Training as Usual: Can Therapist Behavior Change After Reading a Manual and Attending a Brief Workshop on Cognitive Behavioral Therapy for Youth Anxiety?

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At the time of this publication, Dr. Beidas was affiliated with Temple University, but she is now a faculty member of the University of Pennsylvania.

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Training as Usual: Can Therapist Behavior Change After Reading a Manual and Attending a Brief Workshop on Cognitive Behavioral Therapy for Youth Anxiety?

Abstract
There exists an ongoing movement to transport empirically supported treatments (ESTs), developed and evaluated in research clinics, to service providing clinics. ESTs refer to psychological interventions that have been evaluated scientifically (e.g., randomized controlled trial; RCT) and satisfy the Chambless and Hollon (1998) criteria (Kendall & Beidas, 2007). Dissemination research encompasses both dissemination (purposeful distribution of relevant information and materials to clinicians) and implementation (adoption and integration of EST in clinical practice) of ESTs (Lomas, 1993). However, for a variety of reasons (Addis & Krasnow, 2000; Riley, Schuman, Forman-Hoffman, Mihm, Applegate, & Asif, 2007), resistance to dissemination and implementation exists. We focus on training therapists in ESTs (i.e., dissemination). Thus, a key question arises: Do current training efforts practice in the community (i.e., reading a manual and attending a brief training workshop) effectively influence therapist behavior in those who are naïve to fundamental principles of an EST?

Disciplines
Cognitive Behavioral Therapy | Medical Humanities | Psychiatry | Psychiatry and Psychology

Comments
At the time of this publication, Dr. Beidas was affiliated with Temple University, but she is now a faculty member of the University of Pennsylvania.
Dissemination

Training as Usual: Can Therapist Behavior Change After Reading a Manual and Attending a Brief Workshop on Cognitive Behavioral Therapy for Youth Anxiety?

Rinad S. Beidas, Andrea J. Barmish, and Philip C. Kendall, Temple University

There exists an ongoing movement to transport empirically supported treatments (ESTs), developed and evaluated in research clinics, to service providing clinics. ESTs refer to psychological interventions that have been evaluated scientifically (e.g., randomized controlled trial; RCT) and satisfy the Chambless and Hollon (1998) criteria (Kendall & Beidas, 2007). Dissemination research encompasses both dissemination (purposeful distribution of relevant information and materials to clinicians) and implementation (adoption and integration of EST in clinical practice) of ESTs (Lomas, 1993). However, for a variety of reasons (Addis & Krasnow, 2000; Riley, Schuman, Forman-Hoffman, Mihm, Applegate, & Asif, 2007), resistance to dissemination and implementation exists. We focus on training therapists in ESTs (i.e., dissemination). Thus, a key question arises: Do current training efforts practiced in the community (i.e., reading a manual and attending a brief training workshop) effectively influence therapist behavior in those who are naïve to fundamental principles of an EST?

Scant research exists in this area. Studies that have addressed this question have focused on training providers in adult treatment, primarily for substance use (see Beidas & Kendall, in press, for a review of training studies; Miller, Yahne, Moyers, Martinez, & Pirritano, 2004; Morganstern, Morgan, McCrady, Keller, & Carroll, 2001; Sholomskas et al., 2005). Additionally, these studies have frequently included supervision, coaching, and longer training times than typically observed in community practices. Typically, these studies have used the “gold-standard training” observed in RCBs (Sholomskas et al.) to identify best training practices. The evidence from these studies suggests that knowledge increases after receiving training in an EST but that change in actual therapist behavior may not be achieved without supervision and feedback on behavior (Beidas & Kendall, in press). The question of what best training practices ought to entail remains unanswered.

More fundamentally, the effect of current community training practices on therapist knowledge and behavior has received meager research attention. Do brief workshops (such as a 2- to 3-hour continuing education seminar) and reading a manual influence therapist knowledge and behavior in therapists who are naïve to the principles of an EST? Given that continuing education workshops tend to be the main vehicle through which practitioners gain experience in newer treatments (Herschell, McNeil, & McNeil, 2004), this is an important area of inquiry. Two studies have addressed this question (DeViva, 2006; Rubel, Sobell, & Miller, 2000), but further study is warranted given study limitations. In one study, therapist behavior changed following a 3-hour workshop (DeViva). However, training was on a particular technique (i.e., increasing client motivation) rather than a treatment program. In another study, therapist behavior changed following 2 days of training on motivational interviewing (Rubel et al., 2000). However, in this study, therapist behavior was gleaned from written responses rather than rated therapist behavior. Additionally, the time of training exceeded that of general continuing education workshops, which tend to be half days or full days at their longest (Herschell et al., 2004).

