Psychological Trauma: Theory, Research, Practice, and Policy

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Characteristics of 17 Statewide Initiatives to Disseminate Trauma-Focused Cognitive-Behavioral Therapy (TF-CBT)

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The purpose of this study was to explore large-scale initiatives and dissemination models in the United States to promote Trauma-Focused Cognitive-Behavioral Therapy (TF-CBT), an evidence-based practice (EBP) for childhood Post-Traumatic Stress Disorder (PTSD). Individuals from 17 statewide TF-CBT dissemination projects across the nation were interviewed about their projects. Data were collected and analyzed on dissemination model used, facilitating factors, approximate overall cost, and approximate number of therapists trained. Approximate total costs, approximate number of therapists trained, and duration of training and consultation ranged considerably across projects. Differences between two dissemination models in duration of training and approximate number of trained therapists were noted; however, approximate funding per year, and approximate total costs did not differ between the two models. Results are discussed in light of recent efforts to engage states in the development of traumafocused interventions and future directions for research.

Keywords: dissemination, trauma, evidence-based practice

The percentage of youth exposed to some form of trauma is high, ranging from 8% to 53%, depending on the type of trauma and population studied (e.g., Copeland, Keeler, Angold, & Costello, 2007; Finkelhor, Ormrod, Turner, & Hamby, 2005; U.S. Department of Health & Human Services, 2007). Approximately 20% of these youth later develop symptoms of Post-Traumatic Stress Disorder (PTSD; Fletcher, 2002). Despite high rates of PTSD and related symptoms, many children who have experienced traumatic events do not receive treatment or receive treatment that has not proven to be effective (Burns et al., 2004; Cohen, Mannarino, & Rogal, 2001; Kolko, Cohen, Mannarino, Baumann, & Knudsen, 2009; Ringeisen, Casanueva, Urato, & Stambaugh, 2009). Without adequate and appropriate treatment, symptoms may linger or exacerbate over time. In addition, lack of treatment has the potential to increase a child's risk for later criminal activity, running away, substance abuse, and sexual acting out, which may subsequently increase the risk for additional trauma (Hernandez, Lodico, & DiClemente, 1993; Myers et al., 2002; Siegel & Williams, 2003). Given these problems, the direct and indirect costs of child abuse and neglect are estimated to be \$103.8 billion when considering medical care, loss of functioning and adverse health consequences (Wang & Holton, 2007).

Large-scale dissemination of evidence-based practices (EBPs) is one possible solution to the current negative state of mental health treatment for children who have experienced trauma. However, effective EBP dissemination and implementation is no easy task. After review and synthesis of available literature, Fixsen, Naoom, Blasé, Friedman, and Wallace (2005) argued that dissemination and implementation occur within a contextual framework. This overall dissemination and implementation framework consists of a Source (i.e., the EBP), a Destination (i.e., the individual and the organization that adopts the EBP), a Communication link (i.e., the developers and/or trainers of the EBP), and a Feedback mechanism (i.e., a method of evaluation of practices) that all operate within a sphere of Influence (i.e., the social, economic, political, historical, and psychosocial factors that impinge directly or indirectly on the individual, organization, or system). Furthermore, Fixsen et al. (2005) argued that successful dissemination and implementation have several core components, including staff selection, preservice and in-service training, ongoing consultation and coaching, staff and program evaluation, facilitative administrative support, and systems interventions. Effective dissemination and implementation depend on the status and quality of each component as well as the status and quality of interactions between components. However, the authors argue that there is little empirical data related to organizational and system influences on dissemination and implementation, their specific influences, or the mechanisms for their impact on implementation efforts. They concluded that more research needs to be conducted to inform implementation and dissemination initiatives.

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Trauma-Focused Cognitive-Behavioral Therapy (TF-CBT) is an EBP for childhood symptoms of PTSD with well-established efficacy that has been disseminated on a large scale. In recent reviews of research on treatment for children with PTSD symptoms (i.e., CA Evidence-Based Clearinghouse for Child Welfare, 2009; Chadwick Center for Children and Families, 2004; Saunders, Berliner, & Hanson, 2004; Silverman et al., 2008), TF-CBT was the only treatment given the highest rating in all of the reviews. Cohen and Mannarino (2008) have discussed three dissemination methods that have been used (Web-based learning, live training plus ongoing consultation, and learning collaborative) as well as the advantages and disadvantages of each model. Webbased learning involves completing TF-CBTWeb (accessible at www.musc.edu/tfcbt), developed by investigators at the Medical University of South Carolina (MUSC) Crime Victims Center in collaboration with TF-CBT developers. The Web site includes parent and child sections for each component of the model, video examples of all of the key treatment components, printable scripts to use, handouts for parents and children, instructions on how to handle clinically challenging situations, guidelines on cultural issues, and resources and links. This method's advantages are overcoming barriers such as cost, distance, and inconvenience of having to travel to live trainings and ability to train multiple therapists at one time. Disadvantages are lack of interaction with a live trainer and no access to ongoing consultation.

