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2008 : November 2008 - Fast Moving Fronts : Marcia Ory, Patricia Jordan & Terry Bazarre

FAST MOVING FRONTS - 2008

November 2008



Marcia Ory, Patricia Jordan & Terry Bazarre talk with *ScienceWatch.com* and answer a few questions about this month's Fast Moving Front in the field of Agricultural Sciences.



Article: The Behavior Change Consortium: setting the stage for a new century of health behavior-change research

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Journal: HEALTH EDUC RES, 17 (5): 500-511 OCT 2002

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(addresses have been truncated)

SW: Why do you think your paper is highly cited?

This paper sets the stage for understanding the processes by which health behavior change theories and approaches could be translated into successful intervention strategies. It addresses the challenges and opportunities for behavioral health interventions to modify three of the nation's most important behavioral risk factors—tobacco use, unhealthy diet, and sedentary lifestyle.

Moreover, this paper was prescient in addressing issues that are now at the heart of the National Institutes of Health (NIH) **Roadmap Initiatives**.

Transdisciplinary partnerships that were developed by the Behavior Change Consortium (BCC) grantees are clearly moving to the forefront of clinical and translational research efforts and are key to the successful application and dissemination of research from bench to bedside to community practice. This paper clearly describes the advantages of transdisciplinary research with substantive examples of its successful application.

SW: Does it describe a new discovery, methodology, or synthesis of knowledge?

This article summarizes the state of the behavioral sciences for these three lifestyle risk factors which together account for the majority of preventable chronic diseases and premature deaths each year, and synthesizes the approaches of 15 different NIH-funded grants to favorably modify these risk factors. It describes the leading health behavior change theories, novel research and measurement methods, successful intervention strategies, and common mediator variables that are represented in this innovative set of multi-risk intervention studies.

A major contribution of this paper is its attention to the simultaneous examination of multiple behaviors and multiple intervention approaches for improving the health of Americans in different settings and circumstances. The collaborative mechanism described in the paper led to both conceptual and methodological advances in behavioral

change research. The BCC provided a forum for identifying key constructs and measures across different intervention approaches, with particular focus on common moderators and mediators at play across the various studies. It also served as the initial testing ground for the development and application of the **RE-AIM model**, a planning and evaluation tool for assessing the public health impacts of programs and policies.

A fuller synthesis of the BCC studies and findings can be found in a **Summary Report** prepared at the conclusion of the BCC funding.

SW: Would you summarize the significance of your paper in layman's terms?

In October 1997, the NIH Office of Behavioral and Social Sciences Research (OBSSR) announced a special Request for Applications (RFA) focusing on "Innovative Approaches to Disease Prevention through Behavior Change." The goal of this initiative was to stimulate investigation of innovative strategies designed to achieve long-term healthy behavioral change by focusing on behaviors such as tobacco use, sedentary lifestyle, and poor diet.

This RFA solicited intervention studies aimed at either a comparison of theoretical approaches to behavior change or an assessment of the utility of specific behavior change theory in a multi-behavioral or multiple-theory framework. This initiative was responsive to concepts and recommendations from several reports calling for increased research on key health behaviors and lifestyle factors affecting disease.

This article analyzes and summarizes the novel approaches taken by the BCC, an alliance of 15 NIH-funded research teams focused on changing multiple behavioral risk factors with a single intervention, and also on testing multiple different theories for health behavior change intervention.

The BCC was created to go beyond "research as usual." Most past research has examined ways to help people change one risk behavior at a time—even though Americans often engage in a cluster of risky behaviors. Similarly, researchers and practitioners often employ familiar intervention strategies although different populations or settings may call for tailored approaches. This paper challenged researchers and practitioners to examine the advantages and disadvantages of different intervention approaches for different health behaviors.

