# A Concise Guide to Cognitive Behavioural Therapy in Dental Practice

# A Concise Guide to Cognitive Behavioural Therapy in Dental Practice

By

Abhilash Panwar, Kamarthi Nagaraju and Swati Gupta

Cambridge Scholars Publishing

A Concise Guide to Cognitive Behavioural Therapy in Dental Practice

By Abhilash Panwar, Kamarthi Nagaraju and Swati Gupta

This book first published 2025

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library



ISBN: 978-1-0364-4419-8
ISBN (Ebook): 978-1-0364-4420-4

# TABLE OF CONTENTS

# ACKNOWLEDGEMENTS

Based on so many favors and blessings, I now take this opportunity to express my heartfelt gratitude to the Almighty, the Supreme Personality of Godhead, *Shree Krishna* the creator, and preserver, who bestowed his blessings on me and gave me the strength, bravery, and inspiration to embark on and complete this endeavor.

It is an honor to express my admiration and gratitude to Dr. Nagaraju Kamarthi, Professor and Head, of the Department of Oral Medicine and Radiology, Subharti Dental College, Meerut. An instructor like him has an eternal impact. Nobody knows where his impact will end. It is an honor to be his student. His never-ending pursuit of academic achievement and professional insight is a constant source of inspiration and drive.

I am exceedingly grateful to Dr. Swati Gupta, Professor, Department of Oral Medicine and Radiology, Meerut, for sowing the seeds of knowledge in us through her invaluable instruction, support, and encouragement. Her ideas, thinking, and patience was crucial in the completion of this dissertation.

It is believed that the role of the modern educator is to irrigate deserts rather than cut down jungles. With these thoughts, I would like to offer my heartfelt gratitude to Dr. Sangeeta S Malik, Professor, Department of Oral Medicine and Radiology, Subharti Dental College, Meerut, for her unwavering support, motivation, and cooperation in bringing out the best in me.

I would take this opportunity to express my heartfelt gratitude to my parents Mr. Rishi Pal and Mrs. Bimlesh for their unconditional love, blessings, prayers, and sacrifices for educating and making me who I am today.

I would also like to extend my gratitude to my niece & best friend Eesha Tomar who formed part of my vision and taught me the things that really matter in life. And my best friends Dr. Maanketu and Dr. Abhishek Srivastava for their constant support.

I would like to express a token of gratitude and love to my seniors Dr. Shalini Sharma, Dr. Shubham Sharma, Dr. Shubhangi Garg, and Dr. Khyati

Arora for their silent support, unconditional love and for preparing me for my future and encouraging me to do my best.

I would like to thank my lovely, friendly, and colorful juniors, for their support and for always being there whenever I needed them.

A special thanks to my close friends Dr. Anusheel, Dr. Abhinav, Dr. Abhijeet, Dr. Aafreen, Dr. Madhav, Aditya Kalsi, & for always seeing the best in me and inspiring me to do my best.

Last but not least I would also like to thank all the authors quoted in this dissertation as without acknowledging their work it would have been impossible to write this book.

# INTRODUCTION

## Psychotherapy

Globally, psychiatric problems are common and linked to high disease burden rates, which include higher rates of morbidity and mortality. Furthermore, the co-occurrence of psychological and medical problems is highly prevalent. When medical conditions and psychological illnesses coexist, the medical symptoms are more bothersome, and the medical condition's treatment is frequently more difficult.

Medication and psychotherapy are the two most widely used types of mental health care. Psychotherapy, often known as talk therapy, refers to a variety of methods that help people recognize and change painful feelings, thoughts, and behaviors. The majority of psychotherapy sessions are held in groups with other patients or individually with a competent mental health practitioner (Prince et al., 2007; Goldfried, 2013). Psychotherapy's major objectives are to reduce symptoms, preserve or improve day-to-day functioning, and raise quality of life.

A person may seek psychotherapy for a variety of reasons, such as:

1. Handling extreme or protracted stress brought on by a family or work scenario, a loved one's passing, or issues with relationships or family.
2. Experiencing symptoms that don't have a physical cause, like altered sleep or eating patterns, low energy, disinterest in or enjoyment of previously enjoyed activities, chronic irritability, excessive worry, or an enduring sense of hopelessness or discouragement;
3. A medical professional suspecting or diagnosing you with a mental illness that is affecting your life.
4. Offering assistance to a kid or member of the family who has been diagnosed with a mental health illness

A variety of psychotherapies have been shown to effectively treat mental health disorders. Therapists may use one primary approach or incorporate elements from multiple approaches depending on their training, the disorder being treated, and the needs of the person receiving treatment.

