INTRODUCTION TO THE SPECIAL ISSUE: INNOVATIVE APPROACHES TO HEALTH BEHAVIOR CHANGE[1]

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The promotion of healthy life-styles is especially important for reducing mortality from cardiovascular diseases, obesity, diabetes mellitus, cancer, and human immunodeficiency virus (HIV) (1–3). Risk factors such as poor diet, lack of physical activity, smoking, substance abuse, and sexual risk behaviors have all been linked to disease progression. For example, intake of specific nutrients such as dietary fat, cholesterol, and sodium have been linked to elevated blood cholesterol, obesity, and high blood pressure (4). Behaviors such as lack of physical activity and cigarette consumption have also been linked to the development of cardiovascular disease and cancer (5,6). Sexually transmitted diseases and HIV also pose a significant threat to individuals who engage in unprotected sex (7).

Over the past several decades, the field of behavioral medicine has demonstrated that modifying behavioral risk factors is an effective method for preventing disease (8–10). Theoretical-based innovative approaches to behavior change, however, are still not firmly established within the field. This special issue highlights a series of articles that focus on theoretically-based innovative approaches to health behavior change. The papers were all selected as representing exceptional work presented at the Eighteenth Annual Society of Behavioral Medicine Conference held in San Francisco in 1997. The articles included in this series are unique in that they highlight approaches for promoting health behavior change that are creative and feasible in public health settings. Many of the studies also test competing theoretical approaches to modifying behavior. In short, each study gives a well-designed theoretically-based approach that clearly advances on past research.

The lead article, Kaplan's Presidential Address, reflects an innovative perspective on decision-making which advocates a more active role on the patient's behalf. In particular, Kaplan highlights the fact that many medical procedures that may effect biological processes may not address important issues such as life expectancy or life quality. In his address, he advocates a model known as the outcomes model which emphasizes quality of life and life duration instead of clinical measures of disease process. This approach has important implications for the organization, financing, and delivery of health care.

In the next three articles by Eitel and Friend, Hendy, and Miller et al., a set of unique methodologies are employed to test the effectiveness of creative behavioral interventions for promoting safe sex, healthy diets, and follow-up to cancer screenings. Although the behavioral topics are quite broad, each study provides a sound approach that could be applied to other related health behaviors.

Eitel and Friend compare two interventions (social–cognitive versus motivational approach) for decreasing denial and sexual risk behaviors in young adults. The social–cognitive approach hypothesizes that reductions in denial will occur by giving individuals accurate information about their own risk level relative to their peers. In contrast, the motivational approach proposes that by creating an uncomfortable state of dissonance, denial about HIV and sexually transmitted disease risk will be reduced. Their work demonstrates that incorporating a motivational approach into prevention/intervention programs may be most effective for increasing intentions to use condoms and decreasing sexual risk behaviors.

In a very unique study, Hendy identifies five teacher actions that may be used to encourage children to try new foods. Each action is based on either Social–Cognitive Theory, Self-Determination Theory, or on physiological events surrounding eating, such as positive and negative affect. In this well-designed study, reward and choice-offering were most effective in getting children to try new foods. These findings have important implications for further research on improving dietary adherence in youth.

Miller and colleagues test the interaction of individual attentional style (high versus low monitoring) and type of message framing (gain, loss, or neutral language) on increasing womens' responses to undergo diagnostic follow-up for precancerous cervical lesions. Attentional style interacted with type of message framing such that low monitoring (low attentional style) was associated with increased knowledge and less canceling of appointments in the loss condition as compared to the neutral condition. In contrast, high monitoring (high attentional style) was associated with greater intrusive thoughts in the loss-oriented frame as compared to the neutral frame, with no effect on knowledge or appointment-keeping behavior. This work points to the need to examine the interaction between individual differences and situational factors in designing behavioral interventions.

In the next set of articles, Harvey-Berino, Goldstein et al., and Andrews et al. examine the impact of innovative behavioral approaches to treating obesity, inactivity, and smokeless tobacco use. Each approach demonstrates a feasible method for interfacing the intervention in a public health setting and sets the stage for further work.

Harvey-Berino examines the controversy about whether fat versus calorie restriction may promote more favorable changes in body weight, body composition, resting metabolic rate, eating behaviors, and dietary adherence in obese women. In short, there were no long-term differences in most predictors of dietary adherence, suggesting that fat restriction did not prove to be superior to calorie restriction in this population. This work

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contributes to a growing literature that suggests that dietary fat restriction does not seem to enhance maintenance of weight loss and does not seem to facilitate long-term improvements in physiologic and metabolic parameters of eating behaviors.

Goldstein and colleagues examine the impact of a physician-based physical activity counseling intervention in middle-aged and older adults. This project highlights the features of the Physically Active for Life (PAL) study which was a randomized, controlled trial comparing the effectiveness of brief physician-delivered physical activity counseling to usual care on self-reported physical activity levels. Their program is based on principles from the Transtheoretical Model of Change and Social Learning Theory. As a result of the intervention, subjects in the treatment condition were more likely to be in the advanced stages of motivational readiness for physical activity then control subjects. This effect was not maintained at the 8-month follow-up, indicating that more intensive, sustained interventions may be necessary to produce optimal effects on physical activity in older adults.

Andrews and colleagues evaluate the effectiveness of a dental office intervention on reducing smokeless tobacco use. In this randomized trial, a smokeless tobacco intervention was delivered by dental hygienists as part of patients' regularly scheduled cleaning visits. The intervention produced a strong effect on sustained quitting for smokeless tobacco users but had no impact on secondary outcomes, including quit attempts, intentions to quit, or readiness to quit. This work is especially intriguing because it demonstrates the effectiveness of incorporating interventions into routine health-related checkups.

The next two articles provide statistical approaches to health behavior change. Humphreys and colleagues evaluate theoretical mediators of the effects of self-help groups in a large sample of male veterans who were treated for substance abuse. Interestingly, both enhanced friendship networks and increased active coping responses mediate these effects. Hedeker and colleagues describe the use of a "Thresholds of Change" model for analyzing separate stages of change. The authors examine explanatory variables on these thresholds using a generalization of an ordinal logistic regression model. They provide clear examples of their approach using the data from a skin cancer prevention study. Results from their approach confirm the use of this model and provide important implications for further applications of the model in the field of behavioral medicine.

In conclusion, this series on "Innovative Approaches to Health Behavior Change" provides a unique perspective of ideas and methods for expanding research in the field of behavioral medicine. Although these articles span across a wide range of behaviors, they have a common link in that they are theoretically-based interventions that set the stage for future work.

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