Science at the Heart of Psychotherapy: A Review of Three

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Changes in the U.S. healthcare system over the past few decades have led to a transformation of the mental health field. The demand for accountability and the need for effective, cost-efficient treatments have spurred the movement toward evidence-based practices. Today, a number of empirically based psychotherapies exist that have proven efficacious in the treatment of a wide range of physical and psychological disorders. Despite the strong evidence base for these treatments, their dissemination and implementation have been slow. The intention of the present article is to summarize the major characteristics of three types of psychotherapy (cognitive behavioral therapy, acceptance and commitment therapy, and dialectical behavior therapy) that have received much empirical support and have demonstrated applicability to a wide range of both mental and medical problems. For each treatment, some background information is provided, along with the theoretical underpinnings of the treatment, a summary of the current state of the evidence, and limitations and criticisms in the literature.

INTRODUCTION

Psychological interventions for both mental and medical disorders have progressed tremendously in the past few decades. Changes in the U.S. healthcare system, including the advent of managed healthcare in the 1970s, led to a greater need for accountability in the mental health field. As a result, providers, consumers, insurance companies, and researchers all began to ask the same two questions of a treatment: "Does it work?" and "Is it cost-effective?" Such inquiries spurred the evidence-based movement and eventually led to the development and proliferation of clinical practice guidelines and treatment consensus statements.

With the science of human behavior as a guide, psychological interventions were developed and set forth in manuals, which allowed them to be rigorously studied and disseminated. This resulted in an array of evidence-based treatment protocols that are now available to clinicians around the world. These psychosocial treatments have demonstrated absolute efficacy not only in the treatment of depression, anxiety, psychosis, and personality disorders, but also in areas such as chronic pain and medication compliance (Beck and Dozois, 2011; Gray et al., 2002; Hayes, Masuda et al., 2004; Linehan et al., 2006). In addition, many of these psychological interventions have demonstrated strong comparative efficacy with medications in the acute treatment of a number of psychological disorders, and with a significantly lower relapse rate in follow-up (Spielmans et al., 2011). Numerous studies using functional neuroimaging have demonstrated that both psychotherapy and psychopharmacology effect changes in brain activity, with these changes overlapping partially—but not completely—with one another (Roffman et al., 2005; Dichter et al., 2010).

Although many mental health researchers and clinicians currently emphasize the importance of employing scientifically derived principles in the treatment of psychological disorders and many evidence-based psychotherapies now exist, dissemination and implementation of these treatments have been slow, and they remain underused in the nation's health and mental health systems (McHugh and Barlow, 2010). This article will summarize three forms of psychotherapy that are highly compatible with medical healthcare systems due to their large evidence base, applicability to a variety of disorders (both mental and medical), and evidence of a robust positive impact on other important areas of functioning (e.g., reduced absenteeism, increased productivity, and improved quality of life). The three treatments discussed here are cognitive behavioral therapy (CBT), acceptance and commitment therapy (ACT), and dialectical behavior therapy (DBT). These therapies have all been derived from scientific principles and have demonstrated positive outcomes in numerous randomized controlled clinical trials. For each therapy, we provide background information, describe the basic principles of the treatment and the populations for which each treatment has been shown to be effective, and note the limitations and criticisms found in the literature.

COGNITIVE BEHAVIORAL THERAPY

CBT is a system of psychotherapy that merges the procedures of cognitive therapy with the procedures of behavior therapy. CBT is not, however, a distinct therapeutic technique. Instead, underlying these procedures is a powerful theoretical infrastructure that has received extensive empirical support, and there is a large body of research attesting to its efficacy for a wide range of psychiatric and medical problems (Beck and Dozois, 2011).

The CBT model emphasizes the critical role that cognition and behavior play in influencing and being influenced by how patients feel. For example, a central tenet

of CBT states that situations or triggers do not upset patients; rather, what upsets them is how they *think* about these situations or triggers. CBT is based on the idea that, regardless of how they originate, psychological disorders are maintained through distorted, negative thoughts (cognitions) and maladaptive or problematic actions, reactions, and inactions (behaviors). As a result, in CBT the therapist focuses directly on modifying cognitions and behaviors in order to remediate the factors thought to be perpetuating a particular disorder. The benefit of this approach is that if patients can learn to change the way they think or act, they can change the way they feel—even if the situations or triggers that are causing the distress do not change.

