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Statewide dissemination of an evidence-based practice using Breakthrough Series Collaboratives

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ABSTRACT

The emerging field of implementation science has begun to inform the increasing efforts to disseminate evidence-based practices. The Breakthrough Series Collaborative (BSC) model was used to disseminate trauma-focused cognitive behavioral therapy (TF-CBT) across Connecticut over three years. Participants were 179 outpatient clinical staff across 16 community-based agencies that implemented TF-CBT. A total of 588 children and families received TF-CBT. Children completing treatment showed significant reductions in PTSD and depression symptoms. Quantitative and qualitative data about the BSC model are presented. The BSC is a promising approach for dissemination of evidence-based practices, and recommendations for additional research on BSCs and sustainment of evidence-based practices are made.

1. Introduction

There has been much progress in the development and dissemination of best practices in children's mental health over the past 15 years. Evidence-based practices (EBPs) – those demonstrated by research to be effective in treating targeted health problems – have been developed to treat a variety of health and mental health conditions in children and adults. There are now more than 210 distinct EBPs for children and adolescents listed on the Substance Abuse and Mental Health Services Administration's (SAHMSA) National Registry of Evidence-Based Programs and Practices. As the number of EBPs increases, policy makers, researchers, and others have been faced with the challenge of how to broadly disseminate these models to community-based settings. Despite the development of so many child behavioral health EBPs and increasing attention to dissemination (Gaudiano & Miller, 2013; Gotham, 2006; McHugh & Barlow, 2010), EBPs are still not routinely used in community settings. Thus, there has been limited impact on public health (Kazak et al., 2010).

1.1. The challenges of bringing science to practice

EBPs have been criticized for not being sufficiently "transportable" to real world settings, and the availability of EBPs in communities continues to lag behind treatment development and research (Chorpita & Regan, 2009) When community-based providers have attempted to implement EBPs, efforts have often been challenged by organizational, policy, and staffing barriers (Foa, Gillihan, & Bryant, 2013; Ganju, 2003). These efforts have historically included traditional didactic training methods with little or no follow-up, which have been minimally effective at creating sustainable changes in practice (Beidas & Kendall, 2010; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Herschell, Kolko, Baumann, & Davis, 2010; Jensen-Doss, Cusack, & de Arellano, 2008; Lyon, Stirman, Kerns, & Bruns, 2011).

Implementation of an EBP with fidelity is a complex process. In Damschroder et al. (2009) widely-used Consolidated Framework for Implementation Research (CFIR), five implementation domains are described: intervention characteristics (the EBP to be implemented), outer setting (factors external to the agency), inner setting (characteristics and culture of the agency implementing the program), characteristics of individuals (those implementing the program), and process (strategies used in implementation). Barriers to implementation in community-based settings exist in each of these domains, across

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multiple levels. For example, clinicians may have difficulty modifying their approach to therapy because of limited time, lack of ongoing support or supervision, or perceptions that the new intervention is not compatible with their treatment philosophy or clientele (Ruzek & Rosen, 2009). Agencies may lack resources or leadership support to implement a new program, and high staff turnover common to community based agencies (CBAs) may impede sustainability (Woltmann et al., 2008) (an inner setting characteristic). Agency, state, or federal policies and incompatibility with reimbursement mechanisms may also be barriers to implementation (an outer setting characteristic). Addressing these issues requires complex implementation strategies that are not part of traditional training models, including the participation of clinical supervisors and agency leaders who can support implementation.

Ironically, there are currently no evidence-based *implementation* models to disseminate EBPs. However, there is a rapidly growing body of research on implementation science, conceptual frameworks, and promising implementation models (Aarons, Hurlburt, & Horwitz, 2011; McHugh & Barlow, 2010; Tabak, Khoong, Chambers, & Brownson, 2012). Promising models for implementing behavioral health treatments in community settings include The Interactive Systems Framework (Wandersman et al., 2008), the ARC (Availability, Responsiveness, and Continuity) model (Glisson & Schoenwald, 2005), Community Development Teams (Bruns & Hoagwood, 2008) and others (e.g. Chamberlain, Roberts, Jones, Marsenich, Sosna & Price, 2012). There are also highly structured, and tightly controlled dissemination models monitored by a central organization associated with the treatment developers, such as Multisystemic Therapy (MST; Edwards, Schoenwald, Henggeler & Strother, 2001).

