

# Association between Food Shopping Motivators and Home Food Environment

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## Introduction

Consumers are consistently faced with array of decision-making when shopping for their food. Shopping decisions vary based on individual factors, household needs and the influence of the shopping environment<sup>1-3</sup>.

The home food environment plays an important role in influencing eating patterns and health outcomes<sup>4</sup>. Choices made by consumers when shopping are critical to the availability of healthy food in the home environment.



Recent studies have examined how the shopping environment impacts shopping behavior and the healthfulness of consumer's diet<sup>5-6</sup>. Little has been done in understanding individual factors that may motivate grocery decision and how this affects the availability and accessibility of healthy food in the home environment.

**Purpose:** This study examines whether the home food environment is associated with food shopping motivating factors such as taste, cost, convenience, weight control, and nutrition.

## Methods

**Study Design:** Cross-sectional study (Exploratory)

**Study Sample:** 123 participants aged 18 to 79 years, enrolled in a study to test the efficacy of the Utah Double Up Food Bucks program.

### Data Collection:

Telephone survey using :

- Nutrition Environment Measure Survey (NEMS-P)<sup>7</sup> questionnaire which included:
  - Food availability using a 19-item checklist about availability of certain food in the home.
  - Food accessibility using questions about how often they have food items (fruits and vegetables, chip and cookies) in different locations in their home.
  - Grocery shopping motivators (nutrition, cost, taste, convenience, and weight control) were assessed dichotomously: not important at all as (0) to somewhat important or very important (1).
- Food security status was measured using 6-item US Household Food Security Survey.
- Socio-demographic characteristics.

### Data Analysis:

- A composite home food environment score was derived by summing availability and accessibility to healthy food and deducting unhealthy access and availability (range -15 to 19, higher score means healthier home food environment)<sup>7</sup>.
- Household food security score was obtained by summing affirmative responses to the questions and deriving a scale score from this (2.86-8.48, lower score means food secure)<sup>8</sup>. These were dichotomized for analysis.
- Shopping motivators were dichotomized.
- Data were analyzed using SAS 9.4.
- Multivariable linear regression models were used.
  - The first model used food shopping motivators and food security as predictors of the home food environment.
  - The second model added demographics as covariates.
- Significance was set at  $p < 0.10$  because of the exploratory nature of this work.