The two other models of TF-CBT dissemination require more intensive training and follow-up efforts. The live training plus ongoing consultation (TC) model involves in-person training in TF-CBT followed by ongoing phone or in-person consultation. The training and consultation are provided by the treatment developers or other approved trainers who monitor trainees to ensure the treatment is being used with fidelity. The advantage of this model is that practitioners receive support when they start seeing clients, which may enhance fidelity and sustainability once training is completed. The disadvantages to this method are cost and limits to the number of therapists that can be trained. By comparison, the learning collaborative (LC) model is designed to change the larger culture in which TF-CBT is implemented with the goal of achieving buy-in across systems and enhancing long-term sustainability. TF-CBT training typically involves separate tracks for therapists, supervisors, and senior leaders (i.e., administrators and directors; Ebert, Amaya-Jackson, Markiewicz, & Burroughs, 2008). Each track has several in-person trainings with follow-up by phone or in person consultation over the course of a year targeting different parts of the TF-CBT model, implementation strategies, and/or dissemination issues. The content of the in-person trainings and consultations are based on where the therapist, supervisor, and/or senior leader are in the TF-CBT model, implementation, and/or dissemination process. The trainings and consultation are also provided by the treatment developers or other approved trainers. With this model, supervisors and senior leaders are involved in the calls, which may provide additional support to therapists learning the model from within the agency as well as change or maintain the culture required for a particular model. The inclusion of senior leaders may enhance sustainability once training has ceased. Senior leaders tend to have fewer turnovers and can sustain use of the model despite front-line worker turnover. Additionally, within the LC model, additional trainings are often conducted in traumainformed care to other stakeholders (e.g., Child Protective Services, Department of Mental Health, child advocacy centers, court personnel) to help achieve buy-in across systems. A possible disadvantage of this model over the live training and consultation model is that this method may be costlier and more time-consuming. There is also an added expense of training supervisors, senior leaders, and stakeholders as well as conducting extra live trainings. Due to these factors, this model may result in fewer therapists being trained but may enhance sustainability and buy-in across systems.

The dissemination of TF-CBT has the potential to reduce symptoms and prevent onset of more severe pathology by increasing the availability of effective, culturally sensitive mental health care. Dissemination of TF-CBT is currently occurring throughout the nation, yet there is little literature available describing these efforts. Research is needed to understand the effective mechanisms for engaging mental health providers in training of TF-CBT. Therefore, the goal of the current study is to describe large-scale dissemination initiatives in the United States to promote TF-CBT. It is anticipated that this article will serve as a guide and potential resource for other states interested in implementing TF-CBT and will contribute to the scientific literature on potentially effective methods for EBP dissemination. We explored the characteristics of statewide dissemination projects designed to increase access to EBP for traumatized children. Additionally, we examined the relationship between dissemination models used and project characteristics (i.e., approximate funding per year, years of funding, approximate total cost, days of training, months of consultation, total consultation calls, approximate number of therapists trained, and use of outcome and fidelity measures). Although there is no current or past research examining characteristics of differing dissemination methods, it was hypothesized that, based on the amount of time and effort needed to facilitate the LC versus the TC model, projects using the former would require more training, cost more money to implement, and result in fewer therapists trained.

Additionally, based on the review of the implementation and dissemination literature by Fixsen et al. (2005) and descriptions of TF-CBT dissemination models by Cohen and Mannarino (2008) we identified eight main facilitating factors commonly used in dissemination and implementation projects. These facilitating factors align with the core components as well as target organizational and external factors affecting successful dissemination and implementation as discussed by Fixsen et al. (2005). We hypothesized that facilitating factors would emerge as predictors of project characteristics. The facilitating factors were: (a) presentations to other outside stakeholder agencies (e.g., Child Protective Services, police, court representatives, and other state agencies) to advocate for EBP by mental health; (b) attempts to gain leadership support within the implementing agency (e.g., training supervisors in TF-CBT, preservice and in-service training, meetings with directors and other administrative staff); (c) assessment of agency readiness (e.g., assessment of attitudes toward EBP and discussing common obstacles of the training process); (d) partnership with state agencies (e.g., Child Protective Services, Department of Mental Health, and/or Medicaid); (e) an application process documenting participants' willingness and capacity to participate; (f) using incentives or stipends (e.g., paying for training, clinical time,

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and/or travel); (g) coaching and consultation (e.g., ongoing learning sessions by the treatment developers or other approved trainers who monitor and evaluate the trainees to ensure the model is being used effectively and with fidelity); and (h) extensive face-to-face contact with therapists throughout the training process (e.g., conducting consultation sessions inperson as opposed to over the phone or site visits in addition to trainings).

Method

Participants

In 2010, there were 19 states that currently or in the past had statewide dissemination projects of TF-CBT. These projects were identified through database searches (i.e., *PsychInfo; PubMed; NIH RePORT; SAMHSA*) using key words (i.e., evidence-based practice, evidence-based treatment, dissemination, TF-CBT, Trauma-Focused Cognitive-Behavioral Therapy, and implementation) as well as through consultation with two national experts in TF-CBT dissemination and a codeveloper of TF-CBT. A list of 19 project principal investigators, directors, or managers was generated with contact information. Among the states, there were five in the Northeast region of the country, six in the South, four in the Midwest and four in the West.

Measure

To guide data collection, a semistructured interview was created based on a review of literature (i.e., Cohen & Mannarino, 2008; Fixsen et al., 2005) of EBP dissemination focusing on program descriptors and processes. For example, the interview used closeended questions to gather approximate funding amounts, sources of funding, duration of the project, length of in-person training and consultation, number of consultation sessions, method of consultation, approximate number of trainees on funding sources, characteristics of the types of clients and therapists targeted by each effort, the training and supervision approach used in the dissemination, and outcome and fidelity measures incorporated into the dissemination efforts. Participants were also asked whether their project used any of the eight facilitating factors listed in the introduction. The interview also included two open-ended questions about barriers to dissemination and "tips" for gaining buy-in (i.e., "What barriers did you face in attempting to gain buy-in with therapists?" and "What tips would you give for gaining buy-in?") and one open-ended question about additional activities that contributed to total costs (i.e., "What additional activities might have contributed to total costs? [e.g., Web site development, dissemination of other EBP's, stipends, training of senior leaders, evaluation costs, trauma-informed care trainings to stakeholders, etc.]"). Interviewers (the first, second and third authors) asked all questions of the state's program directors or managers.

