SECTION IV

Select Interventions in Clinical Practice

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Cognitive-Behavioral Therapy: Theory and Practice

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THE HISTORY AND EVOLUTION OF COGNITIVE-BEHAVIORAL PSYCHOTHERAPY

Researchers and clinicians argue about what the exact scope of cognitive-behavioral therapy (CBT) is. There are a number of current therapies that can be described as CBT, as they all share the assumption that thinking (cognition) mediates behavior change, and that changes in thinking lead to behavior and mood modification. Broadly speaking, the evolution of CBT can be divided into three or, as some claim, four stages:

(1) Independent emergence of behavior therapy in the United States, South Africa, and the United Kingdom in 1950–1970 (first wave of CBT);
(2) The beginning of cognitive therapy in the United States in the 1960s and 1970s (second wave);
(3) Further development and merging with behavior therapy into cognitive-behavioral therapy, with momentum in the 1980s and ongoing remarkable achievements;
(4) Development of the so-called third wave of CBT, with a primary emphasis on changing the function of cognitions instead of changing their content, during the last 10–15 years.

The Emergence of Behavior Therapy

Cognitive-behavior therapy grew out of traditional behavior therapy, which was regarded as the first generation of scientifically based psychotherapy. It was an innovative approach based on but differing from the rather radical perspective of behavioral theorists such as Skinner and Watson. The major contributors to the beginning of behavior therapy were Joseph Wolpe (1958) in South Africa, who formulated the theory of reciprocal inhibition and introduced empirically validated fear-reduction treatment, namely, systematic desensitization, for phobias and anxiety, and, in the United Kingdom, Hans Eysenck (1952, 1960), who provided the theoretical basis and rationale for behavior therapy and was famous for his severe criticism of psychoanalysis and its claims. In a 1952 review, he claimed to find psychoanalysis to be no more effective than no treatment at all. Eysenck rejected the theory that neuroses are caused by unconscious (sexual) conflicts and that symptoms of neurosis are defenses against distress that would otherwise be impossible to bear. Instead, he hypothesized that if one gets rid

of the symptoms, he or she can rid of the neurosis (Eysenck, 1960). In the United States, Ogden Lindsley (1956) used operant techniques in working with schizophrenic patients.

Behaviorists who greatly influenced the development of cognitive therapy are Albert Bandura and Donald Meichenbaum. Bandura (1977a, 1977b) developed several important ideas, including social learning theory and the concepts of expectancy of reinforcement, self- and outcome efficacies, modeling, and vicarious learning. One of his achievements was proving that a perceived reinforcer was more reinforcing than an actual reinforcer that was not perceived to be reinforcing and, furthermore, that an individual does not have to be directly reinforced to execute an action to make it occur; it can be sufficient to observe another person being reinforced for this behavior. This research indicated that the behavioral assumption of an automatic connection between reinforcer and response might not be necessarily correct and that some internal processes may mediate this connection. Meichenbaum discovered that when people talk to themselves, this private speech functions as a significant control of behavior. He observed that schizophrenic patients who engaged in self-instruction to "talk healthy" demonstrated superior task performance on a variety of measures. He developed self-instructional training, in which he used graduated tasks, cognitive modeling, coping statements, and self-reinforcement (Meichenbaum & Goodman, 1971). He is considered to be one of the pioneers of CBT; however, his ideas were behavioral in nature because he claimed that behavior must be changed first, and then internal dialogue.

The main distinction between cognitive and behavioral therapies lies in the incorporation of the mediational perspective, that is, cognition mediates behavioral and emotional change, in the former into the understanding of emotional disturbances, a process that took place in the late 1960s and 1970s on the basis of Aaron T. Beck's (1963, 1967, 1979) work on depression. Although the behavioral approach was still the dominant perspective at that time, there was growing awareness that the strict stimulus-response model of behavior is not comprehensive enough to account for all human behavior (Mahoney, 1974) and that some clinical problems such as depression and obsessional thinking cannot be effectively treated without cognitive interventions.

At the same time, there continued to be criticism of psychoanalysis. Behaviorists like Wolpe were strongly influenced by the empirical standards and ideas of Karl Popper, who claimed that psychoanalysis is unfalsifiable and hence outside science.

The Emergence of Cognitive Therapy

Cognitive therapy developed out of research on depression by Aaron T. Beck (1963, 1964), an American psychiatrist working at the University of Pennsylvania. Beck was trained in psychoanalysis and tried to validate the psychoanalytic concept of anger turned to the self as a cause of depression. By examining the stream of thoughts and dreams of depressed patients, Beck discovered that the main theme is not anger but defeat and loss. His clinical observations and experimental findings showed a consistent negative bias in how depressed patients processed information. Beck sought to develop cognitive interventions that sought to ameliorate patients' suffering from depression and other emotional problems by helping them identify, examine, and modify the distorted and maladaptive thinking patterns underlying their problems. Cognitive therapy is based on the "rationale that an individual's affect and behavior are largely determined by the way in which he structures the world" (A. T. Beck, Rush, Shaw, & Emery, 1979, p. 3) and that therapeutic change can be obtained through the utilization of techniques designed to "identify, reality test, and correct distorted conceptualizations and the dysfunctional beliefs (schemas) underlying these cognitions" (p. 4). In Beck's theory, cognitions play a crucial role as they organize and regulate all other functions (A. T. Beck, Freeman, et al., 1990). The organism needs to process information in an adaptive way in order to survive. Cognition involves the process of identifying and predicting relations between a person and objects and events, so then adaptation to environmental demands is necessary. The key concept in Beckian cognitive therapy is schema, which is a meaning-making cognitive structure made up of tacit assumptions that construct interpretations of the self and the world, organize experiences, and guide behavior. Schemas are involved in screening, coding, and evaluating information (A. T. Beck, 1964), and they are usually established in early childhood. They may include rules about one's personal, occupational, familial, or cultural activities, and they have cognitive, affective, motivational, and action-corresponding subschemas. Furthermore, schemas can be categorized as active to inactive, dormant or latent, and impermeable to permeable (A. T. Beck et al., 1990). They function outside people's awareness, but their products—specific thoughts and images—are accessible. He called these products automatic thoughts to reflect the way they are experienced as spontaneous, habitual, and objective-like. Automatic thoughts organize a person's emotional and behavioral reactions to specific situations and are

usually unrecognized, unless the person is instructed to search for them.

Techniques developed by Beck that aim to modify cognitions, ranging from how to attend, identify, and monitor automatic thoughts to how to challenge them and distinguish between appropriate and maladaptive cognitions, are most commonly used and are the key techniques in cognitive therapy.

Beck's cognitive therapy has undergone various modifications over the years and has been extended to most of psychiatric disorders listed in manuals and other difficulties. These include anxiety and phobias (A. T. Beck & Emery, 1985), marital problems (A. T. Beck, 1988), personality disorders (A. T. Beck et al., 1990), substance abuse (A. T. Beck, Wright, Newman, & Liese, 1993), suicide (Freeman & Reinecke, 1993), crisis management (Dattilio & Freeman, 1994), bipolar disorders (Basco & Rush, 1996), and anger (A. T. Beck, 1999). Although these adaptations have changed the focus and broadened tools of cognitive therapy, their theoretical assumptions remain the same as in Beck's original model.

Concurrent with Beck's research was the work of Albert Ellis (1958), the second pioneer of cognitive psychotherapy, who elaborated a method that he originally described as rational psychotherapy. Over the years he modified this strictly cognitive therapy and included more emotional and behavioral techniques, so then rational psychotherapy expanded into rational-emotive therapy, and then rational-emotive behavioral therapy. Similar to Beck, he focused on patients' thoughts and beliefs, proposed more active dialogue with them rather than passive listening, and included behavioral assignments and exercises in treatment programs (Ellis, 1962). He developed the A-B-C model, in which emotional consequences (C) are considered to be caused by beliefs (B) about events (A), not by the events themselves. The patient can modify these emotional consequences by "vigorously disputing" the beliefs (B) about the events or the situation (A). One of Ellis's major contributions was the distinction between rational and irrational thinking. He identified more than 10 basic types of irrational beliefs, which are characterized by the following features: (1) they are absolutistic (he termed this "masturbatory ideology"), as in for example, the belief that someone must be competent in everything he or she does; (2) there is no empirical evidence to support them, or existing evidence contradicts them; (3) they result in intense negative feelings, such as severe anxiety or depression; and (4) they lead to self-defeating actions (Ellis, 1986). All irrational beliefs can be reduced to the absolutistic evaluations of perceived events, which Ellis described as musts, shoulds, has to's, and ought to's. He stated that people's "difficulties largely result from distorted perception and illogical thinking" and a person "can rid himself of most of his emotional or mental unhappiness . . . and disturbance if he learns to maximize his rational and minimize his irrational thinking" (Ellis, 1962, p. 36).

The idea that cognitions play a crucial role in psychological well-being was not new, as both Beck and Ellis acknowledged (A. T. Beck et al., 1979; Ellis, 1962). Ancient philosophers such as Socrates and Epictetus claimed that "people are disturbed not by things, but the views they take on them." This phenomenological approach to psychology would appear in Immanuel Kant's writings and the more contemporary work of Adler (1927), Horney (1950), and Sullivan (1953). Ellis (1962) pointed out that "self-help" systems taught by the great religious leaders such as Gautama Buddha and Jesus Christ were essentially cognitive behavioral in nature.

Another crucial historical factor contributing to the development of cognitive therapy was experimental cognitive psychology, with its mediational information-processing model of cognition, which was extended to clinical constructs (e.g., Hamilton, 1980). In the field of cognitive psychology, significant researchers include Kelly (1955), with his formulation of "personal constructs," and Richard Lazarus, who carried out studies that documenting the involvement of cognitive mediations in anxiety (Lazarus, 1966; Lazarus & Launier, 1978). As was mentioned earlier, cognitive therapies incorporate behavior interventions, and that is why most cognitive therapy proponents call their approaches cognitive behavioral; similarly most behavior therapists regard themselves as CBT therapists. Although the Association for Advancement of Behavior Therapy has not incorporated "and Cognitive" in its title, its European counterpart, the European Association for Behaviour Therapy, changed its name to the European Association for Behaviour and Cognitive Therapies in 1992.

