

Methodological Resources for Translating Evidence-Based Behavioral Interventions (EBI) to Reach Disparity Populations in Ethnically Diverse Communities

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A critical approach in addressing persistent health disparities is to implement evidence-based interventions (EBI), particularly behavioral interventions that can improve health and prevent disease and disability into community settings to reach disparity populations. Although effective EBIs exist, they are not being implemented broadly, especially in vulnerable communities experiencing disparities. One reason is that there are few conceptual models of the translation processes that apply to the health disparities field. Most existing models assume that translating one EBI with minor adaptations suffices, and communities are seldom involved in the process. What is needed instead includes these considerations:

- Substantial adaptations to any EBI are necessary to accommodate differences between the original EBI context and disparity communities in populations reached, community settings, and available resources.
- Health disparity communities often have locally developed programs (best practices) designed specifically for vulnerable individuals that warrant consideration.

Community-based participatory research approaches that create community ownership are thus critical. This annotated bibliography includes key publications that provide guidelines and models for translation and adaptation in disparity communities. We list alphabetically publications in two categories:

- I. Conceptual models of the processes of translation and implementation that are applicable to translational research in health disparity communities
- II. Good examples of the adaptation and translation process including formative research to learn about the community-based context for implementation

I. Conceptual Models of the Processes of Translation and Implementation Appropriate for Disparities Populations

Barrera M Jr, Castro FG. A heuristic framework for the cultural adaptation of interventions. *Clinical Psychology: Science and Practice*. 2006;13, 311-316.

A framework is presented that tests three types of cultural equivalence in order to determine whether an evidence-based intervention requires adaptation. Although focused on cultural adaptations, it is based on the need to adapt evidence-based interventions to fit a variety of special subgroups. Included are equivalence of engagement, action, and conceptual theory. A sequence is described for developing adaptations including three phases: 1) information gathering, 2) preliminary adaptations, and 3) refinements of adaptations.

Castro FG, Barrera M Jr, Holleran Steiker LK. Issues and challenges in the design of culturally adapted evidence-based interventions. *Annual Review of Clinical Psychology*. 2010;6:213-39. PMC4262835

The authors provide relevant definitions, describe challenges and issues, and give examples of cultural adaptation frameworks and methods. They explore emerging multistep frameworks as a guide to developing culturally adapted EBIs. Table 2 provides a useful summary and comparison of three adaptation process models with the specific steps of each model. They also review evidence on the effectiveness of EBIs that have been culturally adapted and suggest important areas for future research, including identification of cultural mediators and moderators of program effectiveness.

Nápoles AM, Santoyo-Olsson J, and Stewart AL. Methods for translating evidence-based behavioral interventions for health disparity communities. *Preventing Chronic Disease*, 2013 Nov 21;10:E193. PMC3839588

Drawing from two existing models, the authors describe seven methodological phases in the process of translating and implementing EBIs in communities to reach vulnerable groups: establish infrastructure for translation partnership, identify multiple inputs (information gathering), review and distill information (synthesis), adapt and integrate program components (translation), build general and specific capacity (support system), implement intervention (delivery system), and develop appropriate designs and measures (evaluation). For each phase, specific methodological steps and resources are described and examples are provided from research with ethnic minority, low-SES, and disabled populations. The methods focus on how to incorporate needed adaptations so that programs fit new community contexts, meet needs of individuals from disparity populations, capitalize on scientific evidence, and utilize and build community assets and resources. A key tenet is to integrate EBIs with community best practices to the extent possible, while building local capacity to address disparities. Tradeoffs between maintaining fidelity to the EBIs while maximizing fit to the new context are discussed.

Wainberg ML, McKinnon K, Mattos PE, Pinto D, Mann CG, de Oliveira CS, de Oliveira SB, Remien RH, Elkington KS, Cournos F; PRISMA Project. A model for adapting evidence-based behavioral interventions to a new culture: HIV prevention for psychiatric patients in Rio de Janeiro, Brazil. *AIDS Behavior*, 2007 Nov;11(6):872-83.