1.2. Breakthrough Series Collaboratives

The Breakthrough Series Collaborative (BSCs) is another model currently being used and tested for disseminating EBPs. Confronted with the challenge of bringing health care research to practice, the Institute for Healthcare Improvement (IHI) developed the BSC to implement practice improvements in medical settings (Kilo, 1998). The BSC involves an intensive 6–15 month process that differs from traditional training and is consistent with Fixsen et al.'s (2005) stages of implementation and review of structured implementation strategies. The BSC includes staff with diverse roles in a team-based learning approach (including leadership), consists of multiple in-person trainings and site-specific consultation, emphasizes the use of data, feedback, and quality improvement, and focuses on organizational change and sustainability, as well as clinical skills. These components are consistent with emerging constructs described in the implementation science literature that are necessary for successful implementation (Nadeem, Gleacher, & Beidas, 2013; Novins, Green, Legha, & Aarons, 2013; Wandersman et al., 2008), and are consistent with the five domains of the CFIR model (Damschroder et al., 2009). Promising results have been found for the BSC model in healthcare (Young, Glade, Stoddard, & Norlin, 2006), education (Wiecha, Nelson, Roth, Glashagel, & Vaughan, 2010), child welfare (Miller & Ward, 2008) and mental health (Cohen, Adams, Dougherty, Clark, & Taylor, 2007).

The National Child Traumatic Stress Network's (NCTSN) National Center at Duke University and the University of California, Los Angeles (UCLA) pioneered adaptation of the BSC model to disseminate EBPs for treating child traumatic stress through what was called "learning collaboratives" (Ebert, Amaya-Jackson, Markiewicz, Kisiel, & Fairbank, 2012; Markiewicz, Ebert, Ling, Amaya-Jackson, & Kisiel, 2006). The NCTSN is funded by SAMSHA, part of the U.S. Department of Health and Human Services, and is comprised of a network of more than 150 sites across the country. The NCTSN adopted the BSC as a primary mechanism for disseminating EBPs across NCTSN sites nationally, and has coordinated over 40 regional or national BSCs. However, little research exists about the use of BSCs to disseminate (Nadeem, Olin, Hill, Hoagwood, & Horwitz, 2014). An evaluation of the NCTSN's first TF-CBT BSC showed that the model was used to successfully disseminate TF-CBT with fidelity to 11 NCTSN sites across the country, and was perceived as an effective implementation model by participants (Ebert et al., 2012). However, the authors noted that outcomes from children receiving TF-CBT were not available to determine effectiveness and recommended further research about whether the BSC model could be used with typical community-based agencies, which may not have the same resources as NCTSN-funded sites.

Connecticut was among the first states to use the BSC model to disseminate a child behavioral health EBP across a statewide system of care beginning in 2007. This initiative was the first step of an ongoing broader strategy to disseminate and sustain TF-CBT across the state. The current study, which describes the first phase of this dissemination from 2007–2010, was designed to extend the limited research on BSCs by providing process and outcome data about whether and how BSCs can be used within a statewide system of care to disseminate an EBP to community based agencies. The study was designed to answer the following questions: (1) whether the BSC is a feasible model to disseminate an EBP to typical community-based agencies, (2) whether staff had positive perceptions of the BSC approach and improvements in attitudes about EBPs, (3) whether staff reported increased utilization of TF-CBT, and (4) whether disseminating TF-CBT through a BSC resulted in positive outcomes for children.

2. Method

2.1. Implementation plan

2.1.1. Background

The Connecticut Department of Children and Families (DCF) is an integrated state agency with five mandates: child welfare, behavioral health, prevention, juvenile justice, and substance abuse. In 2006, DCF administrators sought to disseminate an EBP for children suffering from traumatic stress reactions because of increased awareness of the needs of traumatized children in the child welfare system (Greeson et al., 2011) and the long-term costs associated with child trauma exposure (Alonso et al., 2011; Felitti et al., 1998; Walker et al., 2003). This initiative also grew out of previous successful statewide implementations of in-home EBPs and recognition that virtually no outpatient EBPs were widely available in the state.

2.1.2. Treatment selection

A number of EBPs for children suffering from traumatic stress exist (Gillies, Taylor, Gray, O'Brien, & D'Abrew, 2012). TF-CBT, one of the most widely studied models, includes psychoeducation and teaching practical skills for children to manage thoughts and feelings associated with traumatic stress reactions, the development and processing of a "trauma narrative" and sharing of the narrative with a caregiver in a safe therapeutic setting, and skills to enhance future safety and development (Cohen, Mannarino, & Deblinger, 2006). TF-CBT is supported by more than 18 studies, including 15 randomized clinical trials, which demonstrate improvements in children's PTSD, depression, and anxiety symptoms, and improvements in parental distress and parenting skills (for a review, see Cary & McMillen, 2012). The NCTSN has also successfully used the BSC model to disseminate TF-CBT across the country since 2005 (Ebert et al., 2012). Subsequently, there have been a number of statewide efforts to disseminate TF-CBT through a variety of approaches (Cohen & Mannarino, 2008; Sigel, Benton, Lynch, & Kramer, 2013), including North Dakota (Wonderlich et al., 2011), Arkansas (Sigel, Kramer, et al. 2013), and New York (Hoagwood et al., 2007). In 2007, DCF selected TF-CBT to disseminate in Connecticut based upon the available research, consultation with local experts in child trauma, and the success of the NCTSN's TF-CBT dissemination efforts.