Procedure

The study was reviewed and determined to be exempt by the Institutional Review Board (IRB). Following IRB approval, we contacted the principal investigators, directors, or managers initially by phone or e-mail to explain the purpose of the study, confirm they were the appropriate person to be interviewed, and scheduled an appoint-

ment for the interview. All interviews were conducted by phone by the first, second, or third author and were recorded to ensure the accuracy of information obtained during the interview. All interviewees verbally consented to being recorded. The first, second, and third authors transcribed participants' responses to each of the questions. The entire interview was completed with the exception of the openended question regarding additional activities included in total costs. When the interview was complete, each interviewee was provided a copy of his or her responses to review for accuracy and add any pertinent details that may have been omitted. After review for accuracy, the interviewees asked the final open-ended question regarding other activities included in total costs.

Data Analysis

Quantitative and qualitative data were collected for the study. Quantitative data consisted of responses that pertained to approximate funding amounts, duration of the project, length of in-person training and consultation, number of consultation sessions, approximate number of trainees, approximate total cost of the project, funding sources, characteristics of the types of clients and therapists targeted by each effort, dissemination method, use of outcome measurement, use of fidelity measurement, and presence or absence of the previously identified facilitating factors. Independent sample t tests, chi-square analyses, and Pearson correlations were conducted to determine significant differences between dissemination models and project characteristics. Qualitative data consisted of responses to only three openended questions. Two of the open-ended questions referred to barriers and "tips." Barriers were coded into seven categories by the first and second authors. Due to the small number and variability in barriers, we did not conduct interrater reliability in our coding. Responses pertaining to the "tips" are presented verbatim. The results of the one additional open-ended question referring to additional activities included in total costs are presented verbatim.

Results

Dissemination Characteristics

Of the total 19 states disseminating TF-CBT, 17 (California, Connecticut, Delaware, Georgia, Kentucky, Massachusetts, Minnesota, Mississippi, New Hampshire, New York, North Carolina, North Dakota, Ohio, South Carolina, Tennessee, Utah, and Washington) directors, principal investigators, and/or managers participated in structured interviews. Illinois and Nevada previously conducted statewide TF-CBT dissemination projects but individuals with detailed knowledge of the project could not be contacted for the interview. Of the 17 interviewees, 82% (n=14) were Doctoral and 18% (n=3) were Master's level professionals.

Dissemination projects either followed the TC model (53%; n=9), LC model (42%; n=7), or a community development team model (5%; n=1). The California Institute on Mental Health (CIMH) developed and used the community development team model, which is a dissemination strategy that involves assisting with organizational support by developing the infrastructure and internal controls to plan, monitor, and support learning and sustaining an evidence-based practice and providing clinical training by treatment developers and/or national experts of evidence-based practices in cohorts that builds upon peer-to-peer assistance. The

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dissemination is paid for by individual counties and/or agencies and, therefore, the dissemination project is not time-limited like the other projects. Given that this is the only project using this model, the results from this project were not included in quantitative analyses. However, this model appeared to be a viable method for disseminating TF-CBT as approximately 500 therapists were trained. We will discuss its components and potential strengths and weaknesses in the Discussion. Although previously identified as a distinct dissemination method, no project used only a Web-based learning model; however, all projects required completion of the Web-based training as part of the TC or LC model.

A primary goal for the majority of projects (82%; n=14) was the dissemination of TF-CBT with the exception of Georgia, Ohio, and Massachusetts. These projects focused on creating a system of care with funding from a Substance Abuse & Mental Health Services Administration (SAMHSA) State Infrastructure Grant; therefore, the results from these projects were excluded in subsequent analyses. However, it is important to note that SAMHSA State Infrastructure Grants were another funding mechanism that has been used to disseminate TF-CBT.

Results (summarized in Table 1) indicated that funding for TF-CBT dissemination originated from a variety of sources including state funds (54%; n = 7), SAMHSA grants (46%; n = 6), and/or private funds (i.e., foundations, endowments, and/or trusts) (38%; n = 5). The approximate funds ranged from \$92,833-\$1,090,000 annually for two to eight years. The approximate total cost for the projects ranged from \$200,000 - \$5,450,000. All projects focused on children and adolescents with the exception of the project in Mississippi, New York, and North Dakota which focused on TF-CBT training for children only and used another model for adolescents (i.e., Component Therapy for Trauma and Grief or Structured Psychotherapy for Adolescents Responding to Chronic Stress). All projects focused on children and/or adolescents treated by providers who accepted Medicaid (i.e., community mental health care agencies or nonprofit agencies) in primarily outpatient settings. All projects primarily trained licensed Master's Degree level therapists. A few projects (21%; n = 3) required therapists to have at least two years of experience working with children and adolescents in addition to being licensed Master's Degree level therapists. Two of the projects (i.e., NY and Mississippi) had an initial focus on a specific traumatic event (i.e., World Trade Center Attack and Hurricane Katrina) and then widened the focus to any type of traumatic event. The other projects had no exclusions based on traumatic event experienced.

