A Pilot Study Examining the Effect of an Intensive Skills-Based Training in Cognitive-Behavioral Therapy: Impact on Graduate Students' Competence

Lauren Lane-Herman

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A PILOT STUDY EXAMINING THE EFFECT OF AN INTENSIVE SKILLS-BASED TRAINING IN COGNITIVE-BEHAVIORAL THERAPY: IMPACT ON GRADUATE STUDENTS’ COMPETENCE

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Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Psychology

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PHILADELPHIA COLLEGE OF OSTEOPATHIC MEDICINE
DEPARTMENT OF PSYCHOLOGY

Dissertation Approval

This is to certify that the thesis presented to us by Lauren Lane Herman on the 17th day of November, 2011, in partial fulfillment of the requirements for the degree of Doctor of Psychology, has been examined and is acceptable in both scholarship and literary quality.

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Abstract

Given the movement toward and increasing need for training in evidence-based practice, this study aims to examine the competence of graduate-level students in cognitive-behavioral therapy (CBT) after an intensive, skills-based training in CBT. The participants, who were psychology graduate students, were randomized into two groups. Both groups received the same intensive training in CBT. The groups differed in that the control group underwent a videotaped intake session prior to the training and the training group underwent a videotaped intake session after the training. It was hypothesized that there would be significant differences between these groups in terms of competence and skills in CBT and of therapeutic relationship skills. Two raters viewed videotaped intake sessions and used the Psychotherapy Skills Inventory (PSI; Philadelphia College of Osteopathic Medicine, 2000), Cognitive Therapy Scale (CTS; Young & Beck, 1980) and the Working Alliance Inventory (WAI; Horvath & Greenberg, 1989) to rate the participants. Results indicated that statistically significant differences were not found between the groups. Findings from this study suggest further research with graduate students and the need for supervision, additional training time, and more attention to the therapeutic bond for competence trainings.
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“The journey of a thousand miles starts with a single step.”

-Chinese proverb
Chapter One: Introduction

Problem Statement

Evidence-supported treatment is defined by Chambless and Holon (1998) as clearly delineated psychological treatments that have demonstrated efficacious outcomes in controlled studies with a specific population. Evidence-based treatment allows for the application of psychotherapy research as a guide for clinical practice to improve the quality of care for patients. In this way, more efficient, safe, and appropriate treatments are being utilized. Expertise of the practitioner, coupled with empirical evidence, allows for better treatments for patients (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996).

Empirically validated treatments include Beck’s cognitive therapy for depression (Dobson, 1989), cognitive-behavioral therapy (CBT) for chronic pain (Keefe, Dunsmore, & Burnett, 1992), CBT for panic disorder with and without agoraphobia (Barlow, Craske, Cerny, & Klosko, 1989; Clark et al., 1994), CBT for generalized anxiety disorder (Borkovec et al., 1987; Butler, Fennell, Robson, & Gelder, 1991), and exposure treatments for phobias, posttraumatic stress disorder (Foa, Rothbaum, Riggs, & Murdock, 1991; Mattick, Andrews, Hadzi-Pavlovic, & Christensen, 1990; Trull, Nietzel, & Main, 1988), and obsessive-compulsive disorder (Marks & O’Sullivan, 1988), and systematic desensitization for simple phobias (Kazdin & Wilcoxin, 1976). The dissemination and implementation of evidence-based practice has become a priority of the American Psychological Association (APA), National Institutes of Health, and numerous governmental mental health systems (Cucciare, Weingardt, & Villafranca, 2008).
As a result of the increased efforts to propagate evidence-based treatment, the need to train therapists has become increasingly necessary (Chu, 2008). Efficacious treatment outcomes depend upon both therapist technique and skill (Huppert, Fabbro, & Barlow, 2006). While the APA Division 12 Task Force Committee on Science and Practice makes efforts to encourage the dissemination of empirically based psychological treatment to doctoral-level practitioners and community mental health clinicians, the Task Force also targets predoctoral trainees in clinical psychology. The Task Force recognized that training to facilitate the dissemination process is needed in order for empirically based treatments to be used and properly implemented (Karekla, Lundgren, & Forsyth, 2004).

Training for graduate students in empirically supported practices is essential for the evolving needs of the field of mental health, where quality, effective, and cost-efficient services are becoming progressively vital. The existing studies of APA-accredited doctoral-training programs in clinical psychology reveal that only one of five programs includes didactic and practicum and/or internship training in empirically supported treatments (Karekla et al., 2004). In addition, doctoral internships were unlikely to require competence in empirically supported treatments. Graduate students usually complete internships during their last year of training, which indicates that graduate students may not be exposed to empirically supported treatments until their final year. Therefore, these students may not be competent in empirically supported treatments upon graduation (Crits-Christoph, Chambless, Frank, & Brody, 1995).

Given the need for competent, trained professionals in the field of psychology, efforts to improve competence of future clinicians would be beneficial. Therefore, training for
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Graduate students is essential in order to produce competent and qualified professional psychologists. According to Matulef, Pottharst, and Rothenberg (1970), there is an increasing need for professional training in the field of psychology:

- It’s an army dedicated to providing increased needs for a demanding public. It’s an army dedicated to the highest possible standards of professional training. It’s an army of well-trained, scientifically knowledgeable but people-oriented professional psychologists who are creating programs to provide this training (p. 14).

This need for trained professionals was obviously identified in the 1970s. Although the field has grown tremendously since then, this need currently remains.

Empirically validated training in CBT has been delivered successfully to psychologists (Wade, Treat, & Stuart, 1998), therapists (Bright, Baker, & Neimeyer, 1999), primary care practitioners (Roy-Byrne et al., 2005), and school personnel (Lowry-Webster, Barrett, & Dadds, 2001), but the effect of intensive, skill-based training in CBT has been underutilized with master’s-level graduate students (Crits-Christoph, et al., 1995; Karekla, et al., 2004). As a result of the increasing demand for and cost of mental health services, many master’s-level graduate students will not enter into doctoral programs but will instead pursue employment in the field immediately following graduation.

The foundation for training in clinical psychology is the scientist-practitioner model (Raimy, 1950). This model combines scientific and evidence-based knowledge with clinical and practical applications (Stricker & Trierweiler, 1995). In adhering to this training model, these clinicians must gain an understanding of the practice and science of the field. A 2-to 3-year course curriculum may be insufficient to prepare graduate students fully for the skillful
and competent delivery of psychological services (McPherson, Pisecco, Elman, Crosbie-Burnett, & Sayger, 2000). Given the movement toward evidence-based practice and the increasing need for training effective clinicians, this study examines the effect of training on graduate students’ competence in CBT.

**Purpose of Study**

The purpose of this study is to determine whether or not there would be a significant increase in graduate students’ skills and competence in CBT and therapeutic alliance skills after an intensive skills-based training in CBT. This proactive training of efficacious treatment is an important step in advancing the field of psychology toward evidence-based practice (Schoenwald & Hoagwood, 2001). According to Calhoun, Moras, Pilkonis, and Rehm (1998), training in empirically supported treatments may be more effective than traditional therapy training because students can gain a conceptual understanding of the treatment, which will prepare them for practical experience. Whereas most studies focus on professionals already practicing in the field, this study involves training psychology graduate students:

The first-line consumers of such information, namely graduate students enrolled in doctoral training, have been largely neglected. Yet, graduate students are precisely the target audience of interest, for they represent the products of current educational practices and represent the future promise of the field. As such, they provide a benchmark or litmus test for evaluating how well graduate programs are educating and training students in empirically supported and manualized psychotherapies (Karekla, et al., 2004, p. 233).
According to Karekla, et al. (2004), dissemination efforts have not focused traditionally on graduate students, and therefore, these efforts may be more effective if they were focused on graduate students, as opposed to clinicians who are already practicing in the field.

I have proposed that completion of an intensive, skill-based training in CBT would significantly increase graduate students’ skills and competence in CBT and therapeutic alliance skills, as measured by the Cognitive Therapy Scale (CTS; Young & Beck, 1980), Psychotherapy Skills Inventory (PSI; Psychotherapy, 2000), and Working Alliance Inventory (WAI; Horvath & Greenberg, 1989). Specifically, I hypothesized that there would be a significant difference between participants in the training group and participants in the control group in terms of competence in CBT, as evidenced by increases in scores on the CTS for participants in the training group. Additionally, I hypothesized that there would be a significant difference between participants in the training group and participants in the control group in terms of therapy skills in CBT, as evidenced by increased scores on the PSI for participants in the training group. I also hypothesized that there would be a significant difference between participants in the training group and participants in the control group in terms of therapeutic relationship skills, as evidenced by increased scores on the WAI for participants in the training group.

Training should be delivered to students while still in graduate school, so as to facilitate transfer prior to applied clinical work in the field because training during graduate education is a more effective means of diffusion of information than are continuing education and/or postgraduate training efforts (Calhoun, et al., 1998). The context of the training is important (Quinones, 1997) for the transfer of training factors, such as skills, knowledge, and
ability (Salas & Cannon-Bowers, 2001). The ultimate goal of training is to optimize performance in the field (Ghodsian, Bjork, & Benjamin, 1997).

Goals of Program

This project aligns closely with the goals of the Department of Psychology at the Philadelphia College of Osteopathic Medicine:

The mission of the Department of Psychology at PCOM is to prepare highly-skilled, compassionate psychologists and master's level psychological specialists to provide empirically-based, active, focused, and collaborative assessments and treatments with sensitivity to cultural and ethnic diversity and the underserved. Grounded in the cognitive-behavioral tradition, the graduate programs in psychology train practitioner-scholars to offer assessment, intervention, consultation, management, and leadership as local clinical scientists, and to engage in scholarly activities, advocacy, and life-long learning in the field of psychology (http://www.pcom.edu/Academic_Programs/aca_psych/PsyD_in_Clinical_Psychology/Program_Mission.html).

The program goal of knowledge of the profession of psychology is addressed with the implementation of this training in empirically supported CBT. In adherence to the practitioner-scholar model of PsyD programs, students can then apply their knowledge of CBT to applied, clinical settings (Stricker & Trierweiler, 1995). The aim for this training was to increase the participants’ general knowledge base and skills in CBT. This intensive, skill-based cognitive-behavioral training was delivered to graduate students in an effort to increase their skills and competency in CBT and therapeutic alliance skills and parallels the
program goal of implementation of interventions. This goal encourages the use of empirically supported, cognitive-behavioral approaches to the conceptualization, diagnosis, and effective treatment of clients. Another aim of the PCOM psychology program is to help students to gain the clinical skills and intervention strategies that are essential for them to reach the final goal of the program, which is to function effectively as a psychologist. This goal is addressed as this training included specific instruction on CBT skills and intervention strategies.
Chapter Two: Literature Review

Evidence-Based Practice

According to Sackett et al. (1996), evidence-based practice entails the “conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients” (p. 71). This definition was expanded to include expertise of the clinician and values and preferences of the patient, along with the best available research (Huppert et al., 2006). Evidence-based practice is clinical practice that is guided by empirical support (Kazdin, 2008). Clinical knowledge, skills, and experience of the practitioner are combined with clinical evidence, which is supported by systematic research (Huppert et al., 2006). This clinical knowledge lies with the expertise of the practitioner and is gained through experience and application of this experience to the clinical setting (Kazdin, 2008). Clinical expertise is essential for determining the appropriateness of treatments to match the particular needs of each patient (Sackett et al., 1996).

Clinical research is derived from the literature in the field and from client-centered studies. Without the most up-to-date and relevant research, older treatments become obsolete and may adversely affect patient outcomes (Sackett et al., 1996). Evidence-based practice leads to clinical practice guidelines, which were embraced by the field of health care, including psychology. In 1995, the American Psychological Association (APA) formed a task force to develop criteria for assessing procedures relating to psychological treatments (Huppert et al., 2006). The criteria were categorized into two areas: treatment efficacy and clinical utility (APA, 2002a).
Treatment efficacy relates to the empirically supported treatments that exist for numerous psychological disorders, including, among many, anxiety, depression, eating disorders, and childhood behavioral problems (Barlow, Levitt, & Bufka, 1999). Empirically supported treatments are interventions that have been evaluated scientifically, using sound methodology, with actual clients. The findings have been consistent, and supportive outcomes can be found from more than one empirical study (Kendall & Beidas, 2007). Efficacious treatments are empirically supported treatments that are specific to particular aspects of psychological disorders especially troublesome to clients. Clinical utility, or effectiveness, relates to the ability of the intervention to generalize to applied settings (APA, 2002a).

Prior to the recognition of the value of evidence-based practice, a divide existed between research and practice (Sackett et al., 1996). Eysenck (1952) was one of the first to recognize a need for the documentation of patient outcomes and the need for research-driven data. He reported results of 19 studies in one of the first examinations into the effects of psychotherapy. Results were grouped into four categories: Cured, or much improved; Improved; Slightly improved; and Not improved, died, discontinued treatment, etc. Eysenck’s findings indicated that most patients recovered on their own:

roughly two-thirds of a group of neurotic patients will recover or improve to a marked extent within about two years of the onset of their illness, whether they are treated by means of psychotherapy or not. . . no further conclusions could be derived from the data whose shortcomings highlight the necessity of properly planned and executed experimental studies into this important field (Eysenck, 1952, pp. 322-323).
Treatment based on outcome-driven research was facilitated more recently by managed care agencies in order to promote effective and cost-efficient treatment. Evidence-based practices were adopted by health-care policy as central to the delivery of health-care services (Institute of Medicine, 2001). The increased need for evidence-based practices began with changes in health-care reimbursement and the ensuing need to establish guidelines of clinical practice (Cucciare et al., 2008). These changes meant that clinicians had to be able to offer evidence-based, effective interventions with measurable outcomes in order to be reimbursed for services. Insurers demanded effectiveness in order to determine whether or not psychological treatment was really working and the client was improving. This change in reimbursement contributed to an atmosphere of increased responsibility among many mental-health practitioners. Practitioners became accountable for determining the need for treating particular clients, the choice of treatment, and whether these choices were cost effective. Clinicians increasingly began to offer evidence-based, effective interventions as a response to this need for accountability (Addis, Wade, & Hatgis, 1999).

Kazdin (2008) discussed several concerns that have been raised with regard to evidence-based treatment. The generalizability of treatment research has been called into question, because of the inherent differences between the characteristics of participants, settings, and actual treatment in research versus real-world, clinical practice. For example, participants in research studies are typically homogeneous groups who have a narrow problem focus (Weisz, Donenberg, Han, & Weiss, 1995) with less severe symptomatology than those usually seen in clinical practice (Kazdin, 2008). According to Westen and Morrison (2001), exclusionary criteria in research settings usually also eliminate more
complicated cases, which may have more than one presenting problem, or comorbidities. Furthermore, the reasons for seeking treatment and processes leading to treatment differ between those in research studies and those who are pursuing clinical treatment. For example, in research settings, incentives may drive participation in the study, rather than impairments in functioning. Therefore, differences in patient characteristics and recruitment procedures between controlled studies and clinical practice may pose an issue of generalizing results from research to actual practice. Kazdin (2008) disagrees with this position by referring to the difficulty of generalizability of any patient to another patient, given individual characteristics and uniqueness of patients.

The format of treatment also may vary, according to the context. In research settings, which are generally lab or school settings, many of the components of treatment may be standardized, whereas in clinical practice, which usually refers to community clinics or hospitals (Weisz et al., 1995), treatment may be more flexible and individually focused on the particular issues of the client (Kazdin, 2008). Another issue concerning the issue of generalizability refers to the focus on symptoms either as part of the disorder or as factors to determine treatment outcome. In the context of research, the reduction of symptoms is usually the treatment goal. In clinical practice, coping skills are taught in an effort to address life problems (Kazdin, 2008).

Thus, the main issue of generalizability depends upon transportability of the treatment, that is, the degree to which treatments that demonstrate positive outcomes in controlled studies also can demonstrate similar results in other settings. In order to maximize fidelity to treatment protocols, training with appropriate adaptation to the setting becomes
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central to the implementation process, as treatment must also be tailored to the individual clients’ needs, along with the needs of the service setting (Kazdin, 2008). Kendall, Gosch, Furr, and Sood (2008) described the importance of maintaining a flexible approach to treatment, allowing for adjustments to be made for individual differences among clients. The term flexibility within fidelity refers to this individualized approach to facilitating the process of implementation (Kendall & Beidas, 2007). Treatment protocols that are flexible while simultaneously maintaining specificity that allows for replication permit interventions to be more transportable to settings other than the research setting (McHugh, Murray, & Barlow, 2009).

In order to assess the generalizability to actual clinical practice and to evaluate a program, the benchmarking method is used. Benchmarking consists of four steps. The first step involves defining the problem, target population, and treatment. In the second step, a gold-standard or benchmark model, supported by research, is selected as a measure of comparison. The third step entails measuring the outcome in the clinical setting, using similar measures to those of the benchmark model. The final step includes comparing the outcomes of the applied setting to that of the benchmark model and determining the basis for any discrepancies (Weersing, 2005).

An empirically supported treatment for panic disorder was transported successfully into a service clinic setting using a benchmarking strategy (Wade, Treat, & Stuart, 1998). Clients with panic disorder with or without agoraphobia were treated with CBT over a 15-week period. Treatment included psychoeducation, cognitive restructuring, deep-breathing retraining, and interoceptive and naturalistic exposure. The treatment outcomes were
comparable to the efficacy study, with significant reductions in panic and anxiety symptoms. The usage of the benchmarking strategy allowed the researchers to use the results of the efficacy study as a benchmark to judge the amount of change in the clinical setting.

According to Kazdin (2008), statistical significance refers to the criterion that the outcome of the treatment group differs from that of the control group or other treatment condition. The question of statistical significance or effect size may be difficult to explain in terms of actual life changes and may not be easy to translate to everyday situations because the concept of statistical significance depends on sample size and variability. The term refers to whether there is a treatment effect. Statistical significance may not be discernible easily as a life change or improvement in functioning. The outcome measures that are most often utilized, such as the Beck Depression Inventory (BDI; Beck, Steer, & Brown, 1996) or Beck Anxiety Inventory (BAI; Beck & Steer, 1993), may not clearly illustrate changes in the client’s functioning (Kazdin, 2008).

As a result of the limitations of statistical significance and standardized measures, several indices of clinical outcomes have been developed. The first index is the reduction of scores from high before treatment to a subclinical level post treatment. The second index is large differences, two standard deviations, from pre to post treatment. The third index is that the diagnostic severity decreases post treatment to the degree that the client no longer meets criteria for the diagnosis (Kendall, 1999). While criteria may be met for clinical significance, a difference in everyday life may not be detected or noticeable (Kazdin, 2001). Multiple outcomes measures are used typically to determine that the treatment was effective, but not
all of these measures need to reflect statistical significance in order to report an outcome as efficacious (Kazdin, 2008).

Additional concerns regarding evidence-based practice are relevant to clinical practice. There is apprehension regarding the role of therapists’ decision-making, judgment, and clinical skills with regard to the individuality of their case presentation and conceptualization. Different therapists may choose varying components of therapy, depending on their judgment and decision-making. Owing to the lack of standardization of these procedures, reliability and validity, in terms of the standards of evidence-based treatment, may be difficult to establish. Therefore, systematic measures are essential for the translation of the reliability and validity of results from research into clinical practice (Kazdin, 2008).