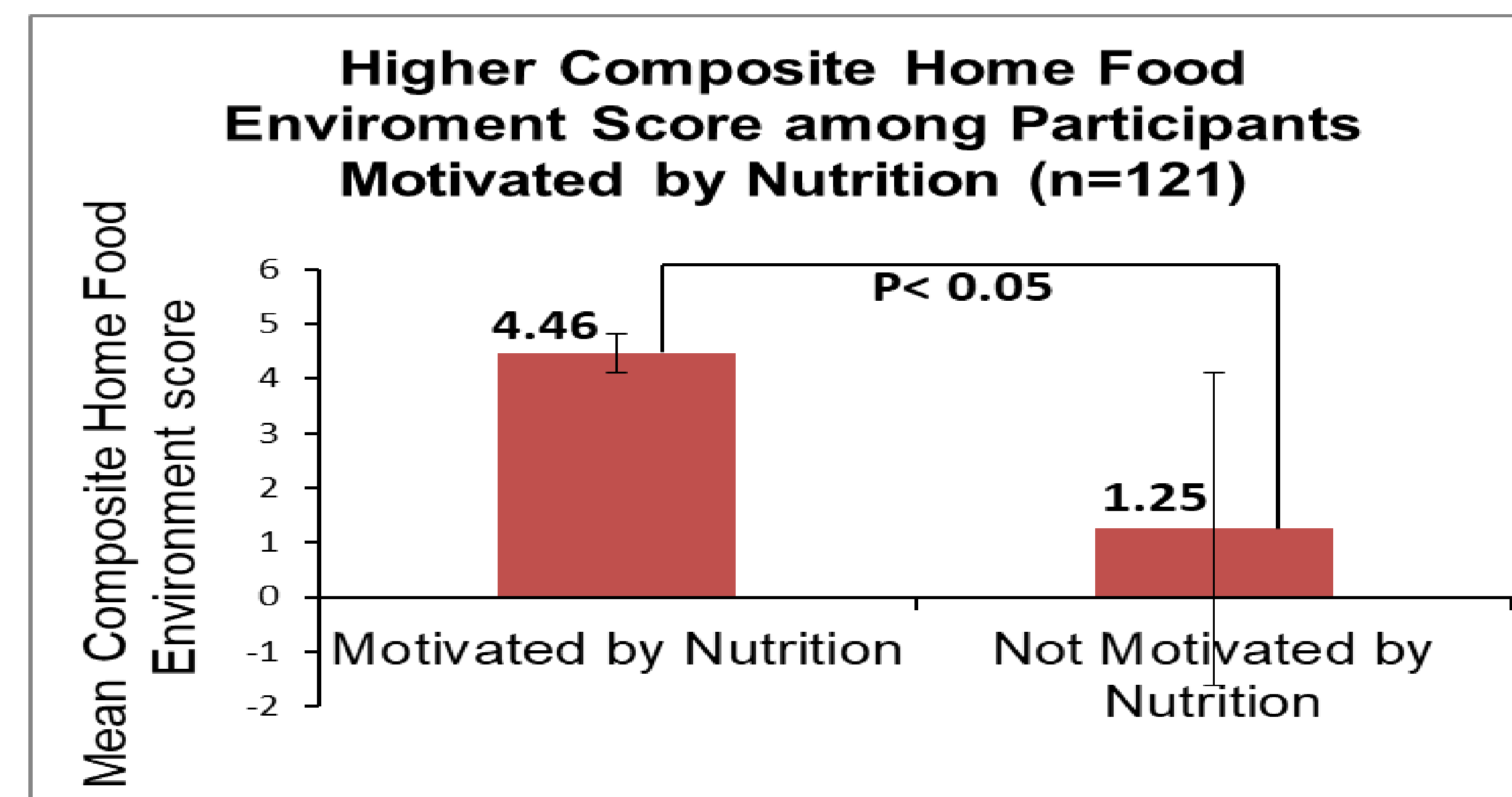
## Results and Discussion

- In the first model, motivation by nutrition when shopping and food security status were positively associated with improvement in the home food environment ( $\beta = 4.67$ ,  $p = 0.028$  and  $\beta = 1.45$ ,  $p = 0.058$  respectively).
- After controlling for socio-demographic characteristics food security status was no longer significantly associated with improved home food environment but nutrition motivation remained significant ( $\beta = 4.89$ ,  $p = 0.034$ ).