All projects initially developed their programs with consultation from the treatment developers. The course of training was similar for all projects and generally included completion of a Web-based TF-CBT training (TF-CBTWeb; 100%; n=13); completion of live conferences (100%; n=13), ranging from 2 to 7.5 days; and completion of a series of phone (92%; n=12) or video (8%; n=1) conferences with the treatment developers or a certified trainer. Consultation sessions ranged from 12 to 60 sessions weekly, biweekly, or monthly for 6 to 18 months duration. For the 12 projects that maintained records of approximate numbers of therapists trained (i.e., UT could not report number of therapists trained), the approximate range of therapists trained was between 32 and 973 per project for a total of approximately 3,029 trained across projects.

More than four-fifths of the states (85%; n = 11) used outcomes assessment measures. Commonly used measures included the UCLA PTSD Reaction Index for DSM-IV (UCLA-PTSD RI; Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998; 85%; n = 11), Mood & Feelings Questionnaire (MFQ; Angold et al., 1995; 31%; n = 4), Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001) and/or Youth Self-Report (YSR; Achenbach & Rescorla, 2001; 23%; n = 3), Trauma Symptom Checklist for Children (TSCC; Briere, 1996) and/or Trauma Symptom Checklist for Young Children (TSCYC; Briere, 2005; 23%; n = 3), and/or Child Depression Inventory (CDI; Kovacs, 1992; 15%; n = 2). A common recommendation was the use of measures in the public domain due to sustainability issues. More than half of the states (62%; n = 8) used fidelity measures. Approximately half the sites (54%; n = 7) used the TF-CBT Brief Practice Checklist (Deblinger, Cohen, Mannarino, Murray, & Epstein, 2007) as a measure of fidelity. One site (8%) used audiotape review while one site (8%) created its own fidelity checklist.

Barriers and Facilitating Factors

The most common barriers for dissemination and implementation identified by interviewees included difficulties assessing and identifying appropriate clients, lack of organizational support/disorganized management, resistance to evidence-based practices and manualized treatments by therapists, therapist avoidance to discussing trauma, trainers being viewed as outsiders, staff turnover/retention on calls, and/or time and productivity constraints (See Table 1). To help overcome these barriers, the previously identified facilitating factors to support effective dissemination and implementation were used to varying degrees. Coaching and consultation were used by 100% (n =13), presentations to other outside agencies to advocate for the use of EBP by mental health providers was used by 85% (n = 11), attempts to gain leadership support with the agency was used by 85% (n = 11), assessment of agency readiness was used by 77% (n = 10), partnership with state agencies was used by 54% (n = 7), an application process that documented participants' willingness and capacity to participate was used by 39% (n = 5), use of incentives or stipends was used by 39% (n = 5), and/or extensive face-to-face contact with therapists throughout the training process was used by 15% (n = 2) of all projects. All of the projects used at least one of these facilitating factors.

Dissemination Model Relationship to Characteristics

Independent sample t tests were conducted to determine significant differences between dissemination models used in terms of project characteristics (i.e., approximate funding per year, years of funding, approximate total cost, days of training, months of consultation, and total consultation calls) for all 13 projects. Additional independent sample t tests were conducted to determine significant differences between dissemination models used and approximate number of therapists trained for the 12 projects reporting such data. Results indicated that the projects using the LC model had significantly more days of training, t(11) = 9.31, p < .001, more months of consultation, t(11) = 2.99, p = .012, and fewer therapists trained, t(10) = -1.87, p = .091. The LC and TC models did not significantly differ in approximate amount of funding per year, years of funding, approximate total cost, or total consultation calls (see Table 2).

Table 1 Characteristics and Outcomes of States Disseminating TF-CBT

Staff turnover; difficulty acquiring and identifying appropriate clients/assessment		Resistance to EBP s;	Lack of organizational support; difficulty acquiring and identifying ts; appropriate clients/assessment	. O	Difficulty acquiring and identifying appropriate clients/assessment	0 Being viewed as an outsider; time constraints on (table continues)
Identified factors impacting accuracy of calculated cost per therapist	Stipends used (\$31,000 per agency; .2 FTE TF-CBT coordinators at each agency; 4–6 agencies per year); evaluation costs; trauma-informed care trainings to stakeholders; trained senior leaders	Hired 2 full-time TF-CBT therapists within training site; evaluation costs; trauma-informed care trainings to stakeholders	Stipends used (\$10,000 per agency); provided therapy equipment; trained senior leaders; disseminated other treatments (PCIT and CPP); site visits; evaluation costs	Paid for 5 additional therapists to participate in an out-of-state TF-CBT learning collaborative; stipends used (\$5,000 per therapist); trained senior leaders; disseminated other treatments (Parenting for Change; CBITS); additional stipends offered for training in other EBPs; partnership in promotion of other programs (CD-CP); child care reimbursement; trauma-informed care trainings to stakeholders; evaluation costs	Trained senior leaders; disseminated other treatments (SPARCS; Psychological First Aid); evaluation costs; trauma-informed care trainings to stakeholders	Establishment of technology (\$300,000 per year of funding related to establishing telemedicine); evaluation costs
Approximate therapists trained	100	85	83	36	174	196
(Method; duration; Total calls/visits)	Phone; Monthly for 12 months; 12	Phone; Weekly for 16 weeks; 16	Phone; Weekly for 12 months; In-person; Monthly for 12 months; 60	Phone; Bi-weekly for 12 months; 24	Phone; Once a month for 12 months; 12	Video, Weekly for 12 months; 48
Total of live trainings	7 days	2.5 days	7.5 days	6 days	6 days	2 days
(Approximate total cost; Approximate average funding per year; Years of funding)	State Department of Child and Families (\$1,500,000; \$500,000; 3 years)	SAMHSA NCTSN (\$1,600,000; \$400,000; 4 years)	SAMHSA NCTSN (\$1,600,000; \$400,000; 4 years)	SAMHSA NCTSN (\$1,600,000; \$400,000; 4 years)	SAMHSA NCTSN (\$3,200,000; \$400,000; 8 years)	SAMHSA NCTSN; supplemental grants to establish videoconferencing; (\$2,800,000; \$700,000; 4 years)
Model	TC	TC	LC	LC	ГС	JC
State	Connecticut	Delaware	Kentucky	Minnesota	Mississippi	New Hampshire