There has yet to be a reported empirical investigation of training in ESTs for youth (Herschell et al., 2004), nor has there been a reported empirical investigation of the dissemination process with graduate trainees. Graduate trainees are especially relevant because they provide an analogue for training practitioners who are naïve to the principles of a particular EST. Additionally, there is concerning evidence that graduate students are not receiving training in ESTs in their graduate programs: A recent study reported that fewer than 50% of graduate students were expected to use ESTs in their training programs and practica (Hunt & Wisocki, 2008). Training in treatment modalities may influence therapist attitudes and openness to such treatments. Karekla, Lundgren, and Forsyth (2004) reported that graduate students exposed to ESTs in the classroom and through practica held more positive attitudes than students without these experiences. Addis and Krasnow (2000) found less favorable attitudes towards ESTs among practitioners, and attitudes towards ESTs may be more favorable for those beginning their careers (Karekla et al., 2004). It is relevant to study dissemination with a graduate trainee sample because they can arguably be the most salient individuals to bridge the research-practice gap.

The present study addressed disseminating an EST to clinically focused graduate trainees with limited training in the EST to be disseminated. One EST for youth anxiety was selected (i.e., cognitive-behavioral therapy [CBT]; Coping Cat; Kendall & Hedtke, 2006). This study evaluated whether a manual and a brief workshop would result in therapist behavior change in a group of trainees seeking service careers.

Method

Participants

The current study consisted of 20 graduate students (N = 20) in clinical psychology, ranging in age from 22 to 46 years (Mage = 25.95, SD = 5.24; 85% female; 100% Caucasian). Participants were in their second year of graduate training, and ranged in general clinical experience from 0 to 70 months (Mage = 10.45, SD = 17.50). When asked to describe their identification with CBT (7-point scale; 1 = do not identify, 7 = strongly identify), participants rated themselves 4 or higher (M = 5.60, SD = .68). Two participants had previously provided services for an anxious child using CBT, but did not use the Coping Cat program (Kendall & Hedtke, 2006). Nineteen of 20 participants (95%) had never read the Coping Cat therapist manual; one participant had read part of the manual. All participants had not previously received training in CBT for child anxiety. Past experience with CBT in general was not examined; however, examination of the program’s curriculum indicates that, prior to their second year, students would have had one class on psychotherapy, which did not exclusively focus on CBT. Twelve out of the 20 students (60%) completed all out-
come measures (knowledge test and structured role-play), with 8 completing most but not all measures.

**Measures**

Clinician Demographics and Attitudes Questionnaire. This questionnaire contained 15 items (response format included multiple choice, open-ended, or a 7-point Likert scale), which assessed background information (e.g., months of clinical experience, training orientation, and experience treating youth anxiety), prior experience with the Coping Cat program, and participants’ opinions toward EST for youth anxiety.

Knowledge Test. The 20-item test included 5 true/false and 15 multiple choice (4 response options) questions to assess knowledge of the Coping Cat program (see below for example).

Which of the following is most true with regard to coping modeling?
(a) Mastery modeling is preferred over coping modeling.
(b) Coping modeling increases the similarity between the observer and the model.
(c) Coping modeling includes initial difficulties (like those of the client), a strategy to overcome the difficulty, and then success.
(d) Both b and c are correct.

Two alternate forms of the knowledge test were developed for use in repeated assessment. The root questions for this test were previously developed and used in training at the Child and Adolescent Anxiety Disorders Clinic (CAADC). Questions for the alternate forms matched the root questions in difficulty and content (rated as comparably difficult by four child anxiety experts). To prevent order effects, participants were randomly assigned a test order. Psychometrics on the knowledge test were obtained via repeated measure (1-week interval) to 10 second-year graduate students at another program. Cronbach’s alpha was .76 and retest reliability was .86, indicating temporal reliability. Three of the 10 students had been trained in CBT for child anxiety. Trained students ($M = 19.33$, $SD = .58$) scored higher than untrained students ($M = 13.71$, $SD = 2.75$), $F(1, 9) = 11.51, p = .01$, indicating that the knowledge test was sensitive to training effects.