Development of Cognitive-Behavioral Therapy

In the beginning, the cognitive concepts of Beck and Ellis were too diffuse and too cognitive for determined behaviorists, but because they respected behavior therapy and incorporated components of it into their treatment modalities, behavior therapists began to be more and more interested in this approach. Besides, the reported achievement of Beck's method in the treatment of depression was not easily undervalued. Dissatisfaction with previous models of therapy, together with findings

revealing new cognitive aspects of human functioning that were not covered under the behavior therapy umbrella, was the basis on which a number of prominent therapists and theorists began, during late 1960s and 1970s, to identify themselves as cognitive behavioral in orientation. That includes Aaron Beck (1967, 1970) and Ellis (1962), but many others as well, for example, Cautela (1967), Mahoney (1974), and Meichenbaum (1977; Meichenbaum & Cameron, 1973). Their example drew the attention of others to research on and practice of CBT. This was facilitated by the founding of a journal in 1977 called *Cognitive Therapy and Research*, which allowed researchers and clinicians to present their ideas and findings to a wide audience. Cognitive concepts have widened the exploratory power and understanding of abnormal behavior and its origin. The growing body of research studies and reviews demonstrated that cognitive-behavioral interventions have a positive clinical impact (e.g., Berman, Miller, & Massman, 1985; Shapiro & Shapiro, 1982) and strengthened the position of CBT further. The two streams of therapy, cognitive and behavioral, were particularly well fused by the development of a theoretical model and specific therapeutic intervention for panic disorder (Barlow & Cerny, 1988; Clark, 1986), regarded by many as the most effective psychological treatment ever invented.

There are many therapies that can be placed under the cognitive-behavioral umbrella. Some of the major ones are rational-emotive behavior therapy, cognitive therapy, self-instructional training, systematic rational restructuring, anxiety management training, stress inoculation training, problem-solving therapy, self-control therapy, and structural and constructivist psychotherapy.

Around the 1990s, a number of new approaches or extensions of previous CBT treatments, described as the third wave of CBT (Hayes, 2004b), appeared. They were a reaction to doubts that had arisen about some of the core assumptions of traditional CBT (Hayes, 2004a; Hayes, Leoma, Bond, Masuda, & Lillis, 2006), especially the assumption that direct cognitive change is necessary for clinical improvement. Other factors leading to the development of the third wave of CBT were new ideas in the philosophy of science and increasing awareness of the Buddhist tradition and the benefits of cultivating mindfulness meditation.

New Directions in CBT: The Third Wave of Cognitive and Behavior Therapy

In the past 20 years, a number of therapies inspired greatly by the pioneering work of Jon Kabat-Zinn's (1990) mindfulness-based stress reduction program have been developed. The leading approaches, aside from mindfulness-based stress reduction itself, are dialectical behavior therapy (Linehan, 1993), acceptance and commitment therapy (Hayes, Strosahl, & Wilson, 1999), and mindfulness-based cognitive therapy (Segal, Williams, & Teasdale, 2002). Others include the cognitive-behavioral analysis system of psychotherapy (McCullough, 2000), functional analytic psychotherapy (Kohlenberg & Tsai, 1991), integrative behavioral couple therapy (N. S. Jacobson, Christensen, Prince, Cordova, & Eldridge, 2000), Roemer and Orslillo's (2002) treatment of generalized anxiety disorder, and mindfulness-based eating awareness training (Kristeller & Hallett, 1999). As Hayes (2004b) described,

> *Grounded in an empirical, principle-focused approach, the third wave of behavioral and cognitive therapy is particularly sensitive to the context and functions of psychological phenomena, not just their form, and thus tends to emphasize contextual and experiential change strategies in addition to more direct and didactic ones. These treatments tend to seek the construction of broad, flexible, and effective repertoires over an eliminative approach to narrowly defined problems, and to emphasize the relevance of the issues they examine for clinicians as well as clients. The third wave reformulates and synthesizes previous generations of behavioral and cognitive therapy and carries them forward into questions, issues, and domains previously addressed primarily by other traditions, in hopes of improving both understanding and outcomes.* (p. 658; italics in original)

Proponents of these approaches claim that the heart of traditional CBT, that is, challenging dysfunctional beliefs through rational, logical analysis, is not necessary (Hayes, Follette, & Linehan, 2004). Instead of primarily focusing on challenging the validity of thoughts, therapy should lead to a direct modification of cognitive processes, particularly attention (Orsillo, Roemer, & Holowka, 2005). There is growing awareness, which has been labeled a "second cognitive revolution," that our thoughts, emotions, and behavior are to a great extent the consequence of unconscious processes (Westen, 2000). In this regard, the new wave of behavioral therapies seems to offer access to automatic and dysfunctional processes, which can be achieved through the cultivation of mindfulness and acceptance. The key element of mindfulness- and acceptance-based psychotherapy is helping the patient make a shift from a judgmental and controlling stance toward internal experiences to a more compassionate and accepting one (Orsillo et al., 2005). Critics of traditional content-focused CBT, with its em-

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phasis on symptom control and management, have pointed out that such an attitude might strengthen the individual's striving to get rid of unwanted and unpleasant experiences like anxiety or obsessions. Attempts to change the form or frequency of internal events (e.g., thoughts, emotions, memories, images, physiological sensations), called experiential avoidance (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996), are usually not alleviated but rather contribute to the development and maintenance of many forms of psychopathology (Hayes et al., 1996; Stewart, Zvolensky, & Eifert, 2002). Third-wave CBT therapies incorporate strategies to help change the patient's relationship with his or her particular form of suffering, to decrease internal struggle, and to normalize unpleasant experiences. Most importantly, they switch the emphasis from "think and feel better" to "live better." Here, the goal for therapy is to reorient the patient from trying to change his or her thoughts and feelings to making positive behavioral change—encouraging the patient to meaningfully engage in life in accordance with his or her values and goals, in spite of his or her suffering. To achieve this, mindfulness meditation, with its qualities of acceptance, non-striving, decentering, and letting go, is a main strategy. Mindfulness-based interventions use different methods to teach mindfulness awareness. In a formal meditation practice, participants usually sit for a period of time with a straight back, focusing on a specific stimulus, such as the breath (single-object awareness). They are instructed to redirect their attention to that object whenever their minds wander or to observe nonjudgmentally the constantly changing stream of stimuli (choiceless awareness) as they arise and pass. Informal practices involve various exercises of mindfulness in daily life activities, such as eating, walking, and breathing, in which a person is instructed to carefully observe whatever occurs, with no attempt to evaluate or get rid of it, but instead to simply note it and let it go. Mindfulness-based stress reduction and mindfulness-based cognitive therapy use both formal and informal practice, whereas acceptance and commitment therapy and dialectical behavior therapy emphasize shorter and less formal activities (Baer & Krietemeyer, 2006). Readers interested more in the third wave of CBT are referred to more extended reviews and books (e.g., Baer, 2006; Hayes et al., 2004).

The third wave of CBT has recently received much attention and interest from medical and psychotherapeutic societies but has also been met by criticism and rejection. Hofmann and Asmundson (2008) have argued that the founders of acceptance and commitment therapy misunderstand key concepts of CBT, leading to their criticism CBT, and that their proclamation of the need for a new approach was based on their poor understanding of these concepts. According to Corrigan (2001), third-wave therapies are "getting ahead of the data" (p. 192) and are far from the principles of empirical validation laid down by the first-wave behavior therapists. Third-wave therapies share some common features but differ significantly, for example, in the extent to which they subscribe to behavioral analysis or radical behaviorism. Öst (2008) recently reviewed the efficacy of third-wave CBT treatments by conducting a meta-analysis of 29 RCTs (13 RCTs in acceptance and commitment therapy, 13 in dialectical behavior therapy, 1 in cognitive behavioral analysis system of psychotherapy, and 2 in integrative behavioral couple therapy). He concluded that the main/mean effect size was moderate for both acceptance and commitment therapy and dialectical behavior therapy, but that none of the third-wave therapies fulfilled the criteria for empirically supported treatments.

DEFINING COGNITIVE-BEHAVIOR THERAPY

According to Clark (1995), "At the very heart of the cognitive therapy model is the view that the human mind is not a passive receptacle of environmental and biological influences and sensations, but rather that individuals are actively involved in construing their reality" (p. 156). The label of cognitive behavioral has been proposed for all approaches that reject the idea that behavior is determined primarily internally, as with Freud, or primarily externally, as with Skinner, and apply approaches that seek to integrate both views (Meichenbaum, 1977).

CBT can be viewed as a family of models that share fundamental theoretical assumptions and usually are similar to the referral exemplar of CBT—Beck's standard cognitive therapy for depression.

The relative emphasis on cognition and behavior varies among cognitive-behavioral approaches; however, Dobson and Dozois (2001) proposed that three main propositions are shared by all forms of CBT:

(1) Cognitive processes affect behavior.
(2) Cognitive activity can be monitored and changed.
(3) Changes in people's cognitions—thoughts, interpretations, and assumptions—can lead to modification in their actions.

Cognitive theory and therapy consider cognitions the key to psychological disorders. Cognition is defined

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as a function that involves inferences about one's experiences and about the occurrence and control of future events (Alford & Beck, 1997). Beck discovered that rigid, automatized forms of thinking form the basis for the clinical manifestation of emotional problems. As a great amount of research demonstrates, cognitive processes are implicated in many forms of psychopathology (Dobson & Kendall, 1993), and modification of these maladaptive patterns of thinking can ameliorate these psychopathological states.

