

# The Grocery Purchase Quality Index— A Tool for Assessing Household Food Purchases

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**Objective:** The Grocery Purchase Quality Index-2016 (GPQI-2016) is a new tool for assessing household grocery food purchase quality.<sup>1</sup> The objective of this study was to evaluate the GPQI-2016 using the Healthy Eating Index-2010 (HEI-2010) as the reference standard. Instead of using amounts of foods or nutrients, the GPQI-2016 is based on the expenditure shares for the 29 food categories found in the USDA Food Plans. It includes the eight food-based adequacy components of the HEI-2010 (Total Vegetables, Greens & Beans, Total Fruit, Whole Fruit, Whole Grains, Dairy, Total Protein Foods, and Seafood & Plant Proteins), the one food-based moderation component (Refined Grains), and additional moderation components for Sweets & Sodas and Processed Meats.

**Methods:** In 2012-13 the USDA Economic Research Service (USDA/ERS) conducted the National Household Food Acquisition and Purchase Survey (FoodAPS). Household members recorded all foods purchased or otherwise acquired for a week. FoodAPS includes information on prices paid for each food item in every purchasing event or transaction. The ERS food groups, also provided in the survey database, were used as the basis for mapping food items to the 29 food categories used in USDA Food Plan market baskets. These categories were slightly revised and then collapsed into the components of the GPQI-2016 so that the expenditure shares could be estimated. The 8-digit USDA food codes, provided in the survey database, were used to calculate the HEI-2010. After scoring purchases from food stores by participating households (n=4,187), using each assessment method, the Spearman's correlation coefficient was used to compare GPQI-2016 scores with HEI-2010 scores.

**Results:** The correlation coefficient for the total HEI-2010 score and the total GPQI-2016 scores was 0.72. For the component scores, the strongest correlations were found for four of the adequacy components, Total Fruit (0.84), Whole Fruit (0.91), Total Vegetables (0.84), and Whole Grains (0.83); while the correlations were somewhat lower for Greens & Beans (0.74), Dairy (0.72), Total Protein Foods (0.67), and Seafood & Plant Proteins (0.67). For Refined Grains, a moderation component, the correlation was 0.67 (p<0.01 for all).

**Conclusion and Implication:** Overall, the total GPQI-2016 correlated well with the total HEI-2010. The tool has potential for evaluating nutrition education programs and retail-oriented interventions when the nutrient content and gram weights of food purchased, converted to as-consumed forms, are not available.

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