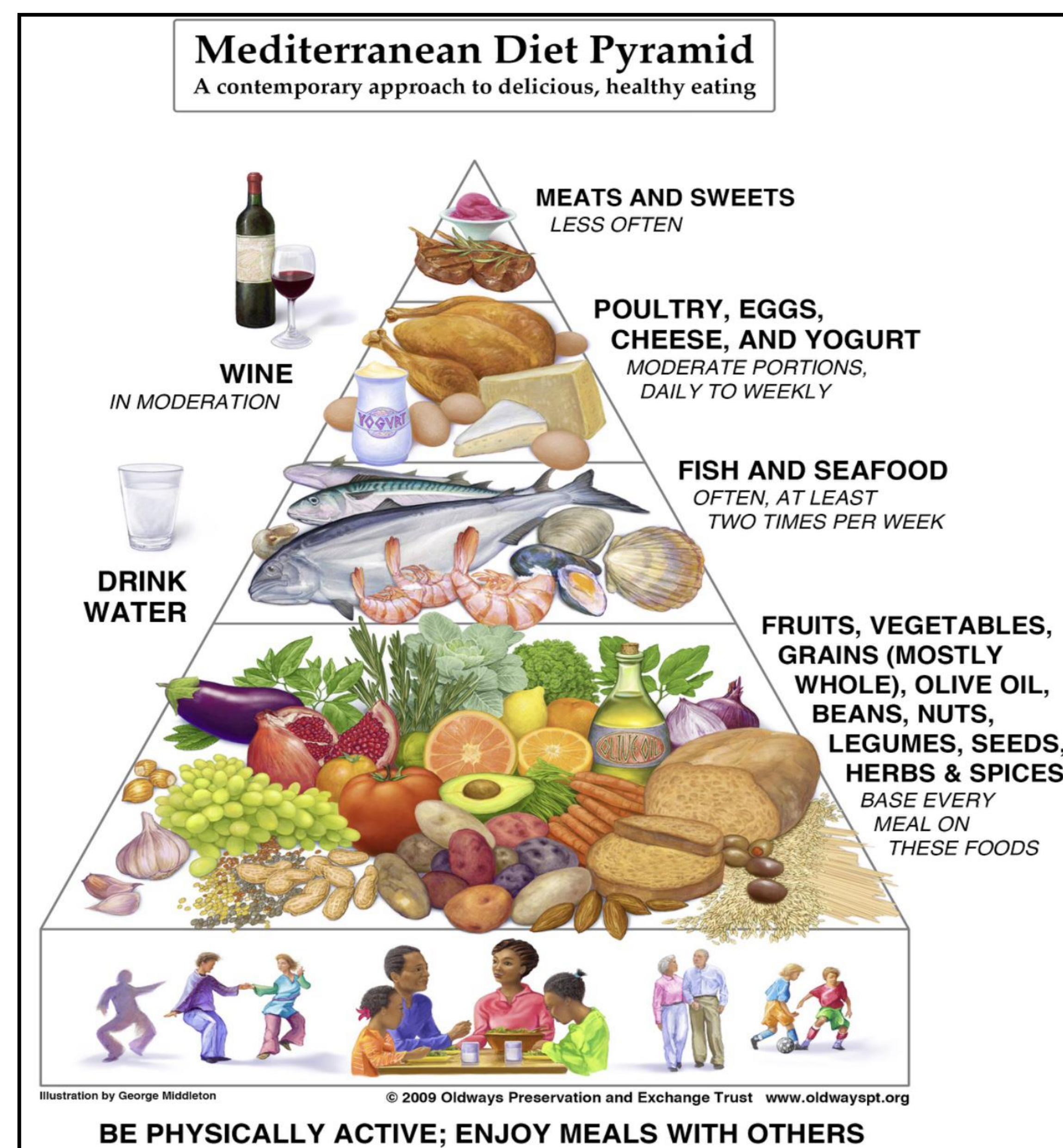# Determining Level of Adherence to the Mediterranean Diet by Individuals Living in the United States

S. Cowart, R. Seguin, A. VanBeber, L. Dart
Department of Nutritional Sciences
Texas Christian University, Fort Worth, Texas

Background

Research shows a correlation between adherence to the Mediterranean Diet and decreased risks for chronic diseases, such as cardiovascular diseases and diseases associated with chronic inflammation, such as metabolic syndrome, atherosclerosis, cancer, diabetes, pulmonary diseases, and cognitive disorders. Chronic diseases are responsible for 70% of deaths in the U.S., killing more than 1.7 million Americans each year. More than 75% of the $2 trillion spent on public and private healthcare in 2005 went toward the treatment of chronic diseases. By analyzing the dietary patterns of individuals living in the U.S. using the Mediterranean Diet Score and comparing to Mediterranean Diet recommendations, these study results could provide solutions for decreasing the risk of chronic diseases in the United States.

