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A Comparison of Degree of Food Insecurity and Food Choice Motives Among College Students

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Learning Outcome: Describe food choice motive differences among college students affected by varying degrees of food insecurity.

Background: Dietary quality declines during college and is exacerbated by food insecurity (FI) and substance use (SU), often leading to negative health and academic consequences. The purpose of this study was to determine if a relationship exists between food choice motives (FCM) and FI.

Methods: College students aged 18-30 were recruited by Facebook advertising. The USDA 6-item Food Security Survey Module (FSSM); Alcohol Use Disorders Identification Test (AUDIT); Extended Drug Use Disorders Identification Test (DUDIT-E); and Food Choice Motives Questionnaire were used. Categories were FI, SU, FI+SU, or Neither based on composite scores. FI degree was determined by FSSM raw scores. Relationships between FCM and FI degree were assessed using Pearson correlations. FCM within groups were analyzed using Friedman and Dunn-Bonferroni post hoc tests.

Results: 734 participants (n=536 male, age=23.98 years) completed the survey. Importance of each FCM category increased with FI degree for FI participants ($p < 0.001$). This observation was less pronounced when SU was present. Significant differences among motives were only observed in the SU group, with organic as the highest, significantly more than price, familiarity, and local/small-scale production ($p < 0.01$). No FCM category was significant for FI+SU.

Conclusions: FCM importance increases as FI intensity increases, possibly due to food obsessive behaviors; this relationship does not exist with coinciding SU. Substance use may attenuate food obsession among FI+SU individuals, perhaps from psychological effects of SU. This suggests that SU may alter food motivations among college students, providing RDNs/NDTRs opportunities to educate on healthy habits addressing FI and FCM.

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A Qualitative Review of the Role Of Macular Carotenoids in the Progression of Age-Related Macular Degeneration

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Learning Outcome: Upon completion, participant will be able to list the macular carotenoids, describe their association in the progression of age-related macular degeneration, as well as specify distinct and effective supplement dosages.

Background: Age-related macular degeneration (AMD) is the leading cause of blindness among the aging population in developed countries. Lack of the macular carotenoids, lutein and zeaxanthin, may be related to AMD pathogenesis. This review critically assesses current research to better understand these associations.

Methods: Research published from 2010-2022 was identified using key terms macular degeneration, central blindness, retinal maculopathy, lutein, and zeaxanthin. Inclusion criteria: peer-reviewed articles, published in English. This generated 536 articles. Duplicates and non-primary source articles, those without AMD staging or mention of carotenoids were excluded. Eleven relevant published studies were identified through database searches and citations of relevant studies.

Results: Studies included one non-controlled trial, one prospective cohort study, eight randomized controlled trials, and one case-control study. Studies used visual performance and the presence of structural abnormalities as disease indication. Nine of the 11 studies showed a significant association between carotenoids and either a reduction in AMD risk or improved visual parameters ($p < 0.05$). Two of three studies using supplement formulas including meso-zeaxanthin, lutein, and zeaxanthin reported change in visual function from baseline, while no supplement with only lutein and zeaxanthin reported any change in visual performance. Supplement formulas with only lutein or zeaxanthin did report increases in serum carotenoid concentrations during studies duration.

Conclusion: Supplementation of macular carotenoids appears safe and may mitigate AMD risk at dosages of 10mg lutein, 10mg meso-zeaxanthin, 2mg zeaxanthin.

Funding source: No funding was granted. This literature review was performed as part of DPD coursework.

A Snapshot of Modalities for Recruitment of African Americans for an Intensive Behavioral Therapy Weight Management Intervention during the COVID-19 Pandemic

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Learning Outcome: Upon completion, the participant will be able to identify two successful recruitment methods of a minority population for a weight management intervention designed to improve nutrition and physical activity behaviors.

Background: Nutrition and physical activity lifestyle interventions mitigate obesity-related disease risk. African Americans continue to experience disparities in obesity-related disease risk; however, African American participants in the Deep South continue to be underrepresented in intervention research, which is further complicated by the COVID-19 pandemic. The purpose of the study was to describe recruitment strategies for enrolled African American participants in the Move & Eat 2 Live intensive, individual (ME2L-II) format weight management intervention.

Methods: ME2L-II is an intensive behavioral therapy to address obesity and related chronic disease through nutrition and physical activity counseling among Mississippians. Individuals between 25-50 years, with a Body Mass Index ≥ 28 were included in the study. Data from the study's digital orientation, screening and consent module was used to analyze recruitment modalities and demographics. IBM SPSS Statistics for Windows, version 25 was used to analyze screener results.

Results: A total of 70 eligible participants who were recruited completed the module and 67.14% (n=47) of these eligible participants identified as African American. Of the 47 African Americans, 24 individuals completed enrollment requirements for the study. Those who did not enroll (n=23) were recruited via family/friends (24%), healthcare clinics (20%), or apartment complexes (20%). Conversely, enrolled participants (n=24) were recruited via healthcare clinics (32%) or apartment complexes (16%).

Conclusion: Underrepresentation in lifestyle intervention research can be addressed through recruitment strategies. Recruitment through more familiar settings (e.g., living area, clinic) attracted the most enrolled participants. Future research should consider how to increase program commitment from recruitment to enrollment.

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Adaptation of the USDA Food Security Survey Module for College Students

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Learning Outcome: Upon completion, participant will be able to evaluate the adaptation of the USDA Food Security Survey Module to develop a validated measure of food insecurity among college students.

Background: Food insecurity (FI) among college students in the U.S. is significantly higher than the general population. The U.S. Department of Agriculture Food Security Survey Module (FSSM) has been widely used to estimate FI prevalence among college students but has not been validated in this population. To better understand the prevalence of FI among college students, this study used qualitative techniques to adapt the 10-item FSSM with 2-item food sufficiency screener for this population.

Methods: Data were collected in two phases at three universities. Multi-step data analyses were used in each phase. Individual cognitive interviews (n=20) were conducted with food secure and food insecure students. Participant feedback and interpretation of survey items were used to adapt the items. Next, the adapted survey was used to conduct focus groups (n=11) with food secure (n=16) and food insecure (n=21) students. Survey items were further adapted based on focus group findings.

Results: Students were uncertain how to estimate their household income. They also expressed confusion about the wording and definitions used by some survey items. Based on feedback, we removed 3 items and adapted 11 items, such as adding a definition for "balanced meals" and describing who to include in a "household."

Conclusions: College students are a unique population due to vast variability in living situations and financial circumstances. An adapted and validated measure of FI may provide a better estimate of the prevalence among college students, which could help institutions develop appropriate resources to support more equitable access to food.

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