

The Impact of Food Prices on College Students' Food Choices

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INTRODUCTION

Mulik and Haynes-Maslow (2017), noted purchasing healthy foods is often more expensive than unhealthy counterparts. The inability to afford nutrient-dense foods may lead to future health complications in university students, and this research can support the need to provide nutrition education to the college population. College students often have limited financial resources. College towns are also prone to possessing a variety of convenience and fast-food restaurants, most that offer calorically dense foods at a desirable price. The outcome of this research is for college students to be knowledgeable about how to make the most of their budget while buying nutrient-rich foods. An undergraduate honors research project was conducted through the Family and Consumer Sciences department of Olivet Nazarene University to investigate the current knowledge base and purchasing habits of university students as these topics relate to their ability to purchase nutritionally dense food.

PURPOSE

The purpose of this current study is to evaluate the relationship between food prices, food choices, and student knowledge base and ability to make affordable nutritionally dense purchases in order to determine the need for nutrition education as it relates to student food choice and affordability.

RESEARCH QUESTIONS

1. What is the relationship between a student's nutritional knowledge and their potential to purchase nutrient dense foods?
2. What is the relationship between a student's financial status and their potential to purchase nutrient dense foods?
3. What is the relationship between a student's meal plan usage and their off-campus purchasing habits?

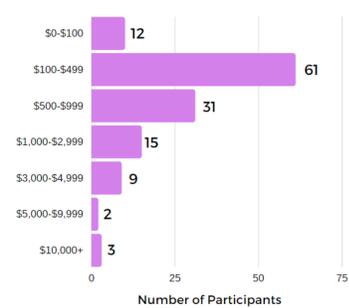
METHODS & DATA COLLECTION

Using a quantitative design, one online survey was administered via email in December 2021 to 2,658 students at a small private university; 133 usable surveys were collected. The survey included Croker's General Nutrition Knowledge Questionnaire (Kliemann et al., 2016) to evaluate students' understanding of nutrition and Mathew's Food Choice Priorities Survey (Vilaro et al., 2018) to determine factors of greatest importance regarding food choices. Research data was analyzed using independent samples *t*-tests to analyze the relationship between a student's nutritional knowledge and their ability to purchase nutrient dense foods, ANOVA to analyze the relationship between a student's financial status and their potential to purchase nutrient dense foods, Spearman's rho to analyze the relationship between priority factors in food choices, and the Chi-Square test of Association to analyze the relationship between which foods students would prefer to eat and which foods students would purchase.

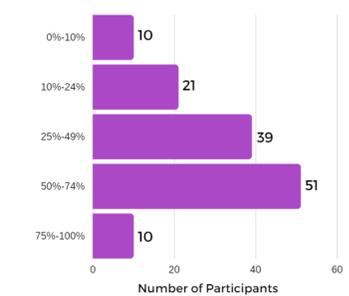
PARTICIPANTS

Participants consisted of university students among the student body of a small Midwestern university. Convenience sampling was used, and participants were recruited via email. One online survey was administered via email to 2,658 students, and 133 usable surveys were collected. Demographics included ages (\bar{x} =20.2 years, σ =1.48 years), ethnicities (109 participants or 82.0% Caucasian, 3 or 2.3% African American, 7 or 5.3% Hispanic or Latin Origin, 2 or 1.5% Asian, and 12 or 9.2% two or more races), gender (101 participants or 75.9% female, 28 or 21.1% male, 4 or 3.0% other), class ranking (30 participants or 22.6% freshmen, 29 or 21.8% sophomores, 28 or 21.1% juniors, 45 or 33.8% seniors, 1 or 0.8% other), nutrition class history (57 total participants or 43.5% have taken a college nutrition class, 74 or 56.5% have not), disposable income per school year (12 participants or 9.0% \$0-\$100, 61 or 45.9% \$100-\$499, 31 or 23.3% \$500-\$999, 15 or 11.3% \$1,000-\$2,999, 9 or 6.8% \$3,000-\$4,999, 2 or 1.5% \$5,000-\$9,999, 3 or 2.3% \$10,000+) meal plan usage per week (17 participants or 12.8% do not have a meal plan, 2 or 1.5% never, 35 or 26.3% five times or less, 43 or 32.3% six to ten times, 29 or 21.8% 10-15 times, 7 or 5.3% 15 times or more), and frequencies of income spent on food (10 participants or 7.6% 0-10%, 21 or 16.0% 10-24%, 39 or 29.8% 25-49%, 51 or 38.9% 50-74%, 10 or 7.6% 75-100%) were evaluated.

