

Cognitive behavior therapy

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ABSTRACT

Cognitive behavior therapy (CBT) is one of the most extensively researched psychotherapeutic modalities which is being used either in conjunction with psychotropic drugs or alone in various psychiatric disorders. CBT is a short-term psychotherapeutic approach that is designed to influence dysfunctional emotions, behaviors, and cognitions through a goal-oriented, systematic procedure. Recent advances in CBT suggest that there is a fresh look on a “third wave” CBT that has a greater impact and newer application that may mitigate the sufferings of mentally ill patients.

Key words: Cognitive behavior therapy, cognitive psychology, third wave

Development of Cognitive Behavior Therapy

The term cognitive behavior therapy (CBT) can be seen as an umbrella term, generally used to refer a group of related therapies that have theoretical basis in behavioristic learning and cognitive psychology and are derived from scientifically proven theoretical models from these theories,^[1] and is currently a treatment of choice for various psychiatric disorders including mood disorders, anxiety disorders, personality disorders (PDs), eating disorders, substance abuse disorders, and psychotic disorders.^[2,3]

The origin of cognitive behavior therapies can be traced back to various ancient philosophical traditions and thinkers of the pre-classical and classical periods, particularly Stoicism.^[4] Epictetus, a Greek philosopher and stoic stated that “It is not things themselves that disturb men, but their judgments about these things.” It has been mentioned in Aaron T. Beck’s original treatment manual for depression that “The philosophical origins of cognitive therapy can be traced back to the Stoic philosophers.”^[5] However, the modern roots of CBT can be traced to the development of Behavioral School of thought

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in the early 20th century and the development of Cognitive School of thought in the 1960s, and subsequent integration of the two.^[6]

Since early 1920s, inspired works of Ivan Pavlov, John B. Watson, Joseph Wolpe and B. F. Skinner, the science of behavior therapy came into practice to treat neurotic disorders. In behaviorism, learning theory played a significant role. The behaviorists shifted from science to technology and did not show much interest in theory building. Although the early behavioral methods successfully treated many neurotic disorders like anxiety disorders, it had little success in treating depression. All this led to a shift in focus of therapeutic approaches from behaviorism to “cognitive theory” of mental disorders.

The so-called cognitive revolution was pioneered by the works of Aaron T. Beck, psychiatrist at the University of Pennsylvania, and Albert Ellis, Psychologist in 1960s. Aaron T. Beck, within the course of his psychoanalytical treatment, observed the fact that traditional psychoanalytical concepts for depression “aggression directed inwards” could not be validated and certain patterns were evident in the thoughts of depressed individuals. He observed that their symptoms were the result of negative bias in their cognitive processing. This led to the development of “cognitive therapy.” Concurrently, “Rational Emotive Behavior Therapy” was developed by Albert Ellis, stating the same notion that faulty cognition leads to emotional disturbances.

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Earlier studies compared cognitive therapy and behavior therapy to see which was more effective. Later cognitive therapists started blending cognitive and behavior therapies into a coherent whole to form CBT. Thus, the importance of cognition was incorporated in behaviorism, while behavioristic characteristics, like empiricism and conduction of outcome research, were incorporated in cognitive therapy. It can be said that the earliest form of CBT was observed in Ellis' work in early 1960s,^[7] but the first major texts on cognitive behavior modification appeared in 1970s.^[8-10]

Basic Principles of Cognitive Behavior Therapy

Although the actual theoretical mechanism behind effectiveness of CBT in various clinical disorders is not well understood, CBT operates under the assumption that psychological disorders are mediated by distorted cognitions and maladaptive behaviors. To explain in simple terms, the distorted cognitions lead to faulty emotions which in turn lead to maladaptive behaviors and these behaviors will have negative impact on cognitions as depicted in Figure 1.

CBT uses two basic approaches to bring about changes, i.e. (i) restructuring the cognitive event which is based on cognitive theory and (ii) social and interpersonal skill training which is a behavioral arm of cognitive behavior theory.