Elements of psychotherapy can include the following (Flückiger C, 2012, Martin DJ, 2000, Moore PJ, 2004):

1. Assist the individual with recognizing automatic thought patterns that are damaging or erroneous (e.g., low self-esteem), challenging those thoughts, comprehending the impact of those thoughts on emotions and behavior, and altering self-defeating thought patterns. Cognitive behavioral therapy is the term for this method (CBT).
2. Determine coping mechanisms and create approaches to solve problems.
3. Examine social interactions and impart communication and social skills.
4. Use awareness and relaxation methods, like breathing exercises and meditation.
5. For anxiety disorders, try exposure treatment (a form of CBT), in which a person learns to withstand the discomfort brought on by specific objects, concepts, or imagined scenes by spending brief amounts of time in a supportive setting.
6. This is carried out again until the anxiety about those items gradually diminishes.
7. Monitor feelings and actions to become more conscious of how they affect one another.
8. Seek emotional support and discuss difficult concerns through supportive counseling.
9. Establish a safety plan to assist with suicidal or self-harming thoughts, identify warning indicators, and employ coping mechanisms including calling friends, family, or emergency services.

There are many types of psychotherapy. Therapies are often variations of an established approach, such as CBT. There is no formal approval process for psychotherapies like there is for medications by the U.S. Food and Drug Administration.

Types of psychotherapies are listed below (Pedersen, et al. 2023):

1. **COGNITIVE BEHAVIOR THERAPY**
   Cognitive behavior therapy examines how an individual's ideas, feelings, and behaviors are related to their perception, or how they see the world, and how this affects their overall wellbeing.
2. **MINDFULNESS-BASED COGNITIVE THERAPY**
   A kind of cognitive behavioral therapy that teaches "mindfulness meditation."

3. **DIALECTICAL BEHAVIOR THERAPY**
   A kind of CBT that delivers constructive behavioral skills for stress and emotion management as well as the growth of healthy relationships.
4. **INTERPERSONAL THERAPY**
   Makes it easier for a person to deal with the people and circumstances that they find challenging.
5. **SUPPORTIVE PSYCHOTHERAPY**
   A talking-based treatment meant to give someone struggling with mental health challenges a platform to express their worries and get support in coming up with workable solutions.
6. **ACCEPTANCE AND COMMITMENT THERAPY**
   Focuses on the present and encourages one to "just notice" one's thoughts and feelings, which helps one accept them.
7. **PSYCHODYNAMIC PSYCHOTHERAPY**
   Raises awareness of how troubling ideas and emotions originated and how they could be related to one's issues.

Additional therapies sometimes used in combination with psychotherapy include:

1. **ANIMAL-ASSISTED THERAPY**
   Aiming to promote comfort, facilitate communication, and aid in trauma recovery while interacting with dogs, horses, or other animals.
2. **CREATIVE ARTS THERAPY**
   Employing poetry, dance, theater, music, and art as therapies.
3. **PLAY THERAPY**
   To assist kids in recognizing and communicating about their feelings and emotions.

## Does Psychotherapy Work?

Psychotherapy is generally associated with symptom alleviation and improved functioning in daily life, according to research. When someone enters psychotherapy, about 75% of them report feeling some improvement. Studies have demonstrated that psychotherapy enhances mental and emotional health and is associated with favorable alterations in both the brain and body. Sick days, disability, and medical issues decrease, and job satisfaction rises as additional advantages.

Through the application of brain imaging tools, researchers have seen alterations in the brain following psychotherapy. Numerous studies have shown that receiving psychotherapy causes changes in the brains of patients with mental disease, including depression, panic disorder, PTSD, and other illnesses. Psychotherapy-induced brain alterations were often comparable to those brought on by drugs.

## Psychotherapeutic interventions in dentistry

Fear is the body's response to an actual or imagined threat or danger. This results in a fight-or-flight scenario. Dental fear is an emotional response to stimuli that pose a threat. A phobia is an extreme, irrational, and ongoing fear of a particular stimuli that causes the sufferer to completely shun the imagined threat. The overwhelming and illogical dread of dentistry, known as "odontophobia," has been classified under specific phobias in the Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV. It is accompanied by severe sensations of anxiety, trepidation, hypertension, and uneasiness. (Klokkevold, P. et al. 2001).

One's body, mind, emotions, and conduct are all affected by dental anxiety and terror. In dental offices, this is an issue that comes up regularly. Due to their lack of cooperation, nervous patients require more time and resources during treatment, which makes it stressful for the dentist to treat them. In the end, this makes the experience unpleasant for both the patient and the dentist.

Dental anxiety can be brought on by a variety of things, including traumatic or upsetting experiences in the past, particularly when the person was young (conditioning experiences), learning from nervous family members or peers through imitation, personal traits like neuroticism and self-consciousness, ignorance, exposure to graphic media depictions of dentists, the person's coping mechanisms, perceptions of their bodies, and the risky position of lying back in a dental chair.

Other sensory triggers that might cause anxiety include the sight of needles and air turbine drills, the sound of drilling and yelling, the smell of cut dentine and eugenol, and the feeling of high-frequency vibrations in a dental environment.