With this simple yet powerful theoretical basis, CBT tends to be a relatively brief, structured, and time-limited treatment. More-traditional forms of psychotherapy are often designed to take years, but CBT patients receive, on average and across all types of problems, approximately 16 sessions. What enables CBT to be briefer than most other psychotherapies is its highly structured and time-limited nature, with therapist and patient agreeing on a target number of sessions at the start of treatment, after which the therapy is designed to end. As a result, both parties become involved and accountable in the therapeutic process, and work hard at achieving the goals of treatment.

CBT differs from more-traditional forms of psychotherapy and the more-generic "talk" therapies in five additional ways. First, CBT takes a "top down" rather than a "bottom up" approach, and in so doing it places an emphasis on the here-and-now. In CBT, etiological factors (what started a problem) are distinguished from perpetuating factors (what keeps it going). By teaching a set of skills that will help patients deal more effectively with problems or symptoms that they are currently experiencing (as opposed to examining their early childhoods), CBT aims to help these patients understand that regardless of the cause of their symptoms, they can achieve relief and attain a better quality of life. This approach does not neglect the role of the past or the origins of the disorder, but rather examines how past events affect the patient's *current* functioning.

Second, CBT takes a symptom-focused approach. After an initial assessment, the patient and therapist agree on the symptoms that are problematic and create goals based on the remediation of these symptoms. While these goals are initially often kept small and simple (e.g., riding a bus without accompaniment and with minimal anxiety), they are often tied to—and help patients achieve—significantly broader changes in their lives (e.g., improving quality of life and restoring social and occupational functioning). By targeting specific symptoms or problems, the therapist and patient can use session time more efficiently, which leads to a greater likelihood of achieving the desired outcomes.

Third, CBT places an emphasis on learning new skills and then transferring the skills learned in a session to the world outside the therapist's office. Progress in CBT relies heavily on the patient making use of the time between therapy sessions to complete various "homework" assignments. This is based on two notions. One is that it takes a great deal of practice to learn any new skill, and the other is that, if patients are able to practice, learn, and then use the skills introduced in a session to reduce emotional distress outside the session, the techniques will reinforce the patients' behavior and will continue to be used. Thus patients are empowered to cope with their problems on their own, which minimizes dependence on the therapist during treatment and the potential for relapse after treatment ends.

Fourth, CBT therapists are highly active and directive in the sessions. Along with helping provide a structure and maintaining a symptom-focused approach to the sessions, the therapist is responsible for directing the treatment, introducing and assisting with the implementation of systematic cognitive and behavioral strategies. This is ultimately designed to help the patient undo maladaptive thinking and behavioral patterns in an efficient and time-limited manner. Creating and maintaining a strong therapeutic relationship in CBT is viewed as an important aspect of treatment—necessary but not sufficient. And although charged with directing the treatment, the therapist frequently refrains from being *directive* through the use of tools such as Socratic questioning, which allows patients, with the therapist's guidance, to come up with their own solutions to their problems.

Finally, CBT emphasizes the importance of creating a "collaborative empiricism" between therapist and patient. The patient and therapist become a scientific team—the therapist being the expert on the treatment and the patient being the expert on his or her symptoms. Both must be willing to be flexible and test out their beliefs and predictions about the patient's problems using a variety of methods and procedures (e.g., behavioral experiments or surveys), regardless of how long the beliefs have been present and how real they appear.

CBT has a strong empirical base, supporting its current place as the psychosocial treatment of choice for the majority of psychological disorders, including depression, anxiety, eating disorders, and substance use disorders (Waller, 2009; Beck and Dozois, 2011). Many professional and governmental organizations now recognize the value of CBT, and it is strongly encouraged by national guidelines in the United Kingdom, the United States, and Australia (Shafran et al., 2009). CBT has also been clinically demonstrated through randomized controlled trials to be an effective treatment for conditions that are more medically oriented, such as irritable-bowel syndrome, obesity, erectile dysfunction, chronic fatigue syndrome, and rheumatic disease pain (Butler et al.,

2006; Chambless and Ollendick, 2001). Finally, CBT has demonstrated efficacy in dealing with stress, low self-esteem, relationship difficulties, work problems, procrastination, separation and divorce, grief and loss, and aging.

