Published in final edited form as:
Evid Based Ment Health. 2008 February ; 11(1): 5–7. doi:10.1136/ebmh.11.1.5.

Cognitive-Behavioral Therapies: Achievements and Challenges

Brandon A. Gaudiano, Ph.D.[1,2]

[1]Department of Psychiatry & Human Behavior, The Warren Alpert Medical School of Brown University

[2]Psychosocial Research Program, Butler Hospital

In 1976, psychiatrist Aaron Beck posed this question about a new form of therapy that emphasized changing patients' dysfunctional cognitions: "Can a fledgling psychotherapy challenge the giants in the field—psychoanalysis and behavior therapy?" (p. 333) [1]. Since that time, cognitive-behavioral therapy (CBT)—the more general term that subsumes Beck's particular variant called cognitive therapy—has emerged as one of the most dominant psychotherapy modalities. What is responsible for the meteoric rise of this approach over the past three decades? In this article, I briefly discuss the factors responsible for the current popularity of CBT, review some of the criticisms that have emerged about the treatment, and describe recent innovative work that may end up changing the very nature of CBT in the decades to come.

CBT as an Increasingly Popular and Evidence-Based Practice

CBT has become increasingly popular with clinicians and the general public alike over recent years. Surveys of therapists indicate the CBT is fast becoming the majority orientation of practicing psychologists [2]. Partly because of its commonsense and clear principles, self-help books based on CBT approaches also have come to dominate the market [3]. Even media articles frequently extol the virtues of this form of psychotherapy. A recent *Washington Post* article proclaimed: "For better or worse, cognitive therapy is fast becoming what people mean when they say they are 'getting therapy'" (p. HE01) [4].

What accounts for CBT's sustained and growing popularity? The short-term, structured nature of the treatment made it particularly amenable to empirical investigation, and it has accumulated an impressive research base. Butler et al. [5] report that there are now over 325 clinical trials of CBT for various clinical populations, including mood disorders, anxiety disorders, marital distress, anger, childhood disorders, and chronic pain. In their examination of 16 separate meta-analyses of CBT studies for a variety of conditions, Butler et al. reported that the treatment produced large effect size improvements compared to control conditions for emotional disorders in adults and adolescents. Furthermore, results indicated that CBT was somewhat superior to antidepressants, and equal in efficacy to behavior therapy in treating adult depression. In recent years, CBT even has been shown to be an effective treatment when added to medications for patients with schizophrenia.

Because of this impressive amount of empirical support, it is not surprising that CBT has found its way onto most treatment guidelines for a variety of psychiatric conditions, including those produced by the U.K.'s National Institute for Health and Clinical Excellence (http://www.nice.org.uk/) and the American Psychiatric Association (http://www.psych.org/psych_pract/). Furthermore, CBT is now one of the psychotherapies taught as a required part

Address correspondence to Brandon A. Gaudiano, Butler Hospital, Psychosocial Research Program, 345 Blackstone Boulevard, Providence, Rhode Island 02860, USA, Brandon_Gaudiano@brown.edu.

of the curriculum in residency training programs in psychiatry [6]. By its vary nature, CBT can be more easily disseminated and implemented than other approaches because of the development of highly specified, manualized treatment protocols designed to be delivered over shorter-term durations (e.g., 12–20 sessions). Given these factors, it is predictable that CBT has become a favorite choice by managed care companies in the U.S. looking for cost-effective alternatives to traditional psychotherapy. Also not surprisingly, many traditional psychotherapists trained in longer-term approaches have complained about the increasing pressure they feel to truncate treatment (in their view) prematurely given the current healthcare climate.

What is CBT?

With the current popularity of the approach, one might assume that CBT would be relatively straightforward to define. Although the basic techniques and tenets of the approach are fairly straightforward, there are a diversity of specific treatments that can be categorized more or less as falling under the CBT umbrella, including cognitive therapy, problem-solving therapy, dialectical behavior therapy, meta-cognitive therapy, rational-emotive behavior therapy, cognitive processing therapy, mindfulness-based cognitive therapy, cognitive-behavioral analysis system of psychotherapy, and schema-focused therapy [7]. Thus, it is more accurate to speak of cognitive-behavioral therapies in the plural sense, as they actually constitute a family of related interventions following certain underlying principles and assumptions. Although it is possible to describe the main elements of CBT, one should recognize that the actual application can vary somewhat in practice. Thus, what follows is a more generic description of the prototypical and most distinctive features of classic CBT (also see Table 1).