Purpose

To determine how closely components of the Mediterranean Diet are followed by individuals living in the United States.
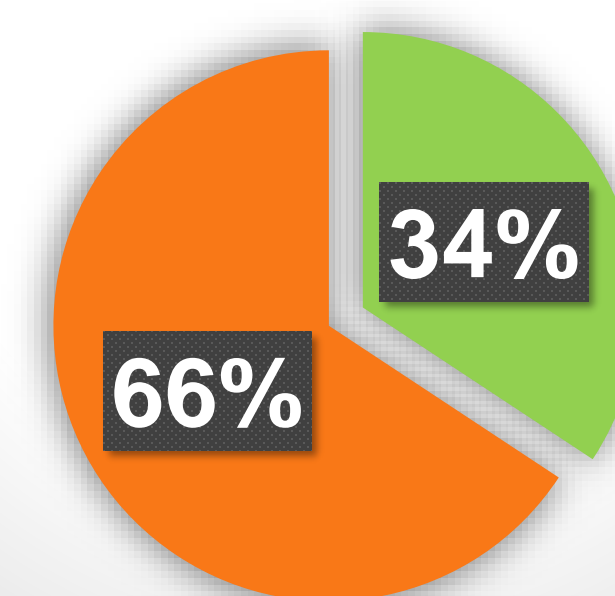
Methods

Data Collection: After providing informed consent for this un-blinded study, participants completed a 27-question online research survey via Survey Monkey®. The survey included questions pertaining to demographics, regular eating patterns, lifestyle habits, and included answer choices that coincided with the Mediterranean Diet Score.

Data Analysis: Comparative analyses of survey data were analyzed for trends in adherence to the Mediterranean Diet and risk for chronic diseases by frequency distributions and bivariate correlations of demographics against servings of fruits, vegetables, whole grains, dairy, legumes, animal protein, nuts, and water and alcohol intake, as compared to the Mediterranean Diet Score recommendations and USDA standards. Data was examined using SPSS ($p<0.05$) and ($p<0.01$).

What is the Mediterranean Diet?

Mediterranean Diet Pyramid
A contemporary approach to delicious, healthy eating

Rate Your Med Diet Score
with Oldways and the Mediterranean Foods Alliance

Participant Profile

- Participants included 258 females and males (86% and 14%, respectively).
- 69% identified as Caucasian, 21% Hispanic, 10% other ethnicity.
- 13% reported chronic disease diagnosis.
- High school diploma was the highest education earned by 13% of participants; 28% obtained some college, and 59% received a Bachelor's degree or higher.
- 46% percent were married; 41% were single.

% of Individuals Living in the U.S. Consuming Mediterranean Diet's Recommended Amount of VEGETABLES

34% / 66%
- > 2 cup of Vegetables standard
- Not meeting Medi standard

% of Individuals Living in the U.S. Consuming Mediterranean Diet's Recommended Amount of FRUIT

30% / 70%
- > 2 pieces of Fruit standard
- Not meeting Medi standard

% of Individuals Living in the U.S. Consuming Mediterranean Diet's Recommended Amount of WHOLE GRAINS

34% / 66%
- > 2 servings/day of Whole Grains standard
- Not meeting Medi standard

% of Individuals Living in the U.S. Consuming Mediterranean Diet's Recommended Amount of NUTS

36% / 64%
- > 1 serving/day of Nuts standard
- Not meeting Medi standard

% of Individuals Living in the U.S. Consuming Mediterranean Diet's Recommended Amount of LEGUMES

