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Evaluating Treatments and Interventions: What Constitutes “Evidence-based” Treatment?

Lisa Jobe-Shields, Amanda Costello, Carrie Jackson, and Rochelle F. Hanson

Abstract

This chapter provides an overview of the evidence-based treatment (EBT) paradigm, beginning with definitional issues, followed by a discussion on use of the iterative process and the importance of strong academic–practice partnerships to inform the development, selection, and implementation of EBTs. The discussion then turns to the importance of attaining, measuring, and sustaining fidelity to the treatment models; and identifying common barriers to sustained EBT use. Drawing from our expertise related to interventions for children and adolescents, a few dissemination/implementation models are highlighted as examples of current efforts to achieve sustained use of EBTs among practitioners, within agencies, and across communities. This involves keeping up to date with the research and integrating the available evidence base with clinical expertise and patient characteristics, including cultural considerations and client preferences for treatment. The chapter concludes with directions for the future, including considerations for practitioners, referring agents, and agency senior leaders to promote, support, and sustain EBTs.

Key Words: EBTs, evidence-based treatments, efficacy, effectiveness, implementation, barriers to implementation, fidelity

Introduction

The scientific inquiry into whether, and to what extent, specific mental health interventions provide relief for a range of psychological conditions is as old as psychotherapy itself. The purpose of this chapter is, first, to provide an overview of the evidence-based treatment (EBT) paradigm, beginning with definitional issues, followed by a discussion of the implementation of EBTs into clinical practice and factors at the provider, client, and agency levels critical to facilitate this process. Next, we discuss key issues to consider in implementing EBTs in “real world” settings, including parameters for training and consultation; the importance of attaining, measuring, and sustaining fidelity to the treatment models; and identifying common barriers to sustained EBT use.

Finally, we provide examples of models that have been developed to address these implementation and sustainability barriers and conclude with a discussion on future directions for delivery of EBTs.

What are Evidence-Based Treatments?

A set of definitional issues must first be addressed. For the purposes of this chapter, we use the term *evidence-based treatments* (EBTs) to refer specifically to those that have been evaluated and found to be efficacious in randomized controlled trials and consider this synonymous with *empirically supported treatments* (ESTs), empirically validated treatments, and empirically validated therapies. *Evidence-based practice* (EBP) refers to the “integration of best available research with clinical expertise

in the context of patient characteristics, culture, and preferences” (American Psychological Association Presidential Task Force on Evidence-Based Practice, 2006). Therefore, EBTs are identified as a primary component of EBP (i.e., “best available research”), but the two terms do not refer explicitly to the same construct and thus are not interchangeable.

Division 12 of the American Psychological Association (APA) formed a task force on *Promotion and Dissemination of Psychological Procedures* at the request of Dr. David Barlow (President) in 1993. The purpose of the APA Task Force, as we have named it here, was to consider methods of educating the public, third party payers, and practitioners about effective psychotherapies. One impetus driving this effort was the perception among some healthcare providers that pharmacological interventions were more effective than psychotherapy, despite empirical research supporting psychotherapy (Chambless, 1993). A number of reports emerged from the task force, one of which delineated the criteria for EBTs (Chambless et al., 1998); this continues to be used to evaluate therapies today and is reviewed below.

The criteria for determining whether a treatment is considered “evidence-based” centers on its level of scientific support. *Efficacy* is defined by Merriam-Webster’s dictionary as “the power to produce a desired result or effect.” In this vein, determining treatment efficacy is based on identifying whether a given approach to therapy produces the desired effect (for example, decreased symptoms of depression) under controlled laboratory conditions and research. The “gold standard” for efficacy studies is the randomized controlled trial (RCT), in which research participants are randomly assigned to the targeted treatment or a comparison condition, which may be another treatment intervention, medication, or

a psychological placebo. Very specific inclusion factors are defined and controlled, such as age, gender, and the type of problem leading to treatment, as well as exclusion of participants who do not meet study criteria (e.g., history of mental health problems aside from the one being investigated, physical health problems).

Based on these research studies, Chambless and colleagues (1998) outlined criteria for treatments to be considered *well-established* or *probably efficacious*, and their guidelines remain in use today (see Table 14.1 and Figure 14.1). More specifically, a treatment meets criteria to be considered *well-established* when efficacy is supported by (1) two well-designed experiments involving at least two different groups randomly assigned to the targeted treatment versus another condition, which may be another treatment intervention, medication, or a psychological placebo; or (2) a large number (nine or more) of well-designed single-case experiments. Between-group experiments must either demonstrate *superiority* to the comparison condition or *non-inferiority* to an established treatment, meaning that the targeted treatment yielded similar effects to the established one. Single-case experiments must also compare the treatment to another treatment (i.e., medication, psychological placebo, or another treatment). Further, to be deemed *efficacious*, the following criteria all must be met: (a) use of treatment manuals; (b) full description of client sample characteristics; and (c) investigations from at least two different investigators/teams.

A treatment meets the criteria to be considered *probably efficacious* when efficacy is supported by (a) two experiments demonstrating superiority to a wait list control; (b) one or more studies that meet the criteria for a well-established treatment compared

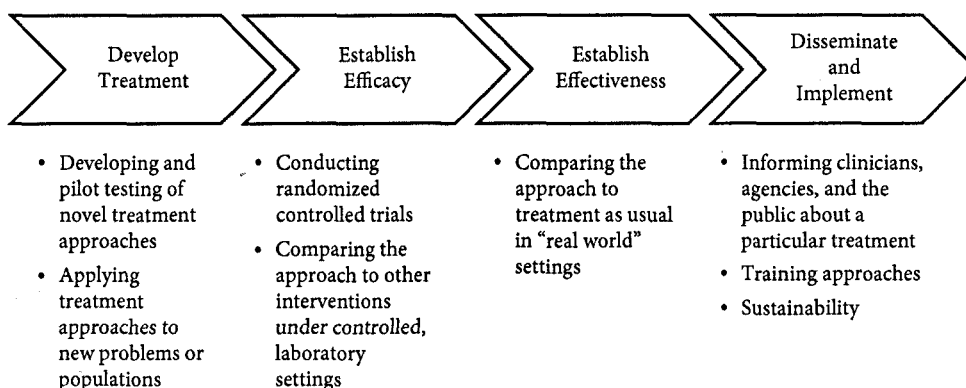


Figure 14.1 Process from Treatment Development to Dissemination and Implementation

Table 14.1. Criteria for well-established and probably efficacious treatments (Chambless et al., 1998).