Beck states that the cognitive approach to psychotherapy “is best-viewed as the application of the cognitive model of a particular disorder with the use of a variety of techniques designed to modify dysfunctional beliefs and faulty information processing characteristic of each disorder” (p. 194) [8]. More specifically, Forman and Herbert [9] describe the fundamental aspects of the model based on its: a) theory of etiology (i.e., the psychopathological processes thought to produce disorder), b) therapeutic strategies/techniques, c) proposed mechanisms of action (i.e. the processes through which the treatment produces its effects), d) and desired outcomes. First, the CBT model proposes that psychopathology is the product of faulty information processing that manifests itself in distorted and dysfunctional thinking, which directly leads to negative emotions and maladaptive behaviors. Thus, the CBT therapist helps the patient to identify, evaluate, and then modify distorted cognitions to produce more realistic and adaptive evaluations. This is typically first accomplished through rational disputation techniques introduced by the therapist during session, followed by behavioral experiments designed to test out the validity of the patient’s assumptions and predictions. For example, the therapist may first help a patient with social phobia review the evidence for and against the notion that her boss thinks that she is a “failure.” Then, between sessions, the therapist may ask the patient to request direct feedback from her boss about her job performance, and compare this information to her prediction about what her boss would say. It is assumed that correcting patients’ distorted cognitions in this manner will produce a direct improvement in both mood (e.g., the patient will feel less anxious) and behavior (e.g., the patient will perform better at work and be more social around coworkers). Although the cognitive techniques tend to be emphasized, CBT also incorporates a variety of other behavioral strategies, including activity scheduling for depression and exposure to feared stimuli for anxiety. Nevertheless, the primary theoretical mechanism of action in CBT is proposed to be cognitive change, which is expected to lead to improvements in other symptoms via cascading and reciprocal

effects. The most immediate focus of CBT, then, is on symptom reduction; although improved functioning is also a longer-term goal of treatment.

Criticisms of Traditional CBT

Given the dominance of CBT in certain settings, it is not surprising that the approach has garnered its fair share of critics. Opponents have frequently argued that the approach is too mechanistic and fails to address the concerns of the "whole" patient. However, in recent years some of the most pointed criticisms have emerged from within the CBT community itself [10–12]. First, the specific cognitive components of CBT often fail to outperform "stripped-down" versions of the treatment that contain only the more basic behavioral strategies. This insight comes from a special type of treatment research called component analyses or dismantling studies in which the specific components of CBT are experimentally manipulated. For example, Jacobson et al. [13] showed that patients with major depression improved just as much following a treatment that contained only the behavioral strategies and explicitly excluded techniques designed to directly modify distorted cognitions, when compared to the full CBT package containing both the cognitive and behavioral elements.

Second, CBT has lacked a strong link to cognitive psychology and neuroscience, or at least until very recently. Even though CBT was being formally codified in the 1970s when experimental cognitive psychology was also emerging as an important new science, CBT developed primarily from clinical observations obtained in the therapy office, instead of the laboratory. Thus, the theoretical basis of CBT was not well connected to the emerging science of human cognition. This has resulted in the need to modify central aspects of CBT theory over the years to better conform to the experimental knowledge being accumulated by cognitive scientists.

Finally, CBT proponents have been slow to experimentally investigate the putative mechanisms of action of CBT, which when tested have often failed to conform to the predictions set forth by the model. For example, Burns and Spangler [14] failed to confirm any of the predicted causal relationships among dysfunctional attitudes and treatment outcomes in a sample of 521 patients being treated with CBT. These observations have led some to pose a curious question after 325 studies of CBT have already been conducted: "Do we need to challenge thoughts in cognitive behavior therapy?" (p. 187) [11].

A "Third Wave" of CBT?

Based on these and related complaints concerning traditional CBT, many prominent researchers and clinicians have begun to propose modified approaches that are based on the latest research on psychotherapy and psychopathology. Dialectical behavior therapy (DBT) for borderline personality disorder is an example of one of the first empirically-supported, next-generation CBT approaches, which attempts to balance acceptance- and change-based strategies [15]. Hayes [16] coined the term "third wave" to describe the emergence of novel approaches that minimize or wholly exclude direct cognitive disputation, relying instead on more indirect methods of addressing putatively distorted cognitions (e.g., acceptance-based strategies), if doing so at all. The reason for the term "third wave" is because these treatments can be seen as linked to the classic behavior therapy movement of the 1950s (e.g., systematic desensitization), or the so-called first wave, and also to the second wave or "cognitive revolution" of the 1960s and 70s from which traditional CBT emerged.