Fear of pain, fear of blood injuries, fear of betrayal or lack of trust, fear of ridicule, fear of the unknown, fear of a detached dental treatment or a feeling of depersonalization, fear of radiation exposure, fear of mercury poisoning,

fear of choking and/or gagging, a sense of helplessness in the dental chair, and a lack of control during dental treatment are some common fears that lead to dental anxiety.

Depending on the dentist's training and experience, the level of dental anxiety, the patient's features, and clinical circumstances, dental anxiety can generally be treated with psychotherapy treatments, pharmaceutical interventions, or a combination of both. Psychotherapeutic approaches can be behavioral or cognitive. Lately, research has demonstrated that cognitive behavior therapy (CBT) is an incredibly effective approach for treating persons with severe anxiety and phobias. These individuals can be treated pharmacologically with either general anesthesia or sedation, depending on specific indications.

There are various psychotherapeutic interventions used in dentistry listed below (Appukuttan, et al. 2016):

1. Communication skills, rapport, and trust building: iatrosedative technique
2. Behavior-management techniques
3. Relaxation techniques:
    - Deep breathing,
    - muscle relaxation
    - Jacobsen's progressive muscular relaxation
    - Brief relaxation or functional relaxation therapy
    - Autogenic relaxation
    - Ost's applied relaxation technique
    - Deep relaxation or diaphragmatic breathing
    - Relaxation response
4. Guided imagery
5. Biofeedback
6. Hypnotherapy
7. Acupuncture
8. Distraction
9. Enhancing control
    - "Tell-show-do"
    - Signaling
10. Systematic desensitization or exposure therapy
11. Positive reinforcement Cognitive therapy
12. Cognitive behavioral therapy (CBT)

Out of all the psychotherapeutic interventions used in dentistry, CBT is practiced more often and has high evidence of reducing the anxiety and fear of the patients. There are various psychosomatic problems that dentists encounter in dental hospitals and in their clinical setups which can be treated or managed by CBT, so this book focuses specifically on the diseases in the dental practice where CBT is beneficial.

## References

Appukuttan, Devapriya. 2016. "Strategies to Manage Patients With Dental Anxiety and Dental Phobia: Literature Review." *Clinical Cosmetic and Investigational Dentistry*, March, 35. https://doi.org/10.2147/ccide.s63626.

Flückiger, Christoph, A. C. Del Re, Bruce E. Wampold, Dianne Symonds, and Adam O. Horvath. 2012. "How Central Is the Alliance in Psychotherapy? A Multilevel Longitudinal Meta-analysis." *Journal of Counseling Psychology* 59 (1): 10–17. https://doi.org/10.1037/a0025749.

Klokkevold, P. (2001). No differences could be demonstrated between relaxation therapy and cognitive therapy for dental fear. *Journal of Evidence Based Dental Practice*, *1*(2), 117–118. https://doi.org/10.1067/med.2001.118700

Martin, Daniel J., John P. Garske, and M. Katherine Davis. 2000. "Relation of the Therapeutic Alliance With Outcome and Other Variables: A Meta-analytic Review." *Journal of Consulting and Clinical Psychology* 68 (3): 438–50. https://doi.org/10.1037/0022-006x.68.3.438.

Moore, Philip J., Amy E. Sickel, Jennifer Malat, David Williams, James Jackson, and Nancy E. Adler. 2004. "Psychosocial Factors in Medical and Psychological Treatment Avoidance: The Role of the Doctor–Patient Relationship." *Journal of Health Psychology* 9 (3): 421–33. https://doi.org/10.1177/1359105304042351.

Pedersen, Traci. 2023. "What Type of Psychotherapy Is Best for Anxiety?" Healthline. January 17, 2023. https://www.healthline.com/health/anxiety/psychotherapy-for-anxiety.

Prince, Martin, Vikram Patel, Shekhar Saxena, Mario Maj, Joanna Maselko, Michael R Phillips, and Atif Rahman. 2007. "No Health Without Mental Health." *The Lancet* 370 (9590): 859–77. https://doi.org/10.1016/s0140-6736(07)61238-0.

# CHAPTER ONE

# COGNITIVE BEHAVIORAL THERAPY

Cognitive Behavioral Therapy (CBT), one of the most well-studied psychotherapy methods, is used alone or in combination with psychotropic medications to treat a variety of psychiatric problems. It is a kind of psychological therapy that teaches patients how to recognize and alter unhelpful or unsettling thinking patterns that negatively affect their behavior and emotions. These thoughts are recognized, contested, and replaced with more objective, realistic thoughts using cognitive behavioral therapy (CBT).

CBT is a type of psychological therapy that is useful for a variety of issues, including depression, anxiety disorders, alcoholism, and substance abuse issues. eating disorders, serious mental illness, and marriage issues. Numerous studies have found that CBT significantly enhances functioning and quality of life. CBT has been shown in numerous studies to be equally successful as, or even more effective than, other types of psychological therapy or psychiatric drugs (Sudhir, et al. 2018).