Table 1 (continued)

Approximate therapists Identified factors impacting accuracy of trained calculated cost per therapist Barriers identified	2 Disseminated other treatments Lack of organizational (Component Therapy for Trauma and support Grief); evaluation costs; trauma-informed care trainings to residential and hospital staff	239 Fi	85 Di	8 Trauma-informed care trainings to Time constraints stakeholders; 3–4 specialty trainings to therapists per years; funding of CACs; evaluation costs; additional annual conference; trained senior leaders; website development	162 Tr	N/A N/A Le	800 Additional annual conference; supervisor TFT-CBT training	M = 252 $(SD = 304)$
Consultation (Method; duration; Total calls/visits)	Phone; Bi-weekly for 12 months; 24	Phone; Bi-weekly for 12 months; 24	Phone; Bi-weekly for 6 months; 12	Phone; Bi-weekly for 18 month; 36	Phone; Once a month for 12 months; 12	Phone; Bi-weekly for 9 months; 18	Phone; Bi-weekly for 6 months; 12	M = 10.69 (SD = 3.64) Months; $M = 23.85$ (SD = 15.37) Calls
Total of live trainings	2 days	7 days	4 days	7 days	7 days	2 days	4 days	M = 4.75 $(SD = 2.25)$ days
Funding source (Approximate total cost; Approximate average funding per year; Years of funding)	SAMHSA; State funds (\$3,650,000; \$730,000; 5 years)	Duke Endowment; Governor's Crime Commission; Keith B. Reynolds Charitable Trust (\$5,450,000; \$1,090,000; 5 years)	Legislative funds for CMHCs; grants from local and regional foundations for non-CMHCs; (\$2,000,000; \$500,000; 4 vears)	Duke Endowment (\$2,400,000; \$800,000; 3 years)	State Funds (\$200,000; \$100,000; 2 years)	State Funds; Annie E. Casey Foundation (\$1,350,000; \$378,333; 3 vears));	M = \$2,146,692 (SD = \$1,331,858); M = \$499,320 (SD = \$1,31,858)
Model	TC	ГС	70	ГС	ГС	TC	TC	TC = 7 $TC = 6$
State	New York	North Carolina	North Dakota	South Carolina	Tennessee	Utah	Washington	Totals

Program; CPP = Child-Parent Psychotherapy; PCIT = Parent Child Interaction Therapy; SPARCS = Structured Psychotherapy for Adolescents Responding to Chronic Stress; CACs = Child Advocacy Centers; all projects focused on children and/or adolescents treated by providers who accepted Medicaid (i.e., community mental health care agencies or non-profit agencies) in primarily outpatient settings; all projects required completion of the Web-based TF-CBT training (TF-CBTWeb) prior to attending an in-person training; Utah could not report number of therapists trained, therefore, cost per therapist trained could not be calculated. Note. LC = Learning Collaborative; TC = Training and Consultation; CBITS = Cognitive Behavioral Intervention for Trauma in Schools; CD-CP = Child Development-Community Policing

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Table 2
T-Test Results for TF-CBT Dissemination Projects by Model

Project characteristic	M(SD)	t	df	
Approximate funding per year total $(n = 13)$				
Learning collaborative $(n = 7)$	527,142 (322,217)	.38	11	
Training and consultation $(n = 6)$	466,861 (235,329)			
Years of funding total $(n = 13)$				
Learning collaborative $(n = 7)$	4.14 (1.95)	21	11	
Training and consultation $(n = 6)$	4.33 (1.03)			
Approximate total cost $(n = 13)$				
Learning collaborative $(n = 7)$	2,278,600 (1,671,790)	.40	11	
Training and consultation $(n = 6)$	1,957,000 (1,126,220)			
Days of in-person training total $(n = 13)$				
Learning collaborative $(n = 7)$	6.79 (.57)	9.31***	11	
Training and consultation $(n = 6)$	2.92 (.92)			
Months of consultation training total $(n = 13)$				
Learning collaborative $(n = 7)$	12.86 (2.27)	2.99*	11	
Training and consultation $(n = 6)$	8.17 (3.37)			
Consultation sessions total $(n = 13)$				
Learning collaborative $(n = 7)$	25.71 (17.57)	.46	11	
Training and consultation $(n = 6)$	21.67 (12.98)			
Approximate therapists trained total $(n = 12)$				
Learning collaborative $(n = 7)$	127.14 (68.17)	-1.87^	10	
Training and consultation $(n = 5)$	427.80 (425.60)			

[^] p < .10. * p < .05. *** p < .001.