The authors propose a 4-step conceptual framework to assist in selecting and integrating intervention components from multiple, related EBIs and adapting interventions to the culture of the served target population. The steps are addressed via a strong community/academic partnership and include adaptations to accommodate the culture and infrastructure of the service organization and community. The adaptation process is designed to balance fidelity to efficacious interventions developed elsewhere with fit to a new context and culture. The 4-step process includes: 1) optimizing fidelity; 2) optimizing fit; 3) balancing fidelity and fit; and 4) pilot testing and refining the intervention. The paper describes how these steps were carried out in a specific context, but the process can be generalized to other contexts, i.e., serving as a model for adapting existing efficacious interventions to new groups and cultures.

Wandersman A, Duffy J, Flaspohler P, Noonan R, Lubell K, Stillman L, Blachman M, Dunville R, Saul J. Bridging the gap between prevention research and practice: the interactive systems framework for dissemination and implementation. *American Journal of Community Psychology*, 2008 Jun;41(3-4):171-81.

This article presents the Interactive Systems Framework for Dissemination and Implementation (ISF) that blends aspects of research to practice models and of community-centered models. The framework presents three systems: the Prevention Synthesis and Translation System (which distills information about innovations and translates it into user-friendly formats); the Prevention Support System (which provides training, technical assistance or other support to users in the field); and the Prevention Delivery System (which implements innovations in the world of practice). The framework provides a heuristic for understanding the needs, barriers, and resources of the different systems, as well as a structure for summarizing existing research and for illuminating priority areas for new research and action.

II. Examples of Processes of Translation and Adaptation of Evidence-Based Interventions including Formative Research Prior to Translation

Barrera M Jr, Castro FG, Strycker LA, Toobert DJ. Cultural adaptations of behavioral health interventions: a progress report. *Journal of Consulting and Clinical Psychology*, 2013 Apr;81(2):196-205. PMC3965302

The goals of the article are to (a) describe consensus on the stages involved in developing cultural adaptations, (b) identify common elements in cultural adaptations, (c) examine evidence on the effectiveness of culturally enhanced interventions for various health conditions, and (d) pose questions for future research. The authors reviewed influential literature from the past decade. Results suggested that cultural adaptation can be organized into five stages: information gathering, preliminary design, preliminary testing, refinement, and final trial. With few exceptions, reviews of several health conditions (e.g., AIDS, asthma, diabetes) concluded that culturally enhanced interventions are more effective in improving health outcomes than usual care or other control conditions. The authors conclude that progress has been made in establishing methods for conducting cultural adaptations and providing evidence of their effectiveness.

Burgio LD, Collins IB, Schmid B, Wharton T, McCallum D, Decoster J. Translating the REACH caregiver intervention for use by area agency on aging personnel: the REACH OUT program. *The Gerontologist*, 2009;49(1):103-16. PMC3695600.

This article describes in detail the processes used to translate the evidence-based Resources for Enhancing Alzheimer's Caregiver Health (REACH) II intervention for use in four Area Agencies on Aging (AAAs). A partnership between the Alabama Department of Senior Services and the University of Alabama adapted the REACH II intervention used in the clinical trial for feasible use in a social service agency. The authors describe the processes of adaptation, including an evaluation of the outcomes of the condensed intervention, which was called REACH OUT.

Delgado AT, Grossman M, Santoyo-Olsson J, Gallegos-Jackson E, Kanaya AM, and Stewart AL. Description of an academic community partnership lifestyle program for lower-income, minority adults at risk for diabetes. *The Diabetes Educator*, 2010, Jul-Aug;36(4):640-60. PMC3771540.

