

Does the Effectiveness of Interventions that Change Attitudes, Norms, and Self-Efficacy Depend Upon the Class of Health Behavior?

Erika Montanaro^a, Alex Maki^b, Angela D. Bryan^a, Alex Rothman^b, Paschal Sheeran^c



^a University of Colorado Boulder, ^b University of Minnesota, ^c University of Sheffield



Introduction

- Prior meta-analytic work has shown that interventions that target health intentions produce small to moderate changes in health behavior (Webb & Sheeran, 2006).
- Theory-based interventions often target attitudes, norms, and self-efficacy in order to increase intentions and promote health behavior change.
- We found that interventions that change self-efficacy were able to produce small-to-medium changes in behavior. Interventions that change attitudes were able to elicit small changes in behavior, and those that changed norms only had a negligible effect on behavior (Maki, Montanaro, Hooper, Bryan, Rothman, Sheeran, SPSP Poster, January 2013).
- The extent to which these constructs elicit behavioral change may depend, in part, on the class of behavior targeted. For example, might interventions that elicit change in self-efficacy produce greater behavior change for maintenance behaviors than frequent prevention behaviors?

Methods

- To assess the impact of cognition change interventions on different classes of health behavior, we meta-analyzed 129 studies which met the following criteria:
 - (a) at least one experimental and comparison condition
 - (b) significant changes in one of the cognitive constructs of interest
 - (c) measurement of subsequent health-related intentions or behavior
- A total of 21 different behaviors were examined in these studies, which could be categorized into three broad classes:
 - frequent prevention behavior (8 behaviors; e.g., exercise)
 - infrequent prevention behavior (8 behaviors; e.g., cancer screening)
 - maintenance/adherence behavior (5 behaviors; e.g., diabetes care).

Examples of Classes of Health Behaviors

Frequent Prevention Behavior	Infrequent Prevention Behavior	Maintenance/Adherence Behavior
Alcohol Related	Self-Examination	Diabetes Care
Smoking Related	Donation Behavior	Blood Pressure Monitoring
Sexual Behaviors	Cancer Screening	Asthma Management
Exercise	Other Screening	HIV/AIDS Self-Management
Diet Related	Vaccination	Apnea Management

Results

- Changes in the cognitive constructs resulted in small-to-large effects on behavior for all three behavioral classes; however, the magnitude of these changes depended on the class of behavior.

Construct Changed	Frequent Prevention Behaviors	Infrequent Prevention Behaviors	Maintenance/Adherence Behaviors
Attitudes (k = 55)	$d_s = .23$	$d_s = .12$	$d_s = .68$
Norms (k = 11)	$d_s = .10$	$d_s = .74$	$d_s = .12$
Self-Efficacy (k = 76)	$d_s = .39$	$d_s = .33$	$d_s = .46$

Conclusions

- These findings indicate that the effect of cognition change interventions is moderated by different classes of health behavior.
- The effect attitudes and norms have on behavior change appears to depend a great deal on the class of health behavior. Self-efficacy, on the other hand, has moderate effects on all classes of behavior.
- These results suggest that class of health behavior is an important factor in determining which constructs should be targeted to produce the greatest amount of behavior change.

Support

Support for this research was provided in part by the National Cancer Institute's Behavioral Research Program. This work also benefited from guidance from members of the Cognitive, Affective, and Social Processes in Health Research Working Group (see <http://cancercontrol.cancer.gov/brp/casphr/index.html>)