Misclassification of Healthy Eating Based on Food Frequency Questionnaires and 24-hour Dietary Recalls in Older Men and Women

Elizabeth Procter-Gray

University of Massachusetts Medical School

MISCLASSIFICATION OF HEALTHY EATING BASED ON FOOD FREQUENCY QUESTIONNAIRES AND 24-HOUR DIETARY RECALLS IN OLDER MEN AND WOMEN

Elizabeth Procter-Gray, Barbara Olendzki, Kevin Kane, Linda Churchill, Rashelle Hayes, Annabella Aguirre, Hyung-Joo Kang, Wenjun Li
Department of Medicine, University of Massachusetts Medical School

OBJECTIVE: To examine the agreement in nutrient intake and alternative healthy eating indices (AHEI) between a self-administered Food Frequency Questionnaire (FFQ) and 24-hour recall (24HR) measurements of diet by gender among older adults.

METHODS: This is a cross-sectional observational study of 105 men and 99 women aged 65 and older living in urban and rural neighborhoods in Worcester County. Participants were queried on diet using both FFQ and 24HR. The healthy eating classification was compared between the two instruments by gender.

RESULTS: For men, the mean±SD of AHEI total score was 48.2±12.3 based on FFQ versus 34.7±10.2 based on 24HR. For women, the mean±SD was 47.9±10.1 based on FFQ versus 36.1±10.0 based on 24HR. Using 32 as the cutoff (40% of maximum AHEI score), 9% of men and 7% of women were classified as eating unhealthy based on the FFQ, versus 47% of men and 38% of women based on 24HR. Compared to women, men had larger 24HR to FFQ discrepancies in the nuts and vegetable protein subscore and white/red meat ratio, and smaller discrepancy in alcohol beverages subscore.

CONCLUSION: Agreements between FFQ and 24HR-based measures of diet quality were roughly comparable between men and women, though slightly better for women than men. Compared to 24HR, the FFQ tended to underestimate the proportions of older men and women classified as eating unhealthy and misclassified more men than women. Such limitations should be considered when the FFQ is used to study healthy eating in older age.

Contact:
Kevin Kane
University of Massachusetts Medical School
Kevin.Kane1@umassmed.edu