This article describes strategies to develop a lifestyle intervention for delivery in a community setting. The project was a partnership consisting of researchers at a major university and public health professionals at a local health department. The Live Well, Be Well program was adapted from several interventions with demonstrated efficacy and delivered in Spanish and English by health department staff. It was designed to meet the needs of lower income, minority, and low-literacy adults at risk for diabetes. Individually tailored and nonprescriptive, it utilized existing health department infrastructure, focused on telephone counseling, and drew from existing culturally appropriate, low-literacy materials. It was delivered in local, community-based facilities. The program provides a unique translational model for implementing diabetes risk reduction programs for underserved populations.

Lorig KR, Ritter PL, Jacquez A. Outcomes of border health Spanish/English chronic disease self-management programs. *The Diabetes Educator*, 2005;31(3):401-9.

This article describes the dissemination and evaluation of the community-based Chronic Disease Self-management Program and the Spanish-language version (Tomando Control de Su Salud) as delivered in Texas/New Mexico/Mexico border towns. It details the cultural adaptations made in the Spanish language version based on formative research and the delivery of the program by the El Paso Diabetes Association to 445 persons with chronic illness. The program was effective with significant improvements in behaviors, health status and self-efficacy.

Nápoles AM, Santoyo-Olsson J, Ortiz C, Gregorich S, Lee HE, Duron Y, Graves K, Luce JA, McGuire P, Díaz-Méndez M, Stewart AL. Randomized controlled trial of Nuevo Amanecer: a peer-delivered stress management intervention for Spanish-speaking Latinas with breast cancer. *Clinical Trials*, 2014; Apr;11(2):230-8. PMC3972263

This paper describes community-based participatory research methods used to develop and implement a culturally tailored, peer-delivered cognitive-behavioral stress management intervention for low-income Spanish-speaking Latinas with breast cancer. It describes the randomized controlled trial study and unique considerations in implementing the trial to test the program in community settings. The authors delineate several methodological phases used to develop and implement the Nuevo Amanecer program and trial, emphasizing community engagement processes. In particular, they summarize several “lessons learned.” For example, including community-based organizations and cancer survivors as research partners and hiring recruiters and interventionists from the community were critical to successful implementation in community settings. Also, facilitating and maintaining excellent communication among community partners was imperative to troubleshoot implementation issues. Engaging community members in the design and implementation of community-based programs and trials enhances cultural appropriateness and congruence with the community context.

Nápoles-Springer AM, Ortiz C, O'Brien H, Diaz-Mendez M. Developing a culturally competent peer support intervention for Spanish-speaking Latinas with breast cancer. *Journal of Immigrant and Minority Health*, 2009;11(4):268-80. PMC3832434.

This paper provides an example of how formative research can be used to adapt evidence-based interventions for minority populations. The authors obtained input from Latina breast cancer survivors, breast cancer patients referred to psychosocial services, and advocates for Latinos with cancer to identify barriers to, benefits of, and useful components of an effective peer support counselor intervention for Spanish-speaking Latinas recently diagnosed with breast cancer. Results indicated that interventions should begin soon after diagnosis, build self-care skills, be culturally competent and emotionally supportive, provide language appropriate cancer information, encourage self-expression, and address lack of access to and knowledge of services.

Stewart AL, Gillis D, Grossman M, Castrillo M, Pruitt L, McLellan B, and Sperber N. Diffusing a research-based physical activity promotion program for seniors into diverse communities: CHAMPS III. *Preventing Chronic Disease*, 2006 Apr;3(2) A51. PMC1563966.

This paper describes the processes involved in diffusing an evidence-based intervention (CHAMPS II), to reach lower-income and minority (primarily Hispanic or Latino and African American) seniors. The evaluation was based on the logic model approach recommended by the Centers for Disease Control and Prevention. Through an academic-community partnership, university staff worked with each organization to adapt the program to be as appealing and effective as possible, enable their staff and volunteers to provide the program, increase participants' physical activity, and leave sustainable programs in place. The adapted and implemented programs differed substantially from the original program and among organizations. Evaluation revealed numerous challenges and some unexpected community-level benefits. The overarching challenge was to retain original program features within each organization's resources yet be sustainable.