The three propositions listed by Dobson and Dozois (2001) as fundamental to the CBT model do not preclude other important assumptions that might be added. According to Freeman and Reinecke (1995), CBT models assume that the processing of information is active and adaptive and that it allows individuals to derive a sense of meaning from their experience. Although CBT models assert that the system of beliefs of each individual is idiosyncratic, clinical disorders can be distinguished on the basis of specific cognitions (cognitive content and products) common to patients suffering from the same disorder. The nature of the patient-therapist relationship and the typical structure of therapeutic process are shared by different cognitive-behavioral therapies. Beck (1979) defined CBT as "an active, directive, time-limited, structured approach used to treat a variety of psychiatric disorders" (p. 3). "Active" refers to the fact that most forms of CBT are either implicitly or explicitly educative in nature. One of the often mentioned characteristics is the specific problem-focused nature of cognitive-behavioral interventions. This orientation on problems partially explains the usual time limits of this therapy; most of the CBT treatment manuals describe a treatment consisting of 12–16 sessions (Chambless et al., 1996). The time-limited nature of CBT distinguishes this form of therapy from psychoanalytic therapy, which is usually long term. What must be stressed, however, is that CBTs cannot be defined by their techniques or strategies to promote change (Clark, Beck, & Alford, 1999). Any intervention that brings about cognitive change as a means of facilitating emotional and behavioral change, and any model that explicitly acknowledges the mediating or moderating role of cognition in human functioning, might be considered a variant of CBT. Acknowledging the key role of cognition in the theory of psychopathology and therapeutic change doesn't mean that CBTs reject the role of noncognitive factors in vulnerability and the treatment of psychiatric disorders. Cognitive-behavioral models assert that human mental health and psychopathology are multiply determined. This is consistent with contemporary research in developmental psychopathology, which indicates that biological, environmental, social, personality, and cognitive factors interact in contributing to individual pattern of psychopathology. There is a strong emphasis on both theory and therapy in CBT to be empirically validated.

As Reinecke and Clark (2004) have stated, "Much of the current appeal of CBT stems from three factors—its intuitive simplicity, its reliance upon empirical methods for testing validity of its models and effectiveness of its treatments, and its clinical utility" (p. 2). In fact, partially because of these characteristics, it has been reasoned that cognitive theory constitutes a unifying theory for psychotherapy and psychopathology (Alford & Beck, 1997; Alford & Norcross, 1991).

THE ANATOMY OF THE THERAPEUTIC ACT

Clinical Assessment and Diagnosis

Traditionally, behavior therapy started with a functional analysis of the problematic behavior that was the target of the intervention. A behavioral intervention is always preceded by a detailed analysis of the factors that have generated and maintained a certain (dysfunctional) behavior. Functional analysis is sometimes known as a case formulation.

Behavior therapists have been reluctant to use diagnostic systems based on a syndrome approach to dysfunctional behavior, such as the *Diagnostic and Statistical Manual* of the American Psychiatric Association (1994). To this day, leaders of behavior therapy (Hayes, 1997) question the utility of psychiatric diagnoses in psychotherapy. Behavior therapists contend that ultimately what matters is the behavior that is to be modified.

Regardless of whether this is good idea or not, most cognitive-behavioral interventions are targeted to a disorder that is defined by the *DSM* categorical system. Cognitive-behavioral psychopathological models have a lot of valid points against the *DSM-IV,* but the dominant stance is that if research were conducted under diagnostic criteria other than the *DSM*'s, it would be very difficult to compare outcome data for various interventions (e.g., medication). It was perhaps for this reason that the Beck Depression Inventory (A. T. Beck, Steer, & Brown, 1996) was modified so that it would be compatible with the *DSM*'s construct of major depression.

So, for the last two decades, most outcome studies and interventions have been targeted at mental disorders as defined by the most recent version of the *DSM.*

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Given the commitment of cognitive-behavior therapy to empirical research, cognitive-behavioral therapists are expected to choose interventions whose efficacy has been empirically evaluated. Since most of this research is targeted to *DSM*-defined disorders, the first step in the assessment phase of CBT is identifying any mental disorders.

DSM categories are meta-theoretical or descriptive so that they are presented in language that is acceptable to mental health professionals of all theoretical backgrounds. Although the multiaxial diagnostic approach provides a lot more information than older forms of diagnosis, the fact remains that a *DSM* diagnosis does not provide all the information needed to for a psychotherapeutic intervention. No matter how carefully the intervention is conducted, a *DSM-IV* diagnosis does not tell us how capable the client is of engaging in a good therapeutic alliance or how much sense the cognitive approach makes to this person.

Because *DSM-IV* categories are meta-theoretical, a second step in assessment is necessary to provide us with the necessary information to conduct cognitive-behavior therapy. This is normally known as a case conceptualization or case formulation.

Clinical Case Conceptualization

Jacqueline Persons defines a case conceptualization as a series of hypotheses that establish a relationship between the different problems that afflict a given patient, postulating the psychological mechanisms that may have participated in the predisposition, triggering and maintenance of these problems (Persons & Davidson, 2001). Clearly, a conceptualization is driven by a certain psychopathological theory. It is, in fact, an ideographic theory about a patient that is based on a general—nomothetic—theory (Persons & Davidson, 2001). Based on a certain cognitive theory, the formulation must provide an answer to the following question: What beliefs were activated by which triggering factors, generating what dysfunctional thoughts, moods, and behaviors?

A young woman comes to consultation complaining of bouts of high anxiety (panic attacks), which she began to experience one night at a nightclub. She had just drunk an energy drink and smoked marijuana. She suddenly experienced some unusual sensations (autonomic activation) that she could not explain and that made her feel vulnerable. She felt very anxious and subsequently stopped clubbing in order to avoid experiencing those sensations again. A cognitive-behavioral conceptualization of this experience would say that the unusual sensations (the trigger) were interpreted as threatening by the activation of the belief "I am vulnerable." The activation of the belief led to the negative automatic thought "There is something physically wrong with me!" As this crossed her mind, she felt marked anxiety (the emotion). She became so afraid that she decided to stop going to this club (avoidant behavior). She thought that doing this prevented the negative affect from occurring again (avoidance as a safety measure).

Case conceptualizations are important because most outcome (efficacy) studies are conducted on relatively "pure" patients (without significant comorbidity), under relatively "ideal" conditions. Until we have many more outcome studies that look at effectiveness, we will need conceptualization-driven treatments for clients with comorbid conditions or other complexities that represent the everyday challenges of psychotherapists.

Treatments based on case conceptualizations do not oppose but complement treatments based on empirical evidence. Case conceptualization guides us in conducting evidence-based treatments by providing a framework for understanding how the disorder manifests itself in a particular individual. The main reason for case conceptualization is its clinical utility. It aims at planning effective interventions, including the identification and reversion of impasses and flops.

There are many different models of case conceptualizations (J.S. Beck, 1995; Persons & Davidson, 2001), but they normally include some basic elements. These are a diagnosis, a list of the present problems, a working hypothesis about the relationship between the present problems and the cognitive profile of the client, and a treatment plan that outlines not only the deficits but the strengths and advantages of the client. In order to precisely diagnose an anxiety disorder, for example, it is important to pay attention not only to the nature of autonomic nervous system activation, but also to what is feared by the patient (i.e., the threatening appraisal). Fear of flying (a specific phobia) is frequently confused with fear of being inside a flying plane (agoraphobia). Cognitions about threat (the threatening appraisal) are central to CBT, since treatments are specific to a certain set of cognitions.

Thus, all problems mentioned by the patient (not only those pertaining to the disorder) must be described in cognitive, emotional, and behavioral terms. CBT therapists socialize the model to the patient as it is generated. Graphs, metaphors, and bibliotherapy are commonly used to this end. For example, a panic patient may be told that "As you felt that unexpected sensation, you said to yourself, 'I am having a heart attack.' This threatening thought triggered your anxiety, leading you

to rush to the emergency room." As in other forms of psychotherapy, in order to generate a complete list, it is useful to probe all the different areas of the patient's life: psychological and psychiatric issues, physical health, interpersonal issues, work or academic issues, finances, housing, cultural and religious issues, and leisure, as well as issues that patients may avoid: substance abuse, suicide ideation or attempt, rituals, and impulsive behavior.

Therapists must assign a score to each problem, according to intensity, frequency or degree of interference. With complex patients, the first targets for treatment are life-threatening behaviors and behaviors that interfere with treatment.

Therapists may observe problematic issues that are not perceived as such by the patient. This should be considered first and eventually addressed when informed consent is obtained. Also, parents of children and adolescents may observe problems that are not perceived as such by the child or the adolescent.

The working hypothesis is the core of the case conceptualization. It must identify cognitive structures (core beliefs, intermediate beliefs, and automatic thoughts), the events and situations that trigger these beliefs, and a clinical theory of their potential origins. In sum, it must generate hypotheses that link the problems listed with the beliefs, precipitants, and origins (J.S. Beck, 1995; Persons & Davidson, 2001). The therapist usually identifies automatic thoughts by asking the patient to focus on what he or she thinks when experiencing the unpleasant emotions that drove him or her to therapy (A.T. Beck et al., 1979). Intermediate beliefs are rules and attitudes derived from core beliefs and represent ways to cope with them. Therapists can identify core beliefs (Leahy & Holland, 2000; Padesky & Greenberger, 1995) and intermediate beliefs by several means, for example, by looking at the first part of an assumption (if . . . , then . . .), by looking at common themes in the patient's automatic thoughts, or by using a belief questionnaire, such as the Dysfunctional Attitude Scale (Weissman & Beck, 1995).

The treatment plan includes the objectives of the therapy, its modality and frequency, the type of interventions to be used, any adjunct therapies, and the potential obstacles that may arise. Cognitive therapists are expected to avoid the traditional tendency to focus on deficits and pay equal attention to the client's strengths and advantages, drawing upon them to generate adequate treatment strategies. For example, one of the strengths of the patient with panic mentioned before was her comfort experiencing emotions and discussing them in therapy.

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The Therapeutic Relationship

The quality of the therapeutic alliance is the most powerful predictor of success in psychotherapy (Howarth & Symonds, 1991; Safran & Segal, 1990). The alliance involves not only the nature of the therapist-patient relationship, but also an agreement on their respective roles and on the goals for the therapeutic undertaking.

What is about the nature of the therapeutic relationship in CBT? In Beck's cognitive therapy (A.T. Beck et al., 1979), the relationship is characterized by collaborative empiricism. Patient and therapist accept that thoughts are just mental events, mere representations of reality. Clients learn to treat their thoughts and beliefs as hypotheses, not as self-evident truths (distancing). As in science, these hypotheses must be tested against the data provided by the environment (questioning of cognitive content). This is a collaborative endeavor in which the patient has to learn how to become his or her own therapist (i.e., he or she has to learn new ways of relating to his or her internal experience). This must be achieved in the spirit of guided discovery. Being accurately empathetic, the cognitive therapist selects experiences that will allow the patient to acquire new perspectives on old problems in a gradual way. Highly inspired by Socratic dialogue, the patient's learning is mostly experiential.