35% / 65%
- > 2 servings/week of Legumes standard
- Not meeting Medi standard

Results

- Positive correlations show that the more active individuals are, the more likely they are meeting recommendations for vegetables ($r=.200$; $p=0.001$) and fruit ($r=.147$; $p=0.019$) according to the Mediterranean Diet Score.
- A negative correlation ($r=-.154$; $p=0.013$) shows that individuals who are married are more likely to be meeting the recommended amounts of whole grains
- Positive correlations show that individuals who drink wine are greater in age ($r=-.124$; $p=0.047$), completed higher levels of education ($r=-.123$; $p=0.048$), and have higher levels of income ($r=-.161$; $p=0.009$).
- A positive correlation shows that individuals who earn more are more likely to meet recommended amounts of nuts ($r=-.144$; $p=0.021$).
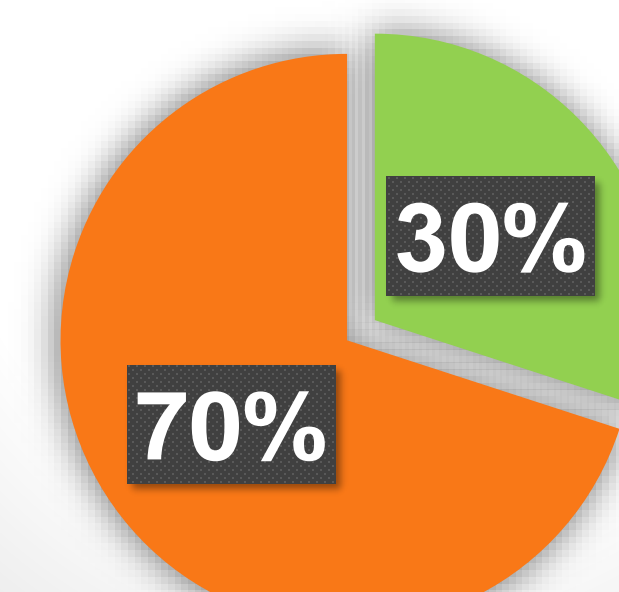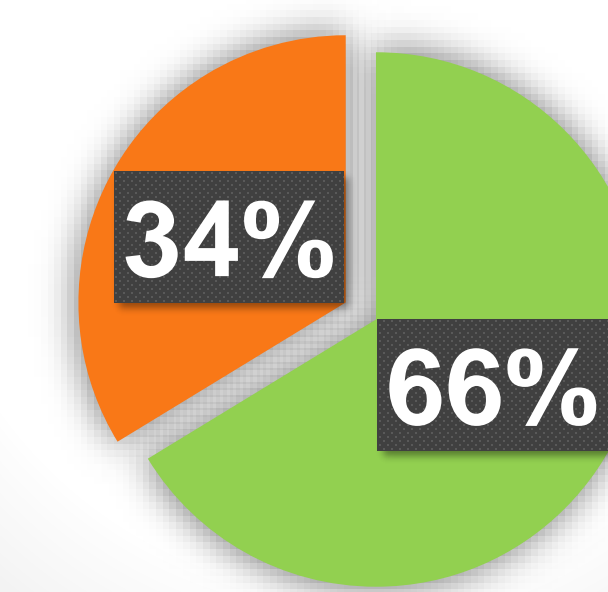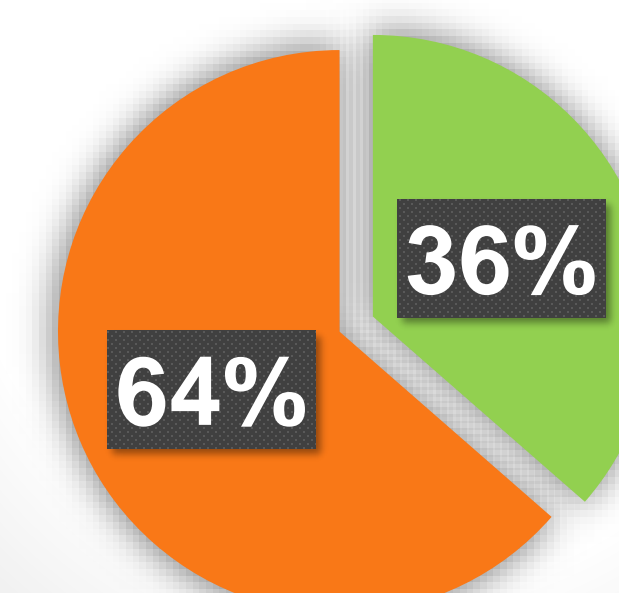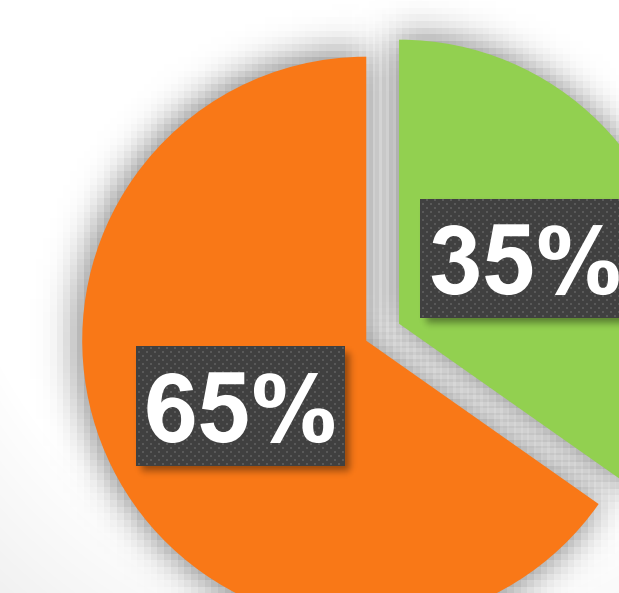
Discussion and Conclusions

- A limitation in this included the population of participants residing in a predominant region versus various regions in the U.S. Another limitation was the question concerning intake of animal proteins and types of fat consumed specified that participants should check "all that apply," but participants only had the option of selecting one answer. This skewed the results because it did not account for the variety of meats or the difference between unsaturated vs saturated fats.
- The positive correlation between physical activity with greater consumption of vegetables and fruits promotes that leading an active lifestyle results in healthier choices, which reflects the Mediterranean Diet and reducing chronic disease risk.
- In order to gain a more diverse perspective of individuals' diet and adherence to the Mediterranean Diet in the U.S., further research is warranted with a more diverse population living in various regions of the U.S., and more specific questions regarding individual diets.
- To lower chronic disease risk in the U.S., nutrition education efforts should focus on importance of increasing fruit and vegetable consumption and greater adherence to Mediterranean Diet principles.