Two related dimensions, treatment efficacy versus treatment effectiveness, are brought into question with the issue of transporting treatment from a research setting into a clinical setting. Treatment efficacy refers to evaluating whether or not a treatment works in a controlled clinical context. This method of evaluation is systematic and scientific and is often conducted in a research or laboratory setting. Treatment effectiveness involves determining whether or not the treatment works in an applied or clinical setting, and is also referred to as the generalization of an efficacious treatment or the clinical utility of an intervention (APA, 2002a).

Manualized treatment ensures that the proper techniques are utilized for a specific disorder. Treatment manuals provide clinicians with necessary psychological principles and a variety of effective techniques. Manualized treatments are neither immutable nor
inflexible; rather, they can be used as guidelines for treatment. Clinicians are expected to apply clinical expertise to tailor the treatments to the specific client’s needs. Therefore, adequate training and supervision are essential (Huppert, Fabbro, & Barlow, 2006).

Addis et al. (1999) discussed several additional concerns in regard to evidence-based practice and manualized treatment. These concerns include the therapeutic relationship, needs of the client, competence and satisfaction, credibility of evidence-based practice, restriction of clinical flexibility, and issues regarding feasibility. Although many practitioners believe that adherence to treatment manuals may compromise the therapeutic relationship, strong alliances between the therapist and client can be established when using manualized treatments. Strategies geared toward the therapeutic alliance are included in many treatment protocols, including identifying both client and therapist expectations for treatment; explaining the role of the therapist as a guide and partner; and addressing concerns, feedback, and questions during each session. Training programs that emphasize the importance of the therapeutic relationship have been suggested in order to address this concern. Role-plays are helpful methods of demonstrating the balance between warmth and directiveness, which is characteristic of CBT. Additionally, nonspecific factors, such as the generation of hope, can be developed via training in manualized treatments.

Addressing the client’s individual needs and emotions in manualized treatments is central to any effective treatment. For example, manualized CBT for panic disorder and depression includes individualized components throughout the phases of treatment in order to tailor treatment to each client’s physiological, cognitive, emotional, and behavioral responses. Psychoeducation, cognitive restructuring, levels of the exposure hierarchy, and
elements of behavioral activation are tailored individually to address the client’s needs. Training experiences can guide clinicians to balance the need for flexibility and protocol adherence via relevant clinical examples and discussion. The importance of emotion and validating a client’s feelings also can be addressed via trainings. Craske and Barlow (2007) developed a treatment manual for anxiety and panic, that recommends adapting the pacing of the protocol to the individual needs of the client.

There is also apprehension about reliance on treatment manuals leading clinicians to become obsolete and slowing development of newer and more advanced interventions. While no evidence supports these fears, advanced training is suggested for the successful implementation of manualized treatments because clinical expertise necessitates training, which is required for case conceptualization and the individualization of treatment to specific clients. The function of the treatment manual is not to replace therapists but instead, to guide the implementation of an empirically supported treatment. In response to the concern about manualized treatments impeding advancements in the field, manualized treatments instead may assist clinical progression by identifying the most effective treatments (Addis et al., 1999).

Another related issue concerns questions of feasibility. Beliefs related to manualized treatments include technical aspects of the treatment, such as the number of sessions needed for effective results, and the client’s skill set. Feasibility relates to difficulty in maintaining adherence to protocol while, at the same time, tailoring therapy also to meet the individual needs of the client and service setting. Although little research examining feasibility issues has been conducted, Strosahl, Hayes, Bergan, and Romano (1998) provided evidence of
feasibility by demonstrating a treatment protocol that was less structured and broader in scope than the manualized treatment. A simple methodological model, entitled, manipulated training method, was proposed for conducting field effectiveness research. This model attempted to accommodate all of the setting features regarding effectiveness, while at the same time allowing for experimental controls that are characteristic of research settings (Strosahl et al., 1998).

This model of training encompassed several factors that often arise with effectiveness research, including heterogeneous patient samples with several different presenting issues, variability in length of treatment, and treatment selection by the client. Flexible treatment regimens, simple outcome measurement, master’s-level therapists, and a “usual care” control condition were additional elements of the manipulated treatment method. Over a 1-year period, 18 therapists were trained in acceptance and commitment therapy with workshops, didactics, and supervision groups. Clients of the trained therapists reported better coping skills and completion of treatment in 5 months. The training also improved the clients’ self-ratings of psychological acceptance (Strosahl et al., 1998).

Outcome studies indicate that manualized treatments are equally efficacious for clients presenting with single or multiple problems. In addition, manualized treatments not only address the target problem but also generalize to ameliorate other comorbid issues (Addis et al., 1999). For example, case studies using CBT for panic disorder indicated not only a decrease in panic attacks but also a decrease in alcohol abuse (Lehman, Brown, & Barlow, 1998). In another study, patients treated for panic disorder improved in symptoms of depression, generalized anxiety, and social and blood phobias (Wade et al., 1998).
Consequently, Addis et al. (1999) recommended that training programs should be broad and include shared treatment basics within diagnostic subgroups in order to address a wide array of diagnoses and comorbid problems.

Furthermore, utilizing transdiagnostic approaches for training, as opposed to focusing on single disorders, allows for a more flexible design in terms of both cost effectiveness and feasibility. Substantial costs associated with training lead to the need for variations in training techniques (Addis et al., 1999). In contrast to single-disorder treatments, transdiagnostic treatment modalities allow for adaptation to the particular setting and, at the same time, the individual client. Transdiagnostic approaches focus on similarities of diagnoses, including comorbidity and shared maintaining factors. CBT, for example, contains similar components to treatment across the spectrum of anxiety disorders (McHugh et al, 2009). A unified CBT protocol was developed for emotional disorders, described as depressive and anxiety disorders (Allen, McHugh, & Barlow, 2008). The main underlying processes involved in the emotional disorder are targeted, and preliminary results have been promising and have exceeded effect sizes of treatments for single disorders (Ellard, Fairholme, Boisseau, Farchione, & Barlow, 2009). Transdiagnostic treatments also have been developed to treat anxiety disorders, both in a group arrangement (Erickson, 2003; Norton & Hope, 2005) and for use in primary care (Sullivan et al., 2007). Fairburn et al. (2009) developed an efficacious, transdiagnostic CBT treatment protocol that spans the spectrum of eating disorders.
Empirically Supported Treatments

The APA Division 12 Task Force on the Promotion and Dissemination of Psychological Procedures identified 18 distinct treatments as empirically supported and 56 treatments as probably efficacious (Chambless & Hollon, 1998). These treatments shared several features. They all contained skill-building techniques, focus on specific problems, contact with clients, and constant evaluation of client progress. Six to 10 therapy sessions and weekly assessment of client progress were the norm among empirically supported treatments (O’Donohue, Buchanan, & Fisher, 2000). Included in the empirically validated and supported treatments are Beck’s cognitive therapy for depression (Dobson, 1989), behavior modification for developmentally disabled individuals (Scotti, Evans, Meyer, & Walker, 1991), behavior modification for enuresis and encopresis (Kupfersmid, 1989), behavior therapy for headache and irritable bowel syndrome (Blanchard, Schwarz, & Radnitz, 1987), behavior therapy for female orgasmic dysfunction and for male erectile dysfunction (Auerbach & Kilmann, 1977; LoPiccolo & Stock, 1986), behavioral marital therapy (Azrin et al., 1980), CBT for chronic pain (Keefe et al., 1992), CBT for panic disorder with and without agoraphobia (Barlow et al., 1989; Clark et al., 1994), CBT for generalized anxiety disorder (Butler et al., 1991; Borkovec et al., 1987), exposure treatment for phobias (agoraphobia, social phobia, simple phobia) and CBT for posttraumatic stress disorder (Foa et al., 1991; Mattick et al., 1990; Trull et al., 1988), exposure and response prevention for obsessive-compulsive disorder (Marks & O’Sullivan, 1988), family education programs for schizophrenia (Hogarty et al., 1986), group CBT for social phobia (Heimberg et al., 1990), interpersonal therapy for bulimia (Fairburn, Jones, Peveler, Hope, & O’Connor,
1993), Klerman and Weissman’s interpersonal therapy for depression (DiMascio et al., 1979), parent training programs for children with oppositional behavior (Wells & Egan, 1988), systematic desensitization for simple phobia (Kazdin & Wilcoxin, 1976), and token economy programs (Liberman, 1972).

According to the cognitive model, an individual’s perceptions of events influence and interact with his or her affective, behavioral, and physiological reactions. This interaction occurs in predictable patterns throughout an individual’s life, along with beliefs and basic understanding of self, others, and the world (Butler & Beck, 2000). Based on the cognitive-behavioral model, cognitive therapy is a short-term, present-oriented psychotherapy that was developed by Aaron Beck in the 1960s as a treatment for depression (Beck, 1964). Central to the cognitive model are problem solving and identifying distorted thinking in order to modify and improve mood and behavior (Beck, 1995) because symptoms and behaviors of the disorder are mediated by cognitions (Dobson & Dozois, 2001). Cognitive therapy, therefore, focuses on cognitions, and cognitive-behavioral therapists ask patients to examine and alter the thoughts and assumptions that lead to their problems (Leahy, 2003).

According to Beck (1995), core beliefs and schemas refer to one’s most central ideas about oneself and generally develop in childhood or adolescence through interactions with significant others. Negative core beliefs tend to be activated during times of psychological distress and are usually global, overgeneralized, and fixed. They may be categorized into thoughts that relate to helplessness and/or unloveability. Through the guidance of the cognitive-behavioral therapist, the client’s thoughts are examined, leading to exposure of
his or her core beliefs. Once identified, the core beliefs can be evaluated, challenged, altered, and/or modified.

A meta-analysis conducted by Blagys and Hilsenroth (2002) summarized the processes and values that are specific to CBT. Six distinctive processes were found that differentiated CBT from other therapies. The first process entails the utilization of homework assignments for practice of skills learned during therapy sessions to generalize to real-world situations. This aspect of therapy is important for the maintenance of gains acquired even after therapy has ended. Cognitive-behavioral therapists are more directive during therapy sessions, as indicated by the setting of the agenda and the active guidance of the client towards specific discussion areas. In addition, cognitive-behavioral therapists teach clients specific skills in order to cope with their problems. The focus of CBT tends to be present oriented, rather than directed at past experiences. CBT tends to be psychoeducational, and clients are provided with treatment rationales and educational information in an effort to increase their awareness and understanding of their symptoms. Finally, CBT focuses on the client’s maladaptive cognitions or beliefs. Once identified, CBT then acts to challenge, test, and change those problematic thinking patterns (Blagys & Hilsenroth, 2002).

The long-term efficacy of CBT can be attributed to the structured therapy sessions and collaborative relationship between the therapist and patient (Young, Rygh, Weinberger, & Beck, 2008). Several factors may moderate the effectiveness or outcome of therapy. These factors are related to characteristics of both the therapist and the client (Whisman, 1993). A number of therapist characteristics have been identified that may contribute to the
effectiveness of therapy. Therapists should possess nonspecific therapy skills of warmth, genuineness, sincerity, empathy, and openness. Ideally, cognitive-behavioral therapists are able to logically plan strategies for treatment and provide structure and direction to the session. Dobson and Shaw (1993) outlined several characteristics that are critical for cognitive therapists. Cognitive-behavioral therapists should be warm, caring, empathetic, motivated to learn the cognitive treatment model, tolerant of negative emotional states, and able to think in an abstract manner. Furthermore, therapists should furthermore lack personal psychopathology and personal issues that may negatively interact with therapy. Patients who are most suitable for CBT also share characteristics. They tend to be organized, conscientious, flexible in their thinking, and able to reason (Young et al., 2008). Clients who are engaged and involved in treatment also seem to benefit more than those who are unmotivated (Whisman, 1993).

Since the introduction of cognitive therapy, numerous studies have been performed in which the effectiveness of this variety of treatment has been shown to be superior to the effectiveness of antidepressants, no treatment, wait list, and placebo control groups in the treatment of depression and anxiety disorders, including obsessive-compulsive disorder (Butler & Beck, 2000). Research has shown that CBT is effective for many disorders and problems, including depression (Butler, Chapman, Forman, & Beck, 2006; Chambless & Ollendick, 2001; Gloaguen, Cottraux, Cucherat, & Blackburn, 1998) and anxiety disorders, including generalized anxiety disorder (DeRubeis & Crits-Cristoph, 1998), panic disorder with and without agoraphobia (Gould, Otto, & Pollack, 1995; Roy-Byrne et al., 2005), social phobia (Gould, Buckminster, Pollack, & Otto, 1997), obsessive-compulsive disorder
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(VanBalkom et al., 1994), and posttraumatic stress disorder (Butler et al., 2006). Long-term effectiveness has been found also for depression, generalized anxiety, panic disorders, social phobia, obsessive-compulsive disorder, sexual offending, and posttraumatic stress disorder (Butler et al., 2006).

CBT also has been found to be effective for bipolar disorder (Lam et al., 2003), substance abuse disorders (Chambless & Ollendick, 2001), hypochondriasis (Clark et al., 1998), schizophrenia with pharmacotherapy (Rector & Beck, 2001), anger (Beck & Fernandez, 1998), bulimia nervosa (Whittal, Agras, & Gould, 1999), and anorexia nervosa (Pike, Walsh, Vitousek, Wilson, & Bauer, 2003). Although the efficacy of CBT for sexual recidivism was found to be low, research shows that along with hormone therapy, CBT is the most effective treatment for sexual offenders (Nagayama-Hall, 1995). CBT has been adapted to the primary care setting (Asarnow et al., 2005), and several medically related disorders have been treated successfully with CBT, including chronic pain (Morley, Eccleston, & Williams, 1999), sickle cell disease, irritable bowel disease, obesity, sleep disorders (Chambless & Ollendick, 2001), and chronic fatigue syndrome (Chambers, Bagnall, Hempel, & Forbes, 2006; Deale, Chalder, Marks, & Wessely, 1997; Scheeres, Wensing, Knoop, & Bleijenberg, 2008; Sharpe et al., 1996).

Beck (2004) provided an update on cognitive therapy studies. His studies indicated that cognitive therapy for depression has been found to be equally effective as pharmacotherapy and light therapy (Hollon et al., 2004). Clients who received cognitive therapy also had a decreased relapse rate, as compared to those who received medications or light therapy alone (Rohan, Lindsey, Roecklein, & Lacy, 2003). CBT has been found to be
effective also for children with posttraumatic stress disorder (Cohen, Deblinger, Mannarino, & Steer, 2004). An interesting study indicated that short-term effects of CBT also can prevent the onset of psychosis in clients who are at a high risk for these disorders (Morrison et al., 2003).

**Dissemination and Implementation**

Along with the establishment of efficacious, empirically based psychological treatments comes the need to disseminate and implement the interventions. Dissemination refers to the process of informing others of an efficacious treatment and ends with a decision to implement this treatment. Implementation involves actively utilizing the treatment in practice (Gotham, 2004). Linehan (2007) indicated that there is a limited amount of research surrounding implementation of empirically supported treatments into clinical settings. Although the existing research on empirically supported treatments has identified a number of efficacious psychological interventions, the dearth of empirical studies into the dissemination and implementation process reflects a gap between the identification of treatments and the actual practice of them in clinical settings (Steinfeld, Coffman, & Keyes, 2009). The U.S. Surgeon General (U.S. Public Health Service, 1999) and the President’s New Freedom Commission on Mental Health (2004) both have reported concerns regarding difficulty in accessing mental-health evidence-based practice. Some reasons for this discrepancy include methodological difficulties, complexity issues, funding difficulties for training research (Bennett-Levy, 2006), and feasibility issues (Weisz et al., 2009).

While some research suggests that efforts to disseminate empirically based treatments to community settings have been unsuccessful because of feasibility issues related to
generalizability of research versus applied settings described earlier (Insel, 2009), there is evidence that some evidence-supported treatments have been implemented effectively (Franklin, Abramowitz, Kozak, Levitt, & Foa, 2000; Woodbury & Popano, 2008). Therefore, quality training becomes central to effective implementation and clinical application of psychological treatments (Chu, 2008). Psychologists are integral to the process of implementation, given their scientist-practitioner background, and are logical choices for trainers (Linehan, 2007). Additionally, psychologists have an obligation to provide evidence-based practices for their clients and to advocate for the dissemination and implementation of evidence-based practices.

**Training and dissemination efforts.** Shaw and Dobson (1988) served as cognitive therapy trainers in the National Institute of Mental Health (NIMH) Treatment of Depression Collaborative Research Program (TDCRP). This large, well-controlled study examined the treatment of depression with a combination group of cognitive and interpersonal therapy, a drug treatment, or a placebo control group that was administered a pill. The therapists were trained for 18 months. This training delivered the treatment according to a CBT manual. Several therapy sessions were monitored in order to assess for competency. The competency evaluations consisted of two external experts in cognitive therapy who viewed the taped sessions. This work led to the validation of the CTS (Young & Beck, 1980) as an instrument to monitor the therapists’ performance during the outcome trial.

Alberts and Edelstein (1990) provided a review of skill-training studies. The status in the field at that time was that competency evaluation was central to therapist training. Therapeutic skills were categorized as “lower level” and “higher order” skills. Lower level
skills included responses, such as questions and reflections. Higher order skills consisted of conceptualizations and decision-making skills. The overall results indicated that instructional methods, such as modeling, rehearsal, and feedback, are equally effective in teaching lower and higher order skills in therapist responses. Several methodological limitations were noted in the group of reviewed studies, including lack of control groups, pretraining assessments, documentation of training duration, and inadequate descriptions of training procedures. Furthermore, measures of independent treatment variables were not included, and therefore, interventions may not have been executed as intended.

Studies during the 1990s were just beginning to measure competence with expert raters and multiple methods, as recommended by Alberts and Edelstein (1990). More recently, Milne, Baker, Blackburn, James, and Reichelt (1999) examined the effect of a 40-day training program in cognitive therapy on trainees’ competence and patients’ coping strategies. This study took a more refined approach to measurement, using objective means to measure competence. This study was also one of the first to examine the impact of therapist competence on patient outcomes and indicated that competence in cognitive therapy was associated with a trend in increased approach and decreased avoidance coping strategies (Milne et al., 1999).

Barnfield, Mathieson, and Beaumont (2007) examined the development of competency after training in CBT. Thirteen bachelor’s and master’s-level therapists were trained over a 30-week course. This training averaged about 20 hours per week and consisted of two components, a didactic component and a practicum component. The didactic component involved lectures, role-plays, videotapes, and discussions. The
practicum component entailed trainees working with patients, as part of their regular employment, and supervision. Their competence was assessed with the Behaviour Therapy Scale (Freiheit & Overholser, 1997), CTS-Revised (Blackburn et al., 2001), and supervisor and trainee reports of competence. Improvements in CBT skills were found in all the trainees at posttraining. A limitation of this study was that the raters were not blind to the phase of training, which may have led to bias in ratings. In addition, baseline ratings were not collected at the beginning of the training. As a result, there was not a means of comparison for subsequent ratings. The overall findings, however, support the positive effects of training on competence.

