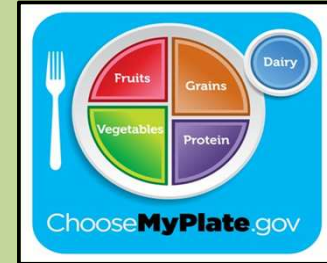# Correlation of Dietary Intake with Nutrition Knowledge
60 Introductory Nutrition Students

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Introduction

- Typical diets of college students do not meet recommended goals set out by the United States Department of Agriculture (USDA)[1].
- Nutrient deficiencies are prevalent among 63% of college students due to low fruit, vegetable, iron, and calcium intakes[2].
- A range of 75-95% of college students exceed recommended values of discretionary foods (i.e. total fat, saturated fat, salt, refined carbohydrates, and added sugars)[3].

Purpose

To determine the nutritional adequacy of a sample of college students and to determine if better nutrient intake correlates with higher nutrition knowledge.
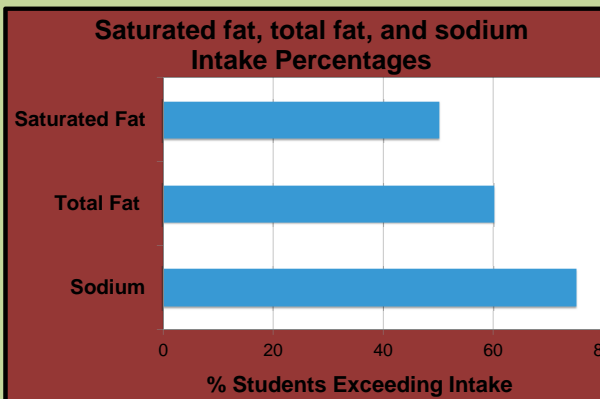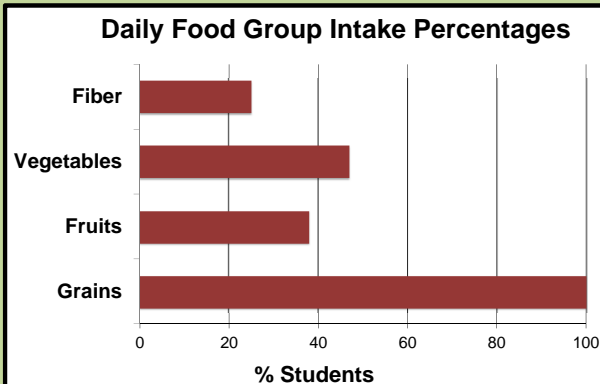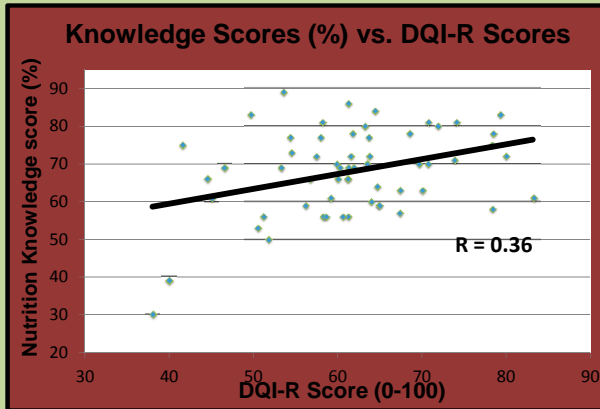
Methods

- Approval was obtained from the International Review Board.
- 60 introductory nutrition students participated.
- Students' 3-day diet records were assessed using Super-Tracker.
- Average 3-day nutrient values and food group intakes were compared to USDA guidelines using Dietary Quality Index-Revised (DQI-R) method (0-100-point scale).
- Subjects completed an electronic nutrition knowledge survey scored as a percentage (0-100%).
- Trends across male and female data groups were compared using independent sample T-tests.
- DQI-R scores were correlated with nutrition knowledge scores using T-test.

References

1. Haas E. (1995). http://www.cnpp.usda.gov/Publications/HEI/HEI89-90report.pdf
2. Hiza H.A., *et al.* (2012). *Journal of the Academy of Nutrition and Dietetics.* 113(2), 297-306.
3. Britten P., et al. (2012). *Journal of the Academy of Nutrition and Dietetics,* 112(10), 1648-55.

Results

Knowledge Scores (%) vs. DQI-R Scores

R = 0.36

Nutrition Knowledge score (%) vs *DQI-R Score (0-100)*

Daily Food Group Intake Percentages

Fiber, Vegetables, Fruits, Grains — % Students

Saturated fat, total fat, and sodium Intake Percentages

Saturated Fat, Total Fat, Sodium — % Students Exceeding Intake

Summary

DQI-R
- The DQI-R score for the sample was 62.5 ±10.7 [Range: 42-96].
- The mean DQI-R score for men was 56.7 ± 8.9 and for women was 68.3 ±12.8.
- Thee difference between male and female DQI-I scores was significant ($p=0.01$)
- Only 38% met goals for servings of fruits, 47% for vegetables, and only 25% consumed adequate fiber.
- Approximately 60% of students exceeded recommended intake for total fat, 56% for saturated fat, and 77% for sodium.

Nutrition knowledge survey
- The average nutrition knowledge score for the population was 69 ±10%.
- Males scored an average of 67 ±9% while females scored an average of 72 ±10%.
- Knowledge scores were not significantly different among male and female samples.

Nutrition Knowledge vs. DQI-R
- There was a weak correlation between students' dietary scores and nutrition knowledge (R=0.36).

Further Conclusions
- Nutrition knowledge appears to have little influence on students' dietary intakes.
- These tests were administered at the beginning of the semester; perhaps if the tests were administered at the end of the course, scores would have improved.

Acknowledgements

Thank you to the nutrition students for your participation.