Evaluating Usability of a Digital Nutrition Education Module to Prevent Early Childhood Obesity in Home Visitation Programs

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Background: Home visitation programs offer a unique opportunity to implement a novel digital early childhood obesity prevention program.

Objective: Evaluate usability of a digital infant feeding nutrition education module with key stakeholders (N=21) of a home visiting program in Florida.

Study Design, Setting, Participants: Home visitors (n=11) and enrolled mothers (n=10) of a home visiting program in Florida participated in a one-time, 45-minute qualitative interview via Zoom with a trained researcher using a semi-structured script based on constructs from the Technology Acceptance Model (TAM) and Social Cognitive Theory (SCT). Participants also completed a modified version of the mHealth App Usability Questionnaire (MAUQ).

Measurable Outcome/Analysis: Interviews were audio-recorded, deidentified, transcribed verbatim and coded by two trained researchers using an inductive thematic analysis approach based on TAM and SCT constructs to develop themes. MAUQ subscales were analyzed using descriptive statistics.

Results: Most participants noted that they liked the digital format, and specifically mentioned the visual or interactive components, convenience and accessibility of the information, and general preference for digital information over paper handouts. Home visitors were interested in content related to food allergies and readiness for solid foods, whereas mothers were interested in all of the infant feeding topics. Nonetheless, the majority (90%) reported that they would be very likely to use information in the learning modules as part of home visits. Usability of the module was high across all three MAUQ subscales (mean ratings out of 7±SD: ease of use = 6.88±0.2, interface and satisfaction = 6.90±0.4, usefulness = 6.78±0.1). Limited access to technology by parents, compatibility of the module with various phone types, and necessity of keeping information updated were mentioned by home visitors as limitations that may impact usability.

Conclusion: The results revealed that a digital nutrition education module to prevent early childhood obesity was deemed usable by both staff and parents of a home visiting program. Future research is needed to determine impact on parental feeding behaviors and child health outcomes.

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Evaluation of Virginia SNAP-Ed’s Eating Smart, Being Active Participant Changes in Fruit and Vegetable Consumption by Race

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Objective: To determine if there were disparities in changes in fruit and vegetable consumption by race and perceived affordability and accessibility of healthy foods for Virginia SNAP-Ed participants using the Eating Smart Being Active (ESBA) curriculum.

Use of Theory or Research: Evaluate SNAP-Ed through a nutrition security lens to determine if any disparities in program outcomes exist.

Target Audience: Virginia caregivers of young children with incomes at or below 185% of the federal poverty level.

Program Description: Virginia SNAP-Ed uses an evidence-based curriculum, ESBA, to promote healthy eating and physical activity through nutrition education that utilizes a peer educator model.

Evaluation Methods: This study analyzed pre-existing Virginia SNAP-Ed evaluation data from FY2021 for SNAP-eligible Virginian adults (n=544). A quasi-experimental pre/post design with a standardized self-reported 28-item survey was used. Variables included demographics, fruit and vegetable consumption, and perceptions on healthy food affordability and fruit and vegetable accessibility. Descriptive statistics were used to describe characteristics of Virginia SNAP-Ed ESBA participants. Paired t-tests were used to determine any pre/post differences in fruit and vegetable consumption, perceived affordability of healthy food, and changes in fruit and vegetable consumption by race and perceived affordability and accessibility of healthy foods for Virginia SNAP-Ed participants using the Eating Smart Being Active (ESBA) curriculum.