Another study examined the effects of a training course in cognitive therapy for clinicians, which included self-practice and self-reflection components (Bennett-Levy et al., 2001). This study was based on suggestions indicating that the learning of cognitive therapy is enhanced when therapists also practice methods on themselves. Self-reflection activities included an essay regarding what the participants learned about cognitive therapy, diary entries following the cognitive model, and reflections on their experience of using specific techniques on themselves. Self-practice activities included thought records, behavioral experiments, and workbook activities. By using cognitive therapy both personally and professionally, therapists experienced a deeper understanding of the role of the therapist, the model of cognitive therapy, and the process of change.

Therapists were able to experience from the client’s perspective and to reflect on their own experiences, which led to an increased comprehension of cognitive therapy, empathy for the clients, and understanding of clients’ difficulties. Furthermore, therapists’ skills and self-
concepts were reportedly enhanced, as they reported personal usefulness of practicing cognitive techniques on themselves and a deeper understanding of themselves. This study was a qualitative study in a specific environment, that did not include objective measures, and therefore, the findings should be interpreted with caution. Additionally, the results may not generalize to other training situations. Nonetheless, the implications regarding the potential of a positive impact with the inclusion of a self-reflection and self-practice component to training in cognitive therapy are important to recognize and examine in further studies (Bennett-Levy et al., 2001).

A related study also examined the effect of self-practice techniques in conjunction with training in cognitive therapy (Bennett-Levy, Lee, Travers, Pohlman, & Hamernick, 2003). Therapists reported skill enhancement in several areas, including improved communication of the model of cognitive therapy, attunement to empathy and the therapeutic relationship, and therapist self-reflection and flexibility. These findings suggest that self-reflection is an important factor in developing clinical expertise and may be a potential strategy for training clinicians in cognitive therapy. The researchers indicated that with novice trainees, who have not yet worked on skill development, determining the impact of self-reflection and practice may be more difficult than with more experienced trainees. This is not to say that this teaching is not helpful with less experienced trainees, but that it may be more difficult to discern the impact of self-practice while trainees are also learning basic skills. Similar to the previously mentioned study, this study was also qualitative, with subjective reports serving as the outcome measures, and therefore, the same limitations as those in Bennett-Levy et al. (2001) study apply. Nonetheless, the implications for trainings
that relate the metacognitive components of self-practice and self-reflection to increased understanding and facilitation of knowledge in cognitive therapy are important to consider.

Bennett-Levy and Beedie (2007) examined trainees’ self-perceptions of their competence during a training in cognitive therapy. They found that self-ratings of competence fluctuated throughout the training, resulting in a significant increase in self-rated competence posttraining. Improvements were larger in structural and technical aspects than in the interpersonal aspects of CBT. Nevertheless, all of the gains were statistically significant. The training consisted of a 1-year training, held once weekly, as part of a diploma program in CT.

The Cognitive Therapy Self-Rating Scale (CTSS) was developed by the authors and used for the previous study to assess trainees’ self-perception of competence in CT. The CTSS is a modified self-assessment adaptation of the CTS and is rated by a supervisor. The researchers developed a model of the influences on self-perception of competence. The three factors that affect self-perception of competence are learning opportunities, emotional state, and cognitive impact. Learning opportunities refers to the acquisition and implementation of knowledge, external evaluation, and clinical experience (Bennett-Levy & Beedie, 2007). The emotional state of the trainee includes emotionally salient memories of supervision, feedback, or clinical sessions. The emotional state of the trainee was found to significantly affect self-reported competence, indicating that this report of competence is highly subjective and may not be the most reliable indicator of competence. Feedback from the supervisor was highlighted as especially important to self-perception of competence. The cognitive impact involves new learning, self-reflection on performance, and increased awareness of the
requirements of a cognitive therapist. One should note that this model was based on tentative qualitative data and has not been examined quantitatively (Bennett-Levy & Beedie, 2007).

Although the findings of this study support other findings that training in CBT leads to increased competence, one must bear in mind the limitations of this study. The CTSS was used as a stand-alone measure. Therefore, without the added dimension of the CTS, conclusions cannot be drawn regarding competence ratings from a supervisor. As many trainees may rate themselves as higher in competence than they actually are (Waltz, Addis, Koerner, & Jacobson, 1993), supervisor ratings are essential for a more objective point of view. Furthermore, the validity and reliability of the CTSS have not been established. Nevertheless, training implications can be ascertained from the results of this study. Trainees can be made aware that their self-confidence and self-perceptions of competence may vary over the course of training and that this experience is normative as trainees develop in knowledge, skills, and abilities. If this information were made explicit to trainees at the beginning of the training, it might help to allay any anxiety that may accompany their training experience (Bennett-Levy & Beedie, 2007).

Three methods of training community-based clinicians in CBT were examined in a dissemination trial by Sholomskas et al. (2005). Participants in one condition were trained via exposure to a CBT manual only, those in another condition via exposure to the manual and an interactive website, and those in the facial condition via exposure to a manual and a 3-day didactic seminar, along with supervision. Results indicated that the participants in the seminar/supervision condition had the highest independently rated adherence and skill
ratings. Participants in this condition also reported greater satisfaction with their training and higher use of CBT in their clinical work.

The impact of a CBT training course was evaluated with reference to satisfaction of the trainees, clinical skills, and outcomes of the clients (Westbrook, Sedgwick-Taylor, Bennett-Levy, Butler, & McManus, 2008). The training lasted 10 days and was comprised of both workshops and clinical supervision. The results on the CTS indicated that the trainees were satisfied with the training and adhered to measures of CBT skill. Client outcomes also were found to be significantly improved after the training, as evidenced by subjective reports of well-being, symptoms, and functioning. This study contained several limitations, including the late submission of the taped sessions of CBT. Although tapes were expected to be submitted at the start of the training for a baseline measurement of competence, delays in the trainees starting the training led to submission of tapes far later than the start of the training.

Raters of the tapes also were not blind to the sequence of the tapes and, therefore, knew which tape was the first and which was the second. This limitation may have led to inadvertent scoring according to rater expectations. Furthermore, CTS scores were not correlated to measures of patient outcome. This correlation may have strengthened the study, in that a relationship between competence and patient outcome may provide further support for the need for therapist competence. Regardless of the limitations, this study provided evidence in support of training in CBT leading to an increase in therapist competence (Westbrook et al., 2008).
Steinfeld et al. (2009) implemented a training program for CBT for the treatment of anxiety and depression in a large mental-health-services setting. The training program consisted of didactics, role-plays, discussion, and videos. Most of the participants were master’s level clinicians who had not received prior training in empirically supported treatment. This program was implemented over a 2-year span in the form of in-services. The goals of the program were for implementation of CBT and improvement in staff and client satisfaction.

The outcome of the program appeared to be successful, as clinicians self-reported a 25% increase in CBT conceptualization and a 30% increase in CBT skills. In addition, staff and client satisfaction increased. Albeit promising results, there are several limitations to this study. Originally, this training program was not designed for empirical assessment, and therefore, clinicians were not randomized and formal evaluation measures were not taken. In addition, the frequency of the in-services was unclear (Steinfeld et al., 2009). Details such as these are important for future implementation studies.

In a study examining the transportability of CBT to community settings (Weisz et al., 2009), community therapists were randomized into two groups. One group was trained and supervised in CBT, and the other group practiced usual clinical care. The therapists in the usual-care group used more psychodynamic and family approaches. The therapists treated 15 depressed children and adolescents between the ages of 8 – 15 years. At the posttreatment assessment, the youths in both groups showed a reduction in depressive symptoms. The groups differed in that CBT treatment was briefer, higher in parent ratings of therapeutic alliance with their children, and less likely to require further services and, therefore, less
costly. This study also fit the criteria for effectiveness trial dimensions because it used a community treatment setting, which is representative for clinical treatment. Furthermore, it was a fully randomized study, with both the therapists and youths randomized into groups, and it broadly assessed the clinical process, outcome, and costs.

CBT has been implemented successfully in a mental-health center for chronic fatigue syndrome (CFS; Scheeres et al., 2008). Currently, CBT and graded exercise therapy are the only evidence-based treatments for CFS. This implementation effort was initiated because of the scarce availability of CBT in some specialist hospitals. Therapists in a mental-health center were trained for 4 days in CBT for patients with CFS and supervised on a biweekly basis for the following 2 years. The implementation was successful, and treatment results were acceptable. The most troubling aspect of this study for the researchers was that more than one third of the patients prematurely terminated treatment, with most of their reasons referring to not believing that CBT fit them and to feeling that there was a medical reason for their fatigue. Regardless of the high number of patient terminations, this study suggests that implementation of CBT for patients with CFS can be successful and comparable to results of randomized controlled trials.

**Dissemination in primary care settings.** In training primary care practitioners in a brief CBT training package, King et al. (2002) found that general practitioners may require more training and support than merely a training that focuses on a basic understanding of the cognitive-behavioral treatment of depression and anxiety. Findings of this study indicated that physicians’ knowledge and attitudes toward depression and anxiety were unchanged after the training. The effects of training also did not have any impact on patient outcomes.
Because direct observation of sessions was not feasible in this study, whether or not physicians actually implemented CBT skills is unknown. Alternatively, physicians may have learned the skills necessary to deliver CBT effectively to patients, but did not have the time to implement their skills.

*National and state-wide programs.* McHugh and Barlow (2010) offered a review of recent efforts to disseminate and implement evidence-based psychological treatments at both the national and state level. They reviewed three national initiatives, including the Improving Access to Psychological Therapies (IAPT) program in the United Kingdom and the Veterans Health Administration (VHA) and the National Child Traumatic Stress Network programs in the United States. Two state-wide programs, in Hawaii and New York, also were discussed.

In the largest effort to disseminate and implement evidence-based psychological treatments, the IAPT program, via the Department of Health in the United Kingdom, allotted funding to improve the dissemination process. Between 2007 and 2010, the Department of Health invested approximately $435 million to provide evidence-based treatment training to mental-health providers. These trainings incorporated both didactic and competence training in CBT. Patient outcomes served as the measurement of the program’s success. Clinical outcome results from pilot studies on the sites chosen by the IAPT for implementation revealed comparable outcomes to results from research studies, with effect sizes ranging from 0.98 to 1.26 (Clark et al., 2009).

The Mental Health Strategic Plan was developed by the VHA in response to President Bush’s New Freedom Commission on Mental Health report in 2004. This plan was
designed to improve access to mental-health care within the VHA system and to support efforts to disseminate and implement evidence-based psychological treatments. The plan involved clinician training in CBT, exposure therapy, cognitive-processing therapy, and acceptance and commitment therapy and included workshops, group activities, and role-plays. Attention was allotted to competence, and on-going consultation was provided to the clinicians. The effect of this plan, in terms of outcome, is currently unclear, given the unknown number of clinicians who completed the trainings (McHugh & Barlow, 2010).

The National Child Traumatic Stress Network, which is funded by the Substance Abuse and Mental Health Administration, involves cooperation among more than 50 universities and treatment providers. The goal of this initiative was to disseminate and implement evidence based practice for children who had experienced trauma. The trainings in trauma-focused CBT were delivered to clinicians based on their service needs and consisted of didactics via the Internet and workshops. Supervision and consultation also were provided, and competence was assessed via consultation and patient outcomes. Initial data regarding outcome indicate promising results, and current data are pending. The trainings sites reportedly continued in the usage of the evidence-based treatment and most of the sites provided additional training to staff members in the interventions (McHugh & Barlow, 2010).

McHugh and Barlow (2010) identified two leading state-led initiatives, Hawaii and New York. As a forerunner in the reform of mental-health-care services for children with disabilities, Hawaii provides trainings specifically geared toward the needs and characteristics of the targeted community. Trainings cover areas of didactics and
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competence. Evaluative program studies indicate preliminary success, particularly in regard to decreased time in treatment and to client improvement (Daleiden, Chorpita, Donkervoet, Arensforf, & Brogan, 2006). Data are unknown, however, regarding reliability of clinical decisions made by therapists about choice of treatment modules and information on sustainability of the intervention.

Achieving the Promise for Children, Youth, and Families, a major initiative in New York, intends to improve the delivery of mental-health-care services to children and families. This program consists of clinician trainings, community advocates, and incentives for implementation of evidence-based treatment. Certification via successful completion of workshops and consultation aims to improve the training process. Training in CBT for trauma and depression was delivered to clinicians in many service agencies, but fidelity to the treatment protocol has not been monitored formally, and thus, information regarding competence is uncertain. McHugh and Barlow (2010) suggested further evaluation of competence in order to gain a clearer understanding of the success of these programs.

Trainees. CBT has been implemented successfully across a wide array of settings and professionals, including professional and paraprofessional community therapists (Bright, Baker, & Neimeyer, 1999), master’s and doctoral-level clinicians (Wade et al., 1998), health-care workers (Smit et al., 2006), and professionals in school settings (Misfud & Rapee, 2005). CBT also has demonstrated advantageous outcomes across different countries and cultures. Therapists in Europe (Garcia-Lopez et al., 2006), Asia (Hodges & Oei, 2007), and Australia (Barrett, Duffy, Dadds, & Rapee, 2001; Lowry-Webster et al., 2001) have been trained to deliver CBT to clients.
According to Sudak (2009), the Accreditation Council of Graduate Medical Education, which accredits psychiatric training programs, asserted a requirement in 2001 to train residents in CBT. Prior to this mandate, results from a survey conducted in 2000 targeting psychiatry-residency training directors, indicated that a significant number of residency programs provided only minimal training in CBT. About 25% of residency programs had no requirement for training in CBT, and about half of all the programs had no faculty credentialed or trained in CBT. This absence of faculty trained in CBT was a significant barrier to training in CBT for psychiatric residents.

A subsequent survey in 2006 (Weismann et al.) indicated that 93% of the responding psychiatric training programs now require training and supervised CBT experience. The skills that must be included are Socratic questioning and specific behavioral techniques. Strategies for training psychiatric residents include caseload management, instruction on which particular CBT strategies to employ with certain clients, and medication management in the context of CBT. The CTS, the Cognitive Therapy Awareness Scale (CTAS; Wright et al., 2002), and the Cognitive Therapy Scale-Resident Supervision (CTSRS; Sudak, Wright, Bienenfeld, & Beck, 2001) are several instruments used to measure competence in psychiatric residents. Although the goal for training with supervised clinical experience and didactic training was 6 months, a standard for training in psychiatry, as in many other fields, has not yet been established (Sudak, 2009).

The Division 12 Task Force on the Promotion and Dissemination of Psychological Procedures of the American Psychological Association (Task Force, 1995) called attention to the need for evidence-based practice and the provision of psychological services that are
informed by the best available information. This Task Force is now called the Committee on Science and Practice and emphasizes education and training in empirically supported treatments. The agenda targets not only clinicians in community settings but also predoctoral trainees in clinical psychology. The Task Force acknowledged that training, in conjunction with dissemination, is central to the proper implementation of empirically supported treatments. This initiative highlights the importance of the role of the scientist-practitioner model of many graduate educational programs in clinical psychology (Karekla et al, 2004).

*The Guidelines and Principles for Accreditation of Programs in Professional Psychology* (APA, 1996) emphasized the need for training in empirically supported treatments. Following the scientist-practitioner model, the value of science and practice is recognized, along with attention to the underlying empirical basis for treatment (Crits-Christoph, Frank, Chambless, Brody, & Karp, 1995). The scientist-practitioner model blends the needs of the scientist for general knowledge with the needs of the practitioner for application of specific skills. This model is currently utilized by many professional psychology programs (Stricker & Trierweiler, 1995). Given survey results indicating that many academic-based, clinical training programs do not provide adequate training for empirically based treatment, and instead favor treatments that are less validated, the scientist-practitioner model may be increasingly helpful (Weissman et al., 2006).

Although initiatives for training must continue to be developed to disseminate empirically supported treatments, merely offering this training in graduate programs is not enough. Instead, programs should be developed to impact graduate education in empirically supported treatments (Barlow, Levitt, & Bufka, 1999). According to Weissman et al. (2006),
efforts to disseminate training to graduate students have been largely overlooked. This gap in dissemination is unfortunate because graduate students represent the future of the growing field. Results from a national survey of psychotherapy training programs in psychiatry, psychology, and social work indicated that few programs actually require both didactic and clinical supervision in evidence-based treatments. Specifically, 67% of clinical PsyD programs and 61% of social work programs that were surveyed did not require didactic and supervision in any empirically based treatment (Weissman, et al., 2006).

Results of a survey of 135 training directors indicated that their program offered training in fewer than half of the empirically supported treatments included on the survey (Crits-Christoph, Frank, Chambless, Brody, & Karp, 1995). This lack of training is troubling because students who do not receive training in empirically validated treatment in their formative academic careers may be more restricted in terms of professional interests and subsequent training. Graduate students, therefore, become a point of reference when evaluating how well graduate programs train students in empirically supported treatments (Karekla et al., 2004). It is important to recognize that master’s level clinicians have the ability to be very effective practitioners (Steinfield et al., 2009).

Changes in accreditation procedures and increasing attention to the need for empirically supported treatments led many program administrators to evaluate their training practices (Calhoun et al., 1998). In 2001, another study examined graduate training in empirically supported treatments (Horan & Blanchard, 2001). Although the internships appeared to be offering more exposure to empirically supported treatments, results were somewhat similar to those of Crits-Christoph, Frank, Chambless, Brody, & Karp (1995).
Specifically, training was offered in fewer than half of the empirically supported treatments included on the survey. A subsequent study by Hays et al. (2002) indicated that 30% of training directors reported that minimal time was allotted for training graduate students in empirically supported treatments. Additionally, the approach to training was not structured in terms of didactics, and students were advised to seek information on their own.

Graduate programs in psychology are expected now to provide students with education, training, and exposure to a broad array of empirically supported treatments, techniques, and interventions. One still cannot assume, however, that training via practicum and internship provides sufficient skills for students to become competent in delivering empirically supported treatment upon completion of the program. Currently,

It is generally believed that students who are broadly trained and socialized to recognize both the assets and liabilities of available empirically supported psychological interventions, but also how to evaluate and use them appropriately, would stand a competitive edge in the evolving behavioral health care marketplace where evidentiary practices are now becoming normative if not mandatory (Karekla et al., 2004, p. 231).

This expectation points to the growing need for clinicians to base their treatment on empirically supported treatments in the face of the managed-care movement toward outcome and research-based treatment.

**Recommendations for Training Programs**

As a result of the relative absence of a comprehensive training program in empirically supported treatments and the limited amount of controlled research studies in this area,
Calhoun et al. (1998) pointed to the evident need for research initiatives in the dissemination of empirically supported treatment. This need may be the result of the continuing trend toward demonstrating the most efficacious treatments, but for those treatments that already have been identified to meet the criteria for efficacy, more concerted efforts for dissemination are needed. Therefore, the next step in the process is to identify the most effective training procedures for empirically supported treatments in clinical psychology.