Chi-square analyses were conducted to determine significant differences between dissemination models used in terms of use of an outcome measurement or use of a fidelity tool for all 13 projects. These analyses indicated, at a trend level, that the projects using the LC model used a fidelity tool, $\chi^2(1, N=13)=3.76$, p=.086, more often when compared to projects using the TC model. The LC and TC model did not significantly differ in their use of outcome measurement (see Table 3).

T3

T4

Pearson correlations were conducted to determine if the approximate total number of therapists trained, regardless of the dissemination model used, was related to available approximate funding per year, years of funding, or by the approximate total cost of the project for the 12 projects that reported number of therapists trained. These analyses indicated that the approximate total number of therapists trained was not significantly correlated with years of funding, approximate funding per year, and approximate total funding (see Table 4).

Facilitating Factor Relationship to Characteristics

Additional independent sample *t* tests were conducted to examine whether the approximate total number of therapists trained,

regardless of the dissemination model used, was influenced by the use of any of the seven out of eight (coaching and consultation was not included in analyses since all projects used this factor) previously identified facilitating factors for the 12 projects reporting number of approximate therapists trained. Independent sample t tests were also conducted to examine whether the approximate total cost of the project, regardless of the dissemination model used, was influenced by the use of any of the seven out of eight previously identified facilitating factors for all 13 projects. These results indicated that the projects that partnered with state agencies had lower approximate total costs than those projects that did not use this facilitator, t(11) = 1.87, p = .089. The approximate total costs and approximate number of therapists trained did not significantly differ by the other facilitating factors (see Table 5).

Identified Additional Activities Included in the Approximate Total Costs

The identified additional activities included in the approximate total costs identified by interviewees included website development, dissemination of other EBP's, stipends, stipends offered for training in other EBPs, partnership in promotion of other pro-

Table 3
Chi-Square Results for TF-CBT Dissemination Projects by Model

	Yes	No		
Project Characteristic	% (n)	% (n)	χ^2	Φ
Outcome measurement use total $(n = 13)$ Learning collaborative	100% (n = 7) (1.7)	0% (n = 0) (-1.7)	2.76	.46
Training and consultation	67% (n = 4) (-1.7)	33% (n = 2) (1.7)	2.70	.40
Fidelity measurement use total $(n = 13)$				
Learning collaborative	88% (n = 6) (1.9)	12% (n = 1) (-1.9)	3.75^	.54
Training and consultation	$33\% \ (n=2) \ (-1.9)$	67% (n = 4) (1.9)		

Note. Adjusted standardized residuals appear in parentheses below group frequencies.

[^] p < .10.

Table 4
Summary of Correlations for Funding Variables and Training Variables

Variable	1	2	3	4
1. Years of Funding	_			
2. Approximate funding per year	.05	_		
3. Approximate total funding	.43	.89***	_	
4. Approximate therapists trained	.38	03	.13	

^{*} p < .05. *** p < .001.

grams, training of senior leaders, evaluation costs, traumainformed care trainings to stakeholders, additional annual trainings, hiring of full-time TF-CBT therapists, site visits, providing therapy equipment, establishment of technology (i.e., telemedicine infrastructure), development of infrastructure, payment for copays, gas reimbursement, child care reimbursement, funds for uninsured families, TF-CBT supervisor training, trauma-informed care trainings to residential and hospital staff, specialty trainings to therapists, and payments for therapists to participate in out-of-state TF-CBT learning collaboratives (see Table 1).

"Tips" for Gaining Buy-In

Several "tips" for gaining buy-in were identified by interviewees. These included limiting the number of participants on the consultation calls, having a consumer on the consultation calls, dispersing newsletters to relevant stakeholders, using free online resource communities (e.g., Google Groups, Yahoo Groups), creating an advisory committee made up of relevant stakeholders, offering continuing education credits, developing a public roster of trained therapists, awarding a certificate of completion, using webinars and other technologies to reduce time commitments, familiarizing the implementation team with the culture of the state, and acquiring knowledge of and being empathetic to therapist barriers (e.g., familiarity/comfort with assessment, productivity requirements, and lack of experience with EBP).

Discussion

Several important findings emerged from this study that may help guide future dissemination efforts. First, the average number of therapists trained over a period of approximately three to five years was approximately 250, even in states of varying size. Thus, states planning future dissemination efforts of TF-CBT or a similar intervention can realistically estimate that 200–300 mental health professionals will be targeted over the course of several years of dissemination. Second, dissemination efforts are expensive; on average; it cost approximately \$500,000 per year to develop a training plan and actually train providers. Several states were able to expend significantly less, and these are discussed in more detail below. Third, it is possible to train a large number of therapists,

Table 5
T-Test Results for Cost Per Therapist, Total Therapists Trained, and Total Cost by Use of Facilitating Factors

