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# Cognitive Behavior Therapy

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## Continuing Education Activity

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In the 1960s, Aaron Beck developed cognitive behavior therapy (CBT) or cognitive therapy. Since then, it has been extensively researched and found to be effective in a large number of outcome studies for psychiatric disorders including depression, anxiety disorders, eating disorders, substance abuse, and personality disorders. It also has been demonstrated to be effective as an adjunctive treatment to medication for serious mental disorders such as bipolar disorder and schizophrenia. CBT has been adapted and studied for children, adolescents, adults, couples, and families. This activity reviews the efficacy of CBT in both psychiatric and non-psychiatric disorders and the role of the interprofessional team in using it to improve patient outcomes.

### Objectives:

- Identify the key concepts of cognitive-behavioral therapy.
- Describe the indications for cognitive behavioral therapy.
- Outline the structure of cognitive behavioral therapy sessions.
- Review the clinical significance of cognitive-behavioral therapy and its efficacy in treating common psychiatric illnesses.

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## Introduction

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In the 1960s, Aaron Beck developed cognitive behavior therapy (CBT) or cognitive therapy. Since then, it has been extensively researched and found to be effective in a large number of outcome studies for some psychiatric disorders, including depression, anxiety disorders, eating disorders, substance abuse, and personality disorders. It also has been demonstrated to be effective as an adjunctive treatment to medication for serious mental disorders such as bipolar disorder and schizophrenia. CBT has been adapted and studied for children, adolescents, adults, couples, and families. Its efficacy also has been established in the treatment of non-psychiatric disorders such as irritable bowel syndrome, chronic fatigue syndrome, fibromyalgia, insomnia, migraines, and other chronic pain conditions.[1][2][3]

## Issues of Concern

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### Origins of Cognitive Behavior Therapy

The idea for developing this form of psychotherapy took root when Aaron Beck began to notice that his patients with depression often verbalized thoughts that were lacking in validity and noted

characteristic “cognitive distortions” in their thinking. His empirical observations led him to start viewing depression not so much as a mood disorder but as a cognitive disorder. Based on his clinical observations and empirical findings, Beck outlined a new cognitive theory of depression. He published *Cognitive Therapy for Depression* (Beck, Rush, Shaw, and Emery, 1979) after having published a study that evaluated and demonstrated the efficacy of cognitive therapy. The combination of a detailed treatment protocol manual with outcome research was an innovation in psychotherapy practice that had only previously been attempted by behavior therapists in treating discrete behavioral problems. By accomplishing the same feat with a more complex set of clinical interventions that included cognitive, emotional, and behavioral components, Beck pioneered a model for what psychologists many years later defined as an “empirically validated psychological treatment.”

Other clinicians and researchers became interested and began developing CBT treatment protocols and evaluating their efficacy. Specific treatment protocols were developed for some psychiatric disorders. As behavioral strategies were incorporated, the term cognitive therapy changed to cognitive behavior therapy. Today CBT is the most extensively researched of all psychotherapies with several evidence-based treatment protocols.

### **Cognitive Model**

CBT is based on a straightforward, common-sense model of the relationships among cognition, emotion, and behavior.[4][5][6][7]

Three aspects of cognition are emphasized:

1. Automatic thoughts
2. Cognitive distortions
3. Underlying beliefs or schemas

### **Automatic Thoughts**

An individual’s immediate, unpremeditated interpretations of events are referred to as automatic thoughts. Automatic thoughts shape both the individual’s emotions and their actions in response to events. For example, a friend may cross you in the hallway and not say hello to you. If you were to have an automatic thought of “he hates me,” or “I have done something to anger him,” it is likely to impact your mood and cause you to feel upset and also to behave in an avoidant manner when you see him next. On the other hand, if you had the automatic thought, “he is in a hurry,” you would not be too concerned, and you would not be avoidant when you were to see him next.

CBT is based on the observation that dysfunctional automatic thoughts that are exaggerated, distorted, mistaken, or unrealistic in other ways, play a significant role in psychopathology.

### **Cognitive Distortions**

Errors in logic are quite prevalent in patients with psychological disorders. They lead individuals to erroneous conclusions. Below are some cognitive distortions that are commonly seen in individuals with psychopathology:

- Dichotomous thinking: Things are seen regarding two mutually exclusive categories with no shades of gray in between.

- Overgeneralization: Taking isolated cases and using them to make wide generalizations.
- Selective abstraction: Focusing exclusively on certain, usually negative or upsetting, aspects of something while ignoring the rest.
- Disqualifying the positive: Positive experiences that conflict with the individual's negative views are discounted.
- Mind reading: Assuming the thoughts and intentions of others.
- Fortune telling: Predicting how things will turn out before they happen.
- Minimization: Positive characteristics or experiences are treated as real but insignificant.
- Catastrophizing: Focusing on the worst possible outcome, however unlikely, or thinking that a situation is unbearable or impossible when it is just uncomfortable.
- Emotional reasoning: Making decisions and arguments based on how you feel rather than objective reality.
- "Should" statements: Concentrating on what you think "should" or "ought to be" rather than the actual situation you are faced with or having rigid rules which you always apply no matter the circumstances.
- Personalization, blame, or attribution: Assuming you are completely or directly responsible for a negative outcome. When applied to others consistently, the blame is the distortion.