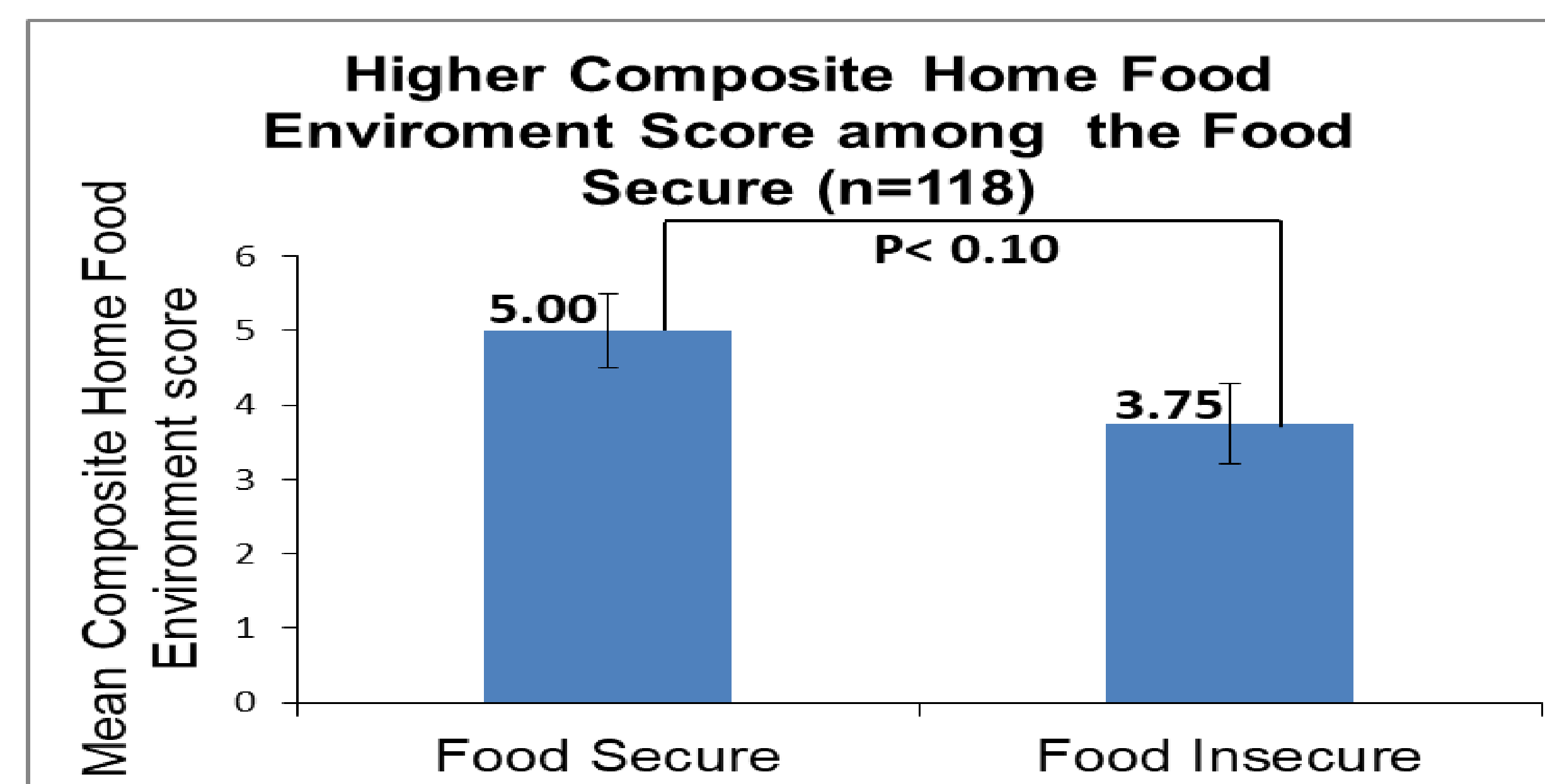
**Table 1: Variables Predicting Composite Food Environment Score Using Multiple Linear Regression**

Variables	Model 1 $\beta$ (SE)	Model 2 $\beta$ (SE)
Taste	-0.70(1.84)	-0.62(1.96)
Nutrition	<b>4.67(2.11)**</b>	<b>4.89(2.27)**</b>
Cost	-2.27(2.43)	3.22(-1.51)
Convenience	1.04(1.20)	0.87(1.25)
Weight control	0.67(0.72)	0.38(0.77)
Food Security	<b>1.45(0.75)*</b>	1.29(0.83)

Significant variable are indicated at  $p < 0.05^{**}$ ,  $p < 0.10^*$   
Model 1: using food motivators and food security as predictors; Model 2: Controlling for age, income, gender, education, ethnicity, adult and children in the home.



Error bar depicts standard error.



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## Conclusion

- Our findings indicate that low-income individuals who consider nutrition important when grocery shopping may have a significantly healthier home food environment.
- Efforts to increase perceived importance of nutrition when grocery shopping may be a useful tool to improve the home food environment.
- Further research should examine the effect of interventions to improve motivation for nutrition and its impact on availability and accessibility of healthy food in the home environment.

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### Partner Organizations:

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- Fair Food Network (FFN)
- County Health Departments
- Participating farmer's markets

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