Cucciare et al. (2008) introduced the topic of blended learning, which includes the utilization of diverse formats, such as reading, discussion, and training, to teach a set of skills. These methods of teaching are varied in such a way as to increase understanding of the material. The potential advantages of blended learning include improvement in learning and cost effectiveness. Additionally, blended learning leads to more effective learning when compared to single learning strategies. The use of didactic trainings, readings, and personal feedback is essential to the successful implementation of evidence-based practices.

Practical considerations of training, such as financial barriers, may limit dissemination efforts. Owing to costs associated with feedback and fidelity measures, most traditional training programs do not include these components and, therefore, may exclude training for competency (McHugh et al., 2009). This limitation is unfortunate because successful training necessitates both didactic and competence training (McHugh & Barlow, 2010). Given that most educational research is limited by time and cost constraints, Chu (2008) suggested that research should focus on the essential and sufficient elements of training. Individual feedback was identified as a necessary aspect to competency. In
addition, delaying some aspects of training in order to give trainees time to apply their newly learned skills, ask relevant questions, and receive feedback is also helpful (Miller, Yahne, Moyers, Martinez, & Pirritano, 2004). Steinfeld et al. (2009) noted that staff benefited from the opportunity to practice newly learned skills between training sessions.

The perception of certain characteristics of treatments can also affect training outcome. That is, therapists may be more or less willing to implement interventions, depending on the beliefs that they hold about the treatment (Addis & Krasnow, 2000). Karekla et al. (2004) surveyed 172 graduate students regarding their beliefs about empirically supported treatments. He found that opinions varied widely as a function of the students’ theoretical orientation and of the amount of prior experiences. The education and training that graduate students receive while in college also were found to be related to their plans to utilize empirically supported treatments once in clinical practice and to continue training in this area.

According to Calhoun et al. (1998), main goals of trainings in empirically supported treatments include being able to conceptualize and understand accurately the psychological disorder and its associated treatment and to teach the intervention and therapeutic skills associated with empirically supported treatments. Given the need for a comprehensive, empirically supported training model, which is sequenced chronologically, a plan for the sequencing of training in empirically supported treatments is recommended. This plan begins at the doctoral level, with training in a general foundation of clinical skills, knowledge of psychological disorders, basic understanding of and skills in empirically supported
treatments, and experience consistent with an empirically supported treatment. This experience usually is gained during internship training.

At the doctoral level, student training in empirically supported treatments is expected, through exposure to these interventions either through coursework or through experience via practicum and/or internship. Master’s programs also should include training in empirically supported treatments. Such training should include knowledge and understanding of psychological disorders and the ability to assess, diagnose, and conceptualize cases. This training provides the framework for subsequent clinical training and application during practicum and internship (Calhoun et al., 1998). Hayes (1995) identified master’s-level clinicians as the principal future providers in the field of mental health; however, little is known regarding their attitudes and beliefs about empirically supported treatments. This runs counter to the current practice of clinical contact because master’s-level clinicians are responsible for an increasing amount of face-to-face client contact (Addis & Krasnow, 2000).

Master’s-level clinicians provide a service for these necessary demands of increased need for direct mental-health services, which allows for greater community access to mental-health services. Given the increasing social needs for psychological services, appropriately trained and educated master’s-level clinicians can adequately fill the need for a broad range of psychological services (McPherson et al., 2000). Training and education during graduate years is an ideal context for instruction in empirically supported treatments (Karekla et al., 2004). In addition to the importance of context, motivation also plays an important role in training. Trainees who are motivated to learn and want to attend trainings are more likely to learn, remember, and apply what they learned in their trainings than are those who are not
motivated (Salas & Cannon-Bowers, 2001). Furthermore, Crits-Cristoph (1996) reported that training for graduate students will assist with the dissemination of empirically based treatments more so than would training for practitioners already in the field. Data suggest that the dissemination of empirically supported treatments to practitioners who received little training during their graduate education would be more difficult than to practitioners who were adequately trained during graduate school (Hays, Rardin, Jarvis, Taylor, Moorman, Armstead, 2002; Horan & Blanchard, 2001; Karekla et al., 2004).

Training at a postdoctoral level would include expertise in at least one empirically supported treatment. Training for continuing education is either aimed at those clinicians already practicing in the field and prior to the introduction of empirically supported treatments or at clinicians looking to further their knowledge in empirically supported treatments. Addis and Krasnow (2000) surveyed licensed psychologists regarding their attitudes about empirically supported treatments and treatment manuals. The majority of the psychologists did not use treatment manuals with their clients. Interestingly, a relationship was found between the amount of prior experience working in the field and the utilization of treatment manuals. Psychologists who had fewer years of experience and who were working in academic or research settings tended to hold more positive attitudes toward treatment manuals in comparison to those working in private practice and with more years of experience. Psychologists with a cognitive-behavioral orientation also held more favorable attitudes about manuals than those who are psychodynamic or psychoanalytic in orientation. Consequently, pre-existing attitudes regarding empirically supported treatments and
treatment manuals and regarding theoretical orientation are of central importance in predicting the clinical use of these treatments in practice settings.

The most complex aspect of the dissemination process is continuing education. The variety of time requirements and range of educational formats result in difficulty in training existing practitioners for the competent use of empirically based treatments. Extended formats of continuing education are recommended including multiple trainings, as opposed to a workshop or lecture. Follow-up is also recommended, to allow for the consolidation of skills and relevant feedback. In addition, competency testing is needed not only to assess for adherence to the training but also to evaluate for clinical competence to perform the empirically supported treatment (Calhoun et al., 1998). Supervision also is needed in order for application of interventions that psychologists are exposed to in a workshop (Chambless, 1999).

**The Beck training initiatives and other model training programs.** The Beck Institute Extramural Training Program in Philadelphia offers training in cognitive therapy to practitioners who hold a minimum of a master's degree. The training program is offered in 32 different countries, including France, Italy, Japan, Russia, and Turkey. Weekly telephone supervision is offered, along with weekend training workshops. The trainees are rated with the Cognitive Therapy Rating Scale (CTRS) in order to determine competence in cognitive therapy. The scores obtained from the scale from trainees enrolled in the program from 1998 to 2002 revealed an increase in CTRS scores from the start to the end of training (Butler & Sokol, 2003).
Aaron T. Beck and his associates currently are providing training and consultation in cognitive therapy for mental-health providers in community-based and public-sector service settings. This project, entitled The Beck Initiative for Dissemination of Cognitive Therapy into Community Settings, is based upon the ACCESS model (Stirman et al., 2010). The acronym, ACCESS, stands for assess and adapt, convey basics, consult, evaluate, study outcomes, and sustain. This training model for evidence-based psychosocial treatments incorporates findings from training and implementation research and provides guidelines for training. According to the ACCESS model, an assessment of the agency providing treatment should be conducted first, in an effort to understand the operations, goals, and population served by the agency.

The next step of this training model suggests that clinicians be evaluated with regard to their personal characteristics, such as engagement and attitudes, in order to examine factors that may predict successful training. Such assessment assists with the adaptation of the training program to meet the particular needs of the agency. The next step involves providing an understanding of the fundamental elements of the treatment model. Recommended readings and training materials with illustrative case examples help to supplement the training (Stirman et al., 2010). Multiple teaching modalities, including didactics, role-plays, feedback, and discussions, also are encouraged (Cucciare et al., 2008). Discussions regarding relevant cases seen at the agency help to address clinician concerns (Stirman et al., 2010).

Calhoun et al. (1998) provided some positive examples of improving psychologists’ access to continuing education, including the Atlanta Center for Cognitive Therapy, which
offers training in order to become competent in cognitive therapy. The trainings include didactics, consultation, and guidance on case conceptualization. Alternative methods of communication, such as telephone consultations and the utilization of taped therapy sessions, are used to offer training for associated agencies. This model, among others, is based on that of Aaron T. Beck’s Center for Cognitive Therapy in Philadelphia. Another model of improving access to continuing education is the workshops offered by the Obsessive-Compulsive Foundation. The trainings include 3-day workshops in exposure and response prevention techniques and allow for clinicians to obtain feedback via telephone consultation.

**Instructional strategies, goals, and suggested training guidelines.** According to Salas and Cannon-Bowers (2001), there are four important instructional strategies. The first strategy is the presentation of pertinent information to be learned. The second strategy is the demonstration of the knowledge, skills, and attitudes to be learned. The third strategy involves allowing for the opportunity to practice what is learned. The fourth strategy is providing feedback to the participants both during and after the training. Collaborative learning, in which participants are trained in a group, is also an important approach to the learning process because it allows for interaction and vicarious learning opportunities.

Calhoun et al. (1998) posited several goals for effective training programs. The goals of training are an increase in understanding and knowledge, along with the acquisition of therapeutic treatment skills in order to achieve competence in the empirically supported treatment. Additionally, the educational material should be included as part of the training program, and the participants optimally should have prior experience with or knowledge of the empirically supported treatment in which they are being trained. The outcome of the
training should be evaluated in terms of the goals of the agency or training program. Client outcomes, trainee competence, satisfaction, and/or characteristics of the trainees are factors that can be assessed in order to evaluate the program.

Seven guidelines based on these assumptions were suggested for training (Calhoun et al., 1998). The first guideline includes the need for videotapes that demonstrate the prominent elements of the treatment. Viewing treatment sessions allows for participants to observe the essential elements of the treatment and answers many questions they may not have anticipated. Taped sessions are efficient for training purposes because they contain a large amount of concise information regarding accurate methods of implementation, and tapes should be used near the beginning of the training program. The timing of the viewing of tapes is important is because modeling is an effective form of learning (Bandura, 1977).

The second guideline outlines the importance of relying on taped sessions for purposes of supervision instead of depending on self-reports of the participants. These taped sessions may be either audio or videorecorded. Taped sessions allow for an accurate and more objective measurement of competence because participants may over or underestimate their ability to deliver the treatment in an effective manner. Supervisors can utilize tapes as a more objective means of judging performance (Calhoun et al., 1998).

The third training guideline further delineates the need for adherence measures to evaluate the correct implementation of the treatment. These measures are developed to assess the manner in which the treatment is being implemented as intended. These ratings are to be used in conjunction with the participants’ taped sessions. These measures can serve as a means to judge improvement in performance, in that initial measures taken can serve as
a baseline for performance. Subsequent ratings then can be used to identify change in skill and ultimately, competence (Calhoun et al., 1998).

The fourth training guideline recommends including material that demonstrates frequent mistakes made in the implementation process of treatment. Calhoun et al. (1998) acknowledge that this aspect of training is not readily available for most empirically supported treatments. Owing to the relative lack of material of this kind, trainers may use personal observations or anecdotal information to supplement training in this area.

The fifth recommended guideline consists of the use of group supervision, as opposed to individual supervision, when listening to or viewing taped sessions. Group supervision may serve to maximize efficiency of the training because the rate of learning for a greater number of individuals is increased. Taped sessions may serve to highlight several different points in the demonstration of treatment. Therefore, a larger amount of information is being conveyed to several participants at the same time (Calhoun et al., 1998).

The sixth guideline considers the number of prototypical and nonprototypical cases for which supervision must be provided in order to demonstrate appropriate skills. Again, although there is a dearth of information in this area, in the view of Calhoun et al. (1998), at least three to four prototypical cases and four or more nonprototypical cases should be included.

The seventh guideline includes the use of continuing assessment of a patient’s treatment response. Outcome measures provided by patient reports are helpful indicators of treatment efficacy. These measures also can be collected at specified periods of time throughout treatment in order to judge patient progress (Calhoun et al., 1998).
Consultation and supervision. Research suggests that 1- or 2-day trainings are insufficient to change clinicians’ behaviors in the clinical setting and that some type of follow-up, such as competency evaluation or supervision, is needed. Shortened formats may suffice for therapists who are experts in similar treatments but usually will not work for most intermediate or novice practitioners (Chambless, 1999; King et al., 2002). Therefore, the provision of coaching and/or feedback is important for the maintenance of gains in clinical proficiency (Miller et al., 2004; Sholomskas et al., 2005). In an effort to sustain the implementation of the treatment, continuing support and information posttraining are helpful and may be performed via continuing consultation. The trainers can consider remaining available for some time posttraining to provide support, suggestions, and additional feedback (Calhoun et al., 1998). Fixsen, Naom, Blasé, Friedman, & Wallace (2005) recommended best practices for training programs to include a combination of role-plays, didactic training, behavioral rehearsal, supervision, and feedback. The presentation of taped sessions is also integral to effective training.

The opportunity for consultation and supervision is important for transfer of learning into practice (Speck, 1996). Consultation allows for clarification of issues that may have emerged during the training or with clinical cases. Consultation also offers support and advice to trainees. The evaluation of work samples is suggested for determining levels of competence in the treatment modality because subjective or self-reports by the trainee may be inaccurate owing to bias or overestimation of skills (Brosan, Reynolds, & Moore, 2008). An instrument that measures competence, such as a rating scale, is recommended, as it operationally defines certain aspects of the therapy session and acts as a tool for the
assessment of progress throughout the training. Specific feedback also can be given with regard to in-session behaviors.

Concerns exist in regard to clinicians’ competence to implement manualized treatments. According to Addis et al. (1999), examining competence, along with adherence to training protocols and job satisfaction, comprises a field of study called process dissemination research. The need to study these factors, as opposed to measuring effectiveness only by examining clinical outcomes, was emphasized. Competence and satisfaction may play a large role in whether or not clinicians will implement empirically based practices and whether or not they will apply treatments as recommended. Therefore, factors of competence and satisfaction are integral to the implementation process.

**Competence**

According to Butler and Sokol (2003), the need for therapists who are competent in cognitive therapy is paramount. Although competence is viewed as an essential standard for effective practice, a wide variety of definitions of competence currently exist. Competencies are defined as groupings of skills, abilities, attitudes, clinical judgment, and behaviors that facilitate professional activity (Butler & Sokol, 2003; Rubin et al., 2007). Knowledge usually is gained during graduate school through readings and didactics. Skills develop via clinical experiences, such as supervised practicum and internships. Judgment typically is formed in conjunction with the development of knowledge and skills (Barnett, Doll, Younggren, & Rubin, 2007). Appropriate and effective action, which necessitates judgment, critical thinking, and decision making, is also an important component to competence (Rodolfa et al., 2005).
Shaw and Dobson (1988) described competency as a state-like variable, with higher competence achieved as the therapist learns to treat many different clients with differing problems and difficulty levels. That is, judgments of competency may vary across time, as the behavior of the therapist is affected by many different factors and situations. Professional competence should be viewed as a context-dependent, life-long process that begins with training in graduate school and continues throughout professional development as it is updated and informed by the latest research and information (Leigh et al., 2007). Furthermore, competence in one area of psychology does not guarantee competence in another area. In order to maintain and improve one’s level of competence, one must participate in continuing education, staying abreast of the literature in the field and advancing one’s clinical skills. Self-reflection and self-assessment are also integral means to maintaining competence. Competence is often maintained via peer consultation, supervision, and specialized trainings (Barnett et al., 2007).

Therapists are expected to demonstrate various skills. Competent clinicians are able to plan and flexibly adapt therapy to a client’s individual needs (Roth & Pilling, 2008). Given that training is central to the effective implementation of treatment, the competence framework proposed by Roth and Pilling describes a potential program for training that outlines a model for CBT competencies (Roth & Pilling, 2008). Generic competencies include the ability to form a good therapeutic relationship, connect with and engage clients, complete a basic assessment, and the ability to work collaboratively with clients.

Basic competencies in CBT establish the organization of the treatment and outline the framework for the implementation of specific therapeutic techniques. Setting an agenda and
assigning homework are examples of basic CBT activities. Specific behavioral and cognitive therapy techniques are the central CBT skills and interventions. Examples of specific behavioral techniques include applied relaxation, exposure, and activity monitoring and scheduling. Cognitive techniques, such as guided discovery and Socratic questioning, are utilized in order to examine, address, and dispute automatic thoughts (Roth & Pilling, 2008).

Problem-specific competencies are the particular procedures designed for a specific problem or disorder, such as phobias, panic disorder, obsessive-compulsive disorder, and depression. Metacompetencies guide practice and all three competencies, and allow for the clinician to be aware of the reasons for which a procedure is carried out. The abilities to use clinical judgment and to adapt treatment flexibly to the particular needs of the individual client are generic metacompetencies. The capacities to choose the most appropriate CBT method and to manage obstacles to therapy are examples of CBT-specific metacompetencies. The CTS was designed to rate the delivery of a basic set of competencies in CBT (Roth & Pilling, 2008).

Models of competency. Bennett-Levy (2006) presented a cognitive model for therapists’ acquisition and refinement of skills. This model is based on information processing theory and provides an account for a range of factors associated with the acquisition of therapeutic skills. Skills are developed in varying ways and at varying rates, and a model is provided to account for the development of perceptual and procedural skills leading to competence. There are three main systems of this model: declarative, procedural, and reflective.
The declarative system refers to knowledge of factual information and is comprised of three knowledge components: conceptual, interpersonal, and technical. Conceptual knowledge refers to the basic understanding of a model and theoretical underpinnings of therapy. Interpersonal knowledge is learning microskills specific to the theoretical orientation. Technical knowledge consists of knowledge that is specific to a certain type of therapy. Technical knowledge is typically attained through training, didactics, observation, supervision, or reading. Trainings that focus solely on technical skills may result in the inability of trainees to transfer the knowledge into clinical settings (Bennett-Levy, 2006).

Thus, the procedural component is important to refining skills and to supplementing declarative knowledge. Procedural information relates to knowing and understanding the procedures of how and when to apply certain skills. With novice therapists, this element requires practice via role-plays, didactics, modeling, and feedback in order to automate the skills. The input of the procedural system is the communication of the client, and the output of this system is the communication by the therapist. In between these two systems, the therapist utilizes interpersonal perceptual skills to understand the input of the client (Bennett-Levy, 2006).

Therapists use these skills to assess the client’s emotional state. This internal event reflects the therapist’s ability to attune to the client. Two systems then process this information: the self-schema of the therapist as him/herself and the self-as-therapist schema, or the therapist as his/herself. The self-schema of the therapist reflects the personal characteristics of the therapist as a person. Novice therapists may process social information through his/her self-schema. With training, the therapist becomes able to process
information through his/her schema-as-therapist and respond to the client more naturally. The self-as-therapist schema refers to the identity of the therapist as a therapist. This model differentiates between the therapist in the personal versus professional role and identifies the function of the personal self in the therapist’s development of skills. The two types of schema are never completely separate, but the aim is to achieve a balance between the personal, or self-schema, and the professional, or the self-as-therapist schema (Bennett-Levy, 2006).

With therapists who are more advanced, this model suggests a mechanism that expands on existing knowledge, leading to expertise (Bennett-Levy, 2006). Measures of quality control depend largely on the therapists’ ability to judge accurately their own performance in therapy (Brosan et al., 2008). Reflection was identified as fundamental to skill acquisition because it enables therapists to reflect upon and add to their existing declarative knowledge and procedural skills and to be able to transfer these skills to different situations. This metacognitive skill includes therapists’ ability to observe, interpret, and assess their thoughts, feelings, and reactions to clients. Declarative knowledge can be refined through supervision and self-reflection. For these reasons, self-reflection may enhance learning during trainings (Bennett-Levy, 2006).

