Nutrition and Health Education

Using Food Models to Enhance Sugar Awareness among Older Adolescents: Evaluation of a brief nutrition education intervention

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Introduction: Poor dietary habits among adolescents, specifically the high amount of added sugar consumed are a public health concern. Nutrition education that provides opportunities for hands-on learning is one potential solution.

Objective: We aimed to evaluate the impact of a 2-day food model-based interactive nutrition education intervention on adolescents' sugar awareness; knowledge, intentions, self-efficacy, and behavior.

Methods: 203 students (74.3% female), mean age 15.9 years (SD 1.0 yrs) from 6 schools in British Columbia participated (April-May 2018). Classes were assigned to intervention (n=8) or control (n=8). Intervention students received two 75-minute interactive 2-dimensional food model sessions that included: sugar content in food and beverages, recommendations for added sugar and food group servings in a healthy diet, as well as participating in self-assessment. A questionnaire to assess knowledge, intentions to limit sugar, self-efficacy (label reading), and behavior (frequency of limiting sugar and label reading) was completed before and immediately after the intervention.

Results: Adolescents short-term knowledge of added sugar in food and beverages, sugar recommendations and food group servings in a healthy diet all improved significantly after intervention ($F=104.9$, $p=.001$). Intention to consume less added sugar ($F=4.93$, $p=.03$) and self-efficacy for label reading ($F=14.94$, $p=.001$) also increased significantly. Frequency of limiting sugar in their diet ($F=0.19$, $p=.67$) and of label reading ($F=3.42$, $p=.07$) did not differ significantly.

Conclusions: This study showed that a brief interactive food model-based nutrition education intervention had an immediate impact on adolescents' sugar related awareness, self-efficacy and intentions to change but not on the frequency of limiting sugar and label reading behaviors.

Significance to the Field of Dietetics: 2-dimensional food models are an affordable and easy-to-use interactive visual aid suitable for nutrition education with adolescents in the school environment. Further research assessing their impact over time and on sugar consumption is needed.