

## Tech Equity and Inclusion in Nutrition Education

### 001 Optimizing a Theoretical Framework for Virtual Nutrition Education Programs for Adolescents With Autism Spectrum Disorder

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**Background:** Adolescents with autism spectrum disorder (ASD) demonstrate more problematic eating behaviors and unhealthy dietary patterns than their neurotypical peers. As the COVID-19 pandemic has resulted in a continued need for virtual interventions, a tailored framework to guide virtual nutrition education programs for this population is warranted.

**Objective:** To optimize a theoretical framework based on empirical data from a virtual nutrition education intervention study for adolescents with ASD.

**Study Design, Setting, Participants:** This is a secondary analysis of qualitative data collected from a pre-post intervention study with 27 adolescents with ASD aged 12-21 years. Six adolescent focus groups (n = 12) and 21 parent interviews were conducted after the intervention.

**Measurable Outcome/Analysis:** The initial framework based on social cognitive theory (SCT) was applied to a virtual nutrition education intervention, BALANCE (Bringing Adolescent Learners Nutrition and Culinary Education), that consisted of eight weekly sessions. The framework had 6 domains (ASD-related Barriers, SCT Constructs, Environmental Context, Eating Habits, Other Lifestyle Behaviors, and Health Outcomes) and 21 constructs. Focus group and interview data were analyzed for emergent themes, and the framework was refined based on key findings.

**Results:** Emergent themes that were overlooked in the initial framework development included that adolescents improved 'Self-regulation'; parents particularly liked that children's 'Autonomy and independence' were encouraged; and 'Family support' for healthy eating increased, e.g., parents teaching their children how to prepare food themselves, after participating in BALANCE. The optimized framework included 3 new constructs based on these results: Self-regulation, Autonomy, and Supportive Social Environment, which can be well-explained with self-determination theory (SDT).

**Conclusions:** The findings suggest that future versions of the BALANCE intervention should incorporate SDT constructs to improve adolescents' intrinsic motivation to make healthy food choices. The optimized framework can be used to inform future virtual nutrition education programs for this population.

**Funding:** University of South Florida College of Public Health.

### 002 Social Media Nutrition Education Integrated With a Home Food Delivery Assistance for Low-income Pregnant Women: A Pilot Study

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**Background:** Poor diet quality during pregnancy is associated with adverse health outcomes. As a remote nutrition intervention may benefit pregnant women, especially during the COVID-19 pandemic, we adapted the Cooking Matters curriculum that uses the social cognitive theory and converted it to a social media intervention integrated with healthy pregnancy and food assistance components.

**Objective:** To examine the feasibility and preliminary effects of a nutrition education intervention implemented through a social media platform for low-income pregnant women.

**Study Design, Setting, Participants:** One-group pre-test/posttest study. A 6-week nutrition intervention was implemented through a private Facebook group. Cooking ingredients were home-delivered every week by the local food bank. Pregnant women living in low-income neighborhoods of the Hillsborough County, FL who were in their first or second trimester participated in the study (n = 27).

**Measurable Outcome/Analysis:** Mixed-methods were utilized. Participant engagement was measured weekly with the number of 'likes' on Facebook posts, goal setting, and engagement questions. Outcomes were measured with validated Food Behavior Checklist, and the Perceptions of Meal Planning and Cooking questionnaires. At post-intervention, qualitative semi-structured interviews were conducted. Descriptive statistics and t-tests were used for quantitative data and emergent themes were analyzed for qualitative data.

**Results:** Cooking demo videos received most frequent 'likes'. Participants significantly decreased sweetened beverage intake ( $P = 0.035$ ); increased using food labels ( $P = 0.046$ ); and improved overall eating habits ( $P = 0.015$ ) after the intervention. Perceptions of meal planning ( $P = 0.023$ ) and shopping and cooking ( $P = 0.018$ ) were significantly improved. Sixteen emergent themes under 6 broad categories were identified from the qualitative data. Participants indicated that they enjoyed the intervention and reported

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meaningful behavior changes. They wanted the program to be longer as it would have provided them the opportunity to continue their behavior changes.

**Conclusions:** Findings indicate that a social media can be a useful tool to remotely implement evidence-based nutrition education interventions for pregnant women in low-income neighborhoods. Further research with a longer intervention duration is warranted to sustain behavioral changes.

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### **003 Exploring Intra-Household Food Insecurity Experiences in Southern Ethiopia**

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**Background:** Gamo families of southern, rural, Ethiopia live in harsh environments and may experience times of food insecurity (FI). While FI is a household level measurement, perceptions and experiences related to the condition may be viewed differently between Gamo spouses due to various sociocultural norms.

**Objective:** To explore potential differences in perceptions and experiences of FI between Gamo mothers and fathers.

**Study Design, Setting, Participants:** Semi-structured interviews were conducted with Gamo dyads (n=33) of mothers and fathers exploring parental perceptions and experiences related to various environmental factors, including household FI.

**Measurable Outcome/Analysis:** Using a basic inductive analytical framework, two coders used an iterative, data-driven analysis process to independently apply codes to transcripts within NVivo. Next, the coders applied discourse analysis tools including I and we statements, and position design and identity building to transcripts. Code frequencies were calculated, and coding matrices and hierarchical charts were developed to inform direct content analysis.

**Results:** Over 75% of participating mothers and fathers (n=25 dyads) agreed on household food security status with their spouse, while the remaining 8 dyads disagreed. Of those 25 dyads in agreement, n=21 reported some indication of FI. While both mothers and fathers reported various FI-related barriers and coping strategies, fathers used I statements (n=29 statements) more often to describe their FI experiences compared to we statements (n=8 statements). The frequency of I and we statements among mothers did not differ.

**Conclusions:** High rates of perceived FI were noted among the participating Gamo families. In some cases, intra-household FI experiences varied between mothers and

fathers. With the differences in discourse related to FI noted between genders in this study, interventions and policies aimed to improve this household-level condition among Gamo families may need to include gender-specific elements tailored to the differing perceptions and experiences of barriers to and coping strategies for achieving a food secure home.

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### **004 The Impact of COVID-19 on Perceived Barriers and Facilitators to the Healthfulness of Communities With Low-Income**

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**Background:** The COVID-19 pandemic brought new challenges affecting the wellbeing of individuals in communities with low income. Understanding where people live and how those environments can facilitate or hinder living a healthy lifestyle is essential for developing interventions that target behavior change and health promotion.

**Objective:** This study compares Extension Nutrition Educators' (NEs) perceptions of the barriers and facilitators impacting the healthfulness of the environment of communities with low income in eleven states before and during the COVID-19 pandemic.

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