Rodolfa et al. (2005) offered a cube, or tripartite, model for competence, which includes foundational and functional domains of competency and stages of professional development. The domain of foundational competency is regarded as the basis of the practice of psychology. Reflective practice and self-assessment, scientific knowledge and methods, relationships, ethical-legal standards, interdisciplinary systems, and individual and
cultural diversity are examples of areas within the foundational domain. The functional domain includes the knowledge and skills, such as assessment, diagnosis, conceptualization, consultation, research, supervision/teaching, management/administration, and intervention, that are necessary for the work of a psychologist. Barber et al. (2007) discussed intervention competence. The ability to deliver a treatment intervention competently requires being knowledgeable about the treatment, capable of carrying out the treatment, willing to adhere to the treatment protocol, and able to deliver the treatment to a particular client. The third part of the model, the stage of professional development, refers to the stage at which the foundational and functional competencies are learned, such as doctoral education, internship, postdoctoral supervision, fellowship, and continuing education (Rubin et al., 2007).

According to Rodolfa et al. (2005), regardless of the model that is used, competence should be viewed on a continuum.

**Ethics.** The APA’s “Ethical Principles of Psychologists and Code of Conduct” (APA, 2002) views competence as both an enforceable standard and an aspirational principle. This principle implies that competence is an ideal that psychologists must strive for in practice and a specific set of values that should be met in order to practice according to ethical standards. Psychologists must work within the boundaries of their competence and provide only services for which they are competent, based on their education and training. For practicing psychologists, licensure represents the minimal degree of competence. In order to surpass the minimum standards of competence, psychologists can become board certified. Board certification indicates advanced competence in a specialty area in psychology (Barnett et al, 2007).
Knapp and VandeCreek (2006) described the ethical conception of competence as a three-component process that involves technical knowledge, social skills, and emotional competence. Emotional competence involves the psychologist’s ability to make careful decisions, manage stress, cope with emotional tribulations that may accompany clinical practice, and demonstrate the qualities needed to sustain good relationships with others. Emotional competence also ensures one’s own mental health, and stability acts as a safeguard against threats to competence (Barnett et al., 2007). This being said, unless there is a problem that is brought to the attention of the APA Ethics Committee, there is little evidence to suggest that competence is ensured through ethical or legal regulations. Furthermore, credentialing examinations focus on knowledge of ethics, rather than on the capacity to execute ethical actions (Leigh et al., 2007).

Therefore, therapists must monitor and evaluate their own competence accurately and seek peer consultation and supervision. Awareness of shortcomings allows for problems to be addressed and improved upon. If clinicians are not aware of their faults, these issues usually are perpetuated. Training was shown to improve competence as a result of external assessment of performance, feedback, and clinical supervision (Brosan et al., 2008). In a study examining competence in cognitive therapists, therapists with postqualification training in cognitive therapy had higher levels of competence than those who did not have this type of training. In this case, postqualification training was defined as completion of a certificate or diploma from a well-known program (Brosan, Reynolds, & Moore, 2006).

Patient outcome. Kingdon, Tyrer, Seivewright, Ferguson, and Murphy (1996) found evidence that patients treated by therapists competent in CBT showed improvement in
depressive symptoms greater than that shown by patients treated by therapists of uncertain competence. The gains were maintained over a 2-year follow-up period. The focus of this study was not on competence but on treatment modality. Therefore, supervision of therapists was not controlled for, and the patient outcome assessment was based on therapist report. These findings do, however, point to the importance of competent therapists in improving patient outcome in the long term.

Trepka, Rees, Shapiro, Hardy, and Barkham (2004) rated sessions of cognitive therapy using the CTS and found that both therapeutic alliance and therapist competence were related to patient outcome. That is, more competent therapists had clients who achieved better outcomes. Although the association between therapeutic alliance and outcome was stronger than that between therapist competence and outcome, when the alliance was controlled statistically for, the relationship between competence and outcome was weakened only slightly. This association could be interpreted as meaning that the effect of therapist competence is independent of and supplemental to the therapeutic alliance. These findings give support to competence reflecting not only the skill of the therapist but also the ability of the client to understand and employ the responsibilities of cognitive therapy.

Patient outcomes were stronger for clients who completed therapy, as compared to those of clients who prematurely terminated therapy (Trepka et al., 2004). This finding was consistent with those of other studies that examined the correlation between therapy dropouts and training level of therapists. According to a review of meta-analyses that focused on therapist training and therapy outcome, Stein and Lambert (1995) found that therapists with more training tend to have fewer clients who terminate therapy prematurely than do
therapists with less training. The results indicated that positive client outcomes were facilitated by many characteristics of the therapist and by the therapeutic relationship. Implications from these findings provide further support that therapeutic skills can be taught and facilitated via training.

Taking the position that competence is a learned skill that is influenced by situational factors, James, Blackburn, Milne, and Reichfelt (2001) examined moderators of therapists’ competence in conjunction with patient outcomes after training in cognitive therapy. They found that three therapist factors were related to competence: training time, clinical experience in cognitive therapy, and therapist gender. With regard to training time, the competence of trainees was found to increase over the course of training. Therapists with more prior experience in cognitive therapy had higher levels of competence. Male therapists increased in competence at a rate higher than that of female therapists. These findings were based on a small sample of 9 men and 11 women, and that the authors were unable to explain this finding, indicating that further investigation is needed in this area. These findings are in opposition to findings from another study examining therapist variables, which suggested that demographic factors and theoretical orientation of the therapist are unrelated to affect patient outcome (Huppert et al., 2001).

While patient change is a desired effect of therapist competence, it is not an adequate or reliable measure (James et al., 2001). Some clients do not improve, despite high levels of therapist competency (Shaw & Dobson, 1988). According to the dual model of psychotherapy set forth by Schulte and Eifert (2002), a set of basic client behaviors is related to treatment success. Clients who are motivated for treatment, cooperative, willing to
explore new patterns of behavior, nonresistant, and willing to self-disclose facilitate the implementation of treatment. An additional finding by James et al. (2001) suggested a significant association between clients found more suitable for cognitive therapy and therapist competence. This finding may imply that clients who are more amenable to cognitive therapy are more likely to create the conditions for therapists to become more competent in cognitive therapy.

Therapists, therefore, must balance the promotion of these client variables, along with implementation procedures. Thus, improved patient outcomes may be dependent on many different factors that may be unrelated to therapist competence (James et al., 2001). Competence may moderate the effects of other process variables, such as the therapeutic alliance or adherence to treatment protocol (Barber et al., 2007). Feeley, DeRubeis, and Gelfand (1999) found evidence to support that the relation between alliance and outcome in cognitive therapy is related to the effect of symptom change on alliance, rather than by the effect of alliance on outcome. They also found that adherence in early sessions predicts early symptom improvement.

**Relationship among adherence, competence, and treatment integrity.**

Adherence refers to the flexible application of a treatment model (Reichelt, James, & Blackburn, 2003) and the degree to which therapists utilize techniques that are consistent with the treatment approach (Hill, O’Grady, & Elkin, 1992). Therefore, a method by which the effectiveness of training can be demonstrated is a measure of competence, which examines adherence to certain treatment methods, the utilization of specific skills (Reichelt et al., 2003), and the adequate application of techniques (Hill et al., 1992). In order to be
competent, adherence must be maintained. Competence, therefore, requires conformance to the guidelines of the treatment (Perepletchikova, Treat, & Kazdin, 2007). However, adherence does not automatically imply competence because while one can remain adherent to treatment protocol, one may not necessarily be competent to provide adequate treatment. Thus, the concepts of adherence and competence are different, but related (Waltz et al., 1993).

In a similar manner, although competence requires a sound therapeutic relationship, competence measures differ from measures of therapeutic alliance. Measures of therapeutic alliance focus both on the relationship between the therapist and client and on the collaboration involved in determining treatment goals. With CBT, the therapeutic relationship and adherence to protocol form the basis of therapists’ skills (Shaw et al., 1999) because in order to assess the integrity of treatment, the therapist must adhere to the treatment protocol while competently performing the appropriate treatment interventions (Waltz et al., 1993). Effective treatments may prove unsuccessful if they are allowed to depart from the treatment protocol (Yeaton & Sechrest, 1981).

While there is still not a definitive linkage between therapist competence and patient outcome, Shaw et al. (1999) found that adherence to manualized therapy is correlated with clinical efficacy. The therapists in this study were trained in CBT, and tapes of their sessions with depressed clients were rated using the CTS to assess the competence level of the therapist. Client outcomes then were assessed to determine the severity of depression posttreatment. Limited support was found for the relationship between therapist competence in CBT and reduction of depressive symptoms. The most important variable was found to be
whether or not the clinicians were able to apply CBT skills in a competent manner, consistent with the CTS.

Treatment integrity, or treatment fidelity, relates to the degree to which the treatment is carried out as planned. If a treatment is not implemented as planned, treatment cannot be empirically validated. This central aspect to the implementation of treatment, though very important, is largely ignored in the literature. Research indicates that CBT, as compared to treatments that are considered non-skill-building interventions, has been implemented with increased consideration to the need for integrity checks. There are three components to treatment integrity: therapist adherence to the treatment protocol, therapist competence, and the differentiation of treatment along critical dimensions. Adherence to protocol and treatment differentiation are correlated, in that a measure of adherence can determine whether or not two treatments are separate. Adherence to treatment allows for the intervention to remain “pure,” meaning that treatment was delivered as intended (Perepletchikova et al., 2007).

Adherence measures are tests of treatment integrity and are essential to sound empirical research (Waltz et al., 1993). When adherence to the treatment protocol is low, the strength of the treatment is expected to be low also. High integrity of treatment demands adequate training (Yeaton & Sechrest, 1981). Because adherence does not guarantee competence (Perepletchikova et al., 2007), there also may be interactions among strength, integrity, and effectiveness of a treatment. With problems that are more severe, adherence to treatment protocol may be especially important (Yeaton & Sechrest, 1981).
Fidelity to the treatment protocol strongly predicts treatment outcome (McHugh et al., 2009). Fidelity is a method for monitoring implementation of an intervention and involves the process of ensuring that the intervention is delivered as intended (Gotham, 2004). In order to maximize fidelity to the training protocol, intensive training is essential. Measuring treatment fidelity is a main aspect of studying treatment outcome because fidelity influences not only the manner in which changes can be attributed to the treatment but also the capability to disseminate the intervention via training (McHugh et al., 2009). Fidelity is determined most often by reviewing treatment sessions and checking for adherence to the treatment protocol (Kendall & Beidas, 2007).

Manipulation checks, which are methods used in research that confirm whether or not the treatment manual is followed and the intervention is performed in a competent manner, allow for conclusions to be drawn regarding treatment effects (Waltz et al., 1993). These checks are necessary to ascertain whether or not the intervention resulted in a change in the dependent measures. A lack of integrity would threaten the internal validity. Furthermore, without integrity, the study cannot be replicated, which, in turn, threatens the external validity. Construct validity may be compromised when evaluating the type of treatment was and its mechanism of effect. Unsystematic error also may occur, compromising the validity and reliability of the statistical conclusion (Perepletchikova et al., 2007).

Testing treatment integrity not only aids in determining how treatments are implemented but also allows for comparisons to be made between different treatment sites. The assessment of adherence and competence additionally may guide the training of therapists, in that information can be gathered in multiple areas, including therapists’
strengths and weaknesses and needs for further training. These treatment manipulation checks also may lead to review or revision of treatment manuals, in that difficulties experienced by many different therapists may reflect a misunderstanding of the manual. In this way, manipulation checks can allow for feedback into the process of manualized treatment (Waltz et al., 1993).

In a study examining the impact of adherence to treatment and therapist competence on treatment outcome, researchers found support for adherence more so than for competence (Hogue et al., 1999). Specifically, in this controlled trial of CBT and multidimensional family therapy, stronger adherence was associated with greater reductions in externalizing behaviors of substance-abusing adolescents. Intermediate levels of adherence predicted the most declines in internalizing behaviors, while high and low levels of adherence were related to smaller improvements. These curvilinear effects indicated the beneficial effects of an intermediate level of adherence, one that is neither overly strict nor overly lenient, to be associated with the greatest improvements. In the CBT condition only, reductions in marijuana usage were associated with greater levels of adherence. Although a relationship between therapist competence and client outcome was not found, these findings were tentative, given the low interrater reliability for the ratings of competence.

The way to ensure that a manipulation has been implemented properly is careful therapist training. Treatment adherence and competence assessment should be part of the training in order to ensure treatment integrity. Training can be performed both directly and indirectly. Direct procedures allow the therapist opportunities to practice skills and involve role-plays, rehearsal, and feedback. Indirect procedures involve presenting information
regarding the intervention and including didactics and written instructions. Supervision also is very important to the training process to decrease the likelihood of deviating from the protocol (Perepletchikova et al., 2007).

Treatment integrity also can be assessed in direct and indirect ways. The direct method involves observing the trainees while in session via videotapes, monitors, or one-way mirrors. Therapist self-reports, writing assignments, and data collection sheets are methods of indirectly assessing integrity. Caution should be taken with relying solely on indirect methods of evaluating treatment integrity because they are subjective and thus may be subject to distortion. They can be used to supplement direct methods, however. Feedback regarding performance also may increase integrity (Perepletchikova et al., 2007).

Based on a review of 147 articles, reviewing 202 treatments, Perepletchikova et al. (2007) found that the systematic implementation of integrity procedures occurs infrequently. In a related manner, the two aspects of treatment integrity, competence and adherence, also were addressed inadequately. In an effort to understand this problem, the researchers examined predictors of integrity implementation. They found that the more specific and exact the treatment, such as CBT, the easier the monitoring of its implementation. Thus, fewer procedurally complex interventions may allow for more uniformity among therapists. With more complex interventions that are process oriented, such as psychodynamic therapy, which includes more abstract components, the implementation process is at an increased risk of degradation caused by the increased difficulty in maintaining integrity. Assuring treatment adherence is a method to ensure treatment differentiation. The authors admit that there may be many more factors that contribute to the paucity of findings of the systematic
implementation of treatment integrity procedures, including therapist and client characteristics and barriers to implementation (Perepletchikova et al., 2007).

**Recommendations for training and assessment of competence.** According to Kaslow (2004), competency-based education must follow a sequential, developmentally informed process. The context of the training environment is significant in effective training. As discussed in previous sections, trainings should include several different components, including didactics, experiential components, and supervision. Training should strive for capability, as well as competency, so as to encourage professional growth. Along with encouraging learning and protecting the public, the assessment of competence helps to determine the effectiveness of a training program.

In order to ensure that the specific knowledge, skills, and abilities have been taught adequately, sufficient assessment methods are critical to ensuring that competence has been achieved. According to Rubin et al. (2007), competence ideally should be assessed in several different ways. Several different initiatives that focus on the assessment of competence include the Education Leadership Conference, APA Task Force on the Assessment of Competence in Professional Psychology, and Assessment of Competency Benchmark Workgroups. The APA Task Force on the Assessment of Competence in Professional Psychology set forth several guiding principles for the assessment of competence (Kaslow et al., 2007). These guidelines apply to the education, training, and credentialing of practicing psychologists. The assessment of competence not only aids in learning, evaluation of progress, and establishment of the quality of training programs but also encourages advancement of the field and protects the consumers of therapeutic services. The first
recommended principle states that the continual assessment of competence throughout one’s professional life requires a culture shift from complacency with knowledge gained in graduate training to a continual motivation to build upon and update this knowledge base throughout one’s professional career. This shift should be initiated in graduate school and continue throughout training, credentialing, and regulation.

The second recommendation refers to the conceptualization of competencies as broad, developmental, and holistic, as opposed to discrete areas of assessment of performance. That is, the assessment of competence should rely not only on knowledge, skills, and abilities of each area of competency but also on the integration of these areas of competence. Additional attention should be paid to the measurement of skills and attitudes. Problem-based learning (Evenson & Hmelo, 2000) was suggested as an aid to the evaluation of incorporating knowledge, skills, and attitudes. This methodology may be useful in learning new knowledge, applying knowledge to clinical problems, assisting in reasoning, teaching others, and operating as a team (Kaslow et al., 2007).

The third principle involves the developmental perspective. This view takes into account the developmental stage of professional progress in terms of novice, intermediate, advanced, etc. This outline would allow for assessment criteria for performance in each area of competency, as expected, depending on developmental stage. Various types of assessments would be appropriate for different points of development.

The fourth principle suggests the integration of both formative and summative approaches. Formative approaches are continuous and developmentally informed processes, that contain the provision of feedback at all stages. This feedback helps to ensure adequate
competence, via learning and performance evaluation. Summative approaches are outcome measures, such as diplomas, certificates, and/or trainings, which enhance competence. Both formative and summative approaches focus on strengths, weaknesses, and problematic areas of needed improvement (Kaslow et al., 2007).

The fifth and sixth principles involve collaboration and fidelity to practice, respectively. With regard to collaboration, educational programs and regulating/credentialing agencies should work together to create coherence and consistency in strategies for evaluating competencies. Multiple methods are suggested for education and credentialing. Techniques for evaluating criteria for licensure and credentialing may begin during graduate school. For example, mock examinations for board certification can be given to students. Assessment methods for competence should reflect fidelity measures that are practical, reliable, and valid. For example, the review of both written work samples and oral interviews is suggested for an examination of clinical proficiency for graduate students and psychologists pursuing board specialties (Kaslow et al., 2007).

The sixth, seventh, eighth, and ninth principles relate to the comprehensive nature of the assessment of competence. Attention should be allotted to the assessment of competence throughout all stages of training and career development. Generic, as well as specialty foundational and functional competencies, should be evaluated in order to strengthen the assessment of competence. The process should be multidimensional, in that myriad methods, along with several different informants, should be used to assess all of the different domains of competency. A multitrait evaluation of competence would involve measuring the integration of knowledge, skills, abilities, attitudes, and performance. Different methods of
assessing competence involve self-reports, supervisor reports, work samples, simulations, and oral examinations. Multiple raters, including supervisors, peers, clients, and the supervisee, can be used to obtain information about competence from various perspectives (Kaslow et al., 2007).

Self-reflection and self-assessment are essential factors to consider implementing into the assessment of competence. As studied by Bennett-Levy (2006), the ability to reflect on and monitor one’s abilities and limitations helps to develop awareness into areas of needed improvement and encourages self-directed learning. The assessment of competence also is strengthened with a focus on interpersonal functioning and professional development. This assessment includes receptivity to supervision and resolution of issues that may impede professional functioning. In order to adequately assess competence, one should also emphasize individual and cultural diversity (Kaslow et al., 2007).

Another important recommendation refers to the multimodal assessment of ethical codes. This assessment involves the utilization of various individuals, including supervisors, faculty, and ethical board members, to review performance. The assessment of capability to adapt skills to novel situations and to generate new knowledge in order to improve competence also should be incorporated. Given that problems may arise in the development of competence, strategies for remediation and management are suggested. The implementation of policies to follow in such an event would be helpful (Kaslow, et al., 2007).