Level of evidence	Criteria	Number of required experiments
Well-established treatment	I. Between-group design experiments demonstrating efficacy in one of the following ways: A. Superior (based on statistical significance) to medication or psychological placebo or to another treatment. B. Equivalent to an already established treatment in experiments with adequate sample sizes. <i>OR</i>	≥2
	II. Single case design experiments demonstrating efficacy. These experiments must have: A. Used good experimental designs and B. Compared the intervention to another treatment (as in IA).	>9
Probably efficacious treatment	I. Experiments showing the treatment is superior (based on statistical significance) to a wait list control group <i>OR</i>	≥2
	II. Experiments meeting the Well-Established Treatment criteria, except that the effects have only been shown by one investigator/investigating teams <i>OR</i>	≥1
	III. Single case design experiments demonstrating efficacy (as described for Well-Established Treatments)	≥3

to placebo/active treatment, except that independent teams have not conducted the research; or (c) fewer (three or more) single case experiments, but otherwise meeting criteria for a well-established treatment. Thus, treatments that meet the criteria as “well-established” have *strong* research support, and treatments that meet the criteria as “probably efficacious” are considered to have *modest* research support.

In 1995, the APA Task Force used these guidelines to compile a list of treatments that included 18 *well-established* treatments, such as Beck’s cognitive therapy for depression (Beck, Rush, Shaw, & Emery, 1979), cognitive-behavioral therapy for bulimia (Thackwray, Smith, Bodfish, & Meyers, 1993), and Behavioral Parent Training for oppositional behavior in childhood (Wells & Egan, 1988); as well as seven *probably efficacious* treatments (Chambless, 1993). The impact of this effort cannot be underestimated—not only has the list continued to grow but there has also been considerable uptake by clinicians, third party payers, and the general public regarding the use of EBTs for psychological

conditions. Division 12 of the APA continues to provide an up-to-date listing of treatments meeting these criteria on their website (<http://www.div12.org/PsychologicalTreatments/treatments.html>), and Division 53 of APA provides a parallel, up-to-date listing of empirically supported treatments for psychological disorders in childhood and adolescence (<http://www.effectivechildtherapy.com>). The Substance Abuse and Mental Health Services Administration’s National Registry of Evidence-Based Programs and Practices (NREPP; <http://www.nrepp.samhsa.gov>) is an online registry of over 300 psychological treatments and/or practices. It includes information about each approach listed, as well as the current state of the literature supporting each approach. Additionally, the California Evidence-based Clearing House for Child Welfare provides a searchable database of evidence-based practices for families involved in the child welfare system (www.cebc4cw.org). For illustrative purposes, in Table 14.2, we provide a few examples of EBTs, along with key citations, websites, and information about treatment manuals. The treatments

Table 14.2. Examples of evidence-based treatments for common psychological disorders and problems.

Disorder	Population	Therapy	Research	Resources
Anorexia nervosa	Adolescent	Family therapy for eating disorders	Robin et al. (1999)	Website: http://www.maudsleyparents.org/ Treatment Manual; Lock et al. (2001). <i>Treatment manual for anorexia nervosa: A family-based approach</i> . New York, NY: Guilford.
Anxiety	Child, adolescent, adult	Cognitive behavioral therapy (CBT), Social skills training, Exposure treatment	Wampold et al. (2011) Silverman et al. (2008)	Website: http://www.beckinstitute.org/ Treatment Manual; Clark and Beck (2010). <i>Cognitive Therapy of Anxiety Disorders</i> . New York, NY: Guilford.
Attention-deficit/hyperactivity disorder (ADHD)	Child, adolescent	Behavioral parent training (BPT), Behavioral classroom management, Behavioral peer interventions	Pelham and Fabiano (2008) Chronis et al. (2006)	Websites: http://ccf.buffalo.edu/STP.php , http://www.oucirs.org/ Treatment Manual; DuPaul, G. J., & Stoner, G. (2003). <i>ADHD in the schools: Assessment and intervention strategies</i> (2nd ed.). New York, NY: Guilford.
Autism	Child	Behavior therapy	Rogers and Vismara (2008)	Website: http://www.lovaas.com/resources.php Treatment Manual; <i>Lovaas treatment manual</i> . Available for purchase or download at the Lovaas Institute website
Depression	Child, adolescent	CBT, Individual interpersonal psychotherapy (IPT)	Wampold et al. (2011) Weisz et al. (2006)	Websites: http://www.beckinstitute.org/ , https://iptinstitute.com/about-ipt/ Treatment Manual; Beck et al. (1979). <i>Cognitive therapy of depression</i> . New York: Guilford Klerman et al. (1984). <i>Interpersonal psychotherapy of depression</i> . New York, NY: Basic Books
Disruptive behavior problems (ODD & CD)	Child, adolescent	Behavioral parent training, CBT, Multisystemic therapy	Eyberg et al. (2008) Garland et al. (2008)	Websites: http://mstservices.com/ , http://www.triplep-america.com/ Treatment Manual; Forehand & McMahon (1981). <i>Helping the noncompliant child: A clinician's guide for parent training</i> . New York, NY: Guilford.
Posttraumatic stress disorder (PTSD)	Child	Trauma-focused cognitive behavioral therapy (TF-CBT)	Cohen et al. (2000) Silverman et al. (2008)	Website: http://nctsn.org/ Treatment Manual; Cohen et al. (2006) <i>Treating trauma and traumatic grief in children and adolescents</i> . New York, NY: Guilford.
Substance abuse	Child, adolescent	CBT, Multidimensional family therapy, Functional family therapy	Liddle et al. (2010) Waldron and Turner (2008)	Websites: http://www.mdft.org/ , http://www.ftllc.com/ Treatment Manual; Liddle (2009) <i>Multidimensional family therapy for adolescent drug abuse: Clinician's manual</i> . Center City, MN: Hazelden Publishing Co.

presented were chosen to illustrate a range of approaches and do not represent all EBTs or a comprehensive list of EBTs. Readers are directed to the resources listed above for such listings.

EBTs in Real World Settings: Effectiveness

As outlined, a treatment is considered an EBT when it has accumulated a certain level of evidence for its efficacy. More specifically, its usefulness is demonstrated when a treatment is found to be more effective than a wait list control group, an alternative well-established treatment, or a medication. Once these important efficacy benchmarks have been met, practitioners and scholars alike turn to investigate the *effectiveness* (i.e., the transferability of efficacious treatments to real world settings; see Figure 14.1) of EBTs. Effectiveness studies often focus on comparing EBTs to “treatment as usual (TAU),” which refers to the treatment that an individual would typically receive in the community setting (as opposed to the comparison against a placebo that is used in randomized controlled trials). It is generally assumed that TAU would include psychotherapy broadly defined, for example, a non-manualized and/or eclectic approach to psychotherapy.

Because of the considerable cost associated with the dissemination and implementation of EBTs in community settings, treatment effectiveness has been researched extensively. The results of this impressive body of research have been subjected to meta-analyses to synthesize findings. (A meta-analysis refers to *a systematic comparison of results from different studies to provide an overall summary of common findings*). Several notable examples include Wampold and colleagues’ (2011) meta-analysis of effectiveness studies for adult anxiety and depression; Budge and colleagues’ (2013) meta-analysis for personality disorders; and Weisz and colleagues’ (Weisz, Jensen-Doss, & Hawley, 2006; Weisz et al., 2013) and Spielmans and colleagues’ (Spielman, Gatlin, & McFall, 2010) meta-analytic research targeting EBTs for psychological disorders in childhood and adolescence.

For treatment of anxiety and depression in adults, Wampold and colleagues (2011) included 14 studies in their meta-analysis, and significant heterogeneity was evident across the conditions considered “treatment as usual.” Overall, EBTs were significantly more efficacious than TAU conditions. However, when the analyses only included those TAU conditions deemed “active psychotherapy,” EBTs were not significantly more efficacious than TAU. While experimental conditions were often

not reported, when they were, they favored the EBT and indicated that more favorable results were associated with such factors as higher doses of therapy and more highly educated clinicians (Wampold et al., 2011).

The meta-analysis of treatments for personality disorders by Budge and colleagues (2013) revealed similar findings. Across 30 studies EBTs significantly outperformed TAU, yet many TAU conditions were not psychotherapeutic treatments. In a second analysis, the investigators considered only studies that compared bona fide treatments to one another. Results indicated that only three of the 12 studies accounted for most of the obtained differences between the EBTs and TAU; once these three studies were removed, the overall differences were nonsignificant. Two comparisons were significant, both of them in the treatment of borderline personality disorder (Budge et al., 2013). The first, mentalization-based therapy, which is a time-limited treatment focused on increasing clients’ capacities to “think about themselves” and decrease sensitivity to interpersonal interactions, outperformed structured clinical management, which is a supportive counseling approach that includes crisis planning, medication management, and significant follow-up when therapy sessions are missed. The second, schema-focused therapy, which draws from cognitive-behavior therapy, Gestalt therapy, and attachment theories, and includes the development of a deep attachment between therapist and client, was superior to transference-based psychotherapy, which focused on assisting clients to develop an integrated view of the self (Budge et al., 2013).

In 2006, Weisz and colleagues conducted a meta-analysis of 32 studies that compared TAU with EBTs for psychological disorders in childhood and adolescence (e.g., delinquency, substance use, conduct problems, depression, anxiety). Results indicated that EBTs outperformed TAU, with an obtained effect size (ES) = .30, which is considered a “small to medium” effect (Cohen, 1992). In 2013, this research team conducted an updated meta-analysis, which included 52 randomized trials comparing EBTs for youth with TAU conditions. Results again indicated an overall small to medium (ES = .29) effect across all studies, which is consistent with an estimate that the average participant in an EBT would experience better outcomes than 58% of youth in TAU. Thus, while EBTs did generally outperform TAU, many TAU conditions were also effective. An in-depth examination of these studies indicated that three factors influenced

whether EBTs were superior to TAUs. The first factor was location of the research, and results indicated that effects were diminished and largely nonsignificant in studies that were conducted outside of the United States. The authors concluded that, because the majority of the treatments were developed in the United States, they may not be relevant or effective for other cultures and may require cultural adaptations. The second factor was related to the informant of the youth's behavioral or mental health symptoms. When teachers (i.e., reporters other than parents and the youths themselves) were asked to report on symptoms, the differences between EBTs and TAU were not evident. The authors postulated that this may be so because parents and youth were more aware that they were being treated with an EBT, and thereby had higher expectations for positive treatment outcomes. The third factor was severity of the youth's symptoms. In studies where inclusion criteria required that the youth in the EBT group have a diagnosable disorder (i.e., the symptoms were presumably more severe than those of youths in the TAU group), there were no significant outcome differences between those receiving EBT vs. TAU (Weisz et al., 2013).

Finally, it is also important to note that Spielmann and colleagues (2010) conducted a re-analysis of the 2006 meta-analysis of Weisz et al., taking into account their stated potential confounds. When elements of the various research designs, including higher dosage (e.g., more sessions) and clinical supervision, were controlled for in the data analyses, differences between EBTs and TAU were no longer statistically significant. In other words, higher treatment dosage and greater use of supervision appear to promote the more positive outcomes among clients receiving EBTs.

Overall, EBTs have shown promise, not only under tightly controlled laboratory conditions but also in the real world. Yet, results do vary widely, and EBTs do not always outperform other treatment conditions; also, as shown in meta-analytic results, EBTs do not always outperform TAU once confounding variables are controlled. While research does indicate that some EBTs outperform comparison treatments, these types of meta-analytic studies serve as a reminder of the importance of critically evaluating the evidence base of a specific EBT prior to making decisions about its implementation. More specifically, a treatment being labeled as "evidence-based" should reference research support that can be reviewed along dimensions like the following: (a) were the study findings reported in

a peer-reviewed journal?; (b) what types of differences were noted between the treatment and comparison conditions? (i.e., how large of an effect size was there?; was this clinically meaningful?); (c) how "good" was the comparison treatment condition? (i.e., was it TAU; a wait list comparison; or no treatment at all?); (d) what population was targeted in the study? How does it compare to the population of interest in terms of diagnosis, severity, and demographic characteristics?

Additionally, these meta-analytic findings highlight the importance of evaluating outcomes in general clinical settings. For example, with careful evaluation of treatment progress and outcomes, providers can assess whether a particular treatment is working for their clients and use those data to inform the treatment plan. In summary, decisions regarding the use of a particular intervention should be guided by a clear review and understanding of the empirical evidence, both in terms of its efficacy (i.e., number of experimental studies) and in the light of any available effectiveness studies that compare the EBT with an active TAU condition.

Integrating Science and Practice: Dissemination and Implementation of EBTs

As discussed above, once a treatment has accumulated sufficient evidence (i.e., efficacy), it is then tested in real world community-based settings to determine its *effectiveness*. Once the EBT has demonstrated effectiveness in real world settings, efforts shift to a focus on *dissemination* (sharing information/spreading knowledge about an EBT) and *implementation*, (i.e., the use of strategies to facilitate the adoption and integration of EBTs into community-based settings; see Aarons, Hurlburt, & Horwitz, 2011; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Proctor et al., 2009, for more detailed discussions). To best facilitate this process, and thereby support the use of EBTs in community settings, effective communication among researchers (which may include treatment developers), clients, mental health practitioners, and agency administrators is crucial. This nexus of communication can be described as an *iterative process* between science and practice, whereby each party plays a unique role in the development, adaptation, and implementation of EBTs into standard practice. Years of research examining the feedback loop between science and practice have also led to considerations regarding how best to communicate information between these two entities, as well as how to employ research

designs that best integrate information from treatment developers and individuals and organizations affected by the implementation of EBTs. In this section, we discuss the role of clients, mental health practitioners, and agencies to highlight the iterative process of EBT implementation.

Client Level

Treatment outcome studies have long provided a wealth of information about how EBTs influence adult and child outcomes. However, as already stated, many of these are efficacy studies, meaning that the treatments have not necessarily been delivered in real world settings to account for the resources, training, and client populations actually seen in community mental health agencies (Kazdin, 2008). As the field has developed, more effectiveness studies have been conducted, and these provide important data to indicate whether the EBT is achieving the desired client outcomes (e.g., less psychological distress, more adaptive functioning).

Thus, the unique perspective of clients should be considered an integral component of good collaboration between science and practice. Given that improving client outcomes is the ultimate goal of both therapy and research, eliciting information from the individuals who are involved in the services is an important part of accumulating evidence for a particular EBT. Many outcome studies have included therapy acceptability or satisfaction assessments, which are a nice way to gain client perspectives on their therapist, treatment process, and content of sessions. Focus group sessions involving clients are another means of yielding rich information to aid in the development of new EBTs or the adaptation of existing treatments. Specifically, focus group data, using client perspectives, may add to knowledge regarding (a) the gaps in current mental health and what services are still needed, and (b) how EBTs can be adapted or modified to improve acceptability and effectiveness. Thus, there are myriad opportunities to elicit this information from clients.

Additionally, an emerging area within treatment outcome research centers on examining the specific mechanisms or processes responsible for changes associated with EBTs (Kaminski, Valle, Filene, & Boyle, 2008; Kazdin, 2007; Weersing & Weisz, 2002). Specifically, understanding factors that influence client outcomes (e.g., age, gender, culture, educational background, and severity of mental health problems) can shed light on the best ways to implement these treatments in community mental

health settings, and help mental health professionals understand the “optimal” conditions for effective client change (Kazdin, 2007). Knowledge of the different treatment components or mechanisms most important for positive client outcomes can also help inform the development of EBTs for a particular clinical population, as well as help adapt existing EBTs to best fit the needs of individuals. Thus, the use of outcome data provided by clients who have received a particular EBT provides a crucial element of good effectiveness research.

Mental Health Practitioner Level

In addition to considering the perspective of clients, collaboration between researchers, treatment developers, and mental health practitioners is important (Chorpita & Daleiden, 2013; Kazdin, 2008). Such collaboration recognizes the unique and important contributions of these different groups of individuals in determining whether treatments demonstrate the “evidence” to work in real world settings. Researchers and treatment developers can benefit from the rich clinical knowledge provided by mental health practitioners who have a firsthand account of which EBTs work (and why) for their client base. Thus, feedback from mental health professionals can be helpful during the development of a new intervention, as well as during adaptations of existing EBTs to better meet the needs of diverse client populations. In other words, feedback from mental health practitioners during training, supervision, and/or consultation regarding delivery of an EBT can (a) add to the knowledge and understanding of why the intervention does (or does not) work with particular populations, (b) help to generate new hypotheses and additional research questions, and (c) make the EBT more clinically relevant, not only to practitioners, but to the clients they serve (Kazdin, 2008).

Not only is this collaboration important during the development of an EBT, it can be especially relevant as EBTs are implemented in community mental health agencies. During this implementation process, mental health practitioners and researchers/treatment developers have the opportunity to contribute information regarding delivery of the EBT (Chorpita & Daleiden, 2013). Specifically, researchers (who may include the treatment developers) can provide the theoretical framework, rationale, supporting data, and structure of the EBT, while mental health practitioners may best provide ongoing feedback about the feasibility of delivering the EBT, and how it is (or is not) working with their

clients. Thus, the unique contributions of all parties are imperative to accumulating evidence and to supporting implementation and sustainment of the EBT within community-based agencies.

Agency Level

When gathering evidence and promoting implementation for a particular EBT, it is important to obtain information from agency personnel, including supervisors, administrators, and executive directors, in addition to the direct service providers. Indeed, without supportive leadership and infrastructure, effective implementation of EBTs in community mental health settings would be extremely difficult to achieve (e.g., Aarons et al., 2011; Fixsen et al., 2005), and strong leadership within agencies has been found to result in better attitudes of mental health practitioners regarding adoption of an EBT (Aarons, 2006; Aarons et al., 2011). Furthermore, feedback from agency administrators can help researchers understand how best to collaborate with agencies, train practitioners, and monitor the implementation of EBTs. Data also can be obtained regarding variables that may serve to facilitate or hinder implementation efforts, including sustaining the practice over time (Proctor et al., 2011).

EBTs in Real World Settings: Achieving and Measuring Fidelity

Critical components of successful and sustained use of an EBT include initial training and ongoing monitoring to ensure the treatment is delivered as intended. Treatment fidelity has been defined as therapist *adherence* (delivery of the EBT as intended by the developers), *competence* (the skill with which the treatment is delivered), and treatment *differentiation* (how well the treatment differs from others; Schoenwald, Sheidow, Letourneau, & Liao, 2003). When a new EBT is introduced into an agency, appropriate training, coaching, consultation, and clinical supervision are needed to ensure it is delivered with fidelity. Once practitioners have mastered the EBT, ongoing monitoring is needed to sustain the practice over time. This can be quite challenging and resource intensive.

When a new EBT is introduced into practice, mental health practitioners may be asked to not only learn and use a new skill set, but to understand when and how to flexibly implement the treatment to best fit the needs of their clients while still adhering to the original model. Strong fidelity to an EBT requires practitioners to have a foundation

of knowledge regarding the theoretical underpinnings of an intervention, an understanding of the evidence base, and access to information regarding any changes to the treatment manual. Ongoing treatment fidelity also requires buy-in from agency administrators to build and maintain the infrastructure that supports the EBT. Without a strong infrastructure and support system, practitioners may “drift” away from the EBT implementation process, such as by selectively implementing only certain components of the treatment or abandoning the treatment completely, opting to use alternative approaches with their clients. Thus, the EBT, as it was originally developed, and for which there is empirical support, may not be used with fidelity. Conclusions about the ineffectiveness of an EBT thus may reflect lack of fidelity in implementation, rather than ineffectiveness of the EBT itself.

Despite these challenges, treatment fidelity remains an important factor for successful implementation outcomes (Huey, Henggeler, Brondino, & Pickrel, 2000), with research indicating that better fidelity to a treatment protocol results in better treatment effect sizes and statistically significant results, greater program success, and increased positive behavioral and emotional change for clients (e.g., Bellg et al., 2004; Durlak & DuPre, 2008; Forgatch, Patterson, & DeGarmo, 2005; McHugo, Drake, Teague, & Xie, 1999; Schoenwald et al., 2003). Fidelity monitoring (e.g., observation of treatment sessions and provision of feedback regarding adherence to the treatment model) and consultation (e.g., additional follow-up training based on needs or issues that came up during session) from treatment developers have been found to be associated with greater clinician knowledge and understanding of the EBT, as well as increased staff retention in community mental health agencies (Aarons, Sommerfeld, Hecht, Slivosky, & Chaffin, 2009). Given the various possible benefits of strong treatment fidelity (e.g., better clinician knowledge and understanding of the EBT, lower staff turnover, greater program success, larger treatment effect sizes), proper training, consultation, supervision, and on-going monitoring remain important factors in supporting delivery of EBTs with fidelity.

Training and Consultation: What Works Best?

Researchers have turned their attention to learn more about what models of training and consultation appear to result in strong fidelity and sustained use of a treatment protocol in real world

community-based settings. It is now widely recognized that attendance at a one-time workshop is not sufficient to actually change practice or to sustain use of an EBT over time. While these types of “one shot” training sessions may increase therapists’ knowledge and positive attitudes toward EBTs, they do not influence the level of clinical skill specific to the EBT or increase its use in regular practice (Beidas & Kendall, 2010). As a result of these findings, training models emphasize longer duration of an initial training (up to a week) that includes reliance on active learning principles (e.g., case vignettes, problem-based learning, behavioral rehearsal, clinical role plays), and ongoing coaching or consultation via telephone, the Web, or in person after the initial training. Some models also include an advanced or “booster” training that occurs after practitioners have had the opportunity to deliver the treatment model with clients. As expected, coaching and consultation do increase use of an EBT, enhance skills, and promote delivery with fidelity (Beidas, Edmunds, Marcus, & Kendall, 2012).

Nadeem and colleagues (2013) identified components of consultation that appear to be critical for successful delivery and long-term implementation of an EBT. These include (a) ongoing training to build skill mastery, whether in practicing skills learned during the initial training, or developing more advanced skills; (b) direct support during EBT delivery (e.g., providing consultation for specific therapy cases); and (c) discussion of strategies to address barriers encountered during treatment delivery. Research indicates that ongoing coaching and consultation should be provided in a structured format, and that these factors appear to be most helpful when guided by a set protocol (Schoenwald et al., 2003). Additionally, agency leaders benefit from consultation that addresses ways to monitor ongoing delivery of an EBT with fidelity across all providers, increase accountability at all levels (i.e., senior administration, program managers, supervisors, and front-line providers) within an agency, and plan for long-term sustainability (Nadeem, Gleacher, et al., 2013). Thus, we turn now to discuss barriers faced during the implementation process and current perspectives on how best to address such barriers.

Barriers to Implementation

In spite of the ever-growing body of research investigating the processes that best support the implementation of EBTs as standard practice, a range of barriers remain. On average, it takes 17

years from the time of initial treatment development to actual use in community settings, and EBTs are still not routinely used in community mental health agencies (Herschell, 2010; Lenfant, 2003). There are numerous barriers to successful implementation and sustained use of EBTs, and these should be considered by all parties involved both before and throughout the implementation process. These barriers are described below.

ORGANIZATIONAL BARRIERS

Community mental health agencies (e.g., outpatient agencies; partial hospitalization or day treatment programs; child advocacy centers; state-run agencies, such as a county Department of Mental Health) play an integral role in successful EBT implementation and sustainability. Limited agency support can result in poor fidelity or abandonment of the treatment model all together. Research consistently demonstrates that the culture and climate of an organization play critical roles in whether the EBT is adopted and sustained in the agency. Organizational *culture* refers to the overall norms and assumptions of a particular agency; thus if the “culture” of an agency does not promote use of the EBT, there is likely to be limited support for the individual practitioner (Aarons et al., 2011). Thus clinical supervisors responsible for ongoing guidance and feedback to practitioners play a crucial role in the longevity of an EBT. If these supervisors are not properly trained in the EBT, or do not support its use, they may not provide the supervision needed to use the EBT with fidelity. They may also encourage practitioners to abandon the EBT, and to instead use alternative (and possibly unproven) treatment strategies. Relatedly, organizational *climate* refers to individual practitioner attitudes about their agency and work environment (Aarons et al., 2011). Thus, if there is a lack of cohesion between practitioners and agency administrators, even with overall agency support of an EBT, practitioners may not feel compelled to use the EBT in their clinical practice.

RESOURCE BARRIERS

Even when there is strong agency and practitioner support of an EBT, logistical barriers can result in obstacles to successful implementation. Community mental health agencies may not have the financial resources to support the infrastructure (e.g., treatment manuals, pre/post measures, special therapy spaces, worksheets for clients) needed to implement the EBT with fidelity. The agency may

not have the charting and billing system required for the EBT (Saunders & Hanson, 2014). There may not be funding available for practitioners to take time off for training or to add extra sessions of supervision and consultation. Some treatment protocols may require clients to be seen multiple times per week, which may not be feasible in the long term for clinicians and agencies. And some interventions, particularly those involving children, require the active involvement of caregivers, and this may not be supported by the insurance provider or other clinic funding streams.

ATTITUDINAL BARRIERS

Implementation science researchers have noted that practitioner attitudes toward the use of EBTs affect the quality of treatment delivery (Aarons et al., 2011). These attitudes, which can be affected by organizational variables as well as demographic factors (e.g., years of experience, theoretical orientation, sense of self-efficacy), are important to consider. Attitudes that do not support the use of EBTs, or reflect mistrust in research–practice partnerships may present a large barrier to successful treatment delivery and long-term implementation. As already stated, practitioners and supervisors may not feel comfortable or supported using the EBT, in which case these treatment protocols may be dropped from service provision.

Conversely, the attitudes of treatment developers and researchers may also negatively affect EBT implementation. A hurdle in successful EBT implementation is that of the “ivory tower” phenomenon, where researchers may not recognize the importance of building collaborations and partnerships with community mental health agencies as a way to obtain feedback that will support sustained delivery of the EBTs.

CLIENT BARRIERS

As noted above, information from clients who receive EBTs has a crucial role in the implementation process. Data from individuals who are directly receiving the EBT are essential for building the evidence base of the EBT, as well as for helping mental health professionals gain a better understanding of which treatments need to be developed for a particular client population, and how these treatments may need to be adapted or modified to best fit the needs of the group. Clients who are involved with treatment services may present a number of barriers that can lead to obstacles in the use of the EBT. Among them are logistical barriers to treatment

(e.g., transportation, child care, finding time off from work), which may result in increased no-shows and cancellations, or perceptual barriers, such as the client not “buying in” to the treatment program, and refusing to complete in-session or out-of-session work. There also may be cultural or familial barriers to treatment that can affect the use of the EBT, as well as the ability to complete treatment cases and collect relevant data to study the effects of the EBT (Saunders & Hanson, 2014). Thus, even with strong support from the other “players” (e.g., researchers, agencies, practitioners) in the implementation process, successful treatment delivery and sustainability are strongly affected by the clients involved.

Dissemination and Implementation Frameworks

Frameworks and models to guide dissemination and implementation efforts have been developed. Many of these are derived from the iterative process described above, namely ongoing “conversations” between scientists and practitioners. In an extensive review of the literature, Tabak, Khoong, Chambers, and Brownson (2012) identified and described 61 models of dissemination and implementation available to researchers. Although there is much to be learned from all of these models, we believe that those incorporating open channels of communication among providers of treatment development, dissemination, and implementation exemplify the state of the art as it relates to bridging the gap between science and practice. While a complete discussion of the various models is beyond the scope of this chapter, we have selected a few exemplars to highlight the significant progress in enhancing knowledge of the most effective strategies for identifying EBTs, and for enhancing their large-scale implementation into community-based settings. This is still a relatively new and emerging field of research; however, efforts to date provide clear direction for practitioners to select, deliver, and sustain the use of EBTs in their clinical practice. Readers interested in a more detailed discussion of current implementation frameworks and models are referred to Tabak et al. (2012).

Managing and Adapting Practice (MAP) System

One framework designed to facilitate access to knowledge about EBTs for mental health professionals is the Managing and Adapting Practice (MAP) system (Chorpita & Daleiden, 2013).

This system was developed as a collaborative and empirically informed tool with which to disseminate information regarding best practice interventions for youth that were tailored to the client's problem(s). It includes a database that matches a list of EBTs (along with the randomized controlled trials [RCTs] demonstrating the evidence behind these treatments) to a specific problem (e.g., childhood anxiety). The MAP system also includes "common elements" from EBTs and decision rules regarding how to best implement these elements, so that professionals can develop a treatment program that is most appropriate for their client's needs. Additionally, MAP serves as a tool for measuring and monitoring quality control of EBT implementation. The direct service component of MAP provides up-to-date information online, via "clinical dashboards," on information relevant to the implementation of EBTs, including monitoring client and provider progress, providing examples of treatment plans or progress updates, sharing information regarding the evidence base for the EBT, and updating professionals with information about logistical or administrative considerations affecting implementation of the EBT (e.g., insurance eligibility status; Chorpita & Daleiden, 2013).

In addition to the clinical dashboards, MAP also includes various process guides (Chorpita & Daleiden, 2013). The Treatment Planner guide was developed to help professionals better organize their delivery of treatment, by choosing a focus for therapy, organizing common elements of EBTs into a chronological framework based on the progression of treatment (i.e., choosing elements that fit best with the beginning, middle, and final stages of therapy), and utilizing resources aimed at addressing possible interference in the treatment plan (e.g., comorbid conditions). The more specific "Session Guide" helps professionals systematically structure each therapy session. An "Embracing Diversity" guide is included so that professionals can systematically assess whether adaptation of the EBTs is appropriate for their client. Overall, MAP is a strong example of a comprehensive framework to help guide mental health professionals by providing up-to-date information regarding a multitude of factors related to the use of EBTs.

Quality Improvement Collaboratives (QICs)

Quality Improvement Collaboratives (QICs), such as the Breakthrough Series Collaborative introduced by the Institute for Healthcare Improvement (IHI, 2003), were initially used in health care to

support change across multiple levels of an agency and thereby spread best practices. The National Child Traumatic Stress Network (NCTSN), funded by the Substance Abuse and Mental Health Services Administration, was established in 2000 to increase accessibility of evidence-based services for youth affected by abuse or trauma (Pynoos et al., 2008). In 2005, the NCTSN (Ebert, Amaya-Jackson, Markiewicz, Kiesel, & Fairbank, 2012; Ebert, Amaya-Jackson, Markiewicz, & Fairbank, 2012) used the Breakthrough Series Collaborative to support and sustain implementation of Trauma-Focused Cognitive Behavioral Therapy, an EBT that targets trauma-related mental health symptoms among youth (Cohen, Mannarino, & Deblinger, 2006). The result of this initial successful effort was a modified QIC, or Learning Collaborative model, which is now being widely promulgated through the NCTSN to implement a variety of trauma-focused EBTs for children and their families.

In brief, the intent of the Learning Collaborative is to bring together teams from different organizations that work to learn an EBT and sustain its use over time. Agency teams are typically comprised of a senior leader, such as the executive director, clinical supervisor(s), and practitioners. Once teams are selected, initial pre-work activities are completed to provide a foundation in the EBT and enhance the in-person training (i.e., learning sessions), in which the focus is on teaching mental health practitioners the specifics of delivering the treatment model. Learning sessions are interactive and emphasize adult learning principles, with opportunities for skill practice and behavioral rehearsal, case vignettes, and problem-based learning, as well as training in quality improvement strategies, such as Plan-Do-Study-Act (PDSA) cycles. The in-person learning sessions (usually 2–3 days, depending on the specific EBT) are interspersed with *Action Periods*: Practitioners take on training cases and deliver the EBT with ongoing consultation by a treatment expert, usually by telephone on a monthly or bi-monthly basis, and conduct small tests of change, using the PDSA strategies. The intent of consultation calls is to promote successful delivery of the EBT by addressing barriers as practitioners work through treatment cases. Senior leaders also participate in consultation calls, usually on a monthly basis, to discuss ways to strengthen agency infrastructure and support sustained implementation. It can be helpful for clinical supervisors to be part of their own consultation group, both as a way to learn

the model themselves and to establish a platform from which to address issues related to supervision in the EBT.

As noted above, Learning Collaboratives have been widely used throughout the NCTSN as a way to promote sustained delivery of EBTs for traumatized children and their families. Studies are just now beginning to examine the effectiveness of this methodology, with initial findings indicating that agency staff viewed the learning collaborative as a useful methodology for learning and sustaining an EBT, and that participation was associated with an increased use of the EBT, as well as sustained use over time (Ebert, Amaya-Jackson, Markiewicz, Kisiel, et al., 2012; Ebert, Amaya-Jackson, Markiewicz, & Fairbank, 2012). This is an emerging area of research, and, as noted in a review by Nadeem, Olin, Hill, Hoagwood, and Horwitz (2013), an important issue to address for QICs, overall, is to define and measure the components. Both clear definitions and accurate measurements are necessary to move the field forward in terms of identifying the “active ingredients” needed for successful and sustained EBT implementation.

The Community-Based Learning Collaborative

One limitation of the Learning Collaborative model is its emphasis on training mental health practitioners in an EBT and its focus on teams from single agencies. While this does increase the supply of trained clinicians, it has limited impact on the overall service delivery system because it does not include a method to increase awareness and demand for the EBT. Thus, based on experience with the NCTSN Breakthrough Series and the existing implementation research literature, the Community-Based Learning Collaborative (CBLC) model (Saunders & Hanson, 2014) was developed as a way to build the supply of mental health practitioners trained to deliver an EBT, as well as increase the demand for the EBT by training nonclinical “broker” professionals. These brokers of mental health services include professionals whose primary job responsibilities are to identify, screen, and refer a target population for mental health treatment services, as well as to provide ongoing monitoring of treatment progress. The CBLC was developed as part of Project BEST (Bringing Evidence-Supported Treatments to South Carolina children and their families; Saunders & Ralston, project co-directors) funded by the Duke Endowment, to implement and sustain trauma-focused mental health practices

for abused or traumatized children and their families across South Carolina.

In addition to the inclusion of both clinical and broker professionals, the CBLC has several unique components. First, the target of the CBLC is a community, rather than a set of individual clinicians or a single agency. The goal is to implement and build the capacity of a *community* to deliver the EBT to all the children who need it. Therefore, clinicians, clinical supervisors, and senior leaders from several agencies within a community participate, cooperate, and work together to develop and sustain capacity to meet the needs of a targeted population. Second, brokers of services are included as participants. As noted, brokers are professionals whose primary responsibilities are to identify children in need of mental health services, develop treatment plans for them, refer them to mental health services, and monitor their treatment progress. As part of the CBLC, brokers are provided with an overview of the targeted EBT, trained on screening protocols to identify those appropriate for the EBT, taught to include the EBT in their treatment plans, and trained to provide ongoing case management to increase the likelihood of successful treatment outcomes. Inclusion and training of brokers is intended to increase demand for the EBT within the community structure. A CBLC is essentially based upon a social economic model of supply and demand. Brokers create demand for the EBT and clinicians supply it. According to this premise, if there is a balance between the two, the likelihood of EBT sustainability within a community is enhanced. Third, clinicians and brokers work together as a Community Change Team (CCT) to implement the EBT within their community. The CBLC works to build and support relationships, trust, and communication among its participants as a way to enhance EBT implementation and sustainability. Finally, metrics are collected from clinical participants throughout the CBLC to assess use of the EBT and barriers to treatment delivery; from brokers to assess use of the screening and case monitoring strategies; and from senior leaders to assess barriers to implementation and use of strategies to address them. All participants also complete metrics to assess levels of inter-professional and inter-agency collaboration related to care and coordination of services for youth and their families. Information gained from these metrics is shared with participants to provide ongoing feedback about progress in their implementation goals.