CBT is "a type of psychotherapy in which unfavorable thought patterns regarding the self and the outside world are challenged to change undesirable behavior patterns or treat mood disorders like depression".

Oral physicians engage in structured work with a mental health counselor (psychotherapist or therapist), attending a set number of sessions. Numerous conditions are treated with cognitive behavioral therapy. It's frequently the favored form of psychotherapy because it may swiftly assist you in understanding and resolving particular difficulties. It is typically more regimented and takes fewer sessions than other forms of therapy.

CBT is a practical tool for dealing with emotional difficulties. It could assist you, for instance:

1. Controlling the signs of a mental disorder.
2. Preventing the symptoms of mental illness from returning.
3. When medication is no longer a good option, treat the mental illness.

4. Learn coping skills for dealing with challenging circumstances.
5. Learn how to control your emotions.
6. Resolve interpersonal disputes and improve communication.
7. Make adjustments with loss or grief.
8. Overcoming psychological damage brought on by abuse or violence.
9. Adapt to a medical condition.
10. Oversight of recurring physical symptoms.

The following mental health conditions may be improved by CBT:

1. Depression
2. Anxiety conditions
3. Phobias
4. Post traumatic stress disorder (PTSD)
5. Sleep problems
6. Disorders of eating
7. Obsessive Compulsive Disorder (OCD)
8. Diseases caused by drug usage
9. Bipolar illnesses
10. Schizophrenia
11. Sexual dysfunction

Thirteen years ago, it was announced that a “third wave” of CBT was on its way. The argument was that orienting assumptions within CBT were changing, and a new set of behavioral and cognitive techniques were emerging based on contextual concepts that placed a greater emphasis on a person’s relationship to thinking and emotion than on the content of those experiences. Aspects like mindfulness, emotions, acceptance, connection, values, aspirations, and meta-cognition were highlighted by third-wave methodologies. Acceptance and commitment therapy, dialectical behavior therapy, mindfulness-based cognitive therapy, functional analytic psychotherapy, metacognitive therapy, and several more new models and intervention techniques were used.

The essential tenet of CBT is that thoughts and feelings have a significant impact on behavior. Cognitive behavior therapy aims to show patients that, despite the fact that they are powerless over all facets of their environment, they do have influence over how they perceive and respond to it.

The following are some of CBT’s most well-known advantages:

1. Becoming aware of the unfavorable and frequently irrational beliefs that affect your feelings and mood enables you to adopt healthy thought processes.
2. It is a successful alternative for short-term therapy; for instance, results can be visible in five to twenty sessions.
3. For a wide range of maladaptive behaviors, it has been proven successful.
4. It is frequently less expensive than certain other forms of therapy.
5. It has been proven to work both in person and online.
6. People who don't need psychotropic medication can utilize it.

The development of coping skills that clients can employ both now and in the future is one of the cognitive behavioral therapy's greatest advantages.

The development of CBT dates back to the 1960s and is rooted in the work of psychiatrist Aaron Beck, who recognized how particular ways of thinking contributed to emotional issues. These "automatic negative ideas," which Beck dubbed, are how cognitive therapy was created.

A variety of mental illnesses, including anxiety, depression, eating disorders, insomnia, obsessive-compulsive disorder, panic disorder, post-traumatic stress disorder, and substance use disorder, have been successfully treated with cognitive behavioral therapy, one of the most thoroughly researched treatment modalities available today.

1. The best evidence-based method of treating eating disorders is CBT (Carpenter, et al. 2018)
2. CBT has been shown to be beneficial for people with insomnia as well as those with a general medical condition that prevents them from falling asleep, such as those who suffer from pain or mood disorders like depression (Trauer, et al.2015)
3. Scientific research has shown that cognitive behavioral therapy is useful in treating the signs and symptoms of anxiety and depression in children and adolescents (Oud, et al. 2019).
4. CBT assisted in reducing symptoms in persons with anxiety and anxiety-related illnesses, such as obsessive-compulsive disorder and post-traumatic stress disorder, according to a 2018 meta-analysis of 41 research (Carpenter, et al. 2018).
5. CBT has a lot of scientific support for treating substance use disorders because it helps patients gain self-control, stay away from triggers, and create coping mechanisms for everyday stressors.

The efficacy of CBT for psychosomatic issues in dental settings has been demonstrated in numerous intervention studies. Even though the benefits of this approach for TMD and dental anxiety are well known (Matsuoka, et al. 2017). Findings indicate that CBT is an effective treatment for dental anxiety in children and adolescents. Orofacial pain can be relieved with CBT. For conditions like persistent TMD, a comprehensive strategy combining CBT with intraoral appliances, stress management, biofeedback, CBT programs, cognitive restructuring, and relaxation may be beneficial.

