

# The Effect of Nutrient Labeling on Food Selection in Female College Students at a Campus Dining Center



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## INTRODUCTION

- Obesity rates have tripled among children & adolescents in the U.S. over the past 30 years (CDC, 2013)
- 69.2% of U.S. adults are currently overweight/obese (CDC, 2013)
- Nutrient posting in college foodservice could improve nutrition knowledge and promote healthier food choices

## PURPOSE

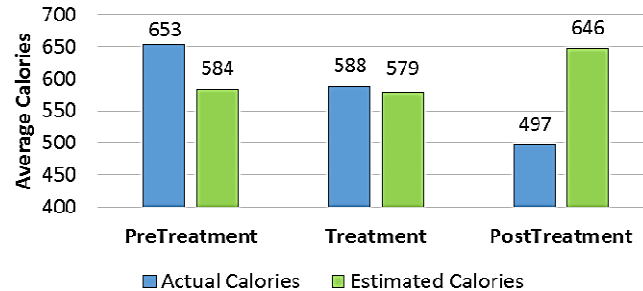
- Does nutrition labeling affect food selection patterns in female college students?
- Does nutrient labeling improve estimations of calories, fat, and sodium content of food?

## METHODS

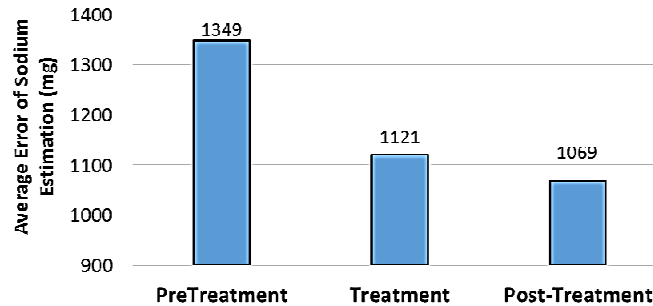
- Approval from the Institutional Review Board and informed consents were obtained for 600 female college students
- Study was completed in 3 stages: Pre-Treatment, Treatment, and Post-Treatment
- Treatment period included use of a feature board displaying nutrient content of 3 menu items and point-of-selection labels next to all items
- 200 females at each treatment were asked to complete a short survey asking them to estimate the nutrient content of their meal
- Accuracy of estimates were assessed using digital photography and Comp-Nutrition Nutrient Analysis software. Statistical significance was evaluated using analysis of variance



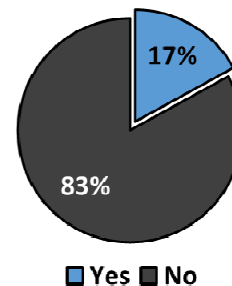
**Average Calorie Content Per Meal vs. Subjects' Average Calorie Estimation**



**Average Difference Between Subjects' Estimate and Actual Sodium Estimation (mg)**



**Did subjects notice the feature board?**



## RESULTS

- Average energy content of meals pre-treatment was significantly higher than post treatment (p value=0.0001)
- Subjects' ability to estimate sodium contents of their meal improved when the nutrition labels were displayed (p value =0.007) and persisted after the labels were removed (p value=0.001)
- No significant improvement of subject's ability to estimate the energy content or grams of fat in their meal was noted between the three treatments.
- Only 17% of surveyed subjects noticed the feature board at the entrance to the dining facility

## CONCLUSION

- Menu labels were associated with a slight decrease in the average energy content of foods selected
- Sodium estimations were the least accurate initially and improved the most
- More effective placement or incentives to read the feature board may increase effectiveness of this study
- Nutrition information in the food service could help college students choose healthier foods and develop dietary patterns that become lifelong habits, ultimately reducing obesity and chronic disease



## REFERENCES & ACKNOWLEDGEMENTS

- Center for Disease Control and Prevention (2013, Aug 16) *Overweight & Obesity*, Retrieved from: <http://www.cdc.gov/obesity/data/adult.html>
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