P136 Screen-Time Guide Development for Parents of Preschoolers: Qualitative Analysis

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Objective: Most children exceed screen-time recommendations. Thus, informational guides in Spanish and English based on Social Cognitive Theory, motivational interviewing, and parent input were created and assessed to help families with preschool children reduce screen-time and increase active play.

Design, Setting and Participants: Parents of preschoolers participated in 1 of 2 rounds of “think-aloud” cognitive interviews. Round 1 assessed comprehension, usefulness, and appeal for English (n=7) and Spanish-speakers (n=10). Round 2, conducted after styling the guides as a 4-page mini-magazines, assessed content and graphic elements with English (n=10) and Spanish-speakers (n=10).

Outcome Measures and Analysis: Trained researchers qualitatively analyzed the results from cognitive interviews to improve guide content.

Results: Round 1 demonstrated that participants understood guide content, found it useful, and especially liked sections providing ideas for overcoming barriers to reducing screen-time and opportunities provided in the guide to reflect on the content. Parents liked tips concerning alternatives to screen-time, specifically related to increasing physical activity. Round 2 results demonstrated that participants were interested in the content, felt the guide was easily understood and beneficial, and had very minor suggestions for improvement. English-speakers especially liked the section on observational learning and role modeling and felt their partners would benefit from the content to get their spouse/partner involved in making household changes. Spanish-speakers liked the realistic photos and the diverse ideas, specifically for alternatives to screen-time for those living in apartments.

Conclusions and Implications: Guide content and graphic layout was well-received by both Spanish and English-speakers. The screen-time guide has the potential to help families with preschoolers reduce screen-time.

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P137 Sugar Sweetened Beverages (SSB) Guide Development for Parents of Preschoolers: Qualitative Analysis

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Objective: To formulate and determine functionality and usability of a guide based on Social Cognitive Theory concepts and motivational interviewing principles that can enable families of preschoolers to replace SSBs with healthier beverage choices.

Design, Setting and Participants: Parents participated in 1 of 2 cognitive interview rounds. In the first round, English (n=9) and Spanish-speakers (n=10) assessed comprehension, usefulness, and appeal of guide content. After guide content was formatted into a mini-magazine style, round 2 cognitive interviews were conducted to assess content and graphic elements with English (n=10) and Spanish-speakers (n=10).

Outcome Measures and Analysis: Trained researchers qualitatively analyzed the results from cognitive interviews to improve guide content.

Results: Round 1 results showed that participants found the content to be informative, specifically tips for making healthy beverage options more appealing. English-speakers liked how the guides helped them reflect on their habits and the focus on making small changes over time. Spanish-speakers liked the focus on health and obesity risks associated with SSB. Round 2 findings indicated that participants had great interest in guide content, felt the guide was easily understood and beneficial, and gave very minor suggestions for improvement. All parents particularly liked the content concerning healthier drink substitutes and found the photos and use of color in the guide to be engaging.

Conclusions and Implications: The guide content and graphic formatting was well-received by both Spanish and English-speakers. The final SSB guide has the potential to help families of preschoolers replace SSBs beverages with healthier options.

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P138 Effect of Group Nutrition Education Intervention for Stage of Change in College Track and Field Athletes

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Objective: The purpose was to evaluate the stages of change, self-efficacy, pros/cons of the Transtheoretical Model, nutrition knowledge and dietary intakes after a group nutrition education intervention for college athletes.

Design, Setting and Participants: Before-after study of a group nutrition education intervention was performed. All participants received the intervention one time by a dietitian, using a food model and the SAT (Satisfactory A la carte Tray) system to realize balance of food intake and how much volume of nutrients they need to take in each participant. Worksheets were also used to assess the energy requirement and to review the education.

We recruited 59 male and 5 female college track and field athletes. This intervention educates athletes in obtaining skills to choose balanced food with the appropriate quantity. The intervention consisted of energy requirements, dietary intake balance, effect of nutrients.

