchasing and personal (gender, age, race/ethnicity, SNAP participation) and environmental (FV quality rating, transportation, influence of FV display) factors. Bivariate logistic regression was used to test the associations between seven single independent variables and FV purchasing. Multiple logistic regression was used to include six independent variables in a single model, excluding SNAP participation.

Results
The majority of respondents were women (68%, n=49) and Hispanic (60%, n=43). Among SNAP participants (31%, n=22), the purchase of FV was low (36%, n=8).

In the bivariate tests, SNAP participation was the only variable not significantly associated with FV purchasing. The multiple logistic model demonstrated that females (OR=6.97, p=0.02), travel by car or bus (OR=6.50, p=0.03), a positive rating of FV quality (OR=15.65, p<0.01) and FV display (OR=5.31, p=0.03) were all positively and significantly associated with purchasing FVs. Age and race/ethnicity were not significant in the adjusted model.

Conclusions
Shoppers, especially women, who rated FV quality positively were strongly associated with purchasing FVs. Pima County grocers may improve the probability of FV purchases by allocating resources to improve fresh FV quality ratings.
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