Use of facilitating factor	Approximate total therapists trained (SD)	Approximate total cost (SD)			
Presentations to outside agencies					
Yes $(n = 10; 10; 11)$	278.40 (328.71)	\$2,353,800 (\$1,374,350)			
No $(n = 2; 2; 2)$	122.50 (55.86)	\$900,000 (\$989,949)			
t(df)	64 (10)	-1.41(11)			
Attempts to gain organizational support					
Yes $(n = 11; 11; 11)$	257.55 (318.21)	\$2,159,700 (\$1,483,130)			
No $(n = 1; 1; 2)$	196.00 (—)	1,967,500 (1,177,330)			
t(df)	19(10)	17(11)			
Assessment of agency readiness					
Yes $(n = 10; 10; 10)$	271.60 (331.34)	\$2,215,700 (\$1,551,060)			
No $(n = 2; 2; 3)$	140.50 (78.49)	\$1,845,000 (\$859,113)			
t(df)	54(10)	39(11)			
Pressure from state agencies in order to					
receive state or medicaid funds					
Yes $(n = 6; 6; 7)$	367.50.00 (406.72)	\$1,520,300 (\$1,124,880)			
No $(n = 6; 6; 6)$	137.33 (77.53)	\$2,841,700 (\$1,429,130)			
t (df)	-1.36(10)	1.87^ (11)			
Application process					
Yes $(n = 5; 5; 5)$	95.40 (45.11)	\$1,460,000 (\$792,465)			
No $(n = 7; 7; 8)$	364.57 (364.37)	\$2,549,900 (\$1,571,360)			
t (df)	1.62 (10)	1.42 (11)			
Incentives or stipends					
Yes $(n = 5; 5; 5)$	108.60 (76.75)	\$2,430,000 (\$1,699,120)			
No $(n = 7; 7; 8)$	355.14 (368.61)	\$1,942,700 (\$1,263,030)			
t (df)	1.45 (10)	60(11)			
Extensive face-to-face contact					
Yes $(n = 2; 2; 2)$	91.50 (12.02)	\$1,550,000 (\$70,711)			
No $(n = 10; 10; 11)$	284.60 (325.54)	\$2,235,600 (\$1,504,820)			
t(df)	.81 (10)	.62 (11)			

[^] p < .10.

TF-CBT DISSEMINATION

regardless of the model used, and implement each model regardless of funding amounts available.

As noted by Fixsen et al. (2005), effective EBP dissemination and implementation cannot rely solely on communication of information or single episodes of training, even though this method continues to be widely used. The results of the current study are consistent with the recommendation of Fixsen et al. (2005) that dissemination requires ongoing, multilevel strategies, including partnerships between community providers and skilled researchers; development of learning collaboratives or other ongoing training opportunities within each implementation site; and sharing of lessons learned from a variety of dissemination efforts. The results indicated that states that disseminated TF-CBT engaged in active strategies for dissemination (TC or LC) rather than online training only or a single episode of in-person training. However, all of the projects required the completion of the online TF-CBT through MUSC prior to receiving additional training, which most likely played a critical role in the roll-out of these projects and served as a valuable training tool.

A large range of approximate annual funds, approximate total funds, and number of approximate therapists was identified for these projects. Several states trained a large number of therapists (e.g., NY and Washington) relative to the amount of funding available, while others reported less numbers of therapists trained relative to the amount of funding available (e.g., Kentucky, Minnesota, North Carolina, and South Carolina). States with higher approximate costs tended to use the LC model, used stipends or other financial incentives, and/or disseminated more than one EBP. As noted by National Center for Child Traumatic Stress (2007), the LC model is designed to change the larger culture in which TF-CBT is implemented with the goal of achieving buy-in across systems and enhancing long-term sustainability. These efforts would be consistent with recommendations by Fixsen and colleagues to address the sphere of Influence (i.e., the social, economic, political, historical, and psychosocial factors that impinge directly or indirectly on the individual, organization, or system) prior to and during implementation of an EBP. The efforts designed for system-wide changes to enhance sustainability often included trauma-informed care trainings to stakeholders, training of supervisors and senior leaders, additional specialty trainings, development of infrastructure, and significant evaluation costs. Because measurement of system-wide change was beyond the scope of this article, we recommend additional studies to systematically explore such factors. Furthermore, we were unable to examine differences in sustainability over time between the LC and TC models, which is deserving of further attention in the implementation literature. Although projects using the LC model resulted in more days of in-person training, months of consultation than the TC model, and fewer approximate therapists trained there were no differences on approximate total funding, number of consultation sessions, and approximate cost per therapist trained. Admittedly with this small sample size these differences may not have been apparent. Again, future work with a larger number of implementation projects may shed light on differences in the extent of training and costs. Regardless, it appears to be feasible to train a large number of therapists, regardless of model used, and implement each model regardless of funding available. These findings suggest that the method of dissemination or funding available was not the most important variable in providing largescale dissemination. A more important variable may have been how the training projects dealt effectively with the common barriers to dissemination and implementation.