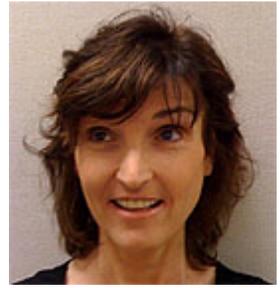
This challenge resulted in some important conclusions about behavior change research that emerged over the course of the study. Many behavior change interventions rely on similar behavior change principles such as goal setting, increasing social support, or increasing confidence to make changes. These strategies are effective for helping people quit smoking, become more active, and change their dietary patterns. Despite differences in population, settings, behaviors, or interventions, most of the studies in the BCC resulted in positive changes—reinforcing the potency of behavior change interventions for improving healthy lifestyles across the lifespan.

By using common measures and methods across studies, the BCC was able to take the power of a single study and turn it into a behavior change movement. Many current themes in behavior change research were incubated within the BCC—multiple behavior change, population tailoring, intervention fidelity, sustainability, and e-health, to name a few.

SW: How did you become involved in this research and were there any particular problems encountered along the way?

Selected on the basis of the scientific peer review, the sponsoring organizations awarded approximately \$8 million annually from 1999-2002 to fund the 15 research grants featured in this supplemental issue. The grantees attended semi-annual meetings co-sponsored by the American Heart Association (AHA), in order to report progress, discuss problems, and share information related to the conduct of their grants.

A Behavior Change Consortium composed of NIH program staff, research investigators from the 15 sites, and representatives from the AHA and the Robert Wood Johnson Foundation, was established to explore opportunities for collaboration across the 15 sites. The authors of this paper were key members



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of the BCC, with a broad knowledge of health behavior research which enabled them to set the BCC activities within the larger behavioral change research field. The biggest problems which were overcome through participation in the Consortium were transforming the traditional mindset of "your" science and "my" science to "our" science.

SW: Where do you see your research leading in the future?

The BCC has served as a model of collaborative research and funding across NIH Institutes as well as across different settings, populations, and intervention strategies. The National Academy of Sciences (NAS) has identified a broad domain of questions at the interface of social, behavioral, and biomedical sciences, whose resolution could lead to major improvements in the health of the US population, all the while stressing the importance of approaching these questions from an interdisciplinary perspective.

In describing their vision of future directions, the NAS has emphasized research priorities that cut across institute boundaries at the NIH, thereby underscoring the broad significance of behavioral and social science research for multiple disease outcomes as well as for health promotion. These are the ingredients for a program of behavioral and social science research that will advance our ability to change behavior in ways that will prevent disease over the long term. The investigators participating in the BCC have already started us down this path.

As a follow-up to this seminal article in the Health Education Research volume which focused on individual grantee site efforts, BCC investigators authored a special issue of *Annals of Behavioral Medicine* in 2005, which highlighted themes developed by the BCC multidisciplinary workgroups around topics such as enhancing recruitment and retention, ensuring treatment fidelity, and applying the RE-AIM framework.

Mentorship of junior investigators, many of whom are now principal investigators on their own NIH grants, has further extended the work of the BCC. The successes of the BCC led to the establishment of the **Health Maintenance Consortium**, a second-generation NIH multi-site collaborative which addresses the follow-up science question of how behavior change gains can be maintained. The BCC approach—bringing together academics, government, and private philanthropy—can serve as a model for other national research efforts.

SW: Do you foresee any social or political implications for your research?

The social and political implications lie in the reduction of chronic disease patterns across the lifespan. Triple helix research—research collaborations between government, academia, and industry—is vital to the promotion of global health and the elimination of health disparities. The BCC helped change the nature of scientific inquiry by demonstrating that collaborative, transdisciplinary research requires substantially different mechanisms for interaction, rapid translation of research findings to practice, and mentorship of junior investigators.

The Consortium efforts pointed the way toward the importance of tailoring behavioral and social interventions to different populations and the need for cultural sensitivity and competencies when working in diverse populations and settings. Examining the context of behavior change research emphasizes the importance of designing multilevel interventions which can also address social and physical environmental influences on individual level behavior change.

Understanding the elements of efficacious behavioral change interventions and strategies for maintaining successes over time is the first step in widely diffusing and sustaining effective interventions in real-world settings which can have a major impact on population health.

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Keywords: behavior change consortium, tobacco use, unhealthy diet, sedentary lifestyle, national institutes of the health roadmap initiatives, preventable and chronic diseases, multi-risk intervention studies.

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