Structured role-play. Participants were given a three-paragraph vignette of a fictitious youngster presenting for anxiety treatment and asked to demonstrate one of the key components of the Coping Cat program in a structured role-play. Two vignettes were prepared to prevent practice effects and were rated by four child anxiety treatment experts to ensure that they were comparable. Vignettes were randomly assigned. The vignettes were previously used for CBT training in a National Institute of Mental Health–sponsored multisite trial (Child/Adolescent Anxiety Multimodal Study; Walkup et al., 2008).

Each participant was allotted 5 minutes to read the vignette and prepare for the structured role-play. The role-play consisted of the participant interacting with the client, having been asked to demonstrate “preparing the child client for an exposure task.” Participants were encouraged to behave as though a child was present in the room with them. This aspect of treatment is a central component of CBT. As an example, one of the vignettes involved the participant preparing a socially phobic youngster to call his grandmother on the phone. The role-plays were videotaped and later independently coded for adherence and skill, and therapist factors, by raters who were blind to participant training condition.

Adherence, a primary outcome measure, is the utilization of the treatment procedures in the treatment of a client (Perepletchikova & Kazdin, 2005). This was assessed by independent evaluators (doctoral graduate students) blind to condition, who watched videotapes of the role-plays and assessed adherence with a checklist. This checklist allowed coders to evaluate whether or not the participants covered the main goals of planning for an exposure—coders scored each category for the presence of the target behavior. The total adherence score demonstrated very good interrater reliability (intraclass coefficient [ICC] of .98). Additionally, 86% of individual items had kappa coefficients of .80 or higher, which indicates substantial interrater reliability (Landis & Koch, 1977). Two items with kappa coefficients of .59 and .55 were not included in the analyses.

Skill can be defined as the level of competence shown by the therapist in the delivery of treatment (Perepletchikova & Kazdin, 2005). Skill and therapist factors were evaluated by independent raters blind to condition using a 7-point Likert scale. The four items that assessed skill and therapist factors showed good interrater reliability (ICCs of .63 to .83; Landis & Koch, 1977) and targeted participant skill and factors that might change as a result of training (e.g., collaborative style, understandable language, confidence).

**Procedure**

**Training.** A quasi-experimental pre-post repeated-measures design examined the effects of reading a manual and attending a workshop on therapist behavior and knowledge (see Figure 1). First, participants completed an assessment evaluating their baseline (BL) knowledge of the treatment and demographic information. Note that baseline measures only included knowledge and demographics. Next, each participant was given a copy of the Coping Cat therapist manual describing the 16-session CBT program for youth with anxiety disorders and were asked to spend 2 to 3 hours reading the manual over the next week. One week later (postmanual; PM), participants completed an assessment evaluating their knowledge of the program as well as participant skill and factors that might change as a result of training (e.g., collaborative style, understandable language, confidence).

![Figure 1. Training and Assessment Schedule](image-url)

<table>
<thead>
<tr>
<th>Measure Administered</th>
<th>BL</th>
<th>PM</th>
<th>PM + WS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics Questionnaire</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge Test</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Role-Play</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

*Note. BL = Baseline, PM = Postmanual, PM + WS = Postmanual and workshop.*

The Behavior Therapist
Results

Training characteristics. Ninety-four percent (16 of 17) of participants reported that they read the manual at the PM assessment. The mean time reading the manual was 1.74 hours (SD = 1.37). All participants completed a 2.5-hour didactic workshop. Mean training time was approximately 4 hours.

Therapist adherence and skill. Adherence and skill were measured after each training condition (PM, PM + WS). See Table 1 for means and standard deviations. The highest possible adherence score was 15, and participant scores ranged from 2 to 9 (PM) and 3 to 11 (PM + WS). No significant effect of training condition on adherence was found, t(1, 10) = –1.53, p = ns. The highest possible skill score was 7, and participant scores ranged from 2 to 5 (both PM and PM + WS). Similarly, there was no effect of training condition on therapist overall skill, t(1, 10) = –.45, p = ns.