Despite this strong evidence supporting CBT, the approach has been criticized. While many of the criticisms (e.g., CBT is too rigid, mechanistic, and superficial; does not deal with emotions; works well only in university-based clinical trials; is effective only with high-functioning patients with circumscribed problems; does not create lasting benefits) are outdated and without merit, CBT does indeed have some real limitations. The treatment does not suit every patient; patients need to be motivated and committed to doing CBT, which includes being willing to do difficult and challenging exercises, both in sessions and for homework between sessions. Data from several studies indicate that, depending on the disorder being treated, a sizeable percentage of patients (e.g., 10% to 30% of patients with panic disorder, and up to 50% of patients with obsessive compulsive disorder) are unable or unwilling to complete the requirements of CBT, and they drop out of treatment. Compared to medication-based treatments, CBT can take longer to reveal its benefits. Finally, relatively few therapists are skilled at doing CBT, which can make access to care a challenge and treatment costly. Fortunately, due to advances in technology (e.g., the use of Skype and other online videoconferencing tools for supervision and therapy, computer-assisted therapy), as well as changes in graduate school training models in psychology and psychiatry, and improvements in healthcare systems (cf. the National Institute of Health and Clinical Excellence guidelines in the United Kingdom), this appears to be changing.

ACCEPTANCE AND COMMITMENT THERAPY

ACT (Hayes et al., 1999) is a "third-wave," contextual, behavioral approach to psychotherapy (with behavior therapy representing the first wave and the injection of cognitive strategies into behavioral therapy representing the second wave). B. F. Skinner's radical behaviorism (Cullen, 2008) highlighted the importance of private events (such as thoughts and feelings) in addition to overt behavior. ACT expands on this theory and applies the principles of functional contextualism and relational frame theory (RFT) to the clinical world. (For more on these theories, see, e.g., Hayes et al., 2001.) In brief, they focus on the function that behaviors, including language and cognition, serve in contexts. A primary insight of RFT is that words become fused with the stimulus functions of the events we experience. Thus, people often respond to words as if they are objectively true. For example, "I am a bad person" is experienced as a true reflection of reality rather than as a thought elicited by a context.

The aim of ACT is to help patients come into contact with the present moment, to diminish the role of literal thoughts, and to promote acting in ways that are consistent with the individual's defined values and goals without attempting to alter or control experience. This is known as psychological flexibility. To increase psychological flexibility, ACT has delineated six core processes: acceptance, contact with the present moment, "self as context," cognitive "defusion," values, and committed action. Each of these core principles influences and interacts with the others. To understand these core principles and how they may be applied in different contexts is to understand the essence of ACT.

Acceptance is the act of allowing psychological distress in the service of one's values. For instance, if it is important to a patient who suffers from social anxiety to make friends, then this person would approach feared social situations whether or not he or she felt anxious. The ACT therapist would teach the patient strategies to let go of control and other actions to decrease the level of distress during the event. The aim of ACT is to increase one's willingness to experience emotions or other private events, whether good or bad, if that is in accordance with the individual's values.

Contact with the present moment, also known as "mindfulness," means the individual is encouraged to be aware of what is happening right now and to respond accordingly, as opposed to reacting based on past experiences or future-oriented thoughts. These two core processes, acceptance and contact with the present moment, often coincide; one cannot truly be in full contact with present experience if one is not also accepting the experience. Mindfulness and acceptance-based interventions are also included in some derivatives of CBT such as mindfulness-based cognitive therapy for depression (Segal et al., 2002) and are an integral component of DBT treatment, which will be discussed later.

The next core process, *self as context*, is the process of choosing not to be defined by the content of what is going on in one's life, but rather seeing one's self as the stage on which all of life's events occur. It can be easy to confuse our selves with the content of our experience: "I am a victim," "I am a strong woman," "I am a bad person." And a person who sees himself or herself as a victim may continue to act in ways consistent with the victim role. Becoming aware of the self as a context is thought to enhance psychological flexibility and allow behavior to reflect actual circumstances, which constantly shift and evolve. We are not and cannot be defined by any single event, thought, or situation.

Cognitive defusion, a term coined by the ACT developers, can be thought of similarly. It is a process by which individuals begin to see their thoughts as thoughts, rather than as objective truths. For instance, a patient with panic disorder who thinks "I'm going crazy!"' during a panic

attack can learn to recognize that telling herself "I'm going crazy!" is different from noting, "I'm having the thought that I'm going crazy"—the latter thought being one step more "defused" than the former. Whereas both CBT and ACT address maladaptive cognitive processes, the primary difference between the cognitive defusion exercises of ACT and the cognitive restructuring exercises of CBT is that cognitive defusion does not attempt to teach patients to replace their maladaptive thoughts with more-accurate or adaptive thoughts. Instead, it allows patients to create distance between themselves and their thoughts, and to see that their thoughts are simply products of their minds, not facts.

