

University of Minnesota

Project Name ...

Challenge Project

Principal Investigators ...

*Robert Jeffrey, Ph.D., Professor
University of Minnesota
Division of Epidemiology
1300 S. Second Street, Suite 300
Minneapolis, MN 55454-1015
tel. 612-626-8580 ; fax. 612-624-0315*

*Alex Rothman, Ph.D., Associate Professor
University of Minnesota
Department of Psychology
Elliott Hall, 5 East River Road
Minneapolis, MN 55455
tel. 612-625-2573 ; fax. 612-626-2079*

Background / Significance of Problem / Research Question ...

The benefits afforded by reductions in unhealthy behavioral practices and increases in health behavioral practices are almost always contingent on those practices being sustained over time. Thus, successfully adopting a healthy pattern of behavior (e.g., not smoking) is not sufficient. The new pattern of behavior must be maintained over time. Intervention methods that have been shown to help people successfully change their behavior have not produced similar effects on longer-term outcomes. Innovations in the design and implementation of interventions are needed that will help people not only to initiate a change in their behavior but also to maintain that change over time. Current models of behavioral decision-making offer limited guidance as to factors that might differentiate between decisions to initiate and to maintain a new pattern of behavior.

We propose that decisions regarding behavioral initiation and behavioral maintenance reflect different decision criteria. Specifically, the decision to initiate a new change in behavior is a function of people's expectations of the processes and outcomes associated with the new behavior; people will take action only if they believe that the new behavior will afford a set of experiences that are meaningfully better than those afforded by their current pattern of behavior. Decisions regarding whether to maintain a behavior are predicted to rest on people's satisfaction with the outcomes afforded by the new pattern of behavior. Moreover, people's feelings of satisfaction are predicted to be contingent on the degree to which their experiences meet their expectations. This thesis suggests that optimistic expectations regarding the outcomes afforded by a new pattern of behavior may motivate people to initiate a change in behavior but undermine their desire to maintain that behavior over time.

To test this new model, a series of four intervention studies were conducted. Two were targeted at smoking cessation and two were targeted at weight loss. Studies 1 (smoking cessation) and 2 (weight loss) were designed to test the impact of people's expectations about behavior change on initial and long-term behavioral outcomes. Specifically, participants were assigned to either an optimistic expectation or balanced expectation intervention condition. The active intervention lasted 8 weeks and participants were followed for 18 months. We predicted that participants in the optimistic condition would be more likely to initiate but less likely to sustain a change in their behavior than would participants in the

balanced condition. Studies 3 (smoking cessation) and 4 (weight loss) were designed to test the impact of how people evaluate the experiences afforded by changes in their behavior on their satisfaction with those changes. Specifically, participants were assigned to either a future-focused or a past-focused intervention condition. The future-focused intervention taught people to compare their experiences to what they wanted the behavior change to provide, whereas the past-focused intervention taught people to compare their experiences to what their life was like prior to the change in their behavior. We predicted that participants in the past-focused condition would be more satisfied with their experiences and consequently more likely to sustain the change in their behavior over time.

Findings To-Date /Future Research Directions ...

At present, we are able to report initial findings for Studies 1 and 2. We anticipate data from Studies 3 and 4 to be available for data analysis in the near future. Intervention Study 1: Smoking Cessation. This study was designed to test the hypothesis that optimistic expectations about the process and outcomes associated with behavior change would facilitate behavioral initiation, but undermine people's satisfaction with the new behavior and thus undermine behavioral maintenance. Participants were randomly assigned to either an optimistic or balanced expectations intervention program. The active treatment program lasted for 8 weeks and participants were instructed to quit after the fourth weekly meeting (See King, Rothman, & Jeffery, 2002 for further details). Consistent with study hypotheses, participants in the optimistic expectations condition were more likely to be quit at the end of the active treatment program. However, the impact of treatment condition was moderated by people's prior experience with cessation. Specifically, participants who had at some point in their life experienced some success with cessation (i.e., having been quit for at least 3 months) benefited from assignment to the optimistic treatment program, whereas participants who had never had success with cessation did better when assigned to the balanced treatment program.

The impact of the intervention on initial quit efforts was mediated by participants' expectations about the consequences of cessation and their confidence in their ability to remain smoke-free. Smoking status at the end of the active program predicted status at 18 months. Intervention condition had no impact on participants' satisfaction with the consequences of their behavior (contrary to study hypotheses). However, perceived satisfaction with initial behavior change did prospectively predict behavioral maintenance. Intervention Study 2: Weight Loss. This study was designed to test the same set of hypotheses that were examined in Study 1 but operationalized in regards to weight loss. Once again, participants were randomly assigned to either an optimistic or balanced expectations intervention program. The active treatment program was designed such that the structure paralleled that used in Study 1. Thus, it lasted for 8 weeks and participants were instructed to begin efforts to lose weight only after the fourth weekly meeting. Although the direct effect of the intervention condition on weight loss (both short- and long-term) was not significant, the intervention condition did alter people's expectations about weight loss, which, in turn, predicted weight loss. Specifically, people in the optimistic intervention condition formed more positive expectations about weight loss and these expectations prospectively predicted weight loss. Similar to Study 1, intervention condition did not alter participants' satisfaction with the consequences of their behavior. However, once again, perceived satisfaction with outcomes afforded by initial weight loss did prospectively predict long-term weight control.