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Cognitive-behavioural therapies: achievements and challenges

Brandon A Gaudiano

In 1976, psychiatrist Aaron Beck posed this question about a new form of therapy that emphasised 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-behavioural therapy (CBT) has emerged as one of the most dominant modes of psychological treatment. 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 nature of CBT in the years to come.

CBT AS AN INCREASINGLY POPULAR AND EVIDENCE-BASED PRACTICE

Cognitive-behavioural therapy has become increasingly popular with clinicians and the general public alike over recent years. Surveys of therapists indicate that CBT is fast becoming the majority orientation of practicing psychologists.[2] Partly because of its common-sense and clear principles, self-help books based on CBT approaches have also 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 makes it particularly amenable to empirical investigation, and it has accumulated an impressive research base. Butler and colleagues[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 an examination of 16 separate meta-analyses of CBT studies, they 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 behaviour therapy in treating adult depression. In recent years, CBT has even been shown to be of benefit 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 treatment guidelines for a variety of disorders, including those produced by the UK'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 of the curriculum in residency training programmes in psychiatry in the USA.[6] By its very nature, CBT can be more easily disseminated and implemented than other approaches because of the development of highly specified, manualised protocols designed to deliver a brief treatment (for example, 12–20 sessions). Given these factors, it is predictable that CBT has become a favoured choice by managed care companies in the USA 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 categorised more or less as falling under the CBT umbrella, including cognitive therapy, problem-solving therapy, dialectical behaviour therapy, meta-cognitive therapy, rational-emotive behaviour therapy, cognitive processing therapy, mindfulness-based cognitive therapy, cognitive-behavioural analysis system of psychotherapy and schema-focused therapy.[7] Thus, it is more accurate to speak of cognitive-behavioural therapies in the plural sense, as they 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 recognise that the actual application can and does vary somewhat in practice. What follows,

Table 1 The general cognitive-behavioral therapy model

Aetiological theory	Techniques and strategies	Mechanism of action	Desired outcomes
Psychopathology is the result of faulty information processing Distorted and dysfunctional cognitions produce negative affective states and maladaptive behaviours Each disorder is characterised 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 Behavioural experiments used to test out distorted predictions and correct them Other "classic" behavioural techniques included as part of the treatment (eg, exposure to feared stimuli)	Correcting distorted cognitions produces improvements in affect and behaviour	Initial symptomatic improvement Later functional improvement

Adapted from Forman and Herbert.[9]

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therefore, 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]

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 behaviours.[9] Thus, the CBT therapist works with the patient to identify, evaluate and then modify distorted cognitions to produce more realistic and adaptive evaluations. Behavioural experiments are also used 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 (for example, the patient will feel less anxious) and behaviour (for example, the patient will perform better at work and be more social around co-workers). Although the cognitive techniques tend to be emphasised, CBT also incorporates a variety of other behavioural 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 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 behavioural strategies. For example, Jacobson and colleagues[13] showed that patients with major depression improved just as much following a treatment that contained only the behavioural strategies and explicitly excluded techniques designed to directly modify distorted cognitions, when compared to the full CBT package containing both the cognitive and behavioural 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 as opposed to 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 criticisms, a number of modified approaches to CBT have been developed. Dialectical behaviour 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 minimise or wholly exclude direct cognitive disputation, relying instead on more indirect methods of addressing putatively distorted cognitions (for example, 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 behaviour therapy movement of the 1950s (for example, systematic desensitisation), 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 "post-suppression rebound effect".[17] Instead, Hayes[16] advocates a novel approach called acceptance and commitment therapy (ACT), which emphasises the acceptance (in contrast to control) of distressing thoughts and feelings, and focuses on the use of innovative strategies for directly changing *behaviour* in accordance with the personal values and goals of patients. Although research on ACT remains in its initial stages, preliminary investigations suggest that it compares favourably 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 behavioural 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 new possibilities for the future of evidence-based psychotherapy. First, component analyses of CBT will continue to be conducted, and this should lead to a refined understanding of the most essential and effective strategies contained in the approach. For example, behavioural activation therapy, which emerged from the seminal study by Jacobson and colleagues,[13] is similarly effective but easier to train clinicians how to implement. Furthermore, a recent clinical trial indicated that behavioural 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.

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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 disorders. These more streamlined approaches may help to decrease the problem posed by training clinicians in separate CBT manuals for each condition, which makes the dissemination of treatment more difficult. Nevertheless, the research on such "unified" approaches is still in its infancy, and success in this area remains 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—behaviour therapy and cognitive therapy? 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 these new challenges, proponents must strive to produce better research, and this may require the modification of some of the approach's central tenets. Otherwise, CBT may be destined to fade the way of former giants such as psychoanalysis over the approaching decades.

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Et al

The articles we select for *Evidence-Based Mental Health* must pass two stages: first they must pass our basic validity criteria and then the editors assess each article for clinical relevance. A number of articles meet the inclusion criteria but are not abstracted due to lack of space. We will highlight the most interesting of these here and list the rest.

In his classic text of 1899, *Psychiatrie*, Emil Kraepelin characterised "dementia praecox" as a disorder of progressive and uniform deterioration. In subsequent writings he conceded that remission of symptoms may occur, but the perception that what we now call schizophrenia has an inevitably poor prognosis persists. That patients can do well is demonstrated by this cluster analysis of 6000 first admissions for schizophrenia followed for 10 years (*Schizophr Res* 2007;**91**:254–8). Readmission patterns were used as an indicator of outcome, with three quarters of the cohort showing improvement over time. Kraepelin was also responsible for drawing the fundamental distinction between schizophrenia and manic-depressive illness, a dichotomy that many consider to be false. For some, schizophrenia has for far too long dominated the mental health agenda, with bipolar affective disorder left playing catch-up.[1] This national household survey from the USA may well make welcome reading for those who believe a hidden epidemic is being neglected, or perhaps not (*Arch Gen Psychiatry* 2007;**64**:543–52). Subthreshold bipolar disorder (with fewer or milder mood symptoms than those required by DSM-IV) doubles the 12-month prevalence of bipolar spectrum disorders from 1.4% to 2.8%, with the authors arguing that it is clinically significant and thus requires treatment. Widening the diagnostic goalposts is one way of boosting numbers but cries of "foul" are likely to follow in the absence of good evidence for doing so.

For adolescents coughing and wheezing behind the bike sheds I'm pretty certain that among the perils of smoking, future suicide doesn't feature highly. This large Finnish birth cohort study confirms previous findings by showing a fourfold increased risk of suicide by the age of 34 in 14-year-old boys who were regular smokers (*J Clin Psychiatry* 2007;**68**:775–80). An important finding although I'd be more inclined to investigate the countless other problems that regular smoking may