Cognitive principle

Although different cognitive therapists use different theoretical models of cognitive processes which may differ according to psychological disorder, some basic cognitive structures and processes have been described by early cognitive therapists.^[5,11,12]

Automatic thoughts

Automatic thoughts are short-term cognitive events which

appear as a response to external events "without thought" or "automatically." Aaron T. Beck first described these automatic thoughts which he observed, in patients of depressive disorders, as often negatively tinged.^[13,14] These "Negative Automatic Thoughts" or "Cognitive Distortions" are thought to exert a direct influence over mood and they are therefore of central importance to any CBT therapy. These cognitive distortions can be classified according to their typical bias or illogic. Examples include: "She thinks I'm an idiot" (Mind-reading), "I'll fail the test" (Fortune-telling), "I'm a loser" (Labeling), "I can't stand it—it's awful" (Catastrophizing), "My successes are trivial" (Discounting positives), "I fail at everything" (All-or-nothing thinking), "If I fail at this, I'll fail at other things too" (Overgeneralizing), and "The divorce was all my fault" (Personalizing).^[15]

Underlying assumptions and core beliefs

These are long-term cognitive processes and are less available to an individual's consciousness than automatic thoughts.^[16] Underlying assumptions and core beliefs are more durable and stable organizational system, that doesn't change over a range of situations or time. These represent person's basic rules or values. Typical rules are "I should be perfect," "I should be liked by everyone," "My worth depends on others' approval," "I need to be certain," and "My partner should understand and meet my needs without my having to tell him." These underlying assumptions and core beliefs structure a person's automatic thinking.^[13] Most cognitive approaches start with helping the client to identify automatic thoughts and cognitive distortions and then addressing the long-term underlying core beliefs that are associated with them.^[7,14,17]

This represents the basic cognitive model of emotional disorders underlying CBT. Over the years, generic models for various psychiatric disorders, i.e. depression,^[5] panic disorder,^[18] post-traumatic stress disorder (PTSD),^[19] hypochondriasis,^[20] obsessive-compulsive disorder (OCD),^[21] generalized anxiety disorder,^[22] and social phobia^[23] have been developed.

Behavioral principle

The theoretical principle which is inherited from behavioral theory assumes that person's behavior is crucial in maintaining – or in changing – psychological states of his mind. It states that the person having cognitive distortions behave in such a way that the subsequent behavior has negative impact on the emotional states and further cognition. Thus, changing the behavior of a person is a powerful way of changing thoughts and emotions. These behavioral methods include various strategies of coping and social skill training. These behavioral techniques have proven to be an essential part for successful therapy in various research studies.^[24]

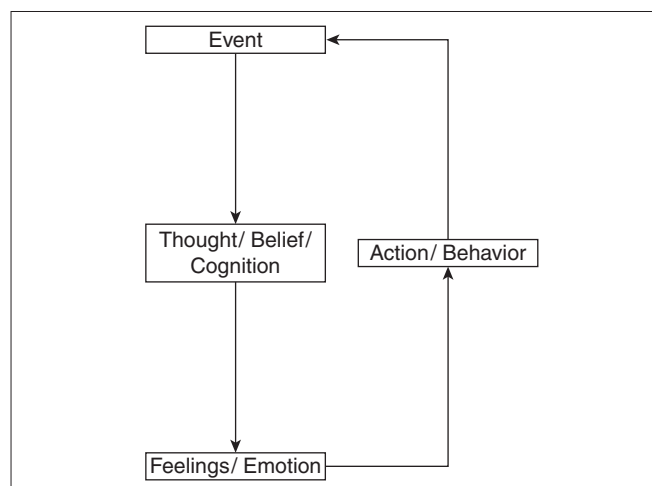


Figure 1: Distorted cognitions leading to maladaptive behaviors

The “here and now” principle

In modern CBT, the main focus of therapy is on what is happening in the present and main concerns of the therapy is the processes currently maintaining the problem, rather than the processes that might have led to its development years ago.

The empirical principle

CBT believes in evaluating the theories and treatment outcome as rigorously as possible using scientific evidence. This is important for several reasons:

- Scientifically – so that the treatments can be founded on sound, well-established theories
- Economically – so that the cost–benefit ratio of treatment is beneficial for the client
- Ethically – so that the clients are provided with sound treatment.

Technique

Modern form of CBT includes variety of techniques and approaches. These are exposure therapy, stress inoculation training, cognitive processing therapy, cognitive therapy, relaxation training, dialectical behavior therapy, and acceptance and commitment therapy.^[25] Therapeutic techniques vary according to specific issues that have to be dealt with. The current form of CBT targets core components of a given disorder. CBT is typically delivered over the course of 12 to 20 sessions; each session typically lasts from 45 min to 1 h duration.

A key feature of CBT is the establishment of a strong, collaborative working relationship with the patient. This will be facilitated if there is a warm and trusting atmosphere. Empathy and unconditional positive regard toward patient is of utmost importance. The role of therapist in CBT should be as a guide, catalyst, and teacher. The initiation of this working relationship is done with psycho education of patient about the nature of the disorder, explaining the CBT model of the etiology and maintenance of the disorder and the intervention derived from the model.