## **Underlying Beliefs**

Underlying beliefs shape the perception and interpretation of events. Belief systems or schemas take shape as we go through life experiences. They are defined as templates or rules for information processing that underlie the most superficial layer of automatic thoughts. Beliefs are understood at two levels in CBT:

### *Core Beliefs*

- The central ideas about self and the world
- The most fundamental level of belief
- They are global, rigid, and overgeneralized

Examples of dysfunctional core beliefs:

- "I am unlovable"
- "I am inadequate"
- "The world is a hostile and dangerous place"

### *Intermediate Beliefs*

- Consist of assumptions, attitudes, and rules
- Influenced in their development by the core beliefs

Examples of dysfunctional intermediate beliefs:

- “To be accepted, I should always please others.”
- “I should be excellent at everything I do to be considered adequate.”
- “It is best to have as little as possible to do with people.”

## Clinical Significance

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Cognitive behavior therapy is a structured, didactic, and goal-oriented form of therapy. The approach is hands-on and practical wherein the therapist and patient work in a collaborative manner with the goal of modifying patterns of thinking and behavior to bring about a beneficial change in the patient's mood and way of living his/her life. It is used to help a wide range of problems, and appropriate treatment protocols are applied depending on the diagnosis and problems the patient is facing.[8][9][10][11]

Most psychotherapists who practice CBT personalize and customize the therapy to the specific needs of each patient.

The first step is an assessment of the patient and the initiation of developing an individualized conceptualization of him/her. The conceptualization based on the CBT model is built from session to session and is shared with the patient at an appropriate time later in therapy. The approach to therapy is explained very early at the start of the therapy. The problems patient would like to work on in therapy, and goals for therapy are decided in the first or second session collaboratively. The prioritized problems are worked on first.

The structure of each session:

The session always starts with a brief update and check on mood. This is followed by bridging from the previous session to establish continuity. The agenda of what will be talked about in the session is set up collaboratively, and the homework the patient had to do between the sessions is reviewed before plunging into talking about any problem. Issues on the agenda are talked about punctuated with feedback and summaries. The session ends with setting up further homework and a final summary.

Examples of CBT in practice:

**Anxiety:** CBT often focuses on replacing negative automatic thoughts that can occur in generalized anxiety disorder and may be used alone or in combination with medications such as selective serotonin reuptake inhibitors, which are typically first-line as benzodiazepines have a greater risk of adverse outcomes. In treating panic disorder, CBT may include desensitization to triggers that provoke anxiety; it is important to note, however, that a potential adverse effect of this technique is a temporary mild increase in anxiety.[12]

**Depression:** In patients with chronic depression, the combination of CBT and antidepressant medication is more effective than either intervention alone. In patients who are no longer taking part in activities that typically bring them pleasure, CBT may initially focus on reinitiating positive activities to overcome inertia.[13]

**Attention deficit hyperactivity disorder (ADHD):** Behavioral therapy is the initial recommended treatment for children younger than 6 years old, while stimulant medications are the recommended initial intervention for ADHD in children 6 years and older. Behavioral treatments are also recommended for older children, especially if they have a poor response or adverse effects on medication. Behavioral therapy interventions include parent training and behavioral

classroom management with a focus on setting clear rules and expectations for the child with appropriate rewards and punishments and daily feedback.[14][15]

Typical CBT treatments involve approximately 60-minute sessions occurring weekly for 8 to 12 weeks.[15]

## Enhancing Healthcare Team Outcomes

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CBT is a valid and proven form of psychological therapy for a range of mental health disorders. It is important for physicians and nurses to understand that CBT is often used in conjunction with pharmacological therapy to achieve the best outcomes. Moreover, CBT has been shown to provide additional benefits or similar outcomes compared to medication alone. Patients with psychiatric disorders should be referred to a mental health nurse who can educate the patient on treatment options. Primary care physicians are encouraged to develop collaborative relationships with behavior therapists and introduce and monitor the progress of cognitive-behavioral therapy. An interprofessional team approach will result in the best outcomes.[16][17][15]