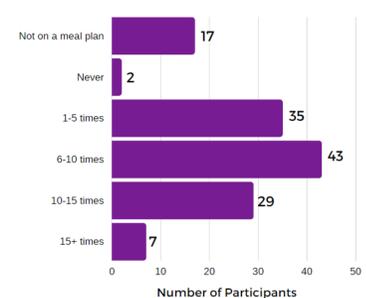
Participants' Disposable Income Per Academic Year



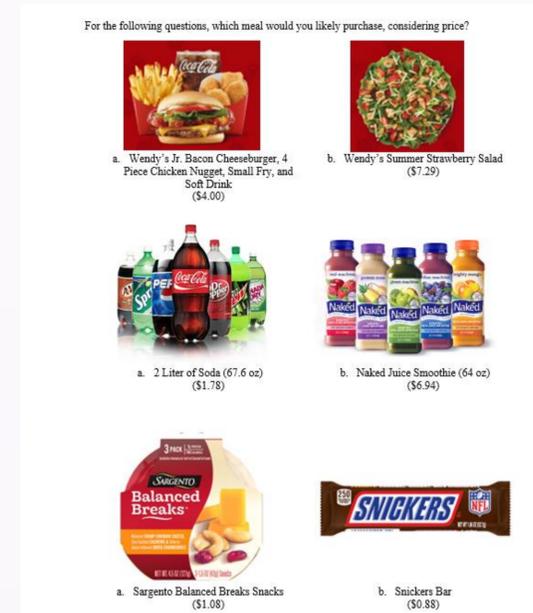
Participants' Income Spent on Food



Participants' Meal Plan Usage Per Week

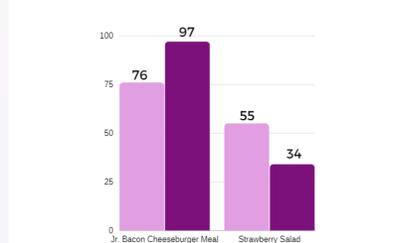


RESULTS

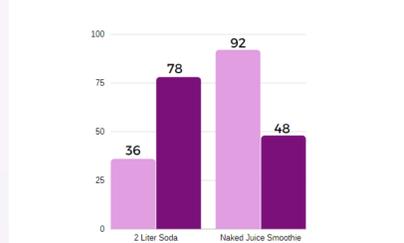


There was a statistically significant correlation between which products participants would prefer to eat and what products they would purchase based on price ($p < .001$). A statistically significant correlation was found between participants' health importance with importance of the physical appearance of food ($r=0.509$; $p < .001$) and freshness quality of food ($r=0.250$; $p < .004$). A statistically significant correlation was also found between participants' importance of food price with the convenience of obtaining food ($r=0.418$; $p < .001$).

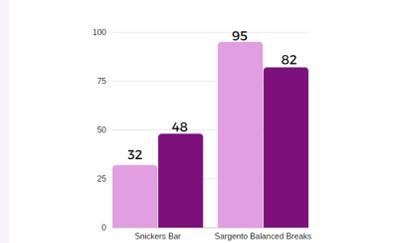
Wendy's Meal Choice: Meal Preferred (light bar) vs. Meal to Purchase based on Price (dark bar)



Drink Choice: Drink Preferred (light bar) vs. Drink to Purchase based on Price (dark bar)

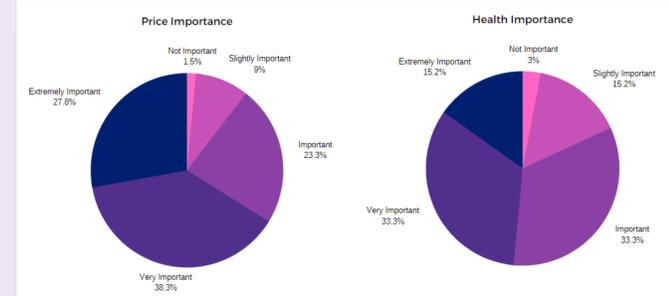


Snack Choice: Snack Preferred (light bar) vs. Snack to Purchase based on Price (dark bar)



RESULTS

Participants who completed a nutrition class in college prior to the study reported a higher mean score ($M = 12.8$, $SD = 3.63$) on the general nutrition knowledge survey than those who did not ($M = 11.6$, $SD = 3.81$). When asked to rank importance of price and health on a 5-point Likert scale (3 being important, 4 very important, and 5 extremely important), 31 participants, or 23.3% ranked price as important, 51 or 38.3% as very important, and 37, or 27.8% of participants, ranked price as an extremely important factor in food choices. Forty-four participants, or 33.3%, ranked health as important, 44 or 33.3% as very important, and 20 or 15.2% of participants ranked health as an extremely important factor in food choices.



CONCLUSION

Students' food choice ranking indicates price of food and physical health as important factors when making choices. The higher mean score of college students who received nutrition education compared to those who had not indicates the value of nutrition education in supporting students to make nutritionally sound choices based on health and economic needs.

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