Cognitive therapists strive to generate cognitive dissonance, thus favoring the chances of psychological change. If the client discovers that belief A is contradicts belief B (or contradicts the data), then he or she will be highly motivated to find a dialectical alternative, belief C. The main obstacle to change is rigidity; the therapeutic relationship must encourage, teach, and foster psychological flexibility.

COGNITIVE AND BEHAVIORAL INTERVENTION TECHNIQUES

As we have already mentioned, the acronym CBT is used as a generic denomination for the many forms of therapy in the cognitive-behavioral paradigm. Despite their many and considerable differences, Beck's cognitive therapy, Ellis's rational-emotive behavioral therapy, Linehan's dialectical behavior therapy, Wells's metacognitive therapy, and Hayes's acceptance and commitment therapy, to name but a few, are all considered part of the CBT family. Therefore, it is not easy to provide a summary of CBT interventions that can do justice to the all their approaches, goals, and methodology. What

follows is an honest attempt to give the reader an idea of what the core of CBT is.

Every cognitive-behavioral treatment is based on a psychopathological model that provides the rationale for the selection of interventions and the sequence in which they are to be applied. CBT is based on the premise that cognition, emotion, and overt behavior are interdependent subsystems. Thus, the modulation of any subsystem will inevitably lead to changes in the other two. Therefore, there are no "pure" cognitive or behavioral interventions. If you ask your client to behave differently in an experimental situation, chances are that his or her way of thinking (cognition) about that situation will change. Conversely, if you challenge the rationale of a certain behavior, chances are that your client will start doing things differently. So, exploring new behaviors is a powerful way of changing cognition and, conversely, changing cognition may be the best way of modifying behavior.

If you provide a bulimic patient with psychoeducation about the link between strict dieting, bingeing, and gaining weight, chances are that he or she will give up that pattern of eating (change in behavior) and stop blaming him- or herself for being "too weak" to stay on a diet (change in cognition) and feeling guilty about it (change in emotion). A healthier eating behavior will result in the regulation of negative affect (change in emotion) and a greater sense of self-control (change in cognition).

CBT acknowledges the technical contributions of several models of psychotherapy. The technical eclecticism of CBT does not mean, however, that techniques are employed for the same ends for which they were initially devised.

Some Basic Technical Principles

Because behavior is to a great degree voluntary, all cognitive-behavioral treatments begin with attempts at modifying behavior. Some theoreticians (Hayes et al., 1999) argue that there is no other way, since internal experience (thoughts and emotions) is not directly manipulable.

Our psychopathological model identifies the behaviors that serve as maintaining factors for the targeted disorder (e.g., avoidance and safety behaviors in anxiety disorders, passive and asocial behavior in depression, strict dieting in bulimia nervosa, use of substances as a means of regulating negative affect in addictions). The client is given an explanation about the role of that behavior in maintaining the problem (the therapist's conceptualization is shared with the client) and is instructed in how to modify this behavior. This is of crucial importance because these behaviors are all too often dysfunctional strategies used by the client to deal with the problem (such as anxious or depressive symptoms, binges, addictive behaviors).

Graded task assignment is one of the principles of behavior change. Although drastic modification of behavior is sometimes used (e.g., "flooding"—massive in-vivo exposure—in the treatment of specific phobias), gradual change (exposure) guided by the hierarchy of anxiogenic stimuli is the most common option. Behavior modification is not governed by social expectations, but by an experimental attitude. The client is asked to behave in new ways and to observe his or her emotions and cognitions as the new experience evolves.

As clients begin to change their usual patterns of behavior, the therapist begins to apply a number of strategies aimed at making cognition flexible. This is generally known as cognitive restructuring. In contemporary CBT there is some debate about what the essential component of this strategy is.

Beck's cognitive therapy for depression (A. T. Beck et al., 1979) gave a central role to cognitive restructuring. His theory postulated that distorted negative thinking is an essential part of depression, and so cognitive modification is mostly about challenging distorted cognitive content and replacing it with unbiased, data-driven cognitions. Other cognitive theorists and therapists have (Segal et al., 2002) posited that cognitive therapy works not so much because it changes faulty cognitive content, but rather because it helps clients contemplate their negative thoughts as mere mental events, thus helping them to distance or decenter from them, and reducing the negative emotional impact. Of course, this is implicit in Beck's therapy, because the client is asked to view his or her thoughts as hypotheses to be tested rather than reflections of reality, but early cognitive therapy put too much of an emphasis on rationality and tended to view the impact of cognition on mood as a one-way process.

But clients rarely go to therapy because they want to change their thoughts; they normally go because they want to get rid of unpleasant sensations, feelings, or emotions.

So how does CBT deal with emotional change? Despite the emphasis it puts on cognition, we must stress that CBT cannot be performed successfully unless central consideration is given to emotions. When cognition or behavior is modulated, success is often evaluated in terms of the positive impact on emotions.

But emotions can also be the direct target of an intervention. One of the cornerstones of CBT, emotion-processing theory (Foa & Kozak, 1986), indicates that

emotions cannot be modified unless activated. Avoidance of "negative" emotions is a typical strategy used by patients with anxiety or mood disorders. Their unwillingness (Hayes et al., 1999) to experience certain emotions prevents the processing of those emotions, thus maintaining the reasons for continued avoidance. This is, for example, the dilemma of people affected by post-traumatic stress disorder.

Emotions are not negative per se; this is more a by-product of our appraisal of them. A person with panic disorder, for example, may be terrified at the idea of experiencing a racing heart, a sense of danger, or heavy breathing. But every day thousands of people pay good money and stand in line for a long time at Disney World for the privilege of riding a roller coaster, eagerly waiting to feel a pounding heart, a sense of danger, muscle tension.

So CBT encourages acceptance of and exposure to "negative" emotions. It challenges a problematic belief that is common among clients: "I will change first (by just talking in therapy), and then I will confront my emotions." People with social anxiety disorder, for instance, frequently come to therapy with the expectation of finding the "cause" of their anxiety, removing it, and then happily proceeding to face the challenges of interpersonal interaction. Psychotherapy can thus become a sophisticated—and expensive—safety measure.

Metaphorically, we can tell our clients that in order to mold steel, we need to heat it up. It may not be pleasant and may take a lot of energy, but it allows us to turn a very rigid metal into a plastic substance that we can shape at will.

Behavioral Techniques

CBT uses all the armamentarium developed by the rich tradition of behavior therapy. A detailed explanation of all these techniques is well beyond the scope of this chapter, but we will provide a synthesis of some of the most characteristic interventions. The reader is reminded that these interventions may be used in different treatment packages to serve different purposes; therefore it is important to pay attention not only to their form but also to their function in each protocol.

Exposure

The essence of exposure is bringing patients into contact with the cues that evoke their negative emotions, in a deliberate, self-controlled manner. They remain in contact with these cues until (1) their anxiety diminishes (habituation), and (2) they begin to realize that the consequences they expected do not occur (disconfirmation). The types of cues that become the target of the technique are decided in terms of the case conceptualization. A person who fears cockroaches can be exposed to a vivid image or a video of a cockroach, and eventually to the real insect. A person with panic disorder can be exposed to the internal sensations that he or she fears (interoceptive exposure).

Types of exposure. Traditionally, exposure was conducted in vivo or imaginally. When patients come into contact with cues in real-life situations, we call it in-vivo exposure; when they come into contact with cues in their imagination, we call it imaginal exposure. With the advent of online video and virtual reality, there is a now a middle ground between the two classical options, which provides an intriguing opportunity to expand exposure in a safe environment for the client. Although in-vivo exposure is normally preferred, imaginal exposure is necessary when one is dealing with feared thoughts, memories, or internal cues.

Conducting exposure. The therapist begins by explaining the rationale for the procedure to the patient and discussing its advantages and disadvantages and clients' usual concerns. Most patients learn to do exposure assignments on their own in an effective manner. Some patients, however, initially need the assistance of the therapist. Gradual exposure is more commonly used than massive exposure. A hierarchy of feared stimuli must be established collaboratively with the patient in order to ensure a graded approach. Going from imaginal exposure to in-vivo exposure is one way of implementing a gradual approach. The client repeats the procedure a number of times, experiencing a decline in the intensity of the negative emotion elicited each time.

Graded Task Assignment

This strategy may be used when a patient feels too depressed and hopeless or too anxious to begin a complex or demanding task (A.T. Beck et al., 1979). A complex action is broken into smaller components, and the client is asked to attempt these steps in a sequence. This strategy is useful for tackling maladaptive perfectionism and performance anxiety and for challenging hopelessness. It is usually applied at the beginning of the session, and then the client is expected to continue the sequence of tasks as part of his or her homework.

Modeling

Based on the principles of observational learning (Bandura, 1977a, 1977b), this strategy aims at helping cli-

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ents find adequate models for the behavior that they want to acquire. This can be performed by the therapist, if necessary, but models are often found in films and in the client's circle of friends, workmates, or schoolmates. Modeling is commonly used for skills training and exposure exercises. It must be faded out as soon as possible, so that the client increases his or her sense of self-efficacy.

Problem-Solving

Lack of problem-solving skills is observable in patients with severe mental disorders such as major depression or substance dependence, who resort to dysfunctional behaviors when facing life challenges as a result of their lack of ability to engage in more functional alternatives. The stages of problem solving can be summarized as (1) defining the problem, (2) setting goals, (3) brainstorming solutions, (4) evaluating possible solutions, (5) selecting a solution, (6) identifying steps for implementing the solution, (7) cognitively rehearsing the solution, (8) implementing the solution, and (9) evaluating the outcome. Traditional behavior therapy focused primarily on problem solving, but researchers (Linehan, 1993) have indicated that this first-order change strategy can be problematic when applied initially to clients with complex and severe mental disorders.

Social Skills Training

The aim of this strategy is to help the patient improve or develop skills involved in meeting other people, carrying on conversations, acting appropriately in social situations, and initiating relationships. The first step involves assessing the client's deficits. Some clients need to develop basic skills, while others just need to get rid of the inhibition caused by anxiety. The second step, modeling, can be performed by the therapist or observed in real life or in films. When this is completed, therapist and patient role-play the skills. Finally, the patient performs the skills in real-life situations.