The final two core ACT processes thought to increase psychological flexibility are *values* and *committed action*. *Values* are desired ways of behaving in various life domains, and *committed action* includes the actual behavioral steps that will serve the ultimate valued ends. Defining *values* is a critical component of ACT, because once patients know what they are working toward, therapists can then help them identify the processes that are impeding their progress. It is not up to therapists to decide which of their patients' behaviors need changing; rather, it is up to patients to decide what they want out of life. For example, knowing that a patient engages in avoidance of a distressing event is not enough to inform the therapist whether this is a treatment target. First, the therapist must find out if the patient values living a life in which he or she engages in that particular event. If so, then this can become a target in therapy. The aim of ACT is not to teach patients to be able to accept all experiences, but instead to teach them to accept those experiences that will serve their valued ends.

ACT has broad applicability to a range of problems and has received empirical support for a wide variety of psychological disorders. Some fifty randomized controlled trials of ACT have either been published or are currently in press (Hayes, 2008). These trials have demonstrated positive outcomes for depression (Zettle and Hayes, 1986; Zettle and Raines, 1989; Forman et al., 2007), anxiety (Block, 2002; Roemer et al., 2008; Twohig et al., 2010), substance abuse (Hayes, Wilson et al., 2004; Smout et al., 2010), psychosis (Bach and Hayes, 2002; Gaudiano and Herbert, 2006), and chronic pain (Dahl et al., 2004; Vowles et al., 2007).

Despite the growing evidence-based support for ACT, criticisms remain. A meta-analysis by Ost (2008) suggests that many of the empirical studies of ACT did not use stringent methodological criteria, which calls into question their results. And Powers and colleagues (2009) found that although ACT appears to demonstrate positive outcomes for a range of problem domains, its effects are about equivalent to those of other established treatments such as CBT. Steven C. Hayes, PhD, the founder of ACT, addressed these criticisms when he stated, "The efficacy and effectiveness data on ACT are positive, but preliminary" (Hayes, 2008). Although the research on ACT is still in its early stages, the evidence in support of the therapy is now strong enough that the American Psychological Association Division 12 has included ACT as an empirically supported treatment for both depression and chronic pain. In addition, the Substance Abuse and Mental Health Services Administration has listed ACT as an evidence-based practice. While there is still much research to be done, ACT has demonstrated positive outcomes in the treatment of a wide range of psychological disorders and it can appropriately be recommended as a form of treatment for certain domains (e.g., depression, obsessive compulsive disorder, substance abuse, and psychosis).

DIALECTICAL BEHAVIOR THERAPY (DBT)

DBT, like ACT, is considered by many a "third wave" behavior therapy. This principle-based behavioral approach to psychotherapy was originally developed to treat chronically suicidal adults and individuals diagnosed with borderline personality disorder (BPD), a mental illness characterized by pervasive instability in moods, interpersonal relationships, self-image, and impulsive behavior (National Institute of Mental Health, 2011). While the DBT model is primarily a treatment for BPD (and will be discussed as such), it is also increasingly being studied for the treatment of other conditions, including eating disorders (Safer et al., 2001; Telch et al., 2001), treatment-resistant depression (Harley et al., 2008), depression in older adults with mixed personality features (Lynch et al., 2003; Lynch, 2000), bipolar disorder (Goldstein et al., 2007), and oppositional defiant disorder (Nelson-Gray et al., 2006). This research suggests that DBT provides a unifying theoretical model that is flexible enough to offer comprehensive treatment for a variety of complex mental health problems beyond BPD. DBT is a multimodal therapy that blends CBT-based change strategies and Zen-based acceptance strategies (Linehan, 1993a; Linehan, 1993b), and in the process, synthesizes four distinct theoretical foundations: dialectics, behaviorism, Zen philosophy, and the biosocial theory of emotion regulation. The term "dialectical" refers to the idea that there is no absolute truth, and that seemingly opposite ideas can simultaneously be true. A dialectical philosophy in therapy highlights the need for patients to work on both accepting and changing their thoughts, emotions, and behaviors. As in CBT, the change-based interventions used in DBT are largely predicated on principles of behaviorism, and include techniques such as exposure, contingency management, problem solving, and cognitive restructuring. In contrast to traditional CBT, but like ACT, DBT incorporates acceptance-based interventions. These are informed by Zen-based mindfulness practice, and teach patients how to accept their reality (including their behaviors, emotions, and circumstances) through mindful and nonjudgmental participation (as in the "contact with the present moment" process of ACT).