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Outcome Measures and Analysis: Self-reported stages of changes, nutrition knowledge, self-efficacy, the pros/cons of changes, and dietary intakes (Food Frequency Questionnaire). The dietary intake data were used for feedback and educational intervention. A paired t-test was used.

Results: The participants' nutrition knowledge has significantly increased after the intervention ($p < 0.01$). After the intervention, 17 participants (50% from contemplation, 38% from preparation, and 14% from action) progressed into the next stage.

Conclusions and Implications: The results suggested that the group nutrition education intervention may be effective to increase nutrition knowledge and encourage athlete in contemplation to progress into the next stage. Further research is needed to assess the efficacy of stage-matched interventions with increased number of sessions.

Funding: None.

P139 Availability, Food and Meal Association, and Family Influences Predict College Students' Calcium Consumption

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Objective: Consuming adequate calcium during the transition from late adolescence to adulthood is essential for achieving optimal bone density. Data suggest college students are consuming levels below the recommended intake for calcium. The objective of this study was to assess the association of attitudes and behaviors surrounding calcium and dairy consumption with college students' dietary calcium intake.

Design, Setting and Participants: Online survey of college students.

Outcome Measures and Analysis: Attitudes and behaviors (measured on a 5-point Likert scale with 5 being "strongly agree") and calcium consumption (brief food frequency questionnaire) were assessed using validated measures. Demographics were also collected. Significant ($p < 0.05$) relationships between attitudes/behaviors and calcium consumption were determined with regression analysis.

Results: Two thousand nine hundred and fourteen students completed the survey. Median (SD) calcium consumption was 900 (+ 490) mg/day. Associating drinking milk with eating certain foods (e.g., cereal, cookies), having family members who regularly drink milk, consuming milk with meals, having dairy products available, and being male were associated with higher calcium intake ($R^2 = 0.18$).

Conclusions and Implications: Efforts to increase dairy calcium consumption in college students should

focus on these factors when designing health promotion campaigns.

Funding: American Dairy Association Mideast.

P140 Developing a Curriculum to Increase Gardening Skills, Culinary Competence and Family Meal Time in Youth and Adults Together

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Objective: To develop a curriculum to increase gardening skills, cooking competence, and family meal time for youth (8 to 10 years old) and their parent (dyad pair) using community-based participatory research (CBPR).

Design, Setting and Participants: Using the Social Cognitive Theory and an inter-disciplinary team ($n = 9$) including child development, nutrition, plant/soil and greenhouse, Extension Jr and Sr master gardeners and 4-H expertise; the curriculum was developed by integrating an evidence-based curriculum iCook 4-H and Junior Masters Gardener curriculum Health and Nutrition from the Garden, with additional resources for gardening activities, from USDA's My Plate, and garden-based recipes. CBPR was utilized by expert reviewers ($N = 16$) providing feedback on the curriculum content, lesson structure, age appropriateness, etc. in a survey of closed-ended and open-ended questions.

Outcome Measures and Analysis: Evidence based curricula and expert review.

Results: A 10 week curriculum was developed and named: iGrow 4-H, which is a hands on, learn-by-doing and having fun through five, 2-hour sessions for a dyad pair, that includes: gardening, cooking, and family conversation. A leader guide was developed that included handouts, recipes, and activities for each session with a goal to further develop a workbook. Weekly goal sheets were designed for youth and the primary food preparer parent to use for reinforcement of specific lesson objectives. The expert reviewers and the focus group feedback analyzed found the dyad approach pivotal to taking what is learned by the lessons to the home; lesson structure and length was appropriate; need for more interaction among participants with each other to be built in; elements of fun and hand on were evident.

Conclusions and Implications: The iGrow curriculum will be adjusted based on expert review feedback gained and pilot tested on the dyad pair design of the specific population for which it was created. Providing knowledge of gardening followed by culinary skills is expected to lead to increase family meal time together focused on skill building to impact healthy goals in the family unit.

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