Several common facilitating factors were used, but partnerships with state agencies were particularly impactful on cost effectiveness. These projects (i.e., Connecticut, Delaware, New York, North Dakota, Tennessee, Utah, and Washington) were funded by, initiated by, and/or partnered with Child Protective Services or the Department of Mental Health. A couple of the projects also partnered with Medicaid (i.e., DE and Tennessee). The majority (86%) of states with partnerships were able to keep the approximate cost per year below average (approximately \$500,000) and the total approximate cost for the project below average (approximately \$2,150,000). There are several possible reasons why partnerships with state agencies may enhance dissemination while controlling costs. Involvement of state agencies may have addressed systemwide barriers, may have created fixed incentives to encourage EBP adoption prior to implementation, or a combination of both. States mentioned such issues as changing policy to base financial contracts and reimbursement on the use of EBPs and requirements for therapists across an entire mental health system to be trained in EBPs as ways of enhancing the training process. For example, Tennessee was able to train a large approximate number of therapists (162) in a short period of time (2 years) using an LC model with a relatively moderate amount of approximate funding per year (\$100,000). In addition to the approximate number of therapists trained, approximately 32 senior leaders were trained. The funding for the project was provided by Medicaid in partnership with already existing academic Centers of Excellence for children in state custody. With the partnership from Medicaid and the existence of the centers, Tennessee had the underlying structure and may have addressed the "influence sphere" to cost effectively disseminate TF-CBT. Another strong example is Washington, which partnered with the state Department of Mental Health. This project was also able to train a large approximate number of therapists (800) in a short period of time (6 years) using a TC model with relatively little amount of approximate funding per year (\$92,833). The project utilized an organizational consultation with administrators to help prepare for the training process and required supervisors to attend and train with therapists. New York was another state able to train approximately 973 therapists in 5 years using a TC model with an average of \$730,000 of approximate funding per year. This project was first funded through a SAMHSA grant specific to the September 11th terrorist attacks and then by state Department of Mental Health funds and involved a partnership between an academic center and the state Department of Mental Health. It is important to note that this project was able to keep costs relatively low and train therapists in two EBPs (TF-CBT for children and Component Therapy for Trauma and Grief for adolescents). Connecticut's project, funded by Child Protective Services, offered a \$31,000 stipend for each agency participating in the dissemination process. Using an LC model, Connecticut incorporated an application process and assessment of agency readiness into their project, resulting in approximately 100 trained therapists and approximately 25 trained senior leaders in 3 years with approximately \$500,000 per year of funds. Although not included in the quantitative analysis, California's model resulted in the training of over approximately 500 therapists. The success of this model can be partly attributed to state and county

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partnership and buy-in as well as longstanding history with the disseminators. The dissemination agency (CIMH) has previously or is in the process of dissemination eight other evidenced-based practices throughout California. Their training model (i.e., community development team) and training processes are similar to the LC model in that the model targets and supports both organizations and individual providers in a series of in-person and ongoing training in an attempt to change the larger cultural attitudes. The success of TF-CBT dissemination may be a result of the foundational work of this model at changing cultural attitudes toward acceptance of evidence-based practices.

Another important facilitator was the significant funding provided by the federal government, most notably SAMHSA through the National Child Traumatic Stress Initiative. The initiative was designed to address the impact of child traumatic stress by creating a network of national grantees known as the National Child Traumatic Stress Network (NCTSN). The NCTSN centers were designed to collaborate, develop, implement, and evaluate effective trauma treatment and services to children. The centers also partnered with other community agencies to transform service delivery approaches so that trauma services are effectively implemented within local child-serving community service systems. Without these funds the majority of these projects may not have taken place.

There are limitations to this study which may bias results and affect generalizability of findings. Although 89% of identified statewide TF-CBT dissemination projects were interviewed, the sample size is small and there is a large amount of variability between projects, as well as between and within the dissemination models. In addition, although the methods and procedures of training in both dissemination models have been thoroughly described, blueprinted, and documented elsewhere (e.g., Cohen & Mannarino, 2008; Ebert, Amaya-Jackson, Markiewicz, & Burroughs, 2008) and the course of training was reported as relatively similar within models, there are unique characteristics of each project within a particular dissemination model that we were unable to assess in a phone interview that most likely affected outcomes. Furthermore, because this was a retrospective study, we were unable to randomize states to different training models; therefore, external characteristics may be responsible for betweenmodel differences. Additionally, although all the interviews were conducted with a principal investigator, project director, and/or project manager who would be familiar with all facets of the dissemination project, we only interviewed one person per initiative. Therefore, we were unable to verify their responses with another individual involved with the project. Another limitation is that we did not collect all cost information on projects, including trainings to other stakeholders such as child welfare professionals or costs for technology and infrastructure development. As mentioned previously, these factors may have contributed to a culture change, which supported dissemination but also led to increased costs. Other cultural factors, such as attitudes toward evidencebased practices or established relationships among stakeholders may affect EBP dissemination but differ across states; more prospective studies are needed to assess the wide variations that may contribute to the success or failure of such initiatives.

It important to note, besides numbers of therapists trained and costs, other measures of success and major goals of large scale dissemination include improving children's functioning, therapists

using the intervention with fidelity, training satisfaction, cultural shifts toward a trauma-informed system of care, and long-term sustainability. Unfortunately, states either did not collect this data or the majority had not analyzed it at the time we conducted interviews, which inhibited our ability to address such issues Future work should examine these differences to further inform the field of EBP implementation.

In summary, dissemination of any EBP among community providers involves the interplay of a complex ecology of organizational structures and cultures, administrative policy, funding resources, and individuals, which ultimately influence the successful process of program implementation (Fixsen et al., 2005). The reports from these states confirm the challenges inherent in largescale dissemination of TF-CBT but provide strong evidence that such efforts are possible with local, state, and federal commitment. As stated by Fixsen et al. (2005), effective dissemination and implementation must include the sharing of lessons learned from a variety of dissemination efforts. Hopefully, this article will serve as an introductory guide and potential resource for other states interested in implementing TF-CBT or other EBPs and will contribute to our understanding of the complexity of dissemination with regard to one type of behavioral intervention for trauma. Given the large range of costs and therapists trained across projects and differing dissemination models and lack of data on fidelity, outcomes, and sustainability, future research should focus on gathering, analyzing, and reporting these findings across dissemination models.

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Received June 23, 2011 Revision received April 10, 2012 Accepted May 14, 2012 ■