In initial few sessions, thorough evaluation of the presenting problem of a patient is done and initial hypothesis and treatment plan is formulated. This phase of treatment is called “Cognitive Behavioral Assessment.” Patient’s current problem is assessed through self-monitoring of symptoms of the patient, behavioral interviewing, and direct observation of behavior or objective assessment of patient’s symptoms through a self-report questionnaire. The therapist helps to identify and differentiate between problems so the challenges are reduced to manageable goals.

At the beginning of each session, review information is gathered from the patient about events that occurred since the previous session that is relevant to the patient’s goals for treatment. Along with this, some part of treatment session is also dedicated for difficulties that may occur before next treatment session. These difficulties then are discussed in the context of problem solving and the implementation of necessary cognitive and behavioral skills. Although the specific intervention used during CBT may vary, the interventions are based on cognitive and learning theories. Through these cognitive and behavioral techniques, generally first patient’s negative automatic thoughts and dysfunctional beliefs are identified and tested in reality. There are a number of specific cognitive and behavioral techniques used in the CBT procedure, some of which are enumerated below although they are not exclusive.^[15]

Cognitive techniques

- Identifying and monitoring negative thoughts
- Rating the degree the belief in such negative thoughts and degree of emotion associated with thoughts
- Categorizing the negative thoughts in specific cognitive distortions
- Vertical descent (What would it mean if the thought were true?)
- What is the underlying assumption?
- What are the costs and benefits of the thought?
- Listing the evidences supporting and refuting his thoughts
- Placing the event in perspective by examining its consequences in patient’s view
- Double standard (asking patient if he would apply the same standards if event occurs with others)
- Role switching and arguing back at negative thoughts by patient
- Patient is asked to examine many alternative causes and consequences of the thought, especially less negative alternatives
- Acceptance (Is there a reality that the patient can learn to accept, rather than trying to fix or struggle with it?)

Behavioral techniques

- Exposure or confronting the feared stimuli
- Graded exposure
- Modeling (e.g. therapist demonstrates in session an appropriate assertive response that the patient then imitates.)
- Imitation (e.g. patient “copies” and enacts the behavior that he observes in another person.)
- Behavioral rehearsal (patient enacts the behavior which he plans to conduct outside of therapy.)
- Relaxation techniques
- Activity scheduling (listing activities throughout the day and rating them for various emotions associated

with them)

- Graded task assignments (planning and enacting behaviors that are expected to produce reward)
- Assertiveness training
- Communication training
- Self reward to increase desirable behaviors

Homework is an essential part of CBT treatment, as patient is not only transformed during sessions but a lot of change in patient's cognitive structuring and behavior is happening between the sessions. This is catalyzed by a homework assignment which usually follows from the problem solving process in the treatment session. Successful completion of homework assignment is a good predictor of success of therapy. This inter-session practice also encourages the patient to generalize skills learned in sessions to tackle problems encountered in everyday life.

Group cognitive behavioral therapy

CBT can also be given in group therapy settings, in which therapeutic benefits of both CBT and group therapy can be combined. This technique is found to be useful in patients with substance use disorders,^[26] depression,^[27] anxiety disorders^[28] social phobia,^[29] and also in children.^[30] The group CBT is cost effective, as well as it allows patients to learn about their cognitive distortions by observing other patients and it also provides a safe environment for them to learn and practice communication and social learning skills as in real life situations.

Computer-based cognitive behavior therapy

Computerized Cognitive Behavioral Therapy (CCBT) has been described by NICE as a "generic term for delivering CBT via an interactive computer interface delivered by a personal computer, internet, or interactive voice response system,"^[31] instead of face-to-face with a human therapist. It can be used by patients where direct face-to-face CBT is difficult to obtain because of unavailability of expert therapist or cost issues. Studies have proved effectiveness of this computer based therapy in mild to moderate depression and anxiety disorders.^[32] The usefulness of this method in our setting is questionable.

