

Mini Review

Cognitive behavioral therapy treatment for drug addiction

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Abstract

Drug addiction remains a major health concern following its devastating consequences to the users and the economy. Current statistics show a rising trend in substance abuse around the globe with approximately 284 million people engaging in drug abuse. Various approaches are used to treat the victims of drug abuse. Cognitive behavior therapy, a form of nonpharmacological intervention, has also been shown to be an effective treatment option for drug addiction. The use of Cognitive Behavioral Therapy (CBT) has grown since the 1970s to become one of the most important models of psychotherapy in this decade. Various empirical studies have shown the efficacy of CBT in well-controlled trials. A total of 19 randomized trials (cases) (with over 1400 patients treated) were selected and studied. In the various cases, results showed that patients were treated for drug and substance abuse disorders with the majority being those who abused cannabis, cocaine, alcohol and other opioids. In most cases, the CBT techniques that were used for drug addiction included cognitive restructuring, relapse prevention and contingency management. Components of CBT for drug addiction include skills and training, amplification of non-substance-related activities, approaches for managing urges, drug rejection and improvement of social aptitudes. Cognitive restructuring focuses on the identification of misconceptions and influencing the way people think about themselves by eliminating distorted thinking. Relapse prevention focuses on the identification and prevention of high-risk situations that may trigger the patient to engage in drