Treatment of child abuse

COMMON GROUND FOR MENTAL HEALTH, MEDICAL, AND LEGAL PRACTITIONERS

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The Roles of Web-Based Technology in the Dissemination and Implementation of Evidence-Based Treatments for Child Abuse

GENERAL CONSIDERATIONS

When the Internet was launched in 1989, an estimated 28% of American adults used a computer at home, work, or school (U.S. Census Bureau, 1991). Between the years 2000 and 2010, the percentage of American adults using computers increased from 65% to 77%, and the percentage of adults using the Internet increased from 53% to 79% (U.S. Census Bureau, 2012). The launches of the Internet and the World Wide Web (in 1992) have led to a global shift in how knowledge is stored, disseminated, and consumed in modern society (Harasim, 2000; Hilbert & Lopez, 2012). Knowledge about mental health treatment is no exception. Innovations in the development, dissemination, and implementation of psychosocial interventions accompanied the technological revolution of the late twentieth century. Web-based technology, in particular, is being used in a variety of mental health applications, including the delivery of treatments for smoking cessation (Shahab & McEwen, 2009), depression and anxiety (Andersson & Cuijpers, 2009; Andrews et al., 2010), and post-disaster emotional psychopathology (Ruggiero et al., 2006), as well as child in maltreatment prevention efforts (cf. Self-Brown & Whitaker, 2008).

Over the past 10–15 years there has been a simultaneous trend within mental health treatments to increasingly emphasize “evidence-supported treatments” (ESTs), those treatments that research has demonstrated to be either efficacious or promising in relieving psychological symptoms. These first efforts at systematically identifying and promoting ESTs (e.g., Chambless & Hollon, 1998) were motivated in large part by an American Psychological Association Task Force (1995) and initially focused on major psychological disorders or populations (e.g., adults, children). Similar efforts followed shortly thereafter within some specialty areas, including child maltreatment (e.g., Saunders, Berliner, & Hanson, 2004).

The timing of these two trends, while probably coincidental, has provided novel opportunities for mental health professionals to learn about ESTs. In the broader context of clinical training models, we are seeing a clear trend toward the incorporation of Web-based technology in the spread and utilization of evidence-based mental health interventions. The purpose of this chapter is to summarize the current impact that such technology is having on the dissemination and implementation of ESTs for child maltreatment and to foreshadow ways in which such technology might be applied to solve existing training-related problems in the field.

IDENTIFYING, DISSEMINATING, AND IMPLEMENTING TREATMENTS

Before beginning an analysis of technology’s impact on the process, it is useful to summarize briefly how treatments are determined to be ESTs and how they are disseminated and implemented. The classification system developed by Chambless and Hollon (1998), and subsequently adapted by Saunders and colleagues (2004) for child maltreatment, emphasizes treatment efficacy data produced by randomized controlled clinical trials (ideally) or other methods as the main determinant of “empirical support.” Although this decision was not without controversy, it has led to useful and widely promulgated systems of ranking treatments according to their level of support within specified criteria. Saunders and colleagues, for example, identified six ranks ranging from “well-supported, efficacious” to “concerning,” based on the type and quality of outcome studies available, as well as other factors. Saunders and colleagues reviewed 24 treatment protocols, each associated with a specific interven-
tion, and assigned an empirical support rating. Excluding
the 2 interventions targeting offenders, 14 interventions
were classified as having some degree of empirical support.
One intervention, Trauma-Focused Cognitive Behavioral
Therapy (TF-CBT; Cohen, Mannarino, & Deblinger, 2006),
was classified as “well-supported and efficacious.”

After an intervention (such as TF-CBT) is developed and
evaluated, it must be transferred to and adopted by clini-
cians who treat maltreated children. This is referred to as
dissemination and implementation. According to Gotham
(2004, p. 164), “Dissemination is the process of informing
others or spreading the word about a new technology. Dis-
semination ends with the decision to adopt. Implementa-
tion picks up after the adoption decision has been made
and refers to how the technology is realized in practice.” For
the purposes of mental health interventions, it is useful to think
of dissemination as providing therapists with information
about the underlying theory, methods, and procedures
associated with a treatment. Implementation involves trans-
lating that knowledge into performance in a practical con-
text or environment. As an intervention is transferred and
adopted, clinicians make changes or modifications to the
intervention to fit their therapeutic style, the idiosyncrasies
of clients, and/or the organizational characteristics of their
practice site. Training clinicians to adopt an EST fully,
therefore, involves both dissemination and implementation
activities.

In an ideal world, clinicians would be highly adept in
delivering an array of ESTs, selecting an appropriate inter-
vention for each maltreated child they serve. Yet numerous
obstacles hinder the successful dissemination and imple-
mentation of ESTs. The Institute of Medicine (2000) esti-
mated that an average of 17 years passes before knowledge
of best practices, as generated in empirical settings, is rou-
tinely incorporated into everyday clinical practices. Web-
based technologies may prove to be particularly useful
methods for hastening this process.

HOW ARE THERAPISTS CURRENTLY
TRAINED?

Generally speaking, therapists learn how to provide clinici-
tal treatments through two traditional training models. 
These models are not mutually exclusive; indeed, virtually
all clinicians have experienced training through both models
at different points in their careers. The first model, the
university-based supervision model, predominates during
graduate training in all clinical training programs in the
United States. The second model, the intensive workshop,
characterizes postgraduate training. We briefly review
each model here, highlighting the strengths and weak-
nesses of each with respect to producing clinicians who can
deliver ESTs with fidelity and competence, and focusing on
ESTs relevant to child maltreatment victims.

In university settings, where basic interviewing and
therapy skills (reflection, validation, paraphrasing, etc.) are
often first developed, trainees acquire knowledge by read-
ing course materials, attending lectures, observing instruc-
tors, practicing skills in controlled settings, and receiving
feedback or supervision (Sommers-Flanagan & Heck, 2012).
Because training in a university setting is often sequential,
trainees may not be exposed to specific interventions, such
as ESTs, until they have mastered foundational skills. Sub-
sequent coursework is often organized according to broad
theoretical orientations (e.g., “Behavior Therapy,” “Psycho-
dynamic Psychotherapy”) in which specific ESTs are pro-
vided as examples of a larger treatment model. In such
cases, in our experience, supervised practice in delivering
an EST in a clinic (“implementation”) is a hit-or-miss propo-
sition. Training is not uniform across (or even within) dis-
ciplines, either. Although the American Psychological
Association’s accreditation standards require instruction in
ESTs, they do not provide a rigid structure for how such
training is to be delivered. In one less than encouraging
study, for example, Weissman and colleagues (2006) re-
ported that the percentage of professional clinical psychology
(Psy.D) and social work programs not requiring didactic
training and clinical supervision in at least one EST
exceeded 60%.

The emphasis on training in ESTs across the mental
health professions is a relatively new phenomenon, and
many training program faculty and affiliates may them-
selves lack adequate training in specific ESTs. With respect
to interventions for maltreated children, many psychology
graduate and internship training programs offer opportu-
nities to learn at least one EST for child abuse (Sigel & Si-
lovsky, 2012a, 2012b). However, training programs have
limited numbers of faculty, and it is unreasonable to as-
sume that they can be expert trainers in all conceivable
ESTs.

The reality is that with our current methods of provid-
ing clinical training, professionals finish their education
without being exposed to a considerable amount of infor-
mation about specific ESTs. Both personal and professional
incentives (e.g., continuing education requirements) re-
quire clinicians to continue learning after their formal,
university-based education is finished. By far the most com-
mon model for such learning is the intensive training work-
shop. The workshop model involves the dissemination, of-
ten at workshops and professional conferences, of didactic
training (e.g., reviewing theory associated with an inter-
vention, demonstrating intervention techniques, practicing
specific skills through role plays). Research has consistently
demonstrated, however, that such training is insufficient to
produce changes in clinical practice and meaningful imple-
mentation of ESTs (e.g., King et al., 2002; Sholomskas et al.,
2005). Clinicians are more likely to implement a newly
learned EST with fidelity if they receive competency train-
ing comprising feedback and coaching (Beidas & Kendal,
2010; Sholomskas et al., 2005). Borrowing McHugh and Bar-
low’s (2012) analogy, didactic training in the absence of
competency training is akin to purchasing a computer that
does not have an operating system and other important software.

Time and money serve as two, often interrelated barriers to disseminating information about ESTs via the workshop model. Attending multiday workshops may be cost-prohibitive for mental health professionals and agencies. Time and money are also barriers to competency training. The limited availability and the cost of professional supervision/consultation may deter mental health professionals and agencies from pursuing training in ESTs, especially when considered in the context of a system where reimbursement for services is often decreasing while administrative requirements to receive reimbursement are increasing. Research to identify best practices in the training of clinicians is limited. Questions remain about the intensity, duration, and mechanisms of training necessary to ensure treatment fidelity, competence, and sustainability, as well as the measurement strategies used to operationalize clinician competence, client outcomes, and cost-effectiveness (McHugh & Barlow, 2012).

With these two models of training and their associated barriers in mind, we turn our attention to how technology is changing the way two ESTs for child abuse and maltreatment are disseminated, highlighting how technology can be used to eliminate or reduce identified barriers to dissemination and implementation.

WEB-BASED TECHNOLOGY AND DISSEMINATION: TF-CBTWEB

As noted above, Trauma-Focused Cognitive Behavioral Therapy was identified in 2004 as the only "well-supported and efficacious" treatment for child maltreatment victims. This coincided with the proliferation of the National Child Traumatic Stress Network, a national effort funded by the Substance Abuse and Mental Health Services Administration to produce more trauma-informed service systems for families and children. Many centers and agencies around the country were funded to identify and implement promising services for child trauma victims. Given its empirical support, many agencies were naturally interested in TF-CBT, resulting in a high demand for workshop training. In response, the co-developers of the treatment, Drs. Judith Cohen, Esther Deblinger, and Anthony Mannarino, collaborated with the National Crime Victims Research & Treatment Center at the Medical University of South Carolina to create an online training system that would supplement the workshop-based training they were providing. The resulting product, known as TF-CBTWeb (www.musc.edu/tfcb; see also Smith & Saunders, 2006), is a 10-hour, Web-based, asynchronous, distance learning course that teaches mental health professionals and students the basic skills associated with TF-CBT and serves as a foundation for the in-person workshop training.

While developing TF-CBTWeb, we conducted extensive reviews of the distance education, Web-based learning, and adult learning literatures. Provision of asynchronous, Web-based learning for adult professionals is quite different from teaching a graduate course or even providing a traditional training workshop. Therefore, the design of TF-CBTWeb was based on specific principles of learning related to its target audience and modality. In particular, making the website attractive and using engaging technology were a high priority because most learners would be taking TF-CBTWeb voluntarily for the learning experience, rather than as part of a degree-granting program (although several training programs now require students to complete the course).

TF-CBTWeb contains learning modules that present information about each component of TF-CBT. Each module includes:

- Pre- and post-tests assessing knowledge of the treatment component
- Learning objectives
- A text description of the intervention techniques associated with the specific component
- Sample scripts of therapist-client interactions
- Multiple streaming video demonstrations of techniques being implemented by trained therapists with simulated clients
- Homework or follow-up exercises that can be used with clients
- Relevant cultural considerations for applying the techniques
- A discussion of common clinical challenges
- Directions for engaging parents or guardians in the intervention

The course was designed to be used by busy, frontline practitioners who often have little time and few resources for traditional approaches to professional education. The asynchronous, modular, self-study approach allows practitioners to learn at their own pace at a time that is convenient. They can access the training at any time, from virtually any computer with Internet access. The modular approach means they can space their learning over time and return to the course whenever they like. TF-CBTWeb is offered at no charge, and mental health professionals who complete the course (i.e., finish all post-test modules and the course evaluation) are eligible for 10 contact hours of continuing education from the Medical University of South Carolina.

TF-CBTWeb was launched on October 1, 2005, and learner evaluation data reveal that it has been successful in achieving several of its purposes. A more thorough evaluation is currently underway (Heck, Saunders, & Smith, 2013), but data from 9,149 learners who registered for the course during its first full year of operation (October 1, 2005, to September 30, 2006) are very encouraging. The full report is available online (National Crime Victims Research & Treatment Center, 2007). Course evaluation data from the 3,558 (39%) course completers indicate statistically significant knowledge gains in every module, as measured by
changes in pre-post test scores. Learner satisfaction scores were also quite high, with over 90% of learners either "agreed" or "strongly agreed" that each element of the course we assessed (including ease of navigation, "look and feel," clarity of content, streaming video content) was helpful or satisfactory. The learner profile for the first year also suggests that the course reached our target audience: mental health professionals from a variety of disciplines who are relatively early in their careers (or students). The large majority of learners lived in the United States, but a significant minority (8%) were international learners (in 60 different countries).

Registration for the course continues to grow; as of September 30, 2012, more than a hundred thousand learners had registered for the course, and a preliminary analysis indicated that the overall completion rate was approximately 50% (Heck, Saunders, & Smith, 2013). Therefore, from a dissemination point of view, TF-CBTWeb has clearly been a success. Literally tens of thousands of people have received basic instruction in the foundational principles and methods of the treatment via the Web in a format approved by (and developed in collaboration with) the treatment developers. Indeed, all participants in authorized TF-CBT workshop trainings are now required to complete TF-CBTWeb prior to workshop attendance.

Of course, the course does have its limitations. For example, since the launch in 2005, the treatment developers have slightly modified the way that TF-CBT training is organized, and the content of the modules has evolved somewhat. Due to a lack of resources, TF-CBTWeb has not yet been updated to reflect these modifications. However, funding for "TF-CBTWeb 2.0" was recently obtained. In addition, our outcome evaluation data thus far are limited to user satisfaction and knowledge gain—both appear to be excellent—but we have no information on utilization of the treatment, therapists' skill acquisition, or fidelity to the treatment for course completers. Information about these crucial aspects of implementation are needed before TF-CBTWeb can be viewed as fully successful.

WEB-BASED TECHNOLOGY AND IMPLEMENTATION: PARENT-CHILD INTERACTION THERAPY

Originally developed to treat disruptive behavior problems in children and, more broadly, in families with unhealthy styles of interaction, Parent-Child Interaction Therapy (PCIT; Hembree-Kigin & McNiel, 1995) has been successfully adapted to treat physically abusive families (Saunders, Berliner, & Hanson, 2004). Traditionally, PCIT has been disseminated in university-based settings where the trainee receives didactic training, followed by approximately six months of co-therapy in which a trainer observes, coaches, and provides feedback to the trainee (Funderbunk et al., 2008). In community settings, PCIT training typically requires as many as 40 hours of didactic training, followed by regular consultation and coaching. Historically, such consultation and coaching involved the trainer and trainee speaking over the telephone. With the trainer unable to directly observe or review the trainee's work, however, the value of such consultation was limited because it relied on trainees' self-reports of their performance, which might not accurately reflect their fidelity to the PCIT model (Funderbunk et al., 2008). An additional barrier to implementing PCIT in community settings was the cost associated with hiring a full-time trainer, and the limited availability of such trainers, to provide on-site coaching for three to six months. Simply put, the co-therapy model of PCIT training, which involved direct observation of trainees' performance, was highly impractical outside university-based settings.

Advances in Web-based communication technologies may help address this barrier. Funderbunk and colleagues (2008) developed and are evaluating a method of videoconferencing that can approximate the traditional co-therapy model of training. The following vignette illustrates this advance.

Dr. Brennan has recently completed a week of didactic training in PCIT and has returned to his community-based counseling center in a small town in West Virginia. Dr. Brennan has been working with a father-child dyad and is planning to observe and coach the father in a child-directed dyadic play session. The father and child are in the playroom, and Dr. Brennan is in the observation room. In addition, Dr. Stewart, a PCIT trainer working at a medical center in North Carolina, is providing live coaching remotely to Dr. Brennan as Dr. Brennan coaches the father.

In the corner of the playroom, a small camera is affixed above two videoconferencing screens (both similar in size to a computer monitor). The camera is equipped with a microphone and speaker system so that Dr. Brennan and Dr. Stewart can hear what is happening in the room and provide coaching to the father. On the screens, the father can see Dr. Brennan and Dr. Stewart. In the observation room sits another camera and two screens that allow Dr. Brennan to communicate with the father and with Dr. Stewart. Finally, in Dr. Stewart's office sit two small screens and a camera allowing her to communicate with both the father and Dr. Brennan. Using videoconferencing technology, Dr. Stewart is able to see, hear, and speak both with the father as he interacts with the child and with Dr. Brennan as he coaches the father from the observation room.

Videoconferencing technology allows the PCIT trainer to remain in the co-therapist role that is typical of university-based training settings. This technology is feasible, and surveys indicate that clinicians are satisfied with the consultation delivered by videoconferencing (Funderbunk et al., 2008). One drawback, noted by Funderbunk and colleagues,
is the cost of such technology, which may be prohibitive for many community-based organizations and providers. However, the authors note that videoconferencing supervision takes place during a billable client-contact hour, which may offset some costs associated with forgoing a billable hour for weekly telephone supervision.

In the absence of co-therapy, a Video Analysis Tool (VAT; www.videoanalysisistool.com) may serve as a viable, cost-effective method to provide ongoing coaching in PCIT to other trainees. According to Wilisle and Brestan-Knight (2012), a VAT allows a trainee to receive feedback from a trainer, who reviews videos of therapy sessions online using a Web interface compliant with HIPAA (Health Insurance Portability and Accountability Act of 1996). Trainers can review the video and insert comments that are linked to specific time points in the session, and once the trainer has finished his or her review, the trainee can review the feedback associated with the most important points of the therapy session (Wilisle & Brestan-Knight, 2012).

In summary, technological advances, including videoconferencing and VATs, increase access to off-site experts who can provide the ongoing coaching and feedback needed for successful implementation of PCIT. Additionally, the use of technology can be used in “train-the-trainer” approaches as a way to increase the number of community clinicians who can receive supervision in a specific EST. Such approaches are ideal—and probably cost-effective—because they increase the availability of on-site supervision, which, given the high turnover rates in community settings, can help to ensure newly hired clinicians’ access to feedback and coaching (Cahill et al., 2006). Although the current cost of acquiring videoconferencing technology may be prohibitive, as time progresses the costs of technology tend to decrease, and alternative methods such as VATs may be used more frequently. Clearly, research is needed into how new technologies can best facilitate the dissemination of ESTs.

FUTURE DIRECTIONS

We have highlighted the ways in which technology is currently being used to improve dissemination and implementation of ESTs related to child maltreatment. However, technology is not standing still. As advances in technology occur, we hope that corresponding advancements in training will follow. Although it is extremely difficult to predict what will and will not take as a technological advance (for every Blu-ray there is a Betamax), we are aware of several exciting new directions in existing or emerging technology that we plan to follow closely.

First, although extensive empirical evidence demonstrates the efficacy of TF-CBT (for a review, see Cary & McMillen, 2012), emerging evidence also suggests that fidelity to TF-CBT may be suboptimal in some community settings (Allen & Johnson, 2012). In an effort to increase fidelity and child and family engagement in TF-CBT, researchers at the University of Medicine and Dentistry of New Jersey, and Allegheny General Hospital, with funding from the National Institute of Mental Health, are developing and evaluating an “eff-CBT” toolkit. Comprising technology-based applications (videos, interactive content, drawing tools, etc.) that mental health professionals can download to mobile devices such as tablets and smartphones for use in or out of session, the eff-CBT toolkit will include applications that correspond to each component of TF-CBT. The selection of applications for the toolkit is ongoing but will be grounded in qualitative data obtained from TF-CBT training experts regarding their impressions of aspects of TF-CBT that present challenges to implementation with fidelity. With the proliferation of tablets and smartphones, it is exciting to consider how their capabilities can be leveraged in mental health interventions, whether for TF-CBT or any other EST.

A second potentially exciting development addresses one of the main shortcomings in the training impact of TF-CBTWeb. In its current form, the learning course cannot measure skill acquisition in a feasible way that is not resource intensive. We have considered a variety of methods for obtaining learners’ performance data, but each has had significant shortcomings. However, recent applications of virtual reality (VR) simulation technology to clinical interactions have led to the development and feasibility analysis of “virtual clients” (Rizzo et al., 2010). Clinical researchers and computer programmers are collaborating to create low-cost, desktop computer–based avatars that can be programmed to mimic clinical patients in a believable fashion. VR technology has been used for some time in exposure-based treatments for phobia and posttraumatic stress disorder (e.g., Rothbaum et al., 2001). Unlike those systems, however, the technology being proposed does not involve wearing VR glasses or goggles or the subjective sense of immersion into a “virtual setting.” Rather, a “virtual client” is created on the computer screen who interacts aurally and orally with the therapist. A feasibility study of this technology for augmenting suicide assessment training is currently underway (Carpenter, Osterberg, & Stutcliffe, 2012). If the technology proves feasible, similar functionality could be applied to online training courses, such as TF-CBTWeb, that would permit remote data collection via computer of a feasible and reasonably standardized interaction with a client or patient, which could in turn be evaluated for competence and treatment model fidelity. Refinement of this technology may be years away, but if it can be readily adapted to different treatment models, its potential for training could indeed be revolutionary.

Although these future possibilities are exciting, it would be imprudent not to mention the caveats and concerns that must accompany technological advances. Although many videoconferencing programs have been deemed HIPAA-compliant, we may still have a lot to learn about how to protect the confidentiality of learners and clients/patients when using technology. This is especially true if applications or programs that contain therapeutic elements are downloaded to smartphones, tablets, or other portable de-
CONCLUSIONS

As Hensler, Wilson, and Sadler (2004) noted, the human tendency to resist change and maintain homeostatic systems is an omnipresent force that we must overcome if we are to disseminate and implement ETSs more broadly. History is filled with examples of technological advances precipitating enormous cultural changes. In the early eighteenth century, Jethro Tull’s horse-drawn seed drill and horse-drawn hoe revolutionized the agricultural industry, James Hargreaves’s spinning jenny and James Watt’s steam engine gave rise to the industrial revolution of the late eighteenth and early nineteenth centuries. And recently, personal computers, the Internet, and the World Wide Web gave rise to a technological revolution that changed the way knowledge is stored, disseminated, and consumed in our society. In the mental health professions, technology is changing how we train and deliver mental health services. The potential for creating better providers, for improving the efficiency of clinical training and the client/patient care system, and for increasing clients’ access to excellent care is enticing and exciting. We have already seen remarkable progress in dissemination and implementation spurred by Web-based technology within, but not limited to, the child maltreatment field. We must continue to capitalize on advances in technology, but we must do so responsibly, never forgetting our obligations to our profession and to the safeguarding of our clients’ well-being.

References


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