Therapist factors. Changes in therapist factors were measured after each training condition (PM, PM + WS; see Table 1). A significant effect of training on therapist confidence was found: therapists were rated as more confident PM + WS, relative to PM alone, t(1, 10) = –2.21, p = .05.

Therapist knowledge. Mauchley’s test demonstrated that sphericity was not violated, χ² = .982, p = ns. The highest possible knowledge score was 20 and scores ranged from 5 to 15 (BL), 10 to 19 (PM), and 16 to 19 (PM + WS). A significant main effect of training on therapist knowledge was observed, F(2, 32) = 22.51, p = .00 (partial et squared = .59; large effect; Cohen, 1988). The mean knowledge score at BL was 12.06 (SD = 2.56), at PM was 15.35 (SD = 2.99), and at PM + WS was 17.24 (SD = 1.20). A priori within-subject contrasts identified a significant difference between conditions, χ²(7) = 6.65, p = ns. For knowledge, the cutoff of 80% (16 of 20 points) was the indication of being trained to criterion. At BL, 0% (0 of 20) of participants met this criterion, at PM, 53% (9 of 20) met criterion, and at PM + WS, 100% met criterion (20 of 20), χ²(2) = 38.05, p = .00.

Discussion

Although empirical study of the dissemination process (i.e., training) has been encouraged (Silverman, Kuntines, & Hoagwood, 2004), few studies have been reported. The present results indicate that knowledge of CBT for child anxiety increased after reading the manual (relative to baseline) and further improved after attending the didactic workshop. The mean effect size associated with the score increase was large. However, unlike the improvements in knowledge scores, participant adherence, skill, and therapist factors (as measured by independent raters) did not differ after reading the manual versus after attending the workshop and reading the manual (with the exception of participant confidence). Training practices as implemented in this study were not enough to influence therapist behavior in novice clinicians.

The training conditions were examined in relation to clinical significance (see Journal of Consulting and Clinical Psychology, Kendall, 1999) and utility by setting a criterion level of acceptable training (i.e., see Sholomskas et al., 2005). Adherence is important because it has been implicated in predicting outcomes (e.g., Hupert, Barlow, Gorman, Shear, & Woods, 2006). None of the participants met the 80% criterion level of adherence after either training condition. Adherence may require additional training and supervision (Bazelmans, Prins, Hoogveld, & Bleijenberg, 2004). Skill is an important aspect of treatment because it has been linked to outcome, even when controlling for adherence (Shaw et al., 1999). Fifty-five percent of the participants demonstrated an acceptable level of skill after reading the manual, whereas 64% achieved this after the workshop. All participants reached the knowledge criterion after both attending the workshop and reading the manual, whereas only 50% met the criterion after just reading the manual.

A gold standard for training practicing clinicians to participate in clinical trials includes a treatment manual, didactic workshop, and supervision of training cases (Sholomskas et al., 2005). However, in the

Table 1. Means and Standard Deviations of Adherence, Skill, and Therapist Factor Ratings

<table>
<thead>
<tr>
<th>Variable</th>
<th>Postmanual</th>
<th>Postmanual + Workshop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adherence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Adherence Score</td>
<td>5.63 (2.29)</td>
<td>6.55 (2.25)</td>
</tr>
<tr>
<td>Skill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judgment of Skill</td>
<td>3.63 (1.12)</td>
<td>3.82 (.98)</td>
</tr>
<tr>
<td>Therapist Factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaboration</td>
<td>4.18 (1.47)</td>
<td>4.55 (1.13)</td>
</tr>
<tr>
<td>Understandable language</td>
<td>4.73 (1.01)</td>
<td>4.91 (.94)</td>
</tr>
<tr>
<td>Confidence</td>
<td>3.82 (.87)</td>
<td>4.36 (.81)*</td>
</tr>
</tbody>
</table>

