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Healthy Eating Index Scores in Older Adults during a 6-Month Weight Loss Intervention

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Learning Outcome: Describe HEI Scoring methods and their importance in accessing diet quality as well as implications for older adults and apply findings to future professional practice

Background: HEI scores are used to evaluate a set of foods using a 0-100 scoring system. The average score for Americans from data from 2015 is 59 out of 100 indicating the American diet does not align well with the guidelines.

Methods: A sample of 38 overweight, older adults completed 3-24 hour diet recalls with specific dietary intakes analyzed both pre-intervention and post-intervention in NDSR 2017 software. Average nutrient reports and average food group count reports were used to calculate HEI scores using the National Cancer Institute population ratio methods. HEI scores were recorded for pre-intervention and post-intervention across four groups, DIET, DEX, EX, and CON. A 1 factor ANOVA test and post-hoc Tukey comparison between treatment groups were conducted.

Results: DEX was the only group with notable HEI score differences pre to post. There was no evidence to conclude there is a difference between pre and post scores for any other treatment group in the study. There was no evidence of differences between HEI scores determined by Gender or Age. While there is no statistical difference within groups from pre to post, post hoc Tukey comparisons indicate a difference between Control and DEX groups.

Discussion: The difference between CON and DEX groups may support weight loss intervention association with healthy eating behaviors. Though there is no significant correlation in the findings, it may post future research questions and implications for weight loss intervention practices for dietitians and health professionals.

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Identifying the Leading Sources of Saturated Fat and Added Sugar in U.S. Adults

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Learning Outcome: Identify the leading food sources of saturated fats and added sugars in the diets of US adults.

Background: The 2020-2025 Dietary Guidelines for Americans recommends limiting intakes of saturated fat and added sugars (SF/AS) to <10% total energy. Achieving these recommendations will require data-driven approaches to identify sources of SF/AS. We propose an ecologically valid dietary assessment method to identify the leading sources of SF/AS consumed by US adults to guide the development of a mobile app to track SF/AS intake longitudinally.

Methods: Two 24-hr dietary recalls (24HR) provided by U.S. adults aged 19 years and older (n=36,378) from the 2005-2018 National Health and Nutrition Examination Survey were analyzed. Foods and beverages reported as consumed were linked to the USDA Food Categories. Intakes of SF/AS were aggregated across both 24HR to identify food categories accounting for ≥90% of SF/AS for the total population; subgroup analysis for age, sex, and race, and ethnicity were also completed. Data were weighted to create a nationally representative sample.

Results: From the two 24HR, 95 discrete food categories accounted for > 90% of the total SF/AS intakes in U.S. adults. The top three sources of SF/AS were: cheese (8.3%), pizza (5.2%), and ice cream (4.4%) and soft drinks (26.0%), sweetened tea (6.9%), and fruit drinks (6.8%), respectively. These 94 food categories accounted for ≥90% of total SF/AS intakes for >88% of U.S. adults on 24HR days 1 and 2, respectively.

Conclusion: This analysis reflects a parsimonious approach to reliably identify SF/AS intakes in US adults. Food categories will be translated into a mobile dietary assessment platform based on ecological momentary assessment methods.

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Intuitive Eating in Adults with Food Allergies

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Learning Outcome: Theorize that adults with a medically diagnosed food allergy can eat intuitively even when prescribed a restrictive diet.

Background: The rate at which people are being diagnosed with food allergies (FAs) continues to increase. An elimination diet, which is the standard prescription for FAs, may impact the ability to eat intuitively. Intuitive Eating (IE) is a self-care eating framework that integrates instinct, emotion, and rational thought to develop a healthy relationship with food, body, and mind. The purpose of this cross-sectional study was to determine tendencies toward IE in adults with FAs.

Methods: Adults with FAs (n=54; 29.8±10.3y; 87% female; 94.4% white) completed an online survey assessing FA history and IE using the Intuitive Eating Survey-2 (IES-2). The IES-2 is scored on a 5-point scale; a higher score indicates stronger tendencies toward IE. Descriptive statistics and Pearson correlations were conducted; statistical significance was set at p<0.05.

Results: Participants' total IES-2 score was 3.21±0.49. Peanut severity (r=0.74, p=0.02) as well as the number of FAs (r= 0.34, p=0.01) were correlated with total IES-2 scores. No other relationships were observed.

Conclusion: Higher scores on the IES-2 indicate the tendency to eat more intuitively. The IES-2 score for adults with FAs suggest, even with multiple food allergies and when prescribed a restrictive diet, they can eat intuitively. This supports investigating the factors that contribute to a person with FAs ability to eat intuitively as well as the impact IE has on their overall health and quality of life. Furthermore, research on IE and other conditions that require restrictive diets is warranted.

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Longer Hospital Stay and Higher Mortality in Nutritionally At-Risk COVID-19 Patients

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Learning Outcome: Demonstrate relevance of nutrition screening in COVID-19 hospitalized patients.

Background: Early detection and treatment of malnutrition is essential as it has a negative impact on patient morbidity and mortality. Our goal was to determine the prevalence of malnutrition upon hospital admission and clinical outcomes in patients with SARS-CoV-2 infection.

Methods: Prospective observational study of hospitalized adults with SARS-CoV-2 in an university hospital in Buenos Aires, Argentina, between May-September 2020. Hospital records were reviewed and Nutrition Risk Screening (NRS) 2002 was conducted through phone calls within 24 hours of admission.

Results: 283 patients were included, 52.3% were females. Mean age was 52 (SD ± 19.9). According to BMI, 30.7% were overweight and 25.4% obese. NRS-2002 classified 6% (CI 95% 3.6-9.6) of patients at risk of malnutrition. Admission to the intensive care unit (ICU) was required by 8.5% of subjects. ICU admission was 23.5% in patients classified at nutritional risk and 7.52% in patients not at risk (p=0.022). Admission to ICU was required by 15.2% of obese patients, and by 3.6% of normal weight patients (p=0,043). Median hospital length of stay (LOS) was 7.5 days (interquartile range 4-14). Patients nutritionally at risk had longer LOS than those not at risk (28.1 vs. 10.6 days; p <0.001). Hospital mortality was 4.95%, and was higher in patients with nutritional risk than in patients without risk (29.4% vs. 3.38%, p<0.001).

Conclusion: In patients with SARS-CoV-2, malnutrition could be detected with standard nutrition screening tools. Patients with NRS-2002 ≥3 had worse clinical outcomes while obese patients had more ICU admission rates.

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