Stewart AL, Grossman M, Bera N, Gillis DE, Sperber N, Castrillo M, Pruitt L, McLellan B, Milk M, Clayton K, and Cassidy D. Multilevel perspectives on diffusing a physical activity promotion program to reach diverse older adults. *Journal of Aging and Physical Activity*, 2006;14(3):270-287.

Because health disparity communities often have locally developed programs (best practices) designed specifically for vulnerable individuals, formative research in those communities is warranted. The authors describe a community-based approach to determine attitudes, resources, needs, and barriers to physical activity and the potential diffusion of a physical activity promotion program to reach minority and lower-income older adults. Formative research using focus groups and individual interviews from multiple sectors: community members, task force and coalition members, administrators, service implementers, health care providers, and physical activity instructors. Using qualitative methods, 47 transcripts (N = 197) were analyzed. Most sectors identified needs for culturally diverse resources, promotion of existing resources, demonstration of future cost savings, and culturally tailored, proactive outreach. The program was viewed favorably, especially if integrated into existing resources. Linking sectors to connect resources and expertise was considered essential. Complexities of such large-scale collaborations were identified. Methods and results may guide communities interested in diffusing health promotion interventions.

Teri L, McKenzie G, Logsdon RG, McCurry SM, Bollin S, Mead J, Menne H. Translation of two evidence-based programs for training families to improve care of persons with dementia. *The Gerontologist*, 2012;52(4):452-9. PMC3391381

The Ohio Department of Aging (in collaboration with the Alzheimer's Association Chapters in Ohio) and the Oregon Department of Health Services (in partnership with Area Agencies on Aging and the Oregon Chapter of the Alzheimer's Association) translated two programs - Reducing Disability in Alzheimer's Disease and STAR-Community Consultants (STAR-C) - for implementation by their staff. Both programs are designed to improve care, enhance life quality, and reduce behavioral problems of persons with dementia and have demonstrated efficacy via randomized controlled trials. This article addresses the developmental and ongoing challenges encountered in translating these programs to inform other community-based organizations considering the translation of evidence-based programs and to assist researchers in making their work more germane to their community colleagues.

McCurry SM, Logsdon RG, Mead J, Pike KC, La Fazia DM, Stevens L, Teri L. Adopting evidence-based caregiver training programs in the real world: outcomes and lessons learned from the STAR-C Oregon Translation Study. *Journal of Applied Gerontology*, 2015 Apr 13. pii: 0733464815581483. [Epub ahead of print]

The authors describe the translation and evaluation of STAR-Community Consultants program (STAR-C), an evidence-based dementia caregiver training program, within the Oregon Department of Human Services. Staff from two regional Area Agencies on Aging (AAAs) were trained to implement all aspects of STAR-C, including screening, recruitment of caregiver/care-receiver dyads, and treatment delivery. Mailed assessments of caregiver depression, burden, and care-receiver mood, behavior, and quality of life were collected at pre-treatment, post-treatment, and 6-month follow-up. One hundred fifty-one dyads entered the program; 96 completed the 8-week intervention. Significant positive post-treatment effects were obtained for caregiver depression, burden, and reactivity to behavior problems, and care-receiver depression and quality of life. At 6-month follow-up, improvements in caregiver reactivity and care-receiver depression were maintained. Caregivers reported high levels of satisfaction with the program. STAR-C was successfully and effectively implemented by participating AAAs. Recommendations for replication, including training, recruitment, and assessment procedures are provided.

Williams AS, Moore SM. Universal design of research: inclusion of persons with disabilities in mainstream biomedical studies. *Science Translational Medicine*, 2011;3(82):82cm12. PMC3320239

This article presents practical universal design principles (“the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design”) and methods that can be applied by clinical researchers to address the gross underrepresentation of people with disabilities in research. They include practical guidelines for designing research methods, instruments, and interventions to accommodate a wide variety of disabilities.