According to Huang, et al., CBT decreased brain waves and pain from orthodontic therapy while reducing delta and theta brain waves, which were connected with the severity of toothaches following dental treatment (Huang, et al. 2016). Additionally, during orthodontic treatment, toothache was reduced with CBT combo therapy (brainwave music). Research has therefore revealed that CBT has some impact on brain wave patterns that happen during pain in pain-associated brain areas.

In the field of Oral Medicine, CBT is frequently utilized. It is used not only to treat dental anxiety TMDs but also a number of other psychosomatic conditions such as halitophobia, xerostomia, various types of migraines, burning mouth syndrome (BMS), quitting deleterious habits, autoimmune disease etc.

The benefits of CBT in the practice of Oral Medicine have received very little research. In order to provide oral physicians with a comprehensive knowledge base to use in their valuable practice, this dissertation places a strong emphasis on the many uses of CBT in Oral Medicine specialty practice.

## References

Carpenter, Joseph K., Leigh A. Andrews, Sara M. Witcraft, Mark B. Powers, Jasper a. J. Smits, and Stefan G. Hofmann. 2018. “Cognitive Behavioral Therapy for Anxiety and Related Disorders: A Meta-analysis of Randomized Placebo-controlled Trials.” *Depression and Anxiety* 35 (6): 502–14. https://doi.org/10.1002/da.22728.

Huang, R, J Wang, D Wu, H Long, X Yang, H Liu, X Gao, R Zhao, and W Lai. 2016. “The Effects of Customised Brainwave Music on Orofacial Pain Induced by Orthodontic Tooth Movement.” *Oral Diseases* 22 (8): 766–74. https://doi.org/10.1111/odi.12542.

Matsuoka, Hirofumi, Itsuo Chiba, Yuji Sakano, Akira Toyofuku, and Yoshihiro Abiko. 2017. "Cognitive Behavioral Therapy for Psychosomatic Problems in Dental Settings." *BioPsychoSocial Medicine* 11 (1). https://doi.org/10.1186/s13030-017-0102-z.

Sudhir, P. (2018). Cognitive behavioural interventions in addictive disorders. *Indian Journal of Psychiatry*, *60*(8), 479. https://doi.org/10.4103/psychiatry.indianjpsychiatry_15_18.

Trauer, James M., Mary Y. Qian, Joseph S. Doyle, Shantha M.W. Rajaratnam, and David Cunnington. 2015. "Cognitive Behavioral Therapy for Chronic Insomnia." *Annals of Internal Medicine* 163 (3): 191–204. https://doi.org/10.7326/m14-2841.

Oud, Matthijs, Lars De Winter, Evelien Vermeulen-Smit, Denise Bodden, Maaike Nauta, Lisanne Stone, Marieke Van Den Heuvel, et al. 2019. "Effectiveness of CBT for Children and Adolescents With Depression: A Systematic Review and Meta-regression Analysis."*European Psychiatry* 57 (January): 33–45. https://doi.org/10.1016/j.eurpsy.2018.12.008.

# CHAPTER TWO

# HISTORY

Cognitive behavioral therapy has its roots in psychological advancements from as early as 1913. John B. Watson's behaviorist research provided the groundwork for eventual advancements in the subject (Watson, et al. 1913).

The theory of learning known as behaviorism holds that all behaviors are learned through conditioning. People interact with their surroundings, receiving cues that mold their behavior, which results in conditioning. The development of cognitive behavioral therapy was also fundamentally influenced by BF Skinner's theories of conditioning (Bjork, et al. 1997).

Before cognitive behavioral therapy, there was a contentious method called behavior therapy that predated cognitive behavioral therapy. The treatment of enuresis in young people was one of the first procedures used in this method (Bolla, Giorgio. 2015). The development of the CBT theories required the use of initial respondent conditioning techniques to comprehend anxiety. Respondent conditioning led to the discovery of extinction, habituation, and counter-conditioning.

Additionally, the development of behavioral therapy and childhood CBT was greatly influenced by the operant learning theory. This hypothesis gave rise to the development of both positive and negative reinforcement in youngsters. Their role in CBT became clearer with a fuller knowledge of the cognition that underlies behavior.

Albert Ellis used Rational Emotive Behavior Therapy in the 1950s. The objective was to assist patients in recognizing their illogical thoughts. Through this recognition, one would be encouraged to dispute the thought and move toward a more sensible one. Patients were supposed to have a more logical perspective of the world and their role in it through therapy (Bjork, et al. 1997).

The 1960s saw the initial development of cognitive behavioral therapy. Experiments were developed and carried out by Dr. Aaron T. Beck at the University of Pennsylvania to test psychoanalysis theories, and he

discovered some unexpected findings. He discovered that depressed individuals frequently experienced a stream of unfavorable thoughts that seemed to come to them out of thin air.