Relaxation

Progressive muscle relaxation (PMR) and its variations is the most commonly used relaxation strategy in CBT. Developed by E. Jacobson (1938), it teaches the patient a series of exercises that become progressively shorter and that are designed to condition a relaxed response that can ultimately be evoked in a very short amount of time (normally as the anxiety-provoking situation takes place). Although effective, it takes a considerable amount of time to train someone in PMR, so it is often replaced by training in breathing relaxation, which is less time consuming. Training in PMR begins with a rationale for the intervention. PMR is presented as a skill for counteracting the physiological responses to anxiety that concern the patient the most. As a coping skill, is must be practiced in order for the patient to gain mastery.

Barlow and Cerny (1988), Öst (1987), and Clark (1989) suggest a sequence of exercises in which the patient tenses of group of muscles and then abruptly releases the tension, breathing calmly and saying, "Relax!" to him- or herself, thus experiencing that muscle group in a more relaxed state. The steps, reflecting increased skill and shortened time, are:

(1) Twelve-muscle-group relaxation (lower and upper arms, lower and upper legs, thighs, stomach, upper chest and back, shoulders, back of the neck, lips, eyes, eyebrows, upper forehead, and scalp)
(2) Eight-muscle-group relaxation (entire arms, entire legs, stomach, upper chest and back, shoulders, back of the neck, face, forehead, and scalp)
(3) Four-muscle-group relaxation (entire arms, upper chest and back, shoulders and neck, face)
(4) Release-only relaxation (same four groups, but without using initial tension)
(5) Cue-controlled relaxation (the patient takes three deep breaths and thinks, "Relax," with each exhalation, while scanning the body for any tension and releasing it; the word "relax" becomes the cue signaling the client's body to relax)

The patient practices these skills daily and progressively applies them when he or she detects early warning signs of anxiety.

Breathing Relaxation

Patients are sometimes used to breathing only into their upper chests, sucking their abdomens in as they breathe, which leads to hyperventilation or other breathing difficulties. In diaphragmatic breathing, the diaphragm, at the base of the lungs, is distended, pushing the abdomen out and drawing air into the lower lungs. Once patients have mastered this skill, they are taught to breathe slowly, holding the breath for 4 seconds, and then gently letting the air out of their lungs, usually at least a half second longer than it took them to breathe in. The idea is for the patient to breathe rhythmically like this for a couple of minutes and become aware of the associated relaxation. Holding on to the breath is

also one of the cornerstones of mindfulness practice and is a skill that is used to steady the mind (Hayes, 2004a).

Visualisation

Visualization combines elements of relaxation and attentional training. Patients are asked to imagine themselves in a place or situation they find pleasant and relaxing (real or just imagined). The more vivid the image becomes, the greater the impact on emotions and physiological response (e.g., muscle tension) is. Patients increase the vividness of the image by focusing their attention on visual, olfactory, or acoustic stimuli.

Behavioral Activation

Traditionally used in the treatment of depression, the global goal of behavioral activation (reward planning and activity scheduling) is to increase behaviors that likely lead a patient to be rewarded in some way. Increasing pleasurable activities helps lift a person's mood and also helps decrease rumination (A.T. Beck et al., 1979). It also is also helpful in dealing with procrastination and behavioral avoidance.

Behavioral activation consists of four steps: (1) monitoring current activities in terms of mastery and pleasure, (2) developing a list of rewarding activities, (3) planning the activities, and (4) engaging in the activities. Carrying out these tasks usually triggers dysfunctional cognitions. Clients often assume that they should wait until they want to do something, and they are surprised to find that engaging in the activities actually increases their motivation to perform them. Also, contrary to their predictions, they normally derive a certain amount of pleasure from the activities, even from those that demand plenty of energy. Behavioral activation offers many opportunities for challenging clients' learned helplessness and hopelessness.

Cognitive Strategies

Clients must learn about the role of cognition in originating and maintaining mental disorders so that they can understand the rationale behind the use of cognitive techniques. The main objective of cognitive strategies is to increase cognitive flexibility. Clients must learn that we relate to the world by means of thoughts, but that these thoughts are just mental events that do not necessarily reflect the exact nature of reality. This is a metacognitive ability (being able to think about our own thoughts) that may be impaired in severe mental disorders.

Clients are helped to gain better awareness of their thoughts, rules, attitudes, and beliefs. This is a preliminary step in challenging cognitions, but also in distancing from them in mere contemplation. Very much like in *Casablanca,* where "a kiss is just a kiss," a thought is just a thought, a mere mental event, in cognitive therapy.

Psychoeducation

Psychoeducation originated in medical practice when the clinical advantages of fully informing patients about their conditions became evident. Psychoeducation serves yet another purpose in CBT. As we mentioned before, most CBT approaches are based on the information-processing paradigm. From this perspective, it is clear that the kinds of hypotheses that we can generate depend on the information available. It is common for human beings to suffer because of mistaken beliefs. Bulimic patients, for example, try to control their binges by making their diets increasingly strict, ignoring the fact that binges are the natural consequence of this kind of dieting. Panic patients commonly fear physical exercise or strong emotions because they believe that they can be dangerous to their cardiac functioning.

Therefore, in CBT, psychoeducation also serves the purpose of giving the patient correct and factual information, which may be indispensable for generating alternative functional views of certain experiences.

Socialising the Cognitive Model

Our conceptualization is shared with the client, so that he or she will understand the importance of cognitive factors in the targeted disorder. Patients are educated about the importance of beliefs, automatic thoughts, cognitive biases, and the like, so that they can see the importance of paying attention to their cognition as one means of modifying the present problem. The basic rule here is that the client should understand that it is not facts that affect us, not matter how important they are, but rather the meaning we ascribe to them (A.T. Beck et al., 1979).

Bibliotherapy

At the beginning of treatment, cognitive-behavioral therapists give their clients plenty of information about the disorder from which they suffer and about the way CBT conceptualizes it. They also suggest readings that offer additional information on these topics. This has a

series of advantages. First, clients are often anxious at the beginning of therapy, and this interferes with their ability to remember the information they are given. Books and Web sites can always be used for reference, especially when the therapist is not available. Second, asking the patient to read something between sessions is a simple homework assignment that will allows the psychotherapist to assess the willingness of the patient to complete assignments. Third, the patient can read (or reread) difficult parts and ask the therapist about them in session.

This was quite a new idea in the 1970s, but with the advent of the Internet, it has become quite common for clients to access information on disorders and therapies. This information is not always accurate or may be difficult to interpret because it is not targeted to CBT clients. Suggested readings have to be accurate, up to date, and written in a simple language.

Some of the texts penned by reputed cognitive-behavior therapists have become best sellers, as in the case of David Burns's (1980) *Feeling Good.* Not only do these books provide information on the disorder, but they also offer self-help tools that can be very powerful when a therapist is not available or when the condition is mild. Fairburn's (1995) *Overcoming Binge Eating,* for example, details a self-treatment program in addition to offering a wealth of information on healthy eating habits to counter the dysfunctional beliefs of people with eating disorders. Padesky and Greenberger's (1995) *Mind Over Mood* is a very good book for those doing CBT, both therapists and clients. Aaron Beck's (1988) *Love Is Never Enough* is a great tool for working with couples in psychotherapy. All these books follow the spirit of CBT, the main goal of which is training the client to become his or her own therapist.

Monitoring

Clients are encouraged to monitor their cognitions, paying special attention to what goes through their minds at the moments when they experience the unpleasant emotions that bring them to consultation. Adequate monitoring and registration of "hot" thoughts, beliefs, or images are essential and must take place prior to any attempt to challenge these cognitions.

Questioning Cognitions

Once patients become competent at monitoring cognitions and understand their connection with the experienced mood, they are encouraged to evaluate these thoughts. Clients are encouraged to treat their cognitions as hypotheses, not as realities. The cognitive content of dysfunctional cognitions can be accessed through a sequence of questions, as described by J. S. Beck (1995):

(1) What is the evidence?
   What is the evidence that supports the idea?
   What is the evidence against this idea?
(2) Is there an alternative explanation?
(3) What is the worst that could happen? Could I live through it?
   What is the best that could happen?
   What is the most realistic outcome?
(4) What is the effect of my believing the automatic thought?
   What could be the effect of changing my thinking?
(5) What should I do about it?
(6) What would I tell a friend if he or she were in the same situation?

Thoughts can also be questioned in terms of their utility (i.e., what is the advantage or disadvantage of thinking like this?). Questioning the utility of a thought implies the ability to distance from the thought.

Daily Thought Record

Another way of teaching the patient to question his or her thoughts is using the daily thought record. There are many varieties of the daily thought record, but basically it has a number of columns in which clients write down the context of a situation, the mood experienced, the cognitions that were activated, and the meaning of those cognitions, as well as the evidence for and against those cognitions. Once this has been completed, clients must generate an alternative, balanced cognition that may account for all the collected evidence. One of my patients once wrote down, "Medication is not working," with the associated low mood and hopelessness. In another situation, before a meeting with his psychiatrist, he wrote down, "I am afraid he might discontinue my medication," with the associated mood of anxiety. The alternative thought was "Although medication is not working as well as I expected, I must admit that it helps a bit."

Identifying Cognitive Distortions

Aaron Beck (1967) posited that abnormal cognition is the result of distorted thinking (see also A. T. Beck et al., 1979). Identifying and challenging these distortions is

central to cognitive therapy. There is a lot of debate as to whether it is correct to use the term "distortion," but in any case, it is clear that people with mental disorders have specific biases in their perceptions of reality.

Beck's cognitive therapy of depression involves identifying and challenging some common cognitive distortions in depressed patients. The following is a list of the distortions described by Beck et al. (1979).

(1) *Arbitrary inference.* The client reaches a conclusion in the absence of data or against data.
(2) *Selective abstraction:* The client selects a negative aspect of a situation and uses it as the only piece of data for a global negative conclusion.
(3) *Overgeneralisation:* The client makes a general rule out of an isolated negative event.
(4) *Mind-reading:* The client "reads" negative impressions about him- or herself in the eyes of someone else.
(5) *Fortune-telling:* The client treats a negative prediction as fact.
(6) *Minimization, maximization*: The client minimizes positive data and maximizes negative data in order to maintain his or her hypothesis.
(7) *Personalization*: The client attributes to him- or herself some negative outcome without justification.
(8) *Catastrophic thinking*: The client believes the worst outcome is the only one possible.
(9) *All-or-none thinking*: The client views a situation in extremes.

