Does knowledge and/or use of MyPlate correlate to better diet quality?

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Introduction

Healthier eating patterns can potentially decrease the prevalence and risk for chronic diseases, help support a healthy body weight and help individuals meet nutrient needs. In comparison to the 2015-2020 Dietary Guidelines for Americans (DGA), current eating patterns of Americans, on average, do not meet the recommended DGA. MyPlate is an infographic that is used to help educate the public and influence consumer food decisions by reinforcing the importance of a balanced, nutrient dense meal. Since its release in 2011, MyPlate familiarity has been found to range anywhere from 20% to 67% of the population. MyPlate is a commonly used tool for basic nutrition education. Significant improvements in diet, nutrition knowledge, physical activity, and knowledge of MyPlate have been seen in a variety of studies. The purpose of this study is to investigate demographic and diet quality factors in relationship to MyPlate awareness and use using the NHANES 2013-2014 data.

Methods

Once the proper datasets from the NHANES 2013-2014 database were downloaded and exclusion criteria were met, a new HEI variable was created and descriptive statistics were run using SPSS. Various statistical tests were then run to complete the analysis:

- **Chi Squared Tests:** to determine the relationship between various demographic factors: age, gender, race/ethnicity, education status, income and MyPlate awareness and use
- **Independent Samples T-Tests:** to explore bivariate relationships between HEI scores and MyPlate knowledge, if the participant has looked up MyPlate, and use of a MyPlate plan
- **Multiple Linear Regression Analysis:** to explore the ability to predict HEI score while controlling for demographic covariates of race/ethnicity, annual household income, and education level
- **Linear Probability Model:** to determine the association of total average HEI score with the likelihood of having heard of my plate, looked up MyPlate or tried a MyPlate plan

Results

**Chi Squared Tests**

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<tr>
<th>Gender</th>
<th>Education</th>
<th>Ethnicity</th>
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**Independent Samples T-Tests**

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<tr>
<th>Comparison</th>
<th>Heard of MyPlate</th>
<th>Looked Up MyPlate</th>
<th>Tried a MyPlate Plan</th>
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**Linear Regression**

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<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
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<td>β</td>
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**Discussion**

- **Awareness of MyPlate was found to be at the bottom (20%) of the range found in previous research (20-67%).**
- The moderately high percent of those who reported looking up (40%) and trying (39%) after hearing about it suggests that participants who know about MyPlate may be interested in learning more about it and using it for diet planning which is consistent with previous research.
- Diet quality findings are consistent with previous research in that:
  - Americans on average do not meet the recommended DGA
  - Americans tend to consume a diet high in fruits, vegetables and whole grains
  - Americans tend to consume a diet high in added sugars and refined grains
  - As education level increases, diet quality improves
  - Females consistently have higher HEI scores
  - As annual household income increases, diet quality improves
  - Race/ethnicity plays a role in diet quality but results did not support previous research by finding that non-Hispanic Asians had the best diet quality when compared to non-Hispanic Whites

**Conclusion**

- There was not seen to be a difference in diet quality whether a participant had or had not heard of MyPlate, had or had not looked up MyPlate, and/or had or had not tried a MyPlate plan.
- HEI score is not a significant predictor for having heard of MyPlate, having looked up MyPlate, or having tried a MyPlate plan regardless of if demographics are considered or not.
- Mean total HEI score is not a meaningful significantly predictor of someone having heard of, looked up, or tried MyPlate.

References