Techniques designed to directly modify cognitions may be neither necessary nor sufficient for improvement, and in some cases can produce paradoxical effects. For example, research has shown that under certain laboratory conditions, subjects attempting to control or suppress thoughts were more likely to experience them later, in a process called the

"postsuppression rebound effect" [17]. Instead, Hayes [16] advocates a novel approach called acceptance and commitment therapy (ACT), which emphasizes the acceptance (in contrast to control) of distressing thoughts and feelings, and focuses on the use of innovative strategies for directly changing *behavior* in accordance with the personal values and goals of patients. Although research on ACT remains in its initial stages, preliminary investigations from 21 clinical trials have demonstrated that the treatment is effective for a variety of clinical conditions, including mood and psychotic disorders, and compares quite favorably when tested against traditional CBT [10]. Furthermore, initial studies of the mechanisms of action of the treatment have suggested that ACT works more through the modification of behavioral avoidance patterns (as predicted) than changes in distorted cognitions (which are not directly targeted).

What the Future May Hold for CBT

There are several emerging themes in CBT that offer exciting new possibilities for the future of evidence-based psychotherapy. First, component analyses of CBT will continue to be conducted, and this will likely lead to a refined understanding of the most essential and effective strategies contained in the approach. For example, behavioral activation therapy, which emerged from the seminal study by Jacobson et al. [13], is similarly effective but easier to train clinicians how to implement. Furthermore, a recent clinical trial indicated that behavioral activation was more effective than CBT, but only for more severely depressed patients [18]. Thus, in addition to identifying the effective components of CBT, a refined study of the approach may also be helpful for identifying possible contraindications, similar to how clinical trials of psychotropic drugs systematically report data on side-effects and safety in addition to efficacy.

Second, more attention is being paid to basic research on psychopathology, and this is leading to modifications in traditional CBT approaches. For example, Clark and colleagues [19] tested a modified form of CBT that targeted self-focused attention in patients with social phobia based on emerging research on the key cognitive processes related to the disorder. They found the modified CBT protocol to be superior to fluoxetine plus patient-directed exposure instructions.

Third, researchers such as Barlow and colleagues [20] are developing new CBT interventions that focus on the core principles found to be effective across different psychiatric conditions, making them useful for patients with various emotional disorders. These more streamlined approaches may help to decrease the problem posed by training clinicians in separate CBT manuals for each condition, which up to this point has been costly and produced logistical challenges for treatment dissemination efforts. Nevertheless, the research on such "unified" approaches is still in its infancy, and ultimate success in this area remains very much an open empirical question.

Finally, approaches such as ACT and DBT are becoming empirically supported alternatives to traditional CBT, and this is changing the landscape of psychotherapy. One may now pose a new question: "Can these fledgling 'third wave' therapies challenge the giants in the field —behavior therapy and cognitive therapy?" In fact, these treatments already are being researched and disseminated at a surprisingly fast pace. As their popularity increases, similar questions will be asked about their specific efficacy and mechanisms of action; hopefully at a much earlier stage compared to their predecessors. Only further research will confirm their ultimate impact on the field and bona fide "third wave" status. But for traditional CBT to survive all these new challenges, proponents must strive to produce better research, and this may require the modification of some of the approach's central tenets. Ultimately, CBT will need to conform to this emerging science in order to retain its strong foothold, or the

approach may be destined to fade the way of former giants such as psychoanalysis over the upcoming decades.

Acknowledgments

I would like to thank the following colleagues for their helpful feedback on an earlier version of the manuscript: Kristy Dalrymple, Gary Epstein-Lubow, Kathleen Palm, and Lisa Uebelacker.

This work was supported in part by grants from the U.S. National Institute of Mental Health (MH076937) and NARSAD: The Mental Health Research Association.