Dr. Beck divided these uncontrollable negative thoughts into three groups. The patients had pessimistic beliefs about the future, the world, and/or themselves. With these results, he started to theorize several perspectives on depression (Bolla, Giorgio. 2015).

Beck's theory of cognitive distortions and Dr. Albert Ellis' idea of irrational thought both contributed to a better understanding of psychological issues. According to Beck's theory, these issues were caused by the early development of maladaptive processes. The cognitive triangle served as the foundation of his hypothesis. A group of predetermined irrational assumptions, often known as common irrational assumptions, served as the foundation for Dr. Ellis's theory.

With his method, Dr. Beck started to assist his patients in reevaluating their self-perceptions. He discovered that by doing this, his patients were growing more capable of managing life's daily responsibilities. Patients said that this therapy brought about significant change.

Numerous meta-analyses have studied the effectiveness of this therapy since its inception, it has developed into an effective therapy option for a range of mental health issues. There are currently therapists who focus on this therapy strategy (Clark, et al. 1991).

Midway through the 1970s, CBT became more widely used to help treat people with higher functioning. This change did not occur by accident; rather, it was brought about through learning from mistakes, advancements in behavioral treatment, and a deeper comprehension of emotional self-control.

Over time, as the use of CBT increased, breakthroughs and expansions in the sector started to appear. One such advancement is the Tripartite Model (Ranjbari, et al. 2018). According to this concept, people with anxiety and depression have negative effects that are noticeably similar.

Work in CBT has been furthered by Barlow's triple vulnerability model of emotional disorders (Gaudiano, B. A. 2008). The concept focuses on how kids feel they have control over their surroundings. In this method, parents receive training to assist kids in understanding and navigating their environments.

Psychology as a whole demonstrates the depth of knowledge on CBT and its use with kids. The treatment's effectiveness for children and teenagers is extensive. Children who receive this kind of therapy are better able to comprehend their surroundings and how they can control them (Gaudiano, B. A. 2008).

Due to the failure of numerous empirical investigations to support the hypotheses created around the effectiveness of CBT, a new "third" wave of CBT is emerging. The language of cognition has changed. Acceptance-based techniques are the method. The theory downplays the importance of changing cognitive distortions because doing so may not be judged necessary. The patient is becoming aware of the distortion while using an acceptance-based approach rather than attempting to control it. The dedication to behavior modification is what is most important.

## The Pioneers and Forefathers

The cognitive behavioral treatment developed more quickly over time. In the 1950s, behavior therapy was invented by Dr. Albert Ellis. His work with illogical thought laid the groundwork for cognitive behavioral therapy (CBT). CBT still makes use of his ABC method of irrational beliefs.

The development of CBT was further aided by the 1960s work of Joseph Wolpe and Arnold Lazarus. Their contributions to the field of behavior therapy to lessen neuroses are fundamental. Many of the methods currently used in this approach today were developed as a result of their hypothesis of systematic desensitization.

The movement for cognitive behavior therapy was started by Dr. Aaron Beck. In the 1960s, he started working as a physician. His method of psychotherapy was unconventional and ground-breaking at the time. His method has consistently held up to scientific scrutiny. His views have a broad range of applications in psychology.

Additionally, Dr. Judith Beck has had a big impact on cognitive behavior therapy. She continued down the same road as her father, researching and creating key components of cognitive behavioral therapy. Her contributions to the study of coupling and the mechanisms underlying change helped to advance science.

## Dr. Aaron Beck: A Closer Look

Father of Cognitive Behavior Therapy is a title bestowed upon Dr. Aaron T. Beck. In addition, he was listed as one of the top 5 psychotherapists of all time. Beck is listed among the Americans who helped define the history of psychiatry. Over 600 articles by Dr. Beck have been published. In 25 novels, he is the author or co-author. He created several measures that are still used today to measure depression.

His work in cognitive behavioral therapy was influenced by the theories of Frederic Bartlett, Jean Piaget, and George Kelly, as well as other psychologists' research. Beck's early work in CBT was greatly influenced by his cognitive construction theory of Kelly, the terminology developed by Bartlett around the theories of schemas, and the vocabulary of Piaget's theory of cognitive development (Bjork, et al. 1997).

Close, personal interaction with the patient was essential in Dr. Beck's opinion. To enable the examination of automatic negative beliefs, a trustworthy relationship had to be built. Some of his patients found it disturbing that he even acknowledged having these feelings. A sizable number of patients self-reported improvement as a result of the reframing of these thoughts through work with Dr. Beck (Bjork, et al. 1997).

The Beck Institute for Cognitive Behavior Therapy was established to further explore how his ground-breaking theory may be used to treat individuals with a variety of psychological problems. Together with his daughter, Dr. Judith Beck, they established the institute to carry out additional research and act as a global resource for CBT.

## References

Watson, John B. 1913. "Psychology as the Behaviorist Views It." *Psychological Review* 20 (2): 158–77. https://doi.org/10.1037/h0074428.