Application of CBT to Various Disorders

After the development of CBT, in the initial few years it primarily gained recognition as a treatment method for mood disorders and anxiety disorders.^[33] As CBT started gaining popularity, the indications for its use was found in various psychiatric as well as medical disorders by various workers. Today some claim that CBT is probably the first line of psychological treatment for many disorders.^[34]

Depression

Initially, CBT was considered a treatment of choice for mild to moderate depression among psychological treatment options. The efficacy of CBT in depression has been shown by many empirical evidences in which it has been stated to be superior or at least equally effective with other treatments including antidepressants.^[35,36] Studies have also shown that combining CBT with medications shows greater effect than medications alone.^[36] CBT can be of particular importance in chronic and recurrent depression in preventing relapses.^[37] Even in severe depression, CBT is shown to be as efficacious as antidepressants^[38] but this is questionable. CBT is also shown to be effective in dealing with depressive symptoms in children.^[39]

Anxiety disorders

Numerous studies have shown that CBT is effective in reducing information processing biases and avoidance behaviors which are characteristic of anxiety disorders and also that with CBT stronger effects are observed for treatment of anxiety disorders as compared to other disorders.^[40] Several meta-analysis studies have shown effectiveness of CBT across the range of anxiety disorders including panic disorder,^[41] specific phobia,^[42] social phobia,^[43] and generalized anxiety disorder.^[44]

Psychotic conditions

The current evidence from multiple randomized controlled trials and meta-analyses suggests that CBT is a potent adjunct to pharmacotherapy in psychotic conditions.^[45,46] CBT is effective in dealing with persistent positive as well as negative symptoms of schizophrenia and also it improve medication adherence. CBT has also shown its effectiveness in treatment of acute psychoses.^[47]

Obsessive-compulsive disorder

CBT is considered as effective psychological treatment for OCD,^[48] particularly in obsessional problems where intrusive thoughts are considered as personal responsibility. CBT can change responsibility beliefs and appraisals and thereby reduce distress and neutralizing behaviors.^[49] However, in compulsive behaviors, behavioral component of exposure seems to be the active component of therapy,^[50] but cognitive component can make patient more compliant to behavioral measures.

Post-traumatic stress disorder and acute stress disorder

Various meta-analyses have shown effectiveness of CBT in treatment and prevention of PTSD.^[51] The most studied CBT approaches being prolonged exposure^[52] and cognitive processing therapy.^[53] In acute stress disorder CBT is found to be superior to supportive counseling^[54] and also prevents progression to PTSD.

Substance use disorders

Numerous large-scale trials and quantitative reviews have shown the efficacy of various CBT interventions in the treatment of alcohol and other drug use disorders.^[55,56] Various CBT interventions used for substance use disorders include contingency management, motivational interventions, relapse prevention which can be given in individual as well as group settings.

Personality disorders

CBT offers various specific therapeutic techniques which depend on the core psychopathological symptoms of the PD. Although there are supporting evidences for efficacy of CBT interventions in PDs, most studied and widely adopted technique is dialectical behavior therapy which is used in patients of borderline personality disorder.^[57]

Behavioral medicine

CBT can help variety of ill and at risk population by modifying health and illness behavior and developing effective coping skills, including patients suffering from bulimia nervosa,^[58] cancer,^[59] chronic pain,^[60] cardiovascular diseases,^[61] HIV and AIDS.^[62]

“New Wave” of Cognitive Behavioral Therapy

Also called as a “Third Wave” of behavior and CBT, this new wave of CBT has been described recently. It defers from traditional CBT in a way that the focus of therapy is to change the function of psychological events that people experience and promote emotion regulation strategies, rather than to change the perception of the event.^[63] This therapeutic effect is achieved through various approaches like acceptance, cognitive diffusion, or mindfulness. Psychotherapeutic interventions which are included in this category include Acceptance and Commitment Therapy (ACT)^[64] and Mindfulness-Based Cognitive Therapy (MBCT).^[65] Although the present empirical evidence allows these third wave therapies to be efficacious, further research is warranted to prove their usefulness over the traditional ones.^[66]

Conclusion

Cognitive therapy first proposed by Beck in early 1960s for depression has rapidly evolved into one of the major psychotherapeutic methods in modern psychiatric treatment. Its efficacy of treatment for depression, generalized anxiety disorder, panic disorder, eating disorders, and other psychiatric conditions has been well established by numerous outcome studies. Most psychiatric illnesses now have well-organized treatment guidelines based on cognitive therapy. The goals of

cognitive therapy include immediate relief from symptoms and to acquire cognitive and behavioral skills that reduce the risk for relapses. With fast-paced modern gadgets, future challenges for this therapy include computer-assisted models of learning that is easy and economically viable. In conclusion, it will not be incorrect to state that whatever method of therapy one uses it should address the relief of symptoms in that respect cognitive behavior therapy has proved its utility in varieties of mental disorders.

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