Socratic Dialogue

This old dialectical skill became one the central techniques of cognitive therapy at its inception in the 1960s. Socratic dialogue is very useful when patients rigidly hold on to certain beliefs, enabling the therapist to generate cognitive dissonance without causing too much tension in the therapeutic relationship. The therapist, because of his or her knowledge of psychopathology, knows in advance where the false premise or contradiction of the client's argument lies. He or she formulates questions aimed at detecting that contradiction, thus generating dissonance in the client's view of the matter. Perception of argumentative incongruence is a powerful tool for psychological change.

The Downward Arrow Technique (Vertical Descent)

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This is a common technique for detecting core beliefs. The therapist enounces the patient's thought and then asks, "And this means . . . ?" encouraging the client to identify the implied meaning of the thought. If a patient thinks, "I will fail this exam," the implied meaning may be "I am academically incompetent." If a patient thinks, "I cannot stand strong emotions," the implied meaning may be "I am vulnerable." Core beliefs are not deep cognitions, although some authors use the depth metaphor. Core beliefs are best viewed as the general rule that generates the specific case determined by the situation. Their identification is more difficult than that of automatic thoughts because they commonly implicit, rather than explicit.

Cognitive Continuum

Continua ratings are commonly used to challenge extreme, all-or-nothing forms of thinking. If a client says, "This is the worst thing that could happen," the therapist asks him or her to think of the best possible outcome, then to reflect on the really worst possible outcome and then to try to place the experience on the continuum.

Pie Charts

Pie charts are a helpful reattribution technique commonly used to challenge ideas of guilt. The client is asked to identify all possible factors influencing an outcome and to assign a percentage to each one, including his or her own intervention. Then a pie chart with all influences is made, leading to a more balanced view.

Role Reversion in Disputing Cognitions

Therapist and patient may switch roles in debating thoughts and beliefs. The therapist defends the patient's hypothesis and the client has to challenge the cognition as if he or she were the therapist. This generates a playful attitude toward cognition, facilitating distancing and helping the client act as if he or she does not believe the cognition.

Capsule Summaries

Psychotherapy is, in many ways, a learning process. It is not wise for therapists to simply assume that clients, like students, will understand the full implication of a certain intervention, no matter how brilliant and clear it may seem to the therapist. Therefore, cognitive therapists are expected to ask their clients to make capsule summaries of what has been discussed in session, with a special emphasis on the conclusions that were attained. These summaries should capture the new perspective

that has been discussed. A panic patient, for example, may say, "After all we have discussed in this session, it is now clear for me that, even if they are unpleasant, panic attacks are not a danger to my health."

Flash Cards

Cognitive theory predicts that cognitive biases are activated by certain stimuli in specific contexts. Faulty beliefs about health are triggered in panic patients when they experience increased arousal. Depressed clients lose faith in their personal competence when faced with a challenge. Clients with generalized anxiety disorder have increasing negative thoughts when they lose contact with their loved ones. People with social anxiety have increasing negative thoughts about how they come across in social situations. All these beliefs or thoughts are challenged in therapy, but naturally clients find it more difficult not to believe them when in the critical situation. In order to improve access to functional cognition, clients write down on index cards the most important conclusions attained in therapy. They then carry these cards with them and look at them when they are facing the critical situation. Reading the functional alternative to the dysfunctional cognition dramatically increases the client's chances of not activating the usual problematic pattern of emotion and behavior.

Behavioral Experiments

As Bennet-Levy, Westbrook, Fennell, Cooper, Rouf, and Hackmann (2004) point out, it is easy to lose sight of how radical the concept of behavioral experiments is in the context of the history of psychotherapy. Indeed, most forms of psychotherapy in the 20th century assumed that in-session dialogue was the most important, if not the only, means to bring about change. Early behavior therapy posited that doing things differently is a powerful way of bringing about change in cognition and affect. Beck's cognitive therapy (1967, 1979) introduced the idea of using experiments to test the beliefs of patients. The dysfunctional cognition is treated like a scientific theory that must be based on solid empirical evidence. Faulty beliefs often suggest a pattern of behavior that prevents the person from obtaining evidence that would prove the belief false.

Bennet-Levy et al. (2004) give the following operational definition: "Behavioral experiments are planned experiential activities, based on experimentation and observation, which are undertaken by patients in or between cognitive therapy sessions. Their design is derived directly from a cognitive formulation of the problem, and their primary purpose is to obtain new information which may help to: a) test the validity of the patient's existing beliefs about themselves, others and the world; b) construct and/or test new, more adaptive beliefs; and c) contribute to the development and verification of the cognitive formulation" (p. 8).

The goal of behavioral experiments is to bring about cognitive change in a way that makes new perspectives more believable. This may be achieved via experiential learning, emotional arousal (facilitating emotional processing), the encoding of experiences in memory in different ways, the practice of new plans and behaviors, or learning through reflection (Bennet-Levy et al., 2004).

There are two kinds of experiments: (1) active experiments, in which the patient takes the lead role, and (2) observational experiments, in which the client is an observer and a data collector, but not an actor. Active experiments involve acting in different ways in contexts in which a problematic behavior has been identified. They are used in real or simulated situations (e.g., role-plays) to test the validity of cognitions. Simulations are helpful when patients are wary about making changes in real life or when the real situation is rare.

A client had the belief "If I confront my teenage daughter, she will be very upset and I will lose her love." He was instructed to choose a situation in which he felt slightly unhappy about her behavior and to express his disagreement. The client's prediction was that she would react angrily at him. To his surprise, his daughter's reaction was actually quite the opposite.

Observational experiments are particularly useful when the thought of direct action provokes high anxiety or when more information is needed before an active experiment can be planned. For example, a patient who is very afraid of the consequences of fainting in public may accompany her therapist to a department store, where the therapist pretends to faint in a busy area, while the patient watches from a "safe" distance (C. Botella, personal communication, 2005).

When planning experiments, therapists must keep in mind a number of issues. The purpose of the experiment has to be very clear to the patient, the cognition to be tested must be very clear, and the degree of belief must be assessed prior to the experience. Therapists identify alternative perspectives and decide on the type of experiment that is best suited to the situation, anticipating potential problems and identifying solutions.

Experiments should be designed so that they are useful irrespective of the outcome of the experience ("no lose" experiments). A client was very fond of one of his classmates but made no move because he thought

rejection would be too painful. Although the first cognition, "She is not interested in me," was proved correct, the client found that rejection was by no means as difficult as he thought, thus proving the second cognition wrong.

It is crucial to agree with the patient on how the outcome is to be assessed. It is not the experience in itself but the meaning assigned to it that is crucial to cognitive modification. Therapists must not take for granted that clients will make functional conclusions out of an experience unless potential outcomes are discussed beforehand.

Experiential Techniques

Cognitive-behavioral interventions usually involve experiential techniques that originated in other forms of therapy. Role-plays, empty-chair exercises, psychodrama, and imagery are some of the techniques that are most commonly employed. The techniques themselves vary not in the way they are applied, but rather in terms of the goals that the cognitive therapist wants to achieve. Experiential exercises are frequently used in CBT to test hypotheses, to help the patient feel differently about a belief, and to trigger an emotion in order to help with its processing.

CASE EXAMPLE

Jimena is a 22-year-old woman who has been referred by a psychiatrist who assessed her and diagnosed panic disorder and agoraphobia of mild to moderate severity and recent onset. The psychiatrist also prescribed a modest daily dose of clonazepam to be used during an imminent family trip but made it quite clear to the patient and her family that this was aimed solely at symptom control to make the trip possible. He also suggested to them that CBT was the best treatment option for her condition.

The assessment interview with her psychotherapist revealed that about 2 months before, she had attended a party where she drank heavily and smoked marijuana. She suddenly felt very dizzy and thought she would faint 3 times. The experience was very unpleasant: she had palpitations and a racing heart, a feeling of choking, a sense of unreality, and fears of dying or of going crazy. Similar experiences occurred over the following days in different situations, particularly when she was in a car with someone else at the steering wheel. These symptoms motivated the consultation with the psychiatrist. For the last weeks she has been very worried about the possibility of experiencing the symptoms again. In order to avoid that, she has stopped taking buses. She continues to use the train regularly to attend classes at her college, but with a level of discomfort that extends to situations in which she feels "it would not be easy to escape."

She also reports difficulties speaking (or singing) in public and occasionally in interpersonal interactions, meeting criteria for circumscribed social anxiety disorder. She is not as assertive as she would like to be and uses avoidance as a strategy to deal with interpersonal problems. She sees this as a flaw in her personality, not as a disorder. Also, she reports being uncomfortable with unexpected events in general, always searching for certainty. Her mood is not compromised; she is, in fact, a cheerful young woman with good social skills and a considerable social network.

Jimena's typical automatic thoughts were "I am going to faint and something bad will happen to me," "I am going to go crazy," "I am going to have a heart attack," "I will never get well, I will never be the same again," and "These experiences are out of my control." Her core beliefs about herself were "I am (physically) vulnerable," "I am not a strong person." Beliefs about others were "Others are strong and assertive" and "People are very critical of others."

Underlying assumptions (intermediate beliefs) were "Because of my vulnerability, I must be very vigilant about any unusual bodily sensations," "If I am not cautious, something terrible will happen to me," "Since I am weak, I must avoid confrontation," "If I make a mistake in public, they will humiliate me."

The assessment interview includes some basic psychoeducation about anxiety. Her mother is present because Jimena did not dare come to the session by herself, so she is included in the psychoeducation. This is a good way of reducing negative, invalidating remarks from family members, who are normally baffled by agoraphobic behavior and may interpret it negatively. Jimena and her mother are asked to read the excellent psychoeducational material by Craske and Barlow (1993, pp. 25–28) for homework.

The following session begins with the discussion of the homework assignment and comments on the doubts and conclusions generated by the reading. According to the cognitive formulation of panic disorder (Clark, 1986), the afflicted person fears normal bodily sensations because they are catastrophically misinterpreted as signs of impending disaster (e.g., dying, going crazy). The catastrophic interpretation of the client's autonomic activation is based on some dysfunctional beliefs, some of which are based on misinformation

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about human physiology. Clients typically believe that strong emotions can be lethal, that a feeling of pressure in the center of the chest means choking or that anxiety itself is dangerous. Cognitive theory holds that providing information about the physiology of anxiety can lead to the correction of these faulty beliefs. Thus, every sensation described by the patient is explained as part of the normal course of anxiety: muscle tension is explained as something indispensable for implementing the fight-or-flight response, an accelerated heartbeat is the result of the need to ensure optimal muscle function and prevent cramps, hyperventilation is a means of incorporating more oxygen, and so on. According to Clark's (1986) intervention for panic disorder, a whole cycle of panic is drawn with the patient in session, as in Figure 22.1 (see also Wells, 1997).