DBT primarily targets emotion dysregulation because difficulties with emotion regulation are central to BPD. According to Linehan's biosocial theory of BPD (1993a), pervasive emotion dysregulation arises through a genetic predisposition to dysfunction in the patient's emotion-regulation system and his or her development within an invalidating environment. Biological dysfunction comprises high emotional sensitivity, reactivity, and a slow return to baseline (Linehan, 1993a). The "invalidating environment" is any environment that invalidates the patient's emotions or behaviors. Children raised in such environments fail to learn to recognize, label, and respond to emotions appropriately, thereby increasing or engendering emotion dysregulation. Thus, validation is another essential acceptance-based strategy used in DBT. Validating patients' feelings implies that the patients' behavioral patterns are logical outcomes of the interaction between their genetics and the environments in which they were raised. Because many patients have learned to doubt their own experiences, validation is a powerful intervention to engender rapport with the therapist and eventual self-acceptance.

DBT involves weekly individual psychotherapy, participation in a weekly DBT skills group, telephone consultation available around the clock, and a weekly therapist consultation meeting. This comprehensive treatment addresses five functions, all of which apply to any patient experiencing emotional, behavioral, or interpersonal dysregulation. The first is to enhance the patient's capabilities by teaching tangible skills in both individual therapy and skills training. The second is to improve the patient's motivation. Therapists assess what gets in the way of a patient implementing changes—skills deficits, cognitive distortions, negative emotions, or contingencies that punish the use of skills. Based on their assessment, therapists can then teach skills, use cognitive restructuring or exposure, or help the patient change environmental contingencies. Third, DBT promotes generalization to the patient's natural environment. By remaining accessible between sessions for telephone consultation, therapists encourage patients to call for skills coaching during real-life situations and stressors. The fourth function of DBT, which is not present in CBT or ACT, is to enhance the *therapists'* capabilities and their motivation to treat effectively. The DBT consultation team provides a supportive network of professionals who offer "therapy for the therapist." They provide validation, troubleshooting, and assistance in identifying aspects of patient conceptualizations that have been missed. And the consultation team also addresses signs of therapists' burnout. The final function of DBT is to structure the environment so that the patient effectively implements treatment.

Individual psychotherapy sessions are principle-based, and DBT therapists use a hierarchical model for agenda-planning. DBT encompasses four stages of treatment. The first stage focuses on stabilization of the patient's behaviors. There are four treatment targets within this first stage that are addressed hierarchically. They are: decreasing suicidal behaviors, decreasing therapy-interfering behaviors, decreasing quality-of-life-interfering behaviors, and increasing behavioral skills. DBT prioritizes treating life-threatening and nonsuicidal self-injury, with the understanding that other treatment goals cannot be addressed until the patient is safe. The second treatment target of DBT is to decrease any behaviors on the part of the patient, the family, or the therapist that increase the likelihood that therapy will end. For instance, if the patient repeatedly misses or arrives late to sessions, or if the therapist fails to convey respect for the patient, these behaviors increase the likelihood that therapy will not be effective. The third treatment target, reducing quality-of-life-interfering behaviors, includes any other items that fall on axes I, II, III, or IV in the *Diagnostic and Statistical Manual of Mental Disorders* taxonomy (APA, 2000). During this stage, therapists will focus on such things as dysfunctional interpersonal relationships, impulsive behaviors, or depression, as these behaviors may perpetuate a life of misery as opposed to a life worth living. The fourth treatment target involves increasing behavioral skills, which is primarily accomplished via skills groups. The final goals of DBT include reducing post-traumatic stress, increasing a patient's self-respect, achieving individual goals, resolving a sense of incompleteness, and "finding freedom and joy" (Linehan, 1993a).

