An Analysis of the Perceived and Objective Diet Quality of Young Adults in the United States

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Background

- The diet quality (DQ) of Americans falls short by a large margin, in nearly every dietary sub-component (Hiza et al., 2013; Wilson et al., 2015).
- The DQ of young adults (YA) is low, potentially the lowest of all adult sub-groups (Debe et al., 2001; Hiza et al., 2013; Kang et al., 2014; Larson et al., 2013; Lutz et al., 2017; Zamora et al., 2010).
- DQ is associated with risk of all-cause mortality, coronary heart disease, diabetes, stroke, and cancer (Chiuve et al., 2012; Schwingluck & Hoffmann, 2017).
- Low DQ also puts YA young at risk of weight gain, which is common during this life stage and is a strong predictor of overweight status in future years (Gray et al., 2009; Guo et al., 2006; Hankinson et al., 2010; Nelson et al., 2008).
- Healthy Eating Index (HEI) score is a valid and reliable measure that operationalizes DQ with a score based on 12 subscores (Guenther et al., 2013; Guenther et al., 2014).

Study Overview

Purpose: Explore the association between PDQ and ODQ in YA in the US.

H1 There will be no significant relationship between mean overall DQ score, as measured by HEI-2010, by level of PDQ (excellent, very good, good, fair, poor).

H2 There will be no relationship between mean HEI subscores (total fruit, whole fruit, total vegetables, greens and beans, whole grains, dairy (including soy products), total protein foods, seafood and plant proteins, fatty acids, refined grains, sodium, and empty calories) by level of PDQ (excellent, very good, good, fair, poor).

Table 1: Sample Characteristics (N=1261)

Table 2: Spearman Rank Correlations between PDQ & HEI Scores (N=1261)

Table 3: Linear Regression Model to Predict HEI Total Scores Based on PDQ, Ethnicity/Race, Education, Income, and Gender

Results

- Multiple regression analysis showed that excellent, very good, and good PDQ are significant predictors of total HEI score compared to the referent category of poor PDQ, but the full model only predicted 16.7% of the variance in total HEI score.
- The ordered logit showed that whole fruit, whole grains, and empty calories have a significant effect on the odds of having a higher PDQ (fair, good, very good, excellent) instead of a poor PDQ, but the increase in odds is low.

Diet Quality of Young Adults

- The mean HEI score for the sample (48.7) was well below the maximum score of 100, showing poor adherence to the Dietary Guidelines for Americans.

Diet Quality and Race/Ethnicity in Young Adults

- The model did not predict significantly different total HEI scores for Non-Hispanic Blacks and Whites, which is discordant with past findings (Debe et al., 2002; Kang et al., 2014; Sijima et al., 2012; Zamora et al., 2010).
- Mexican Americans may be less likely to rate their DQ higher (versus lower) than Non-Hispanic Whites, even though they have significantly higher total HEI scores.

Conclusions

Perceived Diet Quality in Young Adults

- YA may not give much consideration to their adherence to food group recommendations when making judgments about their DQ.

Perceived and Objective Diet Quality in Young Adults

- Most measures of ODQ are significantly correlated with PDQ, but the relationships are weak.
- YA who rated their diets “very good” had higher total HEI scores than those who rated their diets “excellent.”
- DQ in YA may differ by PDQ, sex, race/ethnicity, income, and education level. However, these variables do not have much predictive ability on HEI score. More research is needed to understand predictors of ODQ.
- Overall, there are significant relationships between PDQ and ODQ, but other variables play a substantial role in explaining these two types of DQ.

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