The aim of this technique is to help the client formulate a new way of looking at the experience of panic.

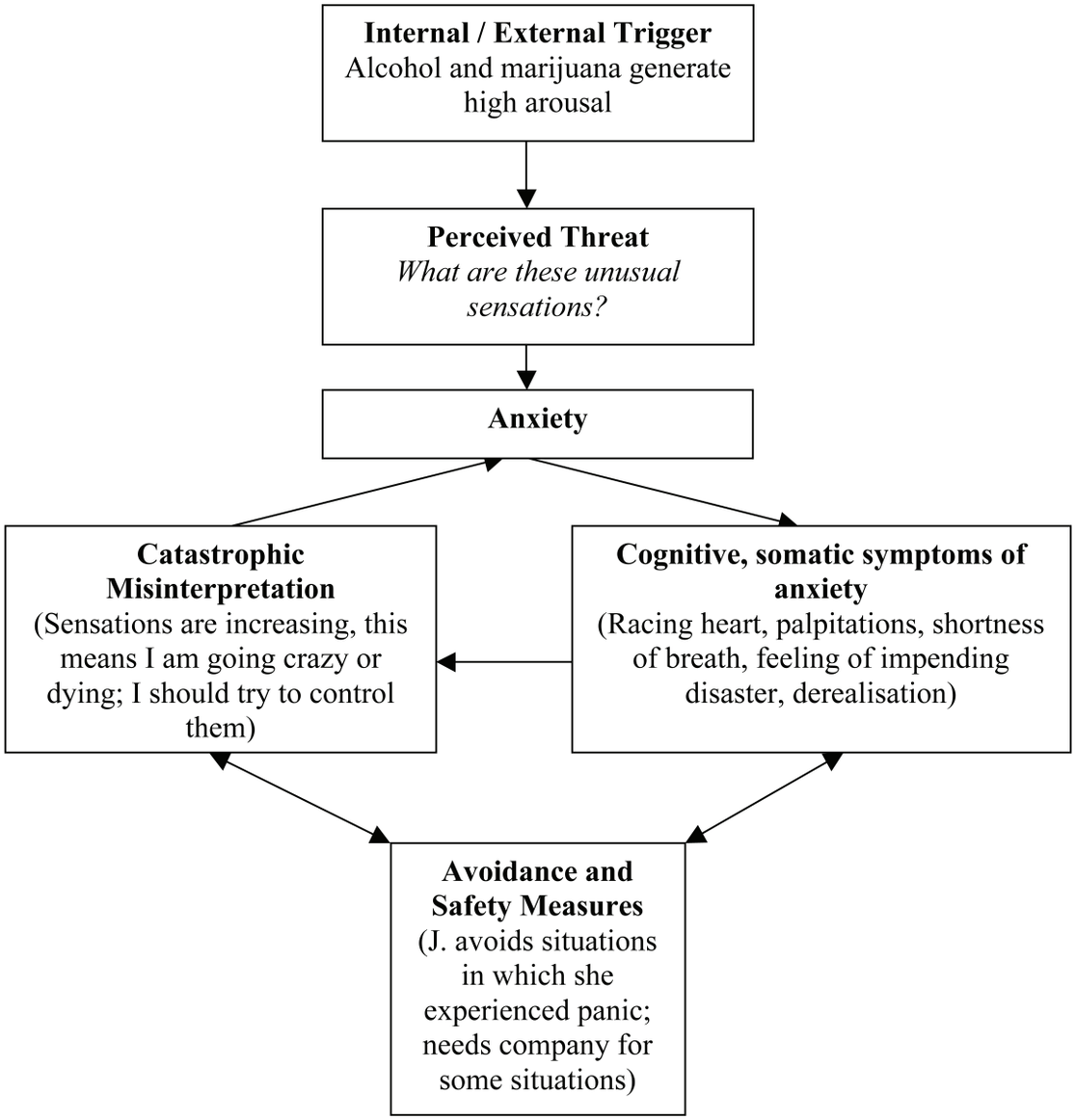

Figure 22.1 Cognitive model of panic.
From *Cognitive Therapy of Anxiety Disorders: A Practice Manual and Conceptual Guide.* by A. Wells, 2000, Chichester, UK: Wiley.

The therapist does not attempt to change the experience itself; he or she rather strives to develop a new, nonthreatening way of looking at the same experience.

In this treatment, breathing retraining or relaxation is not used because the main objective is not to alleviate anxiety, but to help the patient gain a new perspective on the experience of anxiety and panic. Relaxation and controlled breathing can actually be safety measures (behaviors) for some panic clients (especially for those with fears of losing control; Barlow, 2002).

Jimena is asked for her consent to carry out an experiment at the following session. She and the therapist will hyperventilate for 60–90 seconds and then share their experiences. The client is told that in this way they can generate sensations similar to the ones she had during panic attacks, but at a lesser level and within her control. The therapist does it at the same time to prove to the patient that he or she believes there is no danger in hyperventilating. Some treatments of panic (Barlow, 2002) use this as a presentation of interoceptive exposure, a technique by which the patient is exposed to the feared sensations in order to achieve desensitization.

Then, the cognitive element in the cycle of panic is emphasized, and Jimena is informed of the importance of paying attentions to what she thinks when she experiences high anxiety and panic. The connection between cognition and emotion is explained, and her homework is to record her thoughts in previous episodes or in any new ones. She is also asked to make a hierarchical list of feared situations. This list is needed so the therapist can design graded assignments for dealing with agoraphobic avoidance.

The following session begins with a review of the homework. Jimena discusses her records of previous episodes and a number of new ones she experienced (milder than previous ones) during the week. Once the therapist is sure that she understands the connection between thoughts and emotions, the use of the daily thought record is introduced. She is instructed to use the daily thought record not only for recording but also for collecting evidence in favor of and against the thoughts that come up when she experiences high anxiety. Jimena is told that if she takes a critical look at threatening thoughts she will find out that they do not make much sense. When these thoughts are activated, the new conclusions are activated as well, and then the anxiogenic thoughts are not so believable, resulting in less anxiety.

As previously agreed, a hyperventilation experiment is conducted during the session. Jimena recognizes that the sensations are very similar to the ones she experiences when panicky. She concludes that they do not come out of the blue, as symptoms of an unknown illness; they are just the result of arousal that has been triggered by some undetected stimulus (marijuana, coffee, a threatening thought, etc.).

The therapist reviews the list of feared (agoraphobic) situations and explains the principle of graded in-vivo exposure to Jimena. The therapist then proceeds to design an experiment in which the client will expose herself to the less feared situation, dropping all safety measures. Jimena must carry out the experiment long before or after taking the anxiolytic medication, because benzodiazepines can interfere with exposure and may be construed as safety measures.

She is also told to pay attention to and record the anxious thoughts that are likely to appear during exposure. Finally, she is instructed to report her results to the therapist via e-mail, in order to use this opportunity for troubleshooting and for assigning new graded exposure exercises. The aim of this technique is not just desensitization, but also testing the hypothesis "The only way of not feeling anxious is escaping the feared situations." Exposure is thus used as a disconfirmation experiment.

At the following session, Jimena and the therapist review the homework. To her surprise, exposure to feared situations led to a sudden drop in anxiety. She has registered a number of negative thoughts that appeared just before the exposure experiment and in a couple of other situations over the week. She has managed to challenge the thoughts and makes the remark, "They are always the same thoughts." This observation is used to go back to the issue of core beliefs, represented by repeated themes in automatic thoughts. The core belief "I am physically vulnerable" is inferred from the daily thought record, discussed, and challenged in session. Jimena is instructed to continue doing this over the week as homework. The therapist then moves on to the thoughts triggered by speaking in public and asks Jimena to apply the daily thought record in session to them. In discussion of the issue of collecting evidence in favor of and against the thoughts, the client is warned about confusing what people actually say with what she believes they are thinking (mind reading).

Mind reading provides a common source of "evidence" of the client's social incompetence, so special attention must be devoted to it. Jimena is encouraged to carry out some exposure experiments (making a remark during a lecture at school) and pay attention to what happens. At the following session she reports no panic experiences during the week. It is agreed that Jimena will withdraw from medication over the following 2 weeks. If patients attribute their improvement to med-

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ication alone, there is the risk of recurrence of panic disorder in future stressful situations. Therefore, testing the idea "I can manage on my own without medication" is important.

The rest of the homework is reviewed: Jimena has made a couple of remarks in class and nothing negative has happened, although she felt anxious when speaking. She has registered some negative automatic thoughts ("They will say it is a silly remark," "I will look like a fool") and has adequately challenged them. The therapist asks Jimena to pay special attention to the fact that the anxiety she felt was due to *what she expected* from the situation, but the outcome was quite different. The therapist emphasizes that it is the outcome that matters, rather than the internal experience (one could feel very confident and self-assured yet be met by negative reactions).

Jimena is instructed to pay attention when she engages in minor disagreements, in order to practice being assertive and observe the outcome. She has made progress with agoraphobic situations. The therapist asks her to increase her "comfort area" by taking alternative means of transportation to get to school. At the following session Jimena reports not missing the clonazepam; she has actually not given much thought to it in the past few days. She has made continuous progress with agoraphobic symptoms: she uses transportation normally within the city. She is asked to consider taking a bus or going by car somewhere outside the city to continue exposure.

There are no records of situations in which she has felt panicky. However, Jimena did feel quite anxious when she expressed disagreement with someone's point of view during a lecture. Normally this would have meant that it was better to avoid those situations, but now she realizes that there may be a difference between what her mind or emotions say (the internal experience) and what the environment says (others' responses to disagreement). She says she feels a bit stronger after having experiencing this. The belief "I am weak" is discussed. Jimena says her sister is very assertive, sometimes to such a point that she is sort of embarrassed by her behavior. The therapist points out that there is no need for her to behave like that but uses the opportunity to highlight the fact that, contrary to Jimena's belief, people do not always respond negatively when people are very assertive. The client is still too afraid to sing in public, though, so that is left for future experiments. To take a graded stance in this matter, she is asked for the time being to lend some people recordings of her singing and see what the response is. Finally, cognitive work with automatic thoughts and beliefs is reviewed, which shows progressive credibility of functional cognitions.

