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Abstract

The perceived high cost of healthier food items is a common barrier for individuals seeking to improve personal dietary patterns. FRUVEDomics Pilot Study examined food costs of college students enrolled in a non-diet free-living intervention. The 8-week dietary intervention focused on half the plate being fruits and vegetables, based on the USDA MyPlate. **Method:** Meal receipts were obtained weekly from participants (n=48) enrolled in the 8-week dietary intervention. Three participants were excluded from the analysis, based on exclusion criteria of medication use and campus dining meal plan (n=45). Diet compliance of intervention was rated by researchers based on fruit and vegetable intake from the participant's dietary food log, receipt matching, food pictures, weekly 1 hour RDN consult. **Results:** Diet compliant individuals, on average, spent \$95.73 per week compared to non-compliant individuals spending \$66.24 per week. A two sample t-test with unequal variances between compliant and non-compliant participants found compliant participants spent a statistically higher amount on food (p=0.0123). A regression analysis controlling for age, sex, BMI, and Appalachian or non-Appalachian, also found statistical significance between compliant and non-compliant individuals (<0.0001). **Conclusion:** Young adults compliant with the USDA My Plate guidelines, focusing on fruit and vegetable intake, increased food cost spending by ~ \$29.00 per week. These findings can contribute to research incentive design, program planning cost, and counseling of this population.

Background

Young adulthood is a transition period where an individual is gaining more responsibilities- especially in relation to dietary and economic practices. Practices learned and engaged in at this time of life have a large impact on establishing and maintaining long-term health benefits (1). However, many young adults do not participate in dietary and weight management behaviors that would decrease their chance of chronic diseases later in life (2,3). The reasons are multifactorial- with the increased cost of healthy foods being one concern.

Objective

The FRUVEDomics Pilot Study examined food costs of college students enrolled in a non-diet, free-living intervention. Participants were either 'at-risk' of, or diagnosed with Metabolic Syndrome. This population was chosen because they are at increased risk of chronic diseases, and healthy behavior techniques are a primary prevention technique.

Methods

48 West Virginia University students (18-30 years old) enrolled in an 8-week USDA MyPlate Dietary intervention.



Money spent on food (liquids, solids, alcohol, grocery, and restaurant) was tracked by **meal receipts and daily food logs**.

- Three participants were excluded from the analysis, based on exclusion criteria of medication use and campus dining meal plan (n=45).



Diet compliance and accurate cost of food items during intervention was rated by researchers based on:

- Daily dietary food log
- Receipt matching
- Food pictures for every meal to begin with, then sporadically as the study progressed
- Weekly 1 hour RDN consult.

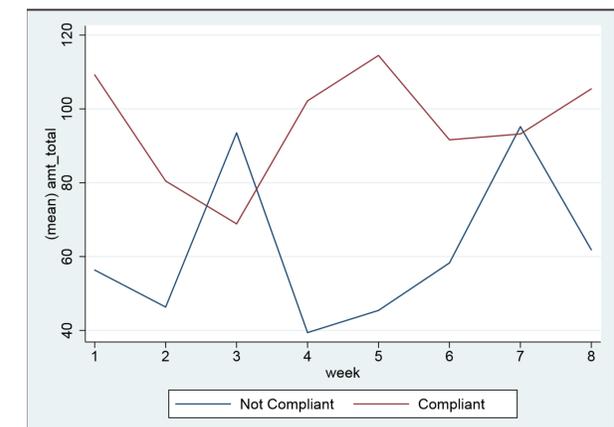
Results

Diet compliant individuals, on average, spent \$95.73 per week compared to non-compliant individuals spending \$66.24 per week.

	Number of Participants	Weekly Dollars Spent (mean)	Standard Deviation
Compliant	39	\$ 95.73	\$ 75.33
Non-Compliant	6	\$ 66.24	\$ 65.31

Results

A two sample t-test with unequal variances between compliant and non-compliant participants found compliant participants spent a statistically higher amount on food (p=0.0123).



A regression analysis controlling for age, sex, BMI, and Appalachian or non-Appalachian, also found statistical significance between compliant and non-compliant individuals (p<0.0001).

Conclusions

Young adults compliant with the USDA My Plate guidelines, focusing on fruit and vegetable intake, increased food cost spending by ~ \$29.00 per week. Possible reasons include:

- Eating healthy foods at restaurants can be more expensive
- More variety of foods (trying new foods)
- More consistent diet

Implications/Future Research

- These findings can contribute to research incentive design, program planning cost, and counseling of this population.