## Review Questions

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## References

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1. van den Berk Clark C, Moore R, Secrest S, Tuerk P, Norman S, Myers U, Lustman PJ, Schneider FD, Barnes J, Gallamore R, Ovais M, Plurad JA, Scherrer JF. Factors Associated With Receipt of Cognitive-Behavioral Therapy or Prolonged Exposure Therapy Among Individuals With PTSD. *Psychiatr Serv*. 2019 Aug 01;70(8):703-713. [PMC free article: PMC6702958] [PubMed: 31010409]
2. Keefe JR, Chambless DL, Barber JP, Milrod BL. Treatment of anxiety and mood comorbidities in cognitive-behavioral and psychodynamic therapies for panic disorder. *J Psychiatr Res*. 2019 Jul;114:34-40. [PubMed: 31015099]
3. Zilcha-Mano S, Eubanks CF, Muran JC. Sudden gains in the alliance in cognitive behavioral therapy versus brief relational therapy. *J Consult Clin Psychol*. 2019 Jun;87(6):501-509. [PMC free article: PMC6533161] [PubMed: 31008637]
4. de Jonge M, Bockting CLH, Kikkert MJ, van Dijk MK, van Schaik DJF, Peen J, Hollon SD, Dekker JJM. Preventive cognitive therapy versus care as usual in cognitive behavioral therapy responders: A randomized controlled trial. *J Consult Clin Psychol*. 2019 Jun;87(6):521-529. [PubMed: 31008635]
5. Tolin DF, Wootton BM, Levy HC, Hallion LS, Worden BL, Diefenbach GJ, Jaccard J, Stevens MC. Efficacy and mediators of a group cognitive-behavioral therapy for hoarding disorder: A randomized trial. *J Consult Clin Psychol*. 2019 Jul;87(7):590-602. [PubMed: 31008633]
6. Heenan A, Pipe A, Lemay K, Davidson JR, Tulloch H. Cognitive-Behavioral Therapy for Insomnia Tailored to Patients With Cardiovascular Disease: A Pre-Post Study. *Behav Sleep Med*. 2020 May-Jun;18(3):372-385. [PubMed: 31007057]
7. Janse A, Bleijenberg G, Knoop H. Prediction of long-term outcome after cognitive behavioral therapy for chronic fatigue syndrome. *J Psychosom Res*. 2019 Jun;121:93-99. [PubMed: 31006534]

8. Webb CA, Stanton CH, Bondy E, Singleton P, Pizzagalli DA, Auerbach RP. Cognitive versus behavioral skills in CBT for depressed adolescents: Disaggregating within-patient versus between-patient effects on symptom change. *J Consult Clin Psychol*. 2019 May;87(5):484-490. [PMC free article: [PMC6506214](#)] [PubMed: 30998049]
9. Cuijpers P, Noma H, Karyotaki E, Cipriani A, Furukawa TA. Effectiveness and Acceptability of Cognitive Behavior Therapy Delivery Formats in Adults With Depression: A Network Meta-analysis. *JAMA Psychiatry*. 2019 Jul 01;76(7):700-707. [PMC free article: [PMC6583673](#)] [PubMed: 30994877]
10. O'Cleirigh C, Safren SA, Taylor SW, Goshe BM, Bedoya CA, Marquez SM, Boroughs MS, Shipherd JC. Cognitive Behavioral Therapy for Trauma and Self-Care (CBT-TSC) in Men Who have Sex with Men with a History of Childhood Sexual Abuse: A Randomized Controlled Trial. *AIDS Behav*. 2019 Sep;23(9):2421-2431. [PMC free article: [PMC7271561](#)] [PubMed: 30993478]
11. Sahranavard S, Esmaeili A, Salehiniya H, Behdani S. The effectiveness of group training of cognitive behavioral therapy-based stress management on anxiety, hardiness and self-efficacy in female medical students. *J Educ Health Promot*. 2019;8:49. [PMC free article: [PMC6432834](#)] [PubMed: 30993142]
12. Locke AB, Kirst N, Shultz CG. Diagnosis and management of generalized anxiety disorder and panic disorder in adults. *Am Fam Physician*. 2015 May 01;91(9):617-24. [PubMed: [25955736](#)]
13. Rupke SJ, Blecke D, Renfrow M. Cognitive therapy for depression. *Am Fam Physician*. 2006 Jan 01;73(1):83-6. [PubMed: [16417069](#)]
14. Felt BT, Biermann B, Christner JG, Kochhar P, Harrison RV. Diagnosis and management of ADHD in children. *Am Fam Physician*. 2014 Oct 01;90(7):456-64. [PubMed: [25369623](#)]
15. Coffey SF, Banducci AN, Vinci C. Common Questions About Cognitive Behavior Therapy for Psychiatric Disorders. *Am Fam Physician*. 2015 Nov 01;92(9):807-12. [PubMed: [26554473](#)]
16. Wu CY, Rodakowski JL, Terhorst L, Karp JF, Fields B, Skidmore ER. A Scoping Review of Nonpharmacological Interventions to Reduce Disability in Older Adults. *Gerontologist*. 2020 Jan 24;60(1):e52-e65. [PMC free article: [PMC7182004](#)] [PubMed: [31002312](#)]
17. Ngamkham S, Holden JE, Smith EL. A Systematic Review: Mindfulness Intervention for Cancer-Related Pain. *Asia Pac J Oncol Nurs*. 2019 Apr-Jun;6(2):161-169. [PMC free article: [PMC6371675](#)] [PubMed: [30931361](#)]

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