The final principle refers to the training of evaluators of competence. This principle suggests that trainings be available for educators, trainers, and supervisors so that the
assessment of competence is enacted in a valid and reliable manner. Common biases and challenges to the assessment of competence should be highlighted, along with ways to manage these issues. A national conference and/or web-based presentation that highlights best practices for the evaluation of competence is recommended. Furthermore, advice from experts in the field and the creation of an “assessment toolbox,” with valid and reliable measures for ascertaining competence, would also facilitate the assessment of competence (Kaslow et al., 2007).

Waltz et al. (1993) made several recommendations for assessing adherence and competence. The first recommendation involved the definition of competence. A treatment manual or another form of documentation is needed in order to explain how to conduct the treatment competently and to provide guidelines for the therapy. Nonspecific factors, such as warmth and empathy, must be also evaluated relative to the treatment manual. The next recommendation is related to the outline for assessing competence and adherence. The assessment should align with the manipulation check itself.

Another recommendation advised that adherence measures include several items. The first item is that therapist’s behaviors that are exclusive to a specific treatment also are fundamental to the treatment and should not be found in other approaches that are being examined. The next item involves the behaviors of the therapist that are central, but not exclusive to the treatment. The following item regards behaviors that align with the treatment, but are neither essential nor unique to it. The final item involves behaviors that are proscribed. This item is crucial in determining whether or not the protocol is being followed (Waltz et al, 1993).
The final recommendation involved the need for assessment of competence via measurement and validation. Competence must be relevant to the therapeutic context and the individual clients. Important factors to consider when rating competence include the stage of therapy and the complexity of the client, including difficulties and presenting problems. The session should be controlled by randomly selecting sessions to be rated and sampling sessions from beginning, middle, and end of therapy. Clients also differ in their levels of problems, including symptomatology, level of impairment, comorbid issues, and history and duration of the problem (Waltz et al., 1993).

Ratings of difficulty, with regard to presenting problems, could be ascertained and used as a basis for choosing sessions. In addition, skilled raters are needed for accurate judgments regarding competence. These raters should not be affiliated with the study in question to avoid a bias in ratings (Waltz et al., 1993). Clinicians have been found to overestimate their competence significantly relative to ratings by an expert. Furthermore, less competent clinicians tend to overrate their performance more so than more competent clinicians (Brosan et al., 2008).

The authors admit that this process is lengthy and costly, with a hypothetical example given by the authors of three sessions per client x 60 clients, equaling 180 sessions to be rated for adherence measures. In order to rate for competence, 10 sessions x four clients x three therapists yields 120 sessions to be rated. The level of rater training involved with these recommendations was estimated to be just under $2,000 for bachelor’s-level coders for adherence and $18,000 for expert raters for competence. These recommendations, therefore, may be offered hypothetically but within the realistic confines of research studies, may not
be wholly attainable. They are, nevertheless, helpful in the process of assessing adherence and competence (Waltz et al., 1993).
Chapter Three

Hypotheses

As indicated by Barlow et al. (1999), given the gap between large amounts of efficacy research and smaller amounts of effectiveness research, efforts to disseminate empirically supported treatments to professionals in the field should continue. Dissemination and implementation efforts have demonstrated that empirically supported treatments have been implemented successfully in the community (Sholomskas et al., 2005; Westbrook et al., 2008; Steinfeld et al., 2009; Weisz et al., 2009; Scheeres et al., 2008), primary care settings (King et al., 2002), and at the national and state-wide level (McHugh & Barlow, 2010). Meanwhile, programs also must be developed to impact graduate education. Given findings that many graduate programs in psychology are not offering training in evidence-supported treatments, (Crits-Christoph et al., 1995; Weissman et al., 2006), it is imperative to begin exposure to evidence-supported treatments prior to practice in the field.

The current study aimed to examine the competence of graduate level students in CBT after an intensive, skills-based training in CBT. This study was accomplished by randomly assigning participants to two groups: the training group and the control group. Both groups received the same training in CBT. The timing of the videotaped intake session differed between the groups. The training, or experimental, group received the training and then underwent the videotaped intake session. The control group underwent the videotaped intake session and then received the training. It was hypothesized that there would be a significant difference between participants in the training group and participants in the control group in terms of competence in CBT, as evidenced by increases in scores on the
CTS for participants in the training group. Additionally, it was hypothesized that there would be a significant difference between participants in the training group and participants in the control group in terms of therapy skills in CBT, as evidenced by increased scores on the PSI for participants in the training group. It was also hypothesized that there would be a significant difference between participants in the training group and participants in the wait-list control group in terms of therapeutic relationship skills, as evidenced by increased scores on the WAI-Therapist version and WAI-Client version for participants in the training group (Table 1).

This study is novel because it focused on graduate students. As most master’s-level students directly enter the field after earning their Master’s degrees, these students must be trained to competence while still in graduate school so they are able to practice as competent professionals after they graduate. The present study incorporated several recommendations from previous studies and is in close alignment with the Beck initiative for the dissemination of cognitive therapy (Stirman et al., 2010). Multiple measures of competence were used (Shaw & Dobson, 1988), to measure competence in CBT in terms of knowledge, skills, abilities, and therapeutic alliance. These measures are both trainee and supervisor ratings of competence. Attention was allotted to case formulation and conceptualization (Padesky, 1996), and several different teaching modalities were used during the training (Alberts & Edelstein, 1990).
Table 1
*Hypotheses Summary*

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Rationale</th>
<th>Formula</th>
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<tbody>
<tr>
<td><strong>H1:</strong> There will be a significant difference between participants in the training group and participants in the control group in terms of competence, as measured by the CTS.</td>
<td>The training group should show significantly higher scores on the measure for competence.</td>
<td>Competence as measured by significantly higher scores on the CTS for the training group. MANOVA, $t$-test.</td>
</tr>
<tr>
<td><strong>H2:</strong> There will be a significant difference between participants in the training group and participants in the control group in terms of skills in CBT, as measured by the PSI.</td>
<td>The training group should show significantly higher scores on the measure for CBT skills.</td>
<td>CBT skills as measured by significantly higher scores on the PSI for the training group. MANOVA, $t$-test.</td>
</tr>
<tr>
<td><strong>H3:</strong> There will be a significant difference between participants in the training group and participants in the control group in terms of therapeutic relationship skills, as measured by the WAI-T and WAI-C.</td>
<td>The training group should show significantly higher scores on the measure for therapeutic relationship skills.</td>
<td>Therapeutic relationship skills as measured by significantly higher scores on the WAI-T and WAI-C for the training group. MANOVA, $t$-test.</td>
</tr>
</tbody>
</table>

*Note.* CTS = Cognitive Therapy Scale; CBT = Cognitive-behavioral therapy; PSI = Psychotherapy Skills Inventory; WAI-T = Working Alliance Inventory- Therapist version; WAI-C = Working Alliance Inventory- Client version.
Chapter Four

Overview

This study examining the impact of an intensive skills-based training in CBT on the competence level of graduate students in CBT has an experimental design. The purpose of the study was to determine whether or not there would be a difference in performance level, in terms of competence, therapy skills, and therapeutic relationship skills, between the training group and the control group after training in CBT. It was hypothesized that there would be a significant difference between participants in the training group and participants in the control group in terms of competence in CBT, as evidenced by increases in scores on the CTS for participants in the training group. Additionally, it was hypothesized that there would be a significant difference between participants in the training group and participants in the control group in terms of therapy skills in CBT, as evidenced by increased scores on the PSI for participants in the training group. It was also hypothesized that there would be a significant difference between participants in the training group and participants in the control group in terms of therapeutic relationship skills, as evidenced by increased scores on the WAI-T and WAI-C for participants in the training group.

The training program was loosely based on Beck’s dissemination studies of trainings in cognitive therapy to community clinical settings. In an effort to further this dissemination initiative, this study was a pilot program in delivering a training program to graduate students at the Philadelphia College of Osteopathic Medicine (PCOM). PCOM graduate students, particularly master’s students, were studied because research has centered primarily on doctoral training and practice in the community setting. Given that most master’s-level
students do not enter a doctoral program immediately upon graduation, but instead enter the professional field as practicing clinicians, procuring training of this type is necessary.

**Design and Design Justification**

This study has an experimental, between-subjects design, in that participants were randomly assigned to either a training group or a control group. The main goal of the program was to evaluate the effectiveness of an evidence-based clinical practice approach. The training program was evaluated in terms of the participants’ competence in CBT, skills in CBT, and therapeutic relationship skills. It was expected for the participants’ competence in CBT, skills in CBT, and therapeutic relationship skills to be higher in the training (experimental) group, which is the group that received the training prior to the videotaped intake session, than the control group. Thus, the increase in these factors was dependent, in part, upon the training itself.

**Participants**

PCOM is an osteopathic medical school located just outside of Philadelphia, PA. This college is dedicated to educating primary care physicians. Advanced-degree programs are offered also in psychology, biomedical studies, and physician assistant studies. The graduate psychology program offers two doctoral degree programs: PsyD in Clinical Psychology and PsyD in School Psychology. There are three master’s degree programs: Master’s of Science in Counseling and Clinical Health Psychology, Master’s of Science in School Psychology, and Master’s of Science in Organizational Development and Leadership. There is also an Educational Specialist degree in School Psychology.
The 12 participants in this study were graduate students enrolled in the master’s and doctoral degree programs in psychology at PCOM. Two of the participants were first-year students in the master’s program, four of the participants were second-year students in the master’s program, four of the participants were first-year students in the doctoral program, one participant was a second-year student in the doctoral program, and one participant was a third-year student in the doctoral program.

No one was excluded because of gender and/or race. Participants were recruited via an email outlining the training program, along with an invitation to attend the training. This design was chosen because the participation of the students was on a voluntary basis. Therefore, the sample of participants was self-selected, in that the participants responded to the email because they were interested in receiving the training in CBT.

**Inclusion and Exclusion Criteria**

**Inclusion criteria.** All of the participants had to be currently enrolled in either the master’s or the doctoral programs in psychology at PCOM. They also had to be over the age of 18 years.

**Exclusion criteria.** Participants were excluded from the study if they were not enrolled in a psychology program at PCOM. Participants also were excluded if they were nonEnglish speaking and if they already had obtained a doctoral degree in clinical psychology.

**Recruitment**

An email was sent from the psychology program coordinator to all PCOM psychology students, informing them of the study and inviting them to participate in this
training opportunity in CBT (Appendix A). Potential participants were asked to respond to the Responsible Investigator via telephone or email by a certain date to indicate their interest in attending the training. Once they contacted the investigator, they were reminded of the date and time of the training and asked if they were able to attend the training. If they were able to do so, the Responsible Investigator registered them by recording their names, e-mail addresses, program and year of study, and telephone numbers.

**Screening criteria.** The Responsible Investigator conducted the screening via telephone or email when participants called or emailed to register. The potential participants were asked whether or not they were currently enrolled in a psychology program at PCOM, whether or not they were English speaking, and whether or not they already had a doctoral degree in psychology. If they met the screening criteria, they were registered for the training.

**Plan for Informed Consent Procedures**

Participants were asked for information, such as names, that may identify them at a later time. Therefore, an informed consent form was signed. This informed consent let the participants know that they would be asked to provide information that may lead to their identification at a later time. They were signing to acknowledge that they understood this possibility. The participants in the training group were given the informed consent form on the same day of the training, just prior to the training. The participants in the control group were given the informed consent form on the same day of their videotaped intake session, just prior to the session.

Participants in both groups were asked to read and sign the form. They also were encouraged to ask further questions and given a telephone number for the Principal
Investigator to call, if needed. While this study involved minimal risks to the participants, videotaping was involved. Participants were advised that if they were not comfortable signing this form, there would be no consequences to their standing as a student and that no faculty members would be advised of their refusal to sign the informed consent. All of the participants signed the informed consent forms.

Measures

Pre-training Survey. The Pre-training Survey designed for this study requested information, such as name, psychology program the participants were enrolled in, level of experience (years spent working clinically in the field, degrees, certifications, and/or licenses), theoretical orientation, and attitude toward CBT (positive or negative, as indicated by several forced-choice questions). Participants completed this survey prior to the training (Appendix B).

Post-training Survey. The Post-training Survey also was administered and requested information, such as name, feedback regarding the training, satisfaction with the training and CBT, and likelihood that the participant will use CBT in clinical practice. Participants completed this survey after the training (Appendix C).

Cognitive Therapy Scale. The Cognitive Therapy Scale (CTS; Young & Beck, 1980) is an 11-item, observer-rated measure. The CTS uses a 7-point Lickert-type scale, which assesses the competent delivery of CBT. This measure associates competence to elements of adherence and is the most widely used instrument in randomized controlled studies (Barber et al., 2007). The CTS is used to rate audiotaped or videotaped sessions of CBT and assesses general therapeutic skills and the therapist’s ability to structure sessions
CBT TRAINING

(Shaw et al., 1999). It has an internal reliability of .95 and interrater reliabilities ranging from .74 (Barber et al., 2007) to .94 (Trepka et al., 2004). Interrater reliability ratings improved when judges were trained together (Barber et al., 2007). Findings on validity indicate that this scale adequately discriminates between acceptable and unacceptable sessions of CBT. This scale is highly homogeneous, and the psychometric properties also provide support for the usage of a single rater (Vallis, Shaw, & Dobson, 1986).

The items cover general interview procedures, including agenda setting, feedback, collaboration, and pacing. Interpersonal effectiveness is measured via items regarding empathy, effectiveness, and professionalism. The area of specific cognitive-behavioral techniques is measured with items relating to guided discovery, conceptualization, cognitive focus, cognitive techniques, behavioral techniques, and homework (Trepka et al., 2004). The CTS also predicts improvement in symptoms of personality disorders and depression (Kindgon et al., 1996; Shaw, Elkin, Yamaguchi, Olmstead, Vallis, & Dobson, 1999; Trepka et al., 2004). The CTS does not, however, predict global symptoms of improvement, as reported by the client (Shaw et al., 1999). A score of 39 or below is considered a red-line violation because it is below the desired standard of competence. This scale is used in collaboration with videotaped or audiotaped psychotherapy sessions and the *Cognitive Therapy Rating Manual* (Young & Beck, 1980).

**Psychotherapy Skills Inventory.** The Psychotherapy Skills Inventory (PSI; Philadelphia College of Osteopathic Medicine, 2000) is a 30-item inventory that examines the extent to which certain elements of the therapy session are covered by the therapist and measures therapy according to the stages of change. Items include agenda setting; therapist
responses that indicate empathy, warmth, and concern; creating a safe and comfortable atmosphere; eliciting feedback; facilitating collaboration; reflecting content; and promoting awareness of feelings. The measure is newly developed, and there are currently no published studies on the PSI. Therefore, there are no findings of validity and reliability. This inventory also is used to rate audiotaped or videotaped psychotherapy sessions.

**Working Alliance Inventory.** The Working Alliance Inventory (WAI; Horvath & Greenberg, 1989) is a self-report, 36-item inventory that measures nonspecific variables that may contribute to the therapeutic relationship and success in counseling. There are two versions of the WAI: the client version and the therapist version. This study utilized both versions. Items are rated on a 7-point Likert-type scale. The WAI is a widely used instrument, and it has adequate reliability, with reliability estimates of .93 for the client version and .87 for the therapist version. Findings support the convergent and predictive validity of the WAI scales.

**Procedure**

An email originating from the PCOM psychology program coordinator and detailing the training, including the date and time of the training, was sent to all PCOM psychology students. PCOM students routinely receive email announcements regarding student notifications, advocacy issues, and requests for involvement in surveys. Students who were interested in attending the training were asked to contact the Responsible Investigator, via telephone or email, by a certain date. The participants who contacted the Responsible Investigator were reminded of the date and time of the training and asked if they were able to
attend the training session. They also were screened in order to determine whether or not they met the inclusion and exclusion criteria.

If they met the inclusion criteria and did not meet any of the exclusionary criteria and were able to attend the training session, they were registered for the training. The Responsible Investigator registered the participants by recording their names, email addresses, telephone numbers, and program and year of study.

The participants then were assigned randomly, using a table of random numbers, to either the training (experimental) group or the control group. Participants in the training group received the training prior to the videotaped intake session. Participants in the control group were run through the videotaped intake session prior to the training and notified of the date and time of their videotaped intake session.

**Trainings.** The training consisted of a 1-day, 7-hour-long training. All of the participants received the same training, on the same day. At the beginning of the training, the participants read and signed the informed consent form and completed the Pre-training Survey.

The training was led by Brad Rosenfield, PsyD, full-time faculty member in the psychology department, at PCOM, and Lauren Lane-Herman, fourth-year PsyD candidate at PCOM. The trainings consisted of didactics in CBT, role-plays, discussions, viewing of videotapes of experts in CBT, and consultation. The topics included an introduction to CBT, an overview of the cognitive model, cognitive and behavioral interventions, discussion of the stages of treatment, motivational enhancement, case conceptualization, session structure, and
case discussions. At the end of the training, the participants completed the Post-training Survey.

**Videotaped Psychotherapy Intake Sessions.** All of the participants were run through a videotaped psychotherapy intake session with the same standardized patient (Appendix D). The timing of the videotaped intake session differed between groups. The participants in the training group went through the videotaped intake session after they received the training. The participants in the control group went through the videotaped intake session prior to receiving the training. The participants in the control group read and signed the informed consent forms on the same day of the videotaped intake session.

The videotaped intake session was 45 minutes long and allowed for a measurement of competence and skills in CBT. The intake session was videotaped by the coordinator of the Standardized Patient Program at PCOM. Upon completion of the sessions, all participants completed the WAI-Therapist version (WAI-T). The standardized patient completed the WAI-Client version (WAI-C).

Two raters viewed the videotaped sessions and used the CTS and PSI to rate the participants in terms of competence in CBT, therapy skills, and therapeutic relationship skills. The raters were both fourth-year, Clinical PsyD candidates at PCOM. One of the raters was the Responsible Investigator for this study. The raters viewed and rated the videotapes separately from each other, and they did not discuss the ratings that were assigned to each participant.
The rating forms (CTS, PSI, WAI-T, and WAI-C), the Pre-training Surveys, Post-training Surveys, and videotaped intake sessions were all coded with numbers, instead of names. The forms and videotapes were all held in a secure and confidential location.

**Analysis of Risk/Benefit Ratio**

**Potential Risk to Participants.** There was minimal risk involved in this study, with the only risk being mild discomfort to the participant while being videotaped for the intake session. The participants may not have been accustomed to being videotaped in a simulated situation, and videotaping may have caused slight embarrassment, nervousness, or anxiety. However, videotaping is employed regularly in the graduate psychology programs at PCOM as part of the Standardized Patient Program. These measures were essential to determine whether or not the training was responsible for an increase in the participants’ competence in CBT. Furthermore, these measures were kept confidential, used only for the purposes of the present study, and were destroyed after they were rated.

**Potential Benefit to Participants.** There were several potential benefits of this training to the participants. One benefit included increasing the participants’ knowledge and skills in CBT. With this increased knowledge in the practice of CBT, including the implementation of specific techniques, the participants may be better able to apply this knowledge in their clinical work. This training may give them a clinical advantage over their colleagues, who may not have had such training. The participants also may have an advantage with this additional knowledge, compared to classmates who may not have attended the training. This additional knowledge may benefit them in their coursework, as they may be more informed about CBT.
Another benefit was the intensive nature of this training, which was equivalent to training for professional clinicians already practicing in the field. Therefore, these participants may have more knowledge than many other professionals and graduate students. They typically would not have access to information of this nature until entering into a doctoral program, unless they sought out training on their own. If these participants were planning on enrolling in a doctoral program, this training may be excellent preparation.