The CBLC has several phases, each of which includes specific strategies or components. Prior to the start of the CBLC, initial meetings are held with senior leader stakeholders to assess interest and readiness to participate. This also includes completion of a readiness assessment. Once a community has formally decided to participate, they assemble a CCT (comprised of representatives from multiple agencies within the community) who will engage in the learning and implementation activities over the course of the CBLC. During the pre-work phase participants do selected readings, complete a Web-based training course, attend an orientation session to learn more about the CBLC process and training requirements, and meet as a CCT to begin the collaborative process. Participants attend two-day in-person training sessions (*Learning Sessions*), conducted by the CBLC training faculty. Each Learning Session is followed by an *Action Period* of 2–4 months, during which clinicians implement trauma focused CBT (TF-CBT) with training cases presented and followed in biweekly telephone consultation from CBLC faculty; brokers implement the screening, treatment planning, referral, and case monitoring activities; and all participants and agencies use PDSAs to effect small tests of change within their communities. Brokers participate in monthly telephone consultations from CBLC broker faculty. Senior Leaders also participate in monthly consultation calls, led by CBLC faculty, to address strategies to support and sustain implementation. During the Action Periods, CCT meetings are also held.

To date, as part of Project BEST (Saunders & Hanson, 2014) seven CBLCs and two clinician-only Learning Collaboratives, involving 618 clinicians, brokers and senior leaders from multiple child-serving agencies across South Carolina's 46 counties have been completed. In December, 2013 the South Carolina Trauma Practice Initiative (SCTPI) was formed as a partnership among Project BEST, the South Carolina Department of Social Services, and the South Carolina Department of Mental Health. The SCTPI consists of a series of 6 CBLCs conducted in 2014–2015 and will involve over 600 additional clinical and broker professionals from communities across South Carolina. The first of these CBLCs began in February 2014 and is ongoing; the second began in April 2014. An additional series of CBLCs is being conducted as part of a SAMHSA funded NCTSN *Program on Adolescent Traumatic Stress* (PATS; Rochelle F. Hanson, PI). Comprehensive evaluation of these CLBCs is now underway, and the preliminary and anecdotal data

suggest that CBLC strategies appear to be critical in building, supporting, and sustaining collaborations among multiple professionals.

Conclusions and Future Directions

As discussed at the beginning, the goals of this chapter were to define what is meant by an EBT and to provide guidance to mental health practitioners and community-based agencies regarding factors critical to successful and sustained implementation of EBTs. We attempted to highlight use of the iterative process to inform the development, selection, and implementation of EBTs, as well as the importance of strong partnerships between researchers and practitioners. A few dissemination/implementation models were presented as examples of current efforts to achieve sustained use of EBTs among practitioners, within agencies, and across communities.

In closing, it is important to return to contextual considerations in the use of EBTs. As outlined at the beginning of the chapter, EBTs are one, albeit a critical, component of evidence-based practice in psychology. The “integration of best available research with clinical expertise in the context of patient characteristics, culture, and preferences” (APA Presidential Task Force on Evidence-Based Practice, 2006) entails not only keeping up to date with best available research, but also integrating this evidence with clinical expertise and patient characteristics—including cultural considerations and the preferences of clients. We offer here issues worthy of consideration for practitioners, referring agents, and agency senior leaders in the sustained use of EBTs embedded within evidence-based practice:

- Mental health practitioners need to have basic knowledge and information regarding which treatment interventions work and which ones do not for their targeted population(s).
- Mental health practitioners need to seek appropriate training and ongoing supervision or consultation and pursue additional training to ensure continued use of the EBT with fidelity (Beidas & Kendall, 2010).
- In terms of selecting an appropriate EBT, mental health practitioners need to take into account a number of client factors, such as the cultural backgrounds of their clients, available resources to pay for the EBT, as well as frequency and duration of the EBT, all of which can impact ongoing engagement and successful completion.
- When practitioners are trained in multiple empirically supported approaches, both clinical

expertise and client preferences should be taken into account when determining which approach may be most helpful for a certain client. For example, clients may prefer insight-oriented approaches, relational approaches, or behavioral, homework-focused approaches—all of which are represented in various EBTs for depression.

- Evidence generated throughout the therapeutic process cannot be underestimated in its utility to guide treatment. For example, if a client is struggling to complete behavioral homework assignments, a clinician would do well to consider other treatment approaches in the “clinical toolbox” that might better fit with the client’s current circumstances and life demands. As the evidence shows, EBTs are not “one size fits all,” but a complete clinical toolbox will be filled with expertise in a range of EBTs with demonstrated efficacy and effectiveness for the population served by a particular clinician.

- Evidence regarding cultural considerations is not limited to that reported in the research literature, although there is a rich and growing literature related to the use, as well as the adaptation for use, of many EBTs for various cultural groups. Evidence also accumulates from information gathered as part of the assessment and treatment planning process, such as seeking consultations with experts in the community.

Agency senior leaders have the responsibility to provide the infrastructure and ongoing leadership that will support use of the EBT (Aarons, 2006; Aarons & Sommerfeld, 2012). This includes:

- Providing the resources for initial EBT training, consultation, and ongoing clinical supervision.
- Setting procedures or protocols for hiring new practitioners that ensure they will be appropriately trained in the EBT.
- Providing resources, such as training manuals, assessment instruments, and support of a culture that promotes training and ongoing use of the EBT with fidelity.

Finally, referring agencies also need to have information available to them for the process to work smoothly. This includes knowledge about:

- Which EBTs work and do not work with their targeted population(s).
- How to identify skilled providers in their communities.

- How to make appropriate referrals (i.e., whom to call, what information to provide, how to locate practitioners who use EBTs)

- How to monitor and support client engagement in treatment to increase the likelihood of successful treatment outcomes.

Additionally, mental health practitioners, senior leaders, and referring agencies need to openly communicate and collaborate to ensure the best possible outcomes for their clients. All of these elements are essential components of the effective development, implementation, and sustainability of EBTs in community-based settings; the important contributions of the practitioners, referring agencies, and agency leaders remain essential to this process.

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