Standard DBT skills groups are didactic and focus on teaching four skills modules: mindfulness, interpersonal effectiveness, emotion regulation, and distress tolerance. The mindfulness module helps patients participate more fully in their lives by building a nonjudgmental awareness of themselves and the world around them in the present moment. The skills taught in this module are comparable to the interventions used in ACT. Mindfulness enhances self-knowledge and self-awareness so that patients can make decisions with both emotional and rational input (Wagner et al., 2006). The distress tolerance module helps patients learn to bear negative life events skillfully and without engaging in behaviors that worsen the consequences of such events. Skills include accepting that which patients cannot change, accurately evaluating behaviors, self-soothing, and learning to identify activities that prevent patients from making situations worse. The emotion regulation module helps patients learn to recognize their emotions and antecedent events, as well as how to cope in more-effective ways when overwhelming emotions arise. This module teaches patients skills to help them experience more-positive emotions, restructure cognition to attend to positive events, and protect themselves against vulnerability to negative emotions. Patients learn to differentiate between primary and secondary emotions, to identify unjustified emotions, and to act in a manner opposite to the ones their unjustified emotions may suggest. The skills taught in the emotion regulation mod-

ule are analogous to those in CBT. The interpersonal effectiveness module helps patients learn to navigate relationships effectively. Most patients with complex, comorbid disorders have interpersonal deficits; this module teaches them skills to communicate effectively: to build and maintain relationships, to ask for what they want, and to assert their self-respect. A fifth module, "walking the middle path," is unique to adolescent DBT, and was developed specifically to address the dialectical dilemmas apparent among adolescents and their families (Miller et al., 2007). This module helps adolescents and their parents understand the meaning of dialectics, and to navigate the tension in parent-adolescent dialectical dilemmas.

DBT strives to provide patients with lives worth living using a model that integrates a variety of modalities. In contrast to traditional CBT, DBT (like ACT) strives to go beyond teaching patients how to change their thinking and behavior by incorporating acceptance-based interventions. DBT emphasizes the necessity of change and acceptance strategies as well as skills when treating patients with multiple diagnoses. The ability to move fluidly among these distinct skills and strategies provides therapists considerable flexibility in meeting the needs of a complex treatment group with multiple problems. DBT has been adapted for patients of all ages with varied and often multiple diagnoses, and who are treated in a variety of settings (Miller et al., 2007).

There is substantial evidence from randomized controlled outpatient and inpatient trials that patients with chronic suicidality or nonsuicidal self-injury, and those diagnosed with BPD, significantly benefit from DBT (Linehan et al., 1991; Linehan et al., 1993; Koons et al., 2001; Verheul et al., 2003; van den Bosch et al., 2005; Linehan et al., 2006). Studies have demonstrated that DBT improves social and global adjustment, reduces attrition rates, decreases inpatient psychiatric days and emergency room use, and reduces the frequency and severity of suicide attempts, nonsuicidal self-injurious behaviors, and suicidal ideation (Linehan et al., 1991, 2006; Koons et al., 2001; Verheul et al., 2003; van den Bosch et al., 2005; Bohus et al., 2004; Lynch et al., 2003). Further, DBT has been adapted for adults with a variety of presenting problems. Evidence published to date supports the use of DBT as a treatment for eating disorders (Safer et al., 2001; Telch et al., 2001), treatment-resistant depression (Harley et al., 2008), and depression in older adults with mixed personality features (Lynch et al., 2003; Lynch, 2000). Further, Miller and colleagues (2007; Rathus and Miller, 2002) adapted DBT to treat suicidal adolescents and adolescents presenting with features of BPD.

According to a recent review article by Groves and colleagues (2012), 12 published studies have examined the effectiveness of DBT with different adolescent populations. These studies have evaluated DBT as a promising treatment for adolescents with bipolar disorder (Goldstein et al., 2007), eating disorders (Safer et al., 2007; Salbach-Andrae et al., 2008; Salbach et al., 2007; Salbach-Andrae et al., 2009), oppositional defiant disorder (Nelson-Gray et al., 2006), and suicidality/borderline personality features, (James et al., 2008; Fleischhaker et al., 2006; Rathus and Miller, 2002; Woodberry and Popenoe, 2008). Despite significant variability in populations, settings, structure, and treatment format, these results suggest that DBT is an effective treatment for adolescents with a range of diagnostic and behavioral problems (Groves et al., 2012).

