

Theory or not? Best study designs for increasing vegetable intake in children

November 7 2014

Researchers try to develop interventions that are most likely to work. Some times that involves deciding which activities should be included, such as whether to have cooking classes or be involved in a garden. Some times that involves deciding how many people should be involved to find truly meaningful results. However, a little talked about consideration is whether to include behavior theory within the intervention. Things like attitudes, self-efficacy, social norms and others may or may not be included in the intervention or reflected by the activities. Often, this decision is made based on the researcher's own bias as to whether behavior theory helps or not. However, researchers at the USDA, Baylor College of Medicine, and Federal University of Santa Catarina (Florianópolis, Brazil) decided to look at the data already published in order to guide future research.

In a systematic, in-depth review focused on the use of behavior theory in interventions aimed to increase fruit and vegetable intake among children, researchers found theory-based interventions to be beneficial for vegetable intake only. The authors determined the effects of theory use to be limited overall.

"Higher levels of fruit and vegetable intake protect against hypertension, heart disease, stroke, and other chronic diseases and may be a strategy for obesity prevention among children and adults, but fruit and vegetable interventions have been minimally effective," concluded lead author Cassandra Diep, PhD, US Department of Agriculture/Agricultural Research Service Children's Nutrition Research Center, Baylor College

of Medicine.. Her team wanted to determine if using or not using a behavior theory contributed to effectiveness. However, they found "little or mixed support for enhanced dietary change with use of theory, multiple theories, or a formal planning process in dietary change interventions." This result may be surprising to many researchers, professional organizations, and funding agencies that stress the inclusion of behavior theory in nutrition programs.

The researchers focused their work on the hypothesis that interventions clearly based on theory were more effective in changing fruit and vegetable intake among children than interventions with no behavioral theoretical foundation. To do so, the authors searched for peer-reviewed studies on fruit and vegetable interventions among children and adolescents that met five exclusionary criteria. In total, 29 articles were included, all of which appeared in journals between 1989 and 2013, with the majority published in or after 2000. Most of the studies occurred in the United States.

A total of 33 interventions were found among the 29 articles, eight with no theoretical foundation, 15 using one theory, and the remaining 10 using two theories. Social Cognitive Theory was the most common, as it was used in 17 interventions; Theory of Planned Behavior was used in six interventions. In the statistical analysis, interventions had a small but significantly greater impact on [vegetable consumption](#) than control conditions and a moderate effect on fruit and vegetable consumption combined. After controlling for study quality, theory use remained a significant predictor for [vegetable intake](#) only.

Given these findings, the researchers recommend that future studies examine the causality and strength of relationships between theoretical variables and dietary change behaviors. Additional research could also focus on what is needed to identify practical or experience-based procedures that may be useful to incorporate into interventions.

More information: "Influence of Behavioral Theory on Fruit and Vegetable Intervention Effectiveness Among Children: A Meta-Analysis," by Cassandra S. Diep, PhD; Tzu-An Chen, PhD; Vanessa F. Davies, MSc; Janice C. Baranowski, MPH, RD; Tom Baranowski, PhD (DOI: [dx.doi.org/10.1016/j.jneb.2014.05.012](https://doi.org/10.1016/j.jneb.2014.05.012)), *Journal of Nutrition Education and Behavior*, Volume 46/Issue 6 (November-December 2014)

Provided by Elsevier

Citation: Theory or not? Best study designs for increasing vegetable intake in children (2014, November 7) retrieved 30 June 2024 from <https://medicalxpress.com/news/2014-11-theory-vegetable-intake-children.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.