**Potential Benefits to Others.** This training program not only benefits the participants but also may benefit the participants’ clients, if the participants practice clinically. It was hypothesized that after completion of the training, the participants’ competence in CBT would increase. With an increase in competence, the participants who were practicing clinically may be able to apply their CBT knowledge, skills, and abilities to positively benefit their clients.

As described, the several potential benefits to the participants of this training outweighed the potential risks to the participants, and therefore, the risks were worth the benefits.

**Procedures for Maintaining Confidentiality**

After collection of the Pre-training Survey, Post-training Survey, CTS, PSI, WAI-T, WAI-C, and videotapes, all of the information was coded with identification numbers, rather than names, in an effort to ensure confidentiality. The forms and videotapes were placed in locked cabinets and computer files were password protected. After the videotapes were coded, they were destroyed.
Chapter Five

Results

There were a total of 12 participants, with seven in the training group and five in the control group. Videorecorded data were collected on 11 of the 12. The missing data resulted from a malfunction in recording instruments for one of the training-group participants. Therefore, data were collected on six participants in the training group and five participants in the control group.

Two raters viewed the videotaped intake sessions of the participants and independently rated the videotapes, using the PSI and CTS to measure skills and competence in CBT. Rater 1 was the Responsible Investigator for this study and was not blind to the conditions of the participants. Rater 2 was blind to the conditions of the participants. Each of the raters’ findings, along with an average of both the raters’ scores, is reported.

Rater 1’s findings.

Rater 1 was not blind to the participants’ assignment of condition. The training group and the control group were first compared by using independent t-tests to examine the significance of the differences between the means of each group on each measure. For Rater 1 (the Responsible Investigator), the PSI ratings for the training group ($M = 53.6667, SD = 9.07010$) were significantly higher than the PSI ratings for the control group ($M = 29.200, SD = 16.43776$), with equal variances assumed ($t(9) = -3.138, p < .012$). In a similar manner, on the CTS, the ratings for the training group ($M = 35.333, SD = 8.06639$) were significantly higher than the ratings for the control group ($M = 18.8, SD = 9.44458$), with equal variances assumed ($t(9) = -3.136, p < .012$). While the results were higher for the training group on
the WAI-T ($M = 47.8333$, $SD = 4.95648$) and the WAI-C ($M = 53.8333$, $SD = 7.41395$) than for the control group on the WAI-T ($M = 40.6000$, $SD = 16.30337$) and the WAI-C ($M = 48.8000$, $SD = 4.54973$), these findings were not significantly different (see Table 2).

### Table 2

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Std. Deviation</th>
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<td>PSI</td>
<td>Control</td>
<td>29.2000</td>
<td>16.43776</td>
</tr>
<tr>
<td></td>
<td>Training</td>
<td>53.6667</td>
<td>9.07010</td>
</tr>
<tr>
<td>CTS</td>
<td>Control</td>
<td>18.8000</td>
<td>9.44458</td>
</tr>
<tr>
<td></td>
<td>Training</td>
<td>35.3333</td>
<td>8.06639</td>
</tr>
<tr>
<td>WAI-T</td>
<td>Control</td>
<td>40.6000</td>
<td>16.30337</td>
</tr>
<tr>
<td></td>
<td>Training</td>
<td>47.8333</td>
<td>4.95648</td>
</tr>
<tr>
<td>WAI-C</td>
<td>Control</td>
<td>48.8000</td>
<td>4.54973</td>
</tr>
<tr>
<td></td>
<td>Training</td>
<td>53.8333</td>
<td>7.41395</td>
</tr>
</tbody>
</table>

*Note. $N$ = number of participants.*

Since there were more than one dependent variable, a MANOVA provided a more conservative test of this hypothesis. An alpha level of .05 was used, with group membership as the independent variable and scores on the PSI, WAI-C, and WAI-T as the dependent variables. These three dependent variables were significantly correlated, which met the assumptions of MANOVA. Box’s test of the equality of the covariance matrices was not statistically significant (Box’s $M = 14.93$, $F(6, 517.028) = 1.547, p = .161$). The MANOVA yielded results that were not statistically significant (Wilks Lambda = .451, $F(3,7) = 2.842, p = .115$). The results of the MANOVA will be used, rather than using multiple $t$-tests.
Furthermore, given the small number of participants \((n = 11)\), the power was only \(0.439\), indicating that if there was a significant difference between the groups in the population, there was only a 44% chance of detecting the difference. The findings from this analysis indicate that there was not a significant difference between the training group and the control group, in terms of competence and skills in CBT and therapeutic relationship skills. These results run counter to the hypothesis that there would be a significant difference between the groups after the training in CBT.

Interestingly, statistical analysis using \(t\)-tests indicated some statistical significance for the videotapes rated by Rater 1, but multiple \(t\)-tests actually yielded a corrected alpha level of \((1-(1-)^2 = 0.19)\), which is why the more conservative MANOVA was appropriate (see Table 3).

Table 3

*Rater 1’s \(t\)-Test for Equality of Means*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Significance (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI</td>
<td>Equal variances assumed</td>
<td>.012*</td>
<td>-24.46667</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>.025*</td>
<td>-24.46667</td>
</tr>
<tr>
<td>CTS</td>
<td>Equal variances assumed</td>
<td>.012*</td>
<td>-16.5333</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>.015*</td>
<td>-16.5333</td>
</tr>
<tr>
<td>WAI-T</td>
<td>Equal variances assumed</td>
<td>.325</td>
<td>-7.23333</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>.386</td>
<td>-7.23333</td>
</tr>
<tr>
<td>WAI-C</td>
<td>Equal variances assumed</td>
<td>.220</td>
<td>-5.03333</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>.203</td>
<td>-5.03333</td>
</tr>
</tbody>
</table>

* \(p < .05\), two-tailed.
**Rater 2’s findings.**

Unlike Rater 1, Rater 2 was blind to the participants’ conditions. Rater 2’s between-group ratings were not statistically significant (see Table 4).

<table>
<thead>
<tr>
<th>Measure</th>
<th>Equal variances assumed</th>
<th>Measure</th>
<th>Equal variances assumed</th>
<th>Measure</th>
<th>Equal variances assumed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI</td>
<td>-1.222</td>
<td>CTS</td>
<td>.445</td>
<td>WAI-T</td>
<td>-1.041</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td></td>
<td>9</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>.253</td>
<td></td>
<td>.667</td>
<td></td>
<td>.325</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.253</td>
<td></td>
<td>.667</td>
<td></td>
<td>.325</td>
</tr>
<tr>
<td></td>
<td>-6.43333</td>
<td></td>
<td>1.60000</td>
<td></td>
<td>-7.23333</td>
</tr>
<tr>
<td></td>
<td>5.26356</td>
<td></td>
<td>3.59485</td>
<td></td>
<td>6.95125</td>
</tr>
</tbody>
</table>

**Comparison of Rater 1 and Rater 2’s scores.**

In addition, group statistics were run in order to compare the ratings from Rater 1 and Rater 2. Rater 1 assigned scores on the PSI ($M = 42.5455, SD = 17.6769$) lower than those assigned by Rater 2 ($M = 51.9091, SD = 8.90454$). Rater 1 also assigned scores on the CTS ($M = 27.8182, SD = 11.94837$) lower than those assigned by Rater 2 ($M = 32.7273, SD = 5.69370$). Although there was a difference in scores between the raters, there was not a large discrepancy between the raters (see Table 5).
Table 5

**Group Statistics**

<table>
<thead>
<tr>
<th>Rater</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI</td>
<td>1</td>
<td>42.5455</td>
<td>17.67690</td>
<td>5.32979</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>51.9091</td>
<td>8.90454</td>
<td>2.68482</td>
</tr>
<tr>
<td>CTS</td>
<td>1</td>
<td>27.8182</td>
<td>11.94837</td>
<td>3.60257</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>32.7273</td>
<td>5.69370</td>
<td>1.71671</td>
</tr>
</tbody>
</table>

*Note.* N = number of participants.

With equal variances assumed, *t*-test comparisons of the two raters were conducted, and the raters’ assignments of scores were not significantly different between groups on the PSI, *t*(14.768) = -1.569, *p* = .138 or the CTS, *t*(14.139) = -1.230, *p* = .238 (see Table 6).

Table 6

**Independent Samples Test**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Levene’s Test for Equality of Variances</th>
<th><em>t</em>-Test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>F</em></td>
<td>Significance</td>
</tr>
<tr>
<td>PSI</td>
<td>Equal variances assumed</td>
<td>7.042</td>
</tr>
<tr>
<td>CTS</td>
<td>Equal variances assumed</td>
<td>16.668</td>
</tr>
</tbody>
</table>

*Note.* *df* = degrees of freedom, *F* = *F*-statistics, *t* = *t*-test statistics

As a result of the discrepancy between ratings, a decision was made to average the ratings between the raters and to test the significance between groups using average ratings.
as the dependent variables (see Table 7). When the findings from Rater 1 and Rater 2 were averaged and tested, with equal variances assumed, the results of the test for independent groups were statistically significant for the PSI only, with \( t(9) = -2.897, p = .018 \). However, the averaged results approached significance only for the CTS, with \( t(9) = -2.141, p = .061 \).

These results indicate that the average scores of both raters yielded a statistically significant difference between the training and control group in skills in CBT, as measured by the PSI. However, the average scores did not reveal statistically significant differences between the groups in terms of competence as measured by the CTS (see Table 8).

**Table 7**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>avgPSI</td>
<td>control</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>experimental</td>
<td>6</td>
</tr>
<tr>
<td>avgCTS</td>
<td>control</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>experimental</td>
<td>6</td>
</tr>
<tr>
<td>avgWAI-T</td>
<td>control</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>experimental</td>
<td>6</td>
</tr>
<tr>
<td>avgWAI</td>
<td>control</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>experimental</td>
<td>6</td>
</tr>
</tbody>
</table>

*Note. N = number of participants.*
Table 8

<table>
<thead>
<tr>
<th>Measure</th>
<th>Measure Differences</th>
<th>Std. Error Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI</td>
<td>Equal variances assumed</td>
<td>-15.45000</td>
</tr>
<tr>
<td>CTS</td>
<td>Equal variances assumed</td>
<td>-7.46667</td>
</tr>
<tr>
<td>WAI-T</td>
<td>Equal variances assumed</td>
<td>-6.13333</td>
</tr>
<tr>
<td>WAI-C</td>
<td>Equal variances assumed</td>
<td>-5.75333</td>
</tr>
</tbody>
</table>

*p < .05, 2-tailed. Note. *t* = *t*-Test, *df* = degrees of freedom.

### Correlations between measures.

Further analysis was conducted to assess the degree of linear relationships between the measures used for this study.

#### Rater 1: Correlations between measures.

For Rater 1, there was a high correlation between the PSI and CTS (*r* = .928) and a moderate correlation between the PSI and the WAI-T (*r* = .590). The PSI and WAI-C did not correlate significantly with each other (*r* = .053) and neither did the CTS and WAI-C (*r* = .127). Alpha levels of *p* < .05 were used (see Table 9).
Table 9

*Rater 1’s Correlations Between Measures*

<table>
<thead>
<tr>
<th>Measure</th>
<th>PSI</th>
<th>CTS</th>
<th>WAI-T</th>
<th>WAI-C</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI Pearson Correlation</td>
<td>1</td>
<td>.928</td>
<td>.590</td>
<td>.053</td>
</tr>
<tr>
<td>Significance (1-tailed)</td>
<td>.000**</td>
<td>.028*</td>
<td>.439</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>CTS Pearson Correlation</td>
<td>1</td>
<td>.458</td>
<td>.127</td>
<td></td>
</tr>
<tr>
<td>Significance (1-tailed)</td>
<td></td>
<td>.078</td>
<td>.355</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>WAI-T Pearson Correlation</td>
<td>1</td>
<td></td>
<td>.135</td>
<td></td>
</tr>
<tr>
<td>Significance (1-tailed)</td>
<td></td>
<td></td>
<td>.346</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>11</td>
<td></td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>WAI-C Pearson Correlation</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05, 1-tailed. ** p < .01, 1-tailed.

*Rater 2: Correlations between measures.*

For Rater 2, there was also a moderate correlation between the PSI and CTS (r = .692). The relationship between the PSI and WAI-T and the CTS and WAI-C approached significance. Alpha levels of p < .05 were used (see Table 10).
Table 10

**Rater 2’s Correlations Between Measures**

<table>
<thead>
<tr>
<th>Measure</th>
<th>PSI</th>
<th>CTS</th>
<th>WAI-T</th>
<th>WAI-C</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI Pearson Correlation</td>
<td>1</td>
<td>.692</td>
<td>.452</td>
<td>.334</td>
</tr>
<tr>
<td>Significance (1-tailed)</td>
<td>.009**</td>
<td>.082</td>
<td>.157</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>CTS Pearson Correlation</td>
<td>1</td>
<td>.123</td>
<td>.421</td>
<td></td>
</tr>
<tr>
<td>Significance (1-tailed)</td>
<td></td>
<td>.359</td>
<td>.099</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>WAI-T Pearson Correlation</td>
<td></td>
<td></td>
<td></td>
<td>.346</td>
</tr>
<tr>
<td>Significance (1-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>11</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WAI-C Pearson Correlation</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Significance (1-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>

* *p < .05, 1-tailed.  **p < .01, 1-tailed.

**Average of Rater 1 and Rater 2.**

When the ratings for Raters 1 and 2 were combined, a high correlation was found for the CTS and PSI ($r = .871$) and a moderate correlation for the CTS and the WAI-C ($r = .615$). A moderate correlation was found between the PSI and the WAI-T ($r = .591$). The WAI-T and the WAI-C were also correlated ($r = .669$). Alpha levels of $p < .05$ were used (see Table 11).
Table 11

*Rater 1 and 2’s Combined Correlations Between Measures*

<table>
<thead>
<tr>
<th>Measure</th>
<th>PSI</th>
<th>CTS</th>
<th>WAI-T</th>
<th>WAI-C</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI Pearson Correlation</td>
<td>1</td>
<td>.871</td>
<td>.591*</td>
<td>.609*</td>
</tr>
<tr>
<td>Significance (1-tailed)</td>
<td>.000**</td>
<td>.028</td>
<td>.023</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>CTS Pearson Correlation</td>
<td>1</td>
<td>.515</td>
<td>.615</td>
<td></td>
</tr>
<tr>
<td>Significance (1-tailed)</td>
<td></td>
<td>.053</td>
<td>.022*</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>WAI-T Pearson Correlation</td>
<td></td>
<td>1</td>
<td>.669</td>
<td></td>
</tr>
<tr>
<td>Significance (1-tailed)</td>
<td></td>
<td></td>
<td></td>
<td>.012*</td>
</tr>
<tr>
<td>N</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>WAI-C Pearson Correlation</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Significance (1-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>

* p < .05, 1-tailed. ** p < .01, 1-tailed.
Chapter Six

Discussion

Overall, the results of the study do not support the original hypothesis that an intensive (7-hour), skills-based training in CBT would result in improvement in graduate students’ competence and skills in CBT, in that the most conservative statistical analyses failed to find significant differences between the training and control groups.

Several possible explanations for these findings range from the statistical to the strategic. Specifically, one possible explanation may be the small number of participants in this study, which led to a very low power (.439). Had the number of participants and power been increased, the study may have demonstrated statistical significance. This notion is supported with the use of t-tests. Specifically, using a less stringent criterion and running the risk of an inflated alpha level, t-tests revealed a significant difference between the groups in terms of skills and competence in CBT for Rater 1.

Another explanation for the lack of significant findings involves the limitations of the training. A single day of training may not be enough instruction or practice for competence to improve. Participants, who were PCOM graduate students, volunteered their time to attend this training. Given the time restriction of graduate students, caused by classes, work, and families, along with the effort to extend this training to as many students as possible, this training took place during 1 day. Although 1-day trainings have been found to positively benefit experienced professionals already practicing in the field, abbreviated trainings may not provide enough time for novices to acquire the requisite knowledge and skills needed for competence (Chambless, 1999; King et al., 2002). Consequently, these findings support the
greater duration of training recommended by such widely recognized “gold-standard”
cognitive therapy training programs, such as the Beck Institute and their associated Beck
Initiative.

There were several additional limitations to this study. The type of participants
(doctoral students enrolled in a clinical psychology program) also limits the generalizability.
PCOM is grounded in a cognitive-behavioral orientation, and therefore, many of the students
either will adopt or will have adopted a cognitive-behavioral perspective. Therefore, many,
if not all, of these students already have been exposed to CBT as part of their graduate
programs and thus either might have had a working knowledge of CBT or had already been
applying these skills in clinical practice. This ceiling effect may have limited the differences
between groups because their level of knowledge in CBT was high prior to the training. In
fact, although not controlled for in the study, some of the participants had in fact attained
master’s degrees in explicitly CBT-oriented programs, such as those at PCOM.

Further, because the participants in this study already had substantial knowledge of
CBT and empirically supported practices, application of the training program to other
populations, such as working professionals, of alternate orientations and limited exposure to
empirically supported CBT practices may have demonstrated greater impact on the
participants’ knowledge base. For these reasons, the external validity of the study was
threatened, given the particular participant sample of this study and possible ceiling effect.

In addition, the lack of significant findings also may be explained by the reliability of
methods used to measure competence. Trepka et al. (2004) indicated that measurement of
only one therapy session may lead to lowered competence scores merely because competence
CBT TRAINING

may vary according to the session or stage of therapy. Consequently, a single session of therapy may not fully reflect relevant contextual factors that may affect ratings of competency (Kazantzis, 2003).

Further, the WAI-T and WAI-C were used to measure the therapeutic relationship in a videotaped intake session for the present study. The session was a first-time meeting between the research participant, or the “therapist,” and the standardized patient, or the “client.” The simulated therapy session may not have allowed for a valid measure of a relationship between an actual therapist and client. Many existing studies examining the therapeutic relationship utilize practicing clinicians and their actual patients during treatment, rather than intake (Martin, Garske, & Davis, 2000). Measurement during an actual treatment session, as opposed to during a simulated intake session with a standardized patient, may lead to a more realistic rating of the therapeutic alliance. In addition, because of the multiplicity of factors involved in the therapeutic relationship, a single therapy session, especially an intake session, may have been insufficient to build and adequately measure a valid therapeutic relationship and competence.

A central factor relating to the therapeutic relationship may be the duration of the relationship. In other words, the relationship may differ at varying stages of therapy. The present study utilized an intake session, which is an initial meeting between the therapist and client. Initial sessions are typically information-gathering sessions, with the therapist determining preliminary diagnoses and treatment goals. In fact, there is good empirical evidence that a more accurate assessment of the therapeutic relationship may be determined during the fourth or fifth session, after the therapist and client have had adequate time
together (Martin et al., 2000). Hence, the therapeutic relationship typically starts during the intake and grows during subsequent sessions. Therefore, the intake session may not provide the best measure of the therapeutic relationship.