Note. Scores on adherence ratings range from 1 to 15, with higher scores indicating better adherence. Scores on skill ratings range from 1 to 7, with higher scores indicating better skill. Values given are means with standard deviations in parentheses. Sample size for each of the two conditions = 11 (with a total N = 22). Degrees of freedom = 1, 10. * p ≤ .05. ** p ≤ .01.
community, current practices often include only a brief continuing education workshop and the reading of a manual prior to implementation of a treatment (DeViva, 2006; Herschell et al., 2004). The present results suggest that this may not be the appropriate model for doctoral trainees or individuals naïve to the principles of an EST. Reading a manual and attending a workshop increased knowledge of an EST, but did not necessarily give rise to the skills necessary for implementation. These results suggest that when training therapists naïve to principles of a treatment, the current practice of reading a manual and attending a continuing-education workshop is not sufficient to influence therapist behavior or transport and implement an EST. Further training and supervision (Bazelmans et al., 2004; Herschell et al.; Kendall & Southam- Gerow, 1996) may be necessary for skillful implementation. To reach clinically significant ratings of adherence, it may be that trainee therapists need more training (James, Blackburn, Milne, & Reichelt, 2001) and practice to adhere to the session goals. Furthermore, reading the manual by itself was not sufficient in increasing therapist knowledge to a clinically significant level, suggesting that individuals who self-train by reading a manual are not necessarily even gaining enough knowledge to implement the treatment in a successful manner.

This study had a number of strengths. One was the use of students training to be practitioners (see Crits-Cristoph et al., 1995; Karekla et al., 2004). Although the findings may be limited to dissemination geared toward trainees (i.e., the training of doctoral students), the implications may be important for professional training of all psychologists. Future research pertaining to dissemination of ESTs ought to examine the professional training of a range of clinicians (i.e., trainees, interns, postdoctoral fellows, and licensed psychologists). Other strengths include the investigation of the dissemination process for a child treatment and the investigation of therapist behavior (i.e., adherence and skill) rated by blind coders. Finally, the training time was “typical” (practitioners have limited time for learning ESTs; Herschell et al., 2004) and matches the typical process followed in the community (i.e., reading a manual and attending a brief continuing education workshop).

Limitations Merit Consideration

One limitation is generalizability, given that participants were second-year graduate students from the same training program who read one manual and attended one workshop. Although the participants were naïve to the EST (a strength), they also may have lacked some general therapeutic skills seen in more advanced practitioners. Second, although an overwhelming majority of those approached agreed to participate, not all were able to schedule time to participate in the structured role-play, which explains the missing outcome measures. Limited therapist resources are one of the challenges of dissemination and implementation research (see Hunter et al., 2005; Miller & Mount, 2001). Another limitation is the lack of a comparison group. Certain measures were only collected post-intervention (i.e., structured role-play); thus, there are no baseline measures for comparison. Additionally, for doctoral trainees, supervision is an important part of training and dissemination and supervision was not included in this study. Additional areas for future research include the possibility of augmenting training with group consultation as that has shown preliminary evidence of being effective (Luoma et al., 2007). Furthermore, this study did not include other important systems variables (i.e., organizational variables, therapist variables, client variables; Beidas & Kendall, in press). Additionally, although the training time matches typical training, it cannot be described as using “best practices” for training given the brief training time (approximately 4 hours). Finally, ecological validity may be a problem given that the behavior rated was a role-play rather than an actual therapist-child interaction in session.

Are we putting the cart before the horse? Perhaps it would be wise to examine how to best disseminate ESTs to both novice and experienced clinicians before striving to transition these treatments into the community. If clinicians are not adequately trained in how to implement these treatments, it could have deleterious effects on the delivery of these treatments. Current dissemination methods are sufficient in transporting knowledge to doctoral trainees, but these strategies may not be enough for adherence and skill.

Future Directions

This study demonstrates that current training practices for clinicians naïve to principles of CBT need investigation (e.g., optimal training time, components of effective training) while also balancing the inherent complexities of training community clinicians (e.g., inadequate resources, barriers to training).

2. Specific therapist competencies (e.g., knowledge of basic principles of CBT, ability to use exposure techniques, ability to use Socratic questioning; see Roth & Pilling, 2007, for an example of therapist competencies in CBT for adult depression and anxiety) in all ESTs should be identified and operationalized, so that training programs are able to effectively target specific behaviors. For example, if the use of cognitive restructuring is essential in the treatment of anxious youth, then therapists should be trained to criterion in this particular skill before implementing the treatment.

3. A “systems perspective” for training offers promise. It is unlikely that training and dissemination will succeed if it does not acknowledge that therapists function within a context and multiple variables (i.e., organizational forces, client factors, therapist factors) interact within this context (Beidas & Kendall, in press).

References


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