References

1. Beck, AT. Cognitive therapy and the emotional disorders. New York: International Universities Press; 1976.
2. Norcross JC, Karpiak CP, Santoro SO. Clinical psychologists across the years: the division of clinical psychology from 1960 to 2003. J Clin Psychol. 2005; 61:1467–83. [PubMed: 15880436]
3. Redding RE, Herbert JD, Forman EM, Gaudiano BA. Popular self-help books for anxiety, depression and trauma: How scientifically grounded and useful are they? Prof Psychol Res Pract. in press.
4. Simon, CC. A change of mind. The Washington Post; Sep 3. 2002 p. HE01
5. Butler AC, Chapman JE, Forman EM, Beck AT. The empirical status of cognitive-behavioral therapy: a review of meta-analyses. Clin Psychol Rev. 2006; 26:17–31. [PubMed: 16199119]
6. Sudak DM, Beck JS, Wright J. Cognitive behavioral therapy: a blueprint for attaining and assessing psychiatry resident competency. Acad Psychiatry. 2003; 27:154–9. [PubMed: 12969838]
7. Kuehlwein, KT.; Rosen, HE. Cognitive therapies in action: Evolving innovative practice. San Francisco: Jossey-Bass; 1993.
8. Beck AT. Cognitive therapy: past, present, and future. J Consult Clin Psychol. 1993; 61:194–8. [PubMed: 8473571]
9. Forman, E.; Herbert, J. Acceptance and commitment therapy: Similarities and differences with cognitive therapy. 2006. Available at: http://www.scientist-practitioner.com
10. Hayes SC, Luoma JB, Bond FW, Masuda A, Lillis J. Acceptance and commitment therapy: model, processes and outcomes. Behav Res Ther. 2006; 44:1–25. [PubMed: 16300724]
11. Longmore RJ, Worrell M. Do we need to challenge thoughts in cognitive behavior therapy? Clin Psychol Rev. 2007; 27:173–87. [PubMed: 17157970]
12. Gaudiano BA. The “third wave” behavior therapies in context. Cog Behav Pract. 2006; 13:101–4.
13. Jacobson NS, Dobson KS, Truax PA, Addis ME, Koerner K, Gollan JK, et al. A component analysis of cognitive-behavioral treatment for depression. J Consult Clin Psychol. 1996; 64:295–304. [PubMed: 8871414]
14. Burns DD, Spangler DL. Do changes in dysfunctional attitudes mediate changes in depression and anxiety in cognitive behavioral therapy? Behav Ther. 2001; 32:337–69.
15. Lynch TR, Trost WT, Salsman N, Linehan MM. Dialectical behavior therapy for borderline personality disorder. Annu Rev Clin Psychol. 2007; 3:181–205. [PubMed: 17716053]
16. Hayes SC. Acceptance and commitment therapy, relational frame theory, and the third wave of behavioral and cognitive therapies. Behav Ther. 2004; 35:639–65.
17. Wenzlaff RM, Wegner DM. Thought suppression. Annu Rev Psychol. 2000; 51:59–91. [PubMed: 10751965]
18. Dimidjian S, Hollon SD, Dobson KS, Schmaling KB, Kohlenberg RJ, Addis ME, et al. Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. J Consult Clin Psychol. 2006; 74:658–70. [PubMed: 16881773]
19. Clark DM, Ehlers A, McManus F, Hackmann A, Fennell M, Campbell H, et al. Cognitive therapy versus fluoxetine in generalized social phobia: a randomized placebo-controlled trial. J Consult Clin Psychol. 2003; 71:1058–67. [PubMed: 14622081]

20. Barlow DH, Allen LB, Choate ML. Toward a unified treatment for emotional disorders. Behav Ther. 2004; 35:205–30.

Table 1

The General Cognitive-Behavioral Therapy Model

Etiological Theory	Techniques & Strategies	Mechanism of Action	Desired Outcomes
• Psychopathology is the result of faulty information processing • Distorted and dysfunctional cognitions produce negative affective states and maladaptive behaviors • Each disorder is characterized by different, but predictable patterns of information processing distortions	• Active, goal-oriented, problem-solving approach • Therapist and patient engage in "collaborative empiricism" • Identify, evaluate, modify, and replace distorted with more accurate and adaptive cognitions • Behavioral experiments used to test out distorted predictions and correct them • Other "classic" behavioral techniques included as part of the treatment (e.g., exposure to feared stimuli)	• Correcting distorted cognitions produces improvements in affect and behavior	• Initial symptomatic improvement • Later functional improvement

Adapted from Forman and Herbert [9].