A Test of Social Cognitive Theory on Fruit and Vegetable Intake in Indiana High School Students

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Abstract #P18

Introduction

Few studies have tested the structural paths of the constructs in SCT that influence behavior. Testing theoretical models is imperative so theory can better guide the design of useful interventions. The aim of this study was to test the structural paths of SCT for the behavior of eating fruits and vegetables by Indiana high school students.

Methods

This study was part of a larger cluster-randomized control trial conducted within Indiana high school. The Indiana Department of Education created a new nutrition curriculum for Family and Consumer Sciences teachers that included messages from the 2015–2020 Dietary Guidelines for Americans1. Their students were surveyed at 2 time points, pre and post intervention. The data used in this study was only collected once, as part of the post-test.

Surveys: A 37-item Social Cognitive Theory questionnaire validated by Dewar et al.2 measured the following constructs: self-efficacy, intentions, situation, behavioral strategies, social support, outcome expectations, and outcome expectancy. The frequency of intake of fruits and vegetables was measured by 3 separate items validated by Hoelscher et al.3

Statistical Analysis: Cross-sectional data were collected. All students were included, and the treatment group was omitted as a covariate. Structural equation modeling estimated the relative amount that SCT variables interacted with each other and contributed to intentions to eat healthy food and the consumption of fruits and vegetables. Model fit: CFI ≥ 0.90 and RMSEA ≤ 0.08

Results

Study methods for human subjects were approved by Indiana University IRB, #1803757288

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Figure 1: Standardized parameter estimates of the structural paths of SCT variables and the consumption of fruits and vegetables (n=1,104)

The major strength of the study is the large sample size (n=1,104). The limitations of the study include that the measures of situation, social support, and behavior are limited by the survey questions and that it used cross-sectional data.

Behavioral strategies and intentions directly influenced consumption of fruits and vegetables among high school students in Indiana. Interventions could be more successful if they focus on improving intentions by increasing self-efficacy.

Conclusions

To influence behavioral strategies, encourage shifting, tracking food intake, and planning meals.

To influence self-efficacy, Bandura suggests using mastery experiences (setting small incremental goals to experience success), vicarious experiences (seeing someone similar to you succeed), social persuasion (verbal encouragement), and changing emotional states.

References