At the following session the review of homework indicates continued progress, with the exception of the assignment to give recordings of her singing to people. Jimena says she forgot about this part of homework and at the same time she did not feel like doing it when she remembered. The therapist and the client review the thoughts behind the ambivalence around completing the homework and agree that it will be completed for the following session. Because of the steady progress, this session is scheduled for 2 weeks from now.

The review of homework for the next session is positive: Jimena has completed all the usual records satisfactorily and has also given recordings of her singing to a couple of friends. She has not gotten feedback from them so far and anticipates rather negative responses, despite frequent her sisters' frequent compliments on her skills as a singer.

The client has been off medication for quite some time now and has not reported any inconvenience or marked anxiety.

Jimena is asked to work on a treatment outline indicating what has worked for her and what she has learned in therapy. The following session is scheduled for 2 weeks from now. Jimena and the therapist meet for the final session, during which they work on the treatment outline. Jimena has listed thought records and experiments as helpful strategies. She also lists the alternative beliefs developed in therapy.

The therapist explains what to do in the case of eventual recurrences, what their usual triggers are, and what to expect in terms of the probability of future problems. Given the recency of onset, the mild severity of symptoms, and the good response to treatment, the chance of relapse looks pretty small. The therapist compliments the patient for her achievements and expresses satisfaction with the good work they have achieved as a team.

RESEARCH AND EFFICIENCY IN CBT

CBT, with its reliance upon experimental methods, is constantly evolving; its models are constantly being validated, tested, and refined. The firm foundation of CBT in the research base of psychiatry and clinical psychology might partially explain its robust clinical utility, which has resulted in ongoing adaptation of CBT to an increasingly wide range of disorders and problems (A.T. Beck, 1997). Compared to other psychotherapy

modalities, cognitive-behavioral therapies are exceptional, with their wide and clearly dominant presence among empirically supported therapies for a variety of mental disorders (Butler, Chapman, Forman, & Beck, 2006; Chambless et al., 1996; Chambless & Hollon, 1998). CBT has been the subject of numerous clinical trials; between 1986 and 1993 the results of 120 clinical trials were added to the literature. A recent review of meta-analyses of treatment outcomes of CBT for different 16 mental disorders (Butler et al., 2006) supports its efficacy. CBT has been shown to be highly effective for recurrent adult and adolescent depression, panic disorder with or without agoraphobia, generalized anxiety disorder, social phobia, post-traumatic stress disorder, and childhood depressive and anxiety disorders. For treatment of all these disorders, large effect sizes have been found. For treatment of anger, marital distress, childhood somatic disorders, and chronic pain, effect sizes were in the moderate range when CBT was compared to controls. Large uncontrolled effect sizes were obtained for treatment of bulimia and schizophrenia. Cognitive-behavioral treatments have also been applied successfully to addictive disorders, insomnia, paraphilias, and personality disorders. In the discussion that follows we will briefly describe the findings regarding most common clinical problems—anxiety and affective disorders—and we will outline the evidence of efficacy of CBT in schizophrenia, a disorder that, not long ago, was regarded as susceptible to only biological intervention. A more extensive review of clinical application and efficacy of CBT is beyond the scope of this chapter, and readers interested in empirically validated CBT treatment are referred to other publications (e.g., Chambless & Hollon, 1998; DeRubeis & Crits-Christoph, 1998; Nathan & Gorman, 2002).

Mood Disorders

There is evidence that CBT is better than a pill-placebo and equivalent to antidepressant medications (Elkin et al., 1989; Hollon, DeRubeis, Evans, Wiemer, Garvey, Grove, & Tuason, 1992) not only for treatment of mild depression but moderate to severe depression as well (DeRubeis et al., 2005). CBT is as effective as medications in acute treatment but seems to have better enduring effect than pharmacotherapy, which reduces subsequent risk of depressive relapse after discontinuation of treatment (DeRubeis & Crits-Christoph, 1998; Gloaguen, Cottraux, Cucherat, & Blackburn, 1998). Results of a recent multisite clinical trial (Hollon et al., 2005) indicate that cognitive therapy had durable effect for moderate to severely depressed patients equivalent to the effect of maintenance of medication treatment. Review of meta-analyses (Butler et al., 2006) revealed that CBT is as effective as behavior therapy in adult depression and obsessive-compulsive disorder.

There is also evidence that CBT in conjunction with medication is efficacious for treatment of bipolar disorder (Lam et al., 2003; Perry, Tarrier, Morris, McCarthy, & Limb, 1999). Patients on combined CBT and mood stabilizers showed fewer and shorter bipolar episodes (Lam et al., 2003) and fewer hospitalizations (Cochran, 1984; Lam et al., 2003) and demonstrated better medication compliance (Lam, Bright, Jones, Hayward, Schuck, Chisholm, & Sham, 2000) and higher social functioning (Lam et al., 2003) than patients taking medications alone.

Schizophrenia/Schizoaffective Disorder

CBT has shown promising results as an adjunct to pharmacotherapy in the treatment of schizophrenia (Butler et al., 2006; Turkington et al., 2008). Its efficacy in treating acute psychotic episodes (Drury, Birchwood, & Cochrane, 2000; Drury, Birchwood, Cochrane, & MacMillan, 1996; Lewis et al., 2002), chronic medication-resistant positive symptoms of both schizophrenia (Turkington et al., 2008) and schizoaffective disorder (Martindale, Mueser, Kuipers, Sensky, & Green, 2003), and chronic negative symptoms (Rector, Seeman, & Segal, 2003) and in prevention of future psychotic episodes (Gumley, O'Grady, McNay, Reilly, Power, & Norrie, 2003) has been established. Moreover, it has been demonstrated that CBT, either in conjunction with medication (McGorry et al., 2002) or without it (Morrison et al., 2002), may delay the onset of the first episode of the disorder.

The five- and eight-year follow-up of family CBT (Tarrier, Barrowclough, Porceddu, & Fitzpatrick, 1994) showed protection against relapse, but only in the high expressed emotion group, whereas the five-year follow-up of CBT reported by Drury et al. (2000) failed to demonstrate stable effects except in those who did not relapse.

Anxiety Disorders

The effectiveness of CBT for generalized anxiety disorder was evaluated in a meta-analysis by Gould, Buckminster Pollack, Otto, and Yap (1997). They reported that CBT outperformed no-treatment conditions, wait-list controls, nondirective therapy controls,

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and pill-placebo controls and had effectiveness similar to that of medications. Positive results of CBT were maintained through at least 6 months post-treatment (Gould et al., 1997) and were shown to be persistent as far as 8–10 years later, as more recent reports indicate (Durham, Chambers, MacDonald, Power, & Major, 2003).

Many studies support substantial efficacy of CBT in panic disorder (with and without agoraphobia). David Clark (1996) reported that across five studies, between 74% and 95% of panic patients treated with CBT became panic free, and that this effect was maintained at 6–15 months of follow-up. In these trials CBT was superior to wait-list control, applied relaxation, and pharmacotherapy. Meta-analysis done by Gould, Otto, and Pollack (1995) revealed that CBT had the highest effect size compared to pharmacological treatment and combined treatment. Among the CBT interventions, combined cognitive restructuring with interoceptive exposure showed the strongest effect size.

Cognitive models of social phobia (Clark & Wells, 1995) emphasize that its occurrence and maintenance are mediated by maladaptive beliefs about social performance. Two meta-analyses of CBT treatments for social phobia revealed that cognitive therapy is superior to wait-list and placebo attention controls, and similar to exposure treatment without cognitive restructuring and the combination of the two interventions (Feske & Chambless, 1995; Gould et al., 1997). Barlow (2002) indicates, however, that combined cognitive restructuring and exposure treatment is better than the two interventions alone. There is also evidence that such a combined treatment delivered in a group context over 12 weeks is more effective than placebo pills and nonspecific therapy and as effective as medications (Heimberg et al., 1998).

There is growing evidence that CBT is as effective as exposure and response prevention in treatment of obsessive-compulsive disorder (Abramowitz, 1997), although the latter treatment is broadly considered the psychotherapy treatment of choice. In a recent controlled clinical trial, Rector, Richter, Denisoff, Crawford, Szacun-Shimizu, and Bourdeau (2005) indicated that the combination of cognitive therapy plus exposure and response prevention is superior to exposure and response prevention alone in the treatment of medication-refractory obsessive-compulsive disorder. Cognitive therapy seems to work best for the obsessive-compulsive disorder subgroup with mental obsessions (Steketee & Barlow, 2002). There is evidence that CBT is effective with or without concomitant pharmacotherapy with SSRI (Franklin, Abramowitz, Bux, Zoellner, & Feeny, 2002).

CONCLUSIONS AND FUTURE DIRECTIONS

In the last 30 years a variety of therapy strategies have been developed under the name of CT and CBT. A great number of studies have shown them to be an effective treatment for a variety of psychiatric disorders in children, adolescents, and adults, and some of them, for example, CBT for panic disorder and depression in adults, have become established as empirically supported treatments. One of the greatest achievements of CBT has been the development of well-articulated intervention packages for a range of clinical disorders, which facilitated outcome research of CBT and its dissemination. Much current research aims to further disseminate and improve existing cognitive-behavioral interventions. Substance abuse, schizophrenia, personality disorders, bipolar disorders, and anorexia nervosa are among the clinical problems receiving recent empirical attention. There are various trends in ongoing research in CBT, among them (1) adoption of clinical protocols for a variety of patients with comorbid psychopathology, which might satisfy growing community needs; (2) consideration of cost-benefit analyses; (3) the development of highly reliable and valid measures of cognitive functioning in clinical disorders, including information-processing paradigms of experimental methods; and (4) the development of combinations of different treatment modalities and interventions, for example, the third wave of therapies, which unite CBT methods with mindfulness and acceptance-based interventions. There is a need to carry out more clinical trials comparing the efficacy of traditional CBT methods using rational reasoning with third-wave CBT methods. Of particular interest would be verifying if patients can disengage from negative thinking without correcting its biased content, and if such procedures bring about change in appraisals of thoughts. Further research is required to establish what the exact mechanism of change is in CBT, and who is most likely to benefit from it.

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