Bjork, Daniel W. 1997. *B. F. Skinner: A Life. American Psychological Association eBooks*. https://doi.org/10.1037/10130-000.

Bolla, Giorgio. 2015. "Psychotherapy and Enuresis." *SOJ Psychology*, October, 01–02. https://doi.org/10.15226/2374-6874/2/1/00122.

Clark, Lee Anna, and David Watson. 1991. "Tripartite model of anxiety and depression: Psychometric evidence and taxonomic implications." *Journal of Abnormal Psychology* 100 (3): 316–36. https://doi.org/10.1037/0021-843x.100.3.316.

Ranjbari, Tohid, Javad Karimi, Abolfazl Mohammadi, and Mohammad Reza Norouzi. 2018. “An Evaluation of the Contributions of the Triple Vulnerability Model to the Prediction of Emotional Disorders.” *Iranian Journal of Psychiatry and Clinical Psychology* 23 (4): 408–23. https://doi.org/10.29252/nirp.ijpcp.23.4.408.

Gaudiano, B. A. 2008. “Cognitive-behavioural Therapies: Achievements and Challenges.” *Evidence-Based Mental Health* 11 (1): 5–7. https://doi.org/10.1136/ebmh.11.1.5.

# CHAPTER THREE

# REVIEW OF LITERATURE

## History of CBT

**Miller et al (1983)** discussed how CBT can help a variety of patients. Although cognitive behavioural therapies are better than no treatment, there is limited evidence that they outperform other commonly used psychotherapies. If supporters of cognitive behaviour therapies want to promote this course of therapy over others, they must present compelling evidence that either this course of treatment is superior to other psychotherapies or that it is the best course of treatment for a certain disease. (Miller et al. 1983).

**McAdam et al (1986)** noticed that CBT for adolescents is a beneficial sort of treatment that takes advantage of the cognitive talents that naturally arise during adolescence. It has downsides and weaknesses, like many psychotherapies, yet it is effective for a large number of young people. Since the existential question of the arbitrary character of reality serves as the cornerstone of active psychotherapy, it is critical to examine this ability while determining who to accept for CBT. (McAdam et al. 1986).

## Use of CBT in the medical field

### CHRONIC FATIGUE SYNDROME

**Deale et al (1997)** randomly assigned sixty chronic tiredness patients to either 13 sessions of relaxation therapy or cognitive behavior therapy (graded exercise and cognitive restructuring). The outcome was assessed using measures of functional impairment, fatigue, mood, and overall improvement. The results showed that 53 of the patients completed the task during therapy. The group that received cognitive behavioral treatment showed larger reductions in functional impairment and fatigue. In comparison to 19% of those who finished treatment in the relaxation group, 70% of those who completed cognitive behavior therapy had favorable results (significant improvement in physical functioning) at the time of final

follow-up. The conclusion was made that the care of individuals with chronic fatigue syndrome was more successful with cognitive behavior therapy than with relaxation control. Improvements persisted over a 6-month follow-up period (Deale et al. 1997).

## SCHIZOPHRENIA

**Sensky et al (2000)** conducted a randomized controlled study to compare the efficacy of manualized cognitive behavioral therapy developed particularly for schizophrenia with that of a nonspecific befriending control intervention. Both procedures were carried out by two experienced nurses who received regular supervision. Patients were evaluated by blind raters at baseline, post-treatment (up to 9 months), and at a 9-month follow-up. Patients received standard care throughout the research. An assessor who was unaware of the patients' treatment groups judged the technical quality of randomly selected audiotaped sessions. The analysis was based on the intention to treat. The study found that ninety patients received an average of 19 individual treatment sessions during nine months, with no significant treatment length differences between groups. Both therapies significantly reduced positive and negative feelings, as well as depression. At the 9-month follow-up, patients who had undergone cognitive therapy continued to improve, whereas those in the befriending group did not. These findings were not due to changes in prescribed medication. They concluded that cognitive-behavioral treatment helps treat negative and positive symptoms in schizophrenia refractory to traditional antipsychotic medications, and its efficacy was sustained over 9 months of follow-up (Sensky et al. 2000)

## DEPRESSION

**Kwon et al. (2003)** proposed a study to look into the causal relationships between automatic thinking changes, dysfunctional attitudes, and depressive symptoms in a 12-week group cognitive behavior therapy (GCBT) program for depression. The Beck Depression Inventory, the Dysfunctional Attitudes Scale, and the Automatic Thoughts Questionnaire were used to follow 35 depressed patients engaged in the GCBT program at the beginning, fourth, and eighth sessions, as well as after therapy. The results are as follows. (1) GCBT reduces negative thoughts; (2) changes in automatic thoughts and dysfunctional attitudes lead to changes in depressive symptoms; and (3) automatic thoughts serve as a bridge between dysfunctional attitudes and depression. Overall, the data support the Causal Cognition Model of depression (Kwon et al. 2003).