**Competence**

There is a paucity of research into competency training. There are several reasons for this lacuna in the literature, including small subject pools, high costs of training and supervision, and the lack of an empirically based competency training model (Bennett-Levy, McManus, Westling, & Fennell, 2009).

Competency viewed from a developmental perspective argues against a massed, 1-day training. The Competency Benchmarks model put forth by Fouad et al (2009) discusses a developmental view of competence. According to this model, core foundational and functional competencies build upon previously learned skills. There are three levels of development, including readiness for practicum, internship, and early career practice. There are also 15 competencies that are defined and divided into two categories: core competencies and functional competencies. The core and functional competencies span the stages of professional development.

Core competencies are the foundational knowledge, skills, and abilities that are minimal expectations of psychologists. The core competencies include professionalism, reflective practice, scientific knowledge and methods, relationships, diversity, ethical and legal standards, and interdisciplinary systems. Functional competencies refer to the functions of psychologists. The functional competencies include assessment, intervention, consultation, research and evaluation, supervision, teaching, administration, and advocacy.
There are several implications for training doctoral-level students to competence. The first is designing a trajectory of classes in which students can build their skill levels, based on each successive class. Numerous assessments of competence are recommended. The second implication relates to the need for benchmarks, or operationally defined behavioral anchors that identify the expectations of performance level for each developmental level. Benchmarks can further serve as a means of determining whether or not a given competency has been achieved and as a comparison with which to measure areas of weakness or remediation. Benchmarks help with addressing specific needs of the students and helps to guide and sequence training. Yearly evaluations would help to deal with concerns as they arise. The third implication involves the clarification of the competencies that trainees must acquire for practicum, internship, and early practice (Fouad et al., 2009).

Kaslow et al. (2009) presented a “toolkit” for the assessment of students’ and professionals’ competence in professional psychology. This toolkit utilized the cube model put forth by the Assessment of Competency Benchmarks Workgroup (Fouad et al., 2009). Designed to complement the suggestions of the Workgroup, the toolkit was developed to address the need for best practice resources for graduates, including those helpful for assessment of competence for internship, postdoctoral programs, and licensing boards.

The assessment tools that are recommended include 360-degree evaluations; annual/rotation performance reviews; case presentation reviews; client process and outcome data; competency evaluation rating forms; consumer surveys; live or recorded performance ratings; objective, structured clinical examinations; portfolios; record reviews; self-
assessments; simulations and role-plays; standardized client interviews; structured oral
examinations; and written examinations.

Assessment from multiple areas, including behaviors and attitude of the person being
assessed, is included in 360-degree evaluations. In order to implement this tool, rating
instruments and raters should be selected. Raters can be supervisors, colleagues, supervisees,
or clients of the person under assessment. Ideally, ratings from multiple assessors then are
combined and feedback, including an action plan regarding specific areas needed for further
development, is given to the person being assessed.

Annual/rotational reviews of the foundational and functional competencies of the
person under assessment occur at the end of each year or rotation and are conducted by
supervisors and faculty. The assessments should include information from multiple assessors
and then be compared against the benchmarks for the appropriate developmental level of the
person being assessed. Case presentation reviews often are viewed as a teaching method but
also can be a useful tool in the assessment of competence. These reviews entail a full case
presentation of a client with whom the person being assessed is working, including a case
conceptualization, assessment measures, treatment interventions, and outcome data.

Client process and outcome data relate to the therapeutic alliance between the person
being assessed and his/her clients. Measures, such as the WAI (Horvath & Greenberg,
1989), symptom checklists, and diagnostic interviews, may assist with this area of
assessment. Competency-evaluation rating forms contain behavioral indicators that raters
use to assess a person on multiple foundational and functional competencies. Consumer
surveys allow the clients to comment on their satisfaction with treatment, which provides a client’s point of view of the competencies of the person being assessed.

With live or recorded performance ratings, performance can be observed directly and rated with competency criteria. Objective, structured clinical examinations involve various simulated situations in which the person being assessed is in the role of the therapist and an actor plays the role of the client. Assessment using this method allows for an assessment of competence with multiple clinical scenarios. Portfolios usually include written documents or taped recordings, which provide support of foundational and functional competencies of the person being assessed.

Record reviews entail the review of the records of the clients of the person being assessed in order to determine the quality and accuracy of the client case being presented. Self-assessment involves a review of personal and professional strengths and weaknesses and an ongoing evaluation of progress toward the foundational and functional competencies from the viewpoint of the person being assessed. Simulations and role-plays allow for assessors’ direct observation of simulated clinical situations and for rating the person on competence in these situations.

Standardized client interviews involve an assessment of the person’s interviewing, assessment, and intervention skills, while using a standardized client. Structured oral examinations consist of a question-answer format in which the performance of the person is evaluated. Questions regarding knowledge, skills, abilities, role-plays, and case conceptualization are all possible areas of assessment. Written examinations include questions posed in varying formats, including multiple choice, fill in the blanks, case
vignettes, and essays. The information gleaned from these examinations assesses the person’s critical-thinking and problem-solving skills and reflects the person’s foundational and functional competencies. Advantages and disadvantages are associated with each measure of assessment, and the assessment measures should be chosen based upon the specific competency being examined. The use of several assessment tools, in conjunction with multiple raters over time, is recommended in order to ascertain the most accurate measurement of competence.

This toolkit is especially useful in the assessment of competence because it provides standardized procedures for the assessment of competence across the developmental span of professional psychologists. The authors acknowledge that the development and implementation of assessment measures for competence continues to present as a major issue to educators, trainers, and credentialing bodies in professional psychology and that much work still is needed in this area in order to facilitate the assessment of competency throughout graduate training.

**Implications**

These findings have several implications. Learning and competently utilizing CBT is a complex process that may take several years to develop and refine. These findings suggest that a single day of training may be insufficient to adequately teach skills and competence in CBT. This training was condensed to test whether or not graduate students with prior knowledge in CBT would benefit from a single day of intensive training. As Stirman et al. (2010) posited, "Although workshops and one-time trainings may change therapist knowledge and behavior to some extent, direct observation of clinician behaviors indicates
that clinicians who receive such brief training are unlikely to deliver treatment at recommended levels of competence and fidelity" (p. 49). Hence, several days, if not weeks, of training, including the provision of supervision, may be necessary.

To further illuminate the complexity of training, Bennett-Levy et al. (2009) found that varying methods were helpful for specific elements of therapy knowledge and skills. For example, didactic training involving reading, presentation of material in a lecture format, and modeling helped trainees to learn declarative information, knowledge, and skills. The researchers defined *declarative knowledge* as an understanding of the material learned, along with the theoretical models from which the information is derived. More interactive activities, such as role-playing, self-experiential work, and self-reflective practice, helped participants to acquire procedural knowledge. Modeling also helped in the acquisition of procedural knowledge. *Procedural skills* were described as declarative knowledge translated into actual practice. *Self-experiential and reflective practice* also helped participants to improve upon their interpersonal skills. In the current study, one could argue that measures were designed to detect procedural skills (competence and skills) and that adding role-playing, self-experiential work, and self-reflective practice necessary for improvement would have been beneficial. Of course, this proposition further illustrates the need for extending the duration of training to include the elements that facilitate the acquisition of procedural skills. Thus, the present study may have been successful in imparting declarative knowledge, but it lacked the interventions to shape the requisite procedural skills needed to conduct effective CBT.
**Therapeutic relationship**

Analyses failed to find significant between group differences in therapeutic alliance. This finding may be because the therapeutic alliance is a multifaceted skill that may take several years of both declarative knowledge and procedural skills to develop. The therapeutic or working alliance is defined generally as the collaborative bond between the therapist and the client. Three common factors, across varying theoretical approaches, are associated with the therapeutic relationship. These include the collaboration between the therapist and client, the agreement between the therapist and client in terms of treatment goals and objectives, and the affective bond between the therapist and client (Martin et al., 2000).

Castonguay, Constantino, and Holforth (2006) indicated that, although the therapeutic alliance is a central factor in effective therapy, little is understood about the development and refinement of building a solid therapeutic relationship. Building an effective therapeutic alliance is a training area that was limited in the current study because of time constraints.

**Correlations between measures**

Another interesting finding of the study is that the CTS and PSI are highly correlated. This correlation indicates that these two instruments are measuring similar constructs, which are skills and competence in CBT. The high correlation between the CTS and PSI provides a measure of construct validity for the PSI.

**Limitations**

One limitation relates to the raters for this study. Rater 2 was blind to the conditions of the study and was unaware of which participants were in the training group and which
were in the control group. However, Rater 1, who was the Responsible Investigator, was not blind. Rater 1 knew which participants were in the control group and which participants were in the training group. This confound may have caused a rater expectancy effect, in which Rater 1 may have inadvertently assigned higher competency ratings to the participants in the training group. In examining the ratings from Rater 1 (the nonblind rater), the ratings for the training group were higher than the ratings given by Rater 2 (the blind rater). For these reasons, an average of the two raters’ scores was reported also.

Additional limitations also relate to the small number of participants, which contributed to a low statistical power and the ceiling effect, involving the participants’ pre-existing knowledge in CBT prior to receiving the training. Both of these limitations limit the generalizability of the findings. Further, this study utilized a simulated intake session to measure the therapeutic relationship. As the therapeutic relationship is dynamic and involves various contextual and interpersonal factors, a more realistic observation of the relationship would employ an actual therapist and client relationship over several sessions.

**Recommendations for future trainings**

The ACCESS model, provided by the Beck Initiative, is recommended as a model for training (Lewis & Simons, 2011; Stirman et al., 2010). This model integrates several recommendations from large-scale implementation studies. Prolonged training efforts, over a 6-month period of time, incorporate supervision, consultation, and feedback into training as an ongoing process. Consultation allows for the trainee to seek advice, clarification, or support from more experienced clinicians, and obtaining this type of feedback appears to be important especially in the transfer of knowledge into practice (Speck, 1996). Feedback may
include an evaluation of work samples because subjective reports by the trainee may be biased or inaccurate (Brosan et al., 2008). These essential elements to effective training were not included in the present study. In addition, results from the Beck Initiative suggest that therapists who submitted 15 psychotherapy sessions for feedback were more likely to improve in competence than were those who submitted fewer (Stirman et al., 2010).

This study supports Miller et al. (2004) in their recommendations for feedback and supervisory coaching as essential components of effective clinical training practices. They found that, although trainees positively benefited from a 2-day workshop in motivational interviewing, their clinical skills returned to baseline unless they were given ongoing support to maintain the gains that had been made during the training. Thus, provision of individualized feedback is suggested in order to achieve competence (Chu, 2008).

Calhoun et al. (1998) suggested that trainees receive supervision for a minimum of three or four standard cases and a minimum of four nonstandard cases in order to achieve competence. They also recommended group supervision to review videotapes, rather than individual supervision, because group sessions may be a more efficient use of supervision.

Similarly, Mannix et al. (2006) found that palliative-care practitioners improved significantly in skills in CBT after a 12-day workshop, which included didactics and supervision. After the training, the participants were randomized into a group that no longer received supervision and a group that received continued supervision. The results indicated that the group that continued to receive supervision increased in their skill development, along with their confidence. Those participants who did not receive the continued supervision experienced the opposite effect. That is, their skills diminished and their
confidence decreased. A limitation of the Mannix et al. (2006) study involved the instrument used to measure competence in CBT. Since the training was not geared toward mental-health professionals, but instead toward medical professionals, the researchers developed their own scale, which was not a validated measure. Despite this limitation, this study underlined the importance not only of including supervision as a part of the training, but also of maintaining supervision for several weeks after the training to help trainees to retain or improve upon their skills and to increase their confidence.

Cucciare et al. (2008) also discussed the importance of spacing between training sessions. Spaced practice allows for the consolidation of newly learned information and provides the trainees with opportunities to apply their knowledge to clinical settings. Trainees also had the opportunity to ask more relevant questions and receive corrective feedback between training sessions, as issues inevitably arose with different clinical cases.

Fouad et al. (2009) recommended taking a developmental approach toward the concept of competence. According to the Competency Benchmark model, core foundational and functional competencies build upon previously learned skills in three levels of development, including readiness for practicum, internship, and early career practice. In a related manner, Kaslow et al. (2009) presented a “toolkit” for the assessment of students’ and professionals’ competence in professional psychology, this toolkit aids in the assessment of competence because it provides standardized procedures for the assessment of competence across the developmental span of professional psychologists. Taking a developmental perspective also argues against condensed, marathon-type trainings, especially for graduate students.
This is a pilot study and differed from existing dissemination studies in several ways. The participants in this study did not receive supplementary supervision. In fact, in an attempt to test the limits of condensing the intervention, supplementary supervision was not provided during the training. Therefore, because of practical constraints of the present study, which are similar to the barriers imposed by more general budgetary constraints in the field, the training was condensed into a single day. Consequently, this study supports the need for supervision, coaching, and/or follow-up consultation in order to acquire and maintain any knowledge, skills, and confidence that are acquired during training. Trainees also may benefit from additional time to learn and practice the training materials. These findings suggest the need for a comprehensive, developmental, and spaced-practice approach to CBT training. Extensive time, attention, and feedback must be allowed to adequately disseminate and implement CBT.

In addition, future trainings also should pay more attention to the therapeutic bond by possibly incorporating a suggestion provided by Castonguay et al. (2006) to study expert therapists’ abilities to form alliances and the way they deal with ruptures to the alliances. The use of role-playing, along with self-experiential work and self-reflective practice, also is recommended (Bennett-Levy et al., 2009) in order to facilitate the acquisition of the procedural skills needed for effective CBT.

Lastly, while most studies have focused on professionals practicing in the field, this study examined graduate students. The APA Division 12 Task Force Committee on Science and Practice recognizes that training for graduate students in clinical psychology is needed in order for empirically based treatments to be used and implemented properly (Karekla et al.,
Therefore, further research into the assessment of competence with graduate students is also recommended, as graduate students must be viewed as a target population for dissemination.
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New York, NY: Guilford.
Appendix A

Recruitment Email

Dear PCOM Psychology Students,

I am writing to announce an exciting opportunity to gain valuable training experience and to refine your skills in cognitive-behavioral therapy (CBT). This 1-day, 8-hour, intensive, skills-based training in CBT is being offered in an effort to refine knowledge, skills, and techniques in CBT. The information provided in this training is equivalent to training for professional clinicians already practicing in the field. For master’s level students who are planning on enrolling in a doctorate program, this training may be excellent preparation to enter the program. For doctoral students, this training may serve as an excellent adjunct to your coursework. This additional knowledge may be beneficial to you in your coursework and practice in the field, as you may be more informed about CBT. This training is offered to all psychology students from PCOM and will be led by Brad Rosenfield, PsyD, Assistant Professor and Practicum Coordinator at PCOM.

This voluntary training will be part of a dissertation which examines graduate students’ competence in CBT. In conjunction to the training, both groups will have the opportunity to take part in the Standardized Patient program at PCOM. This is a chance to practice the videotaped intake sessions, which are regularly employed in the Master’s and PsyD program, as part of the Standardized Patient Program. You will be assigned to one of two groups. The control group will undergo the videotaped intake session prior to the training and the experimental group will undergo the videotaped intake session after the training.

Eligible participants must be over the age of 18 and currently enrolled in one of PCOM’s psychology degree programs. Participants are not eligible if they already possess a doctorate in clinical psychology. Participation in this program is completely voluntary and separate from your degree program and will have no bearing on your academic status or grades. You may also choose to discontinue your participation at any time, without any consequences. The date and time of the training is specified below.

Date: November 19, 2010
Time: 9:00 am -5:00 pm

If you are interested or have any questions, please contact Lauren Lane-Herman, M.A. at laurenla@pcom.edu or (570) 460-6440. Thank you.

Sincerely,
Lauren Lane-Herman, M.A.
4th year PCOM PsyD student
Appendix B

Name: _____________________

Pre-training Survey

1. What type of mental health training have you received?
   - Certification in addiction counseling
   - Completed Bachelor’s degree
   - Enrolled in Master’s program (what program and year: 1st or 2nd) _____________
   - Enrolled in Doctoral program (what program and year: 1st, 2nd, 3rd, 4th, or 5th)
     __________________________

2. How many years experience do you have in counseling or psychotherapy? _________

3. My theoretical orientation is ________________________________________________.

4. What experience do you have with cognitive-behavioral therapy (CBT)? (Check all that apply)
   - Read a short article
   - Heard a lecture on CBT
   - Read a book, such as Cognitive Therapy for Depression
   - Attended a workshop
   - Took a CBT course in school
CBT TRAINING

☐ Attempted to use CBT with clients
☐ Trained and supervised in CBT

5. If you were trained in CBT, where were you trained? ______________________

6. How were you trained? (Check all that apply)
   ☐ Practicum
   ☐ Internship/Extenship (how long?)_____________
   ☐ Weekly supervision
   ☐ Multiple workshops
   ☐ Multi-day workshop or course
   ☐ Supervision and rating tapes of CBT sessions

7. My attitude toward CBT is:
   ☐ Very unfavorable
   ☐ Mostly unfavorable
   ☐ Neutral/unknown
   ☐ Somewhat favorable
   ☐ Very favorable

8. Please list any advantages you see to receiving training in CBT
9. Please list any disadvantages you see to receiving training in CBT

10. What are your expectations for this training in CBT?
Appendix C

Name: _____________________

Post-training Survey

1. My attitude toward CBT is:
   - Very unfavorable
   - Mostly unfavorable
   - Neutral/unknown
   - Somewhat favorable
   - Very favorable

2. Did you find this training to be helpful? Please state your reasons for why or why not.

3. Do you foresee using any of the skills or techniques with your clients in the future? If so, which ones?
4. Please list any advantages you see to receiving training in CBT

5. Please list any disadvantages you see to receiving training in CBT

6. Please state any comments, concerns, or suggestions for future trainings in CBT
Appendix D

Description of the Standardized Patient

The standardized patient depicted a 48-year-old, Caucasian woman, who lives with her husband and 18-year-old daughter. She presented with a depressed mood, fatigue, flat affect, difficulty sleeping, and loss of appetite. She also evidenced a decreased interest in pleasurable activities, such as reading, cooking, and knitting. Her sex drive has also diminished, which has led to problems with her husband. She tends to ruminate about her financial stressors, which include thoughts about paying for her daughter's future college, paying household bills, and having very little savings.

She had been experiencing these symptoms for about a year, following the start of her daughter’s applying for college. Her daughter will be starting college, out of the state, in the fall. In addition, the patient received an invitation to a high school reunion, adding to her feelings of sadness and worthlessness and leading her to reflect upon the choices that she has made in her life. Although the patient is a college graduate, she quit her job at a bank in order to raise her daughter. She currently works part time in the office of AAA. She considers the job to be somewhat menial, low paying, and not challenging.

The patient attended therapy briefly in the past, but did not feel that it was beneficial because of the past focus of the sessions. She is thus somewhat skeptical of therapy. The patient’s goals include decreasing her symptoms of depression and increasing her level of activity, interest, and energy. She also would like to feel happy about her daughter's graduation and wants to improve her relationship with her husband.