DBT is an intensive, wraparound treatment model that requires resources for specially trained individual therapists who are consistently available for telephone consultation, a weekly two-hour skills group, a weekly DBT consultation team, and often a weekly 90-minute DBT graduate group for patients who have completed the skills training group. Given the intensive nature of DBT, this treatment is not relevant for those disorders where simpler treatment options are just as (if not more) effective, such as noncomorbid anxiety disorders and unipolar depression. For those diagnostic categories where CBT alone is effective (e.g., unipolar depression), investing in DBT would be useful only for those individual patients who are not experiencing symptom relief due to other complex needs and who present with complex emotional and behavioral dysregulation. In addition to the substantial commitment required of patients who participate in DBT, the treatment can also be difficult to implement. For example, therapists must be trained in DBT and be available to co-lead groups, conduct individual therapy, and take coaching calls. Healthcare systems must be willing to provide time for consultation and supervision to protect against therapist burnout. For these reasons, future researchers should consider conducting component analyses to determine the necessary and sufficient features of DBT to potentially increase the feasibility of DBT dissemination.

CONCLUSION

CBT, ACT, and DBT stem from the same foundation (behavior therapy), and, in essence, they have the same "heart." They emphasize a scientific approach to the understanding and treatment of mental and physical disorders. All three assert that the practice of psychotherapy must grow out of scientific theory and be based on solid theoretical principles. Each of the three psychotherapies has been subjected to rigorous, methodologically sound, empirical testing. All three treatments have demonstrated, to varying degrees, that they are as effective as, if not more effective than, extant pharmacological treatments and alternative psychotherapeutic procedures for a large number of psychological disorders and medical conditions.

While there are clear similarities among these treatments, there are also notable differences in both the-

ory and technique. For instance, ACT theory challenges the cognitive-mediation theory of CBT; changing one's thoughts is not an objective in ACT treatment. Further, the aim of ACT is to help patients live in accordance with their values, whether or not the patients experience distressing symptoms. This would likely be considered counterintuitive by many CBT therapists, since a primary aim of CBT is symptom reduction. And in practice CBT may be a more structured and directive approach than ACT, with many of its techniques being skills-based. ACT may use more metaphors and experiential learning exercises than CBT. However, while both treatment approaches use a variety of techniques, CBT places greater emphasis on changing thoughts and learning skills and ACT emphasizes acceptance and experiential learning. DBT may be thought of as a combination of CBT and ACT, as it emphasizes both change and acceptance strategies. However, DBT differs from CBT and ACT in underlying theory, because of the multimodal components of the treatment and the population it targets.

Despite the wealth of evidence supporting these therapies, there is continuing debate in the field about which treatments work, what the active ingredients are, and what constitutes evidence. Some research on psychotherapy outcomes suggests that the specific techniques used in psychotherapy account for less of the outcome than common factors such as the therapeutic alliance (Lambert and Barley, 2002). Other factors such as therapist professionalism and level of training have also been associated with treatment outcome and patient dropout rates (Stein and Lambert, 1995). A review of the psychotherapy outcome literature by Lambert and Barley (2002) produced the following conclusions: psychotherapy is successful for many people; many comparative studies find that various types of psychotherapy are relatively equivalent in producing change; the therapeutic relationship accounts for more of the outcome than do specific therapy techniques; and certain therapist characteristics such as warmth and empathy are associated with positive therapy outcomes. Although these conclusions suggest that the differences among CBT, ACT, and DBT may have a minimal effect on outcome, they do not negate the overall positive findings for these therapies. This same review by Lambert and Barley highlighted that certain therapies have demonstrated superiority with some diagnostic categories. For instance, exposure therapies for many anxiety disorders have produced consistently strong effects, greater than those obtained with other types of therapies.

There are researchers who have contested the efficacy of CBT, as well as other evidence-based therapies, particularly with disorders such as schizophrenia and bipolar disorder (Lynch et al., 2010). But the literature as a whole, as well as various expert consensus guidelines and policies, supports CBT as the first-line psychosocial treatment of choice for many of the psychological disorders listed earlier (APA, 2006; Nathan and Gorman, 2007; NICE, 2011). The question today should not be whether these three treatments work for various medical and psychological problems—we know they do, and they are more cost effective than alternative treatments, including alternative psychological treatments—but rather how they can be disseminated and implemented in the places and to the people who need them most. Future research should focus on training, dissemination, and implementation of these treatments, as well as on examining individual differences that may favor using one treatment approach over another.

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