**Powell VB et al. (2008)** discussed the use of cognitive methods and examine studies on the effectiveness of cognitive behavioral therapy (CBT) in treating depression. A non-systematic review of the corpus of literature containing original research, augmented with data from meta-analyses and specialty books. The findings revealed that the fundamentals of cognitive-behavioral therapy are presented, as well as the data supporting its short- and long-term effectiveness in the treatment of depression. In addition to cognitive behavioral therapy, pharmacological therapy is discussed. Conclusions Given that, whether used alone or in conjunction with drugs, CBT is one of the therapeutic strategies for the treatment of depression with the strongest scientific evidence of success (Powell VB et al. 2008).

**Sheykhangafshe et al. (2023)** assessed the effectiveness of cognitive-behavioral therapy on the coping mechanisms and anxiety sensitivity of patients with COVID-19 preoccupation. Their current research strategy used a quasi-experimental, pre-test-post-test design with a control group. The study's statistical population includes patients who were obsessed with COVID-19 in 2021. The study population consists of 30 individuals with COVID-19 preoccupation who were chosen using the convenience sampling approach and randomly assigned to two experimental groups (n=15) and control groups (n=15). The collection tool comprised a questionnaire about COVID-19 obsession, coping techniques, and anxiety sensitivity. The experimental group was given 10 90-minute sessions of cognitive-behavioral therapy, while the control group received no treatment. The data was analyzed using multivariate covariance analysis in SPSS version 24 ($P < 0.05$). Cognitive-behavioral treatment improved problem-oriented coping strategies while decreasing emotion-oriented, avoidance, and anxiety sensitivity (physical, cognitive, and social) in COVID-19 preoccupation patients ($P<0.01$). The results showed that cognitive-behavioral therapy can dramatically improve patients with COVID-19 preoccupation. Given the long-term implications of COVID-19, psychology and counseling centers should take measures to identify and treat susceptible groups (Sheykhangafshe et al. 2023).

## Use of CBT in dentistry

### DENTAL ANXIETY

**Kani et al (2015)** described the characteristics of patients attending a psychologist-led cognitive behavioral therapy (CBT) service for people with dental fear, as well as treatment outcomes. Analysis of routinely collected assessment and outcome data from 130 patients attending a single

secondary clinic that offers CBT for dental fear. The patients included 99 women and 31 males, with an average age of 39.9 years (SD 14.8). On the Modified Dental Anxiety Scale (MDAS), approximately 77% of the patients scored in the dental phobia range. Fear of dental injections and the dental drill were the most often high-scoring topics on the MDAS. Fear of dental injections and the dental drill were the most common high-scoring items on the MDAS. Ninety-four percent of patients reported one or more impacts of their mouth, teeth and gums on their life using the OHIP-14. A minority of patients had co-morbid psychological conditions – 36.9% had high levels of general anxiety and 12.3% had clinically significant levels of depression. Suicidal thoughts were indicated by 12% of patients, with four (3%) reporting a recent desire to commit suicide. 79% of the recommended patients received dental treatment without sedation, while 6% received dental treatment with sedation. The average number of CBT appointments required before a patient could get dental treatment without anesthesia was 5. The conclusion was formed that CBT is a helpful therapy for assisting dentally apprehensive patients in receiving treatment without sedation. Those considering running such programs should be aware of the somewhat high degree of co-morbid psychological problems in this group (Kani et al. 2015).

**Shahnavaz et al (2016)** conducted a study to investigate the efficacy of cognitive behavioral therapy (CBT) for children with dental anxiety in specialist pediatric dentistry. The study used a parallel-group superiority randomized controlled trial design. The primary outcome measure was the behavioral avoidance test; assessors were blind to treatment allocation. Participants were 8 boys and 22 girls 7 to 18 years old (mean ± SD, 10 ± 3.1). Children who satisfied the diagnostic criteria for dental anxiety were randomly assigned to either CBT (n = 13) or conventional treatment (n = 17), which included various sedative modalities. Psychologists administered 10 hours of CBT based on a therapy handbook. Treatments were carried out in a naturalistic, real-world clinical context. Assessments were completed before treatment, three months after treatment began, and one year later. CBT significantly improved children's outcomes at follow-up (16.8 ± 2.4) compared to standard treatment (11.4 ± 3.1, $P < 0.01$). A high between-group effect size was discovered (Cohen's d = 1.9). Following treatment, 73% of those in the CBT group managed all stages of the dental procedures included in the behavioral avoidance test compared with 13% in the treatment-as-usual group. Furthermore, the secondary end measure revealed that 91% of the CBT group, compared to 25% of the treatment-as-usual group, no longer satisfied the diagnostic criteria for dental anxiety at the 1-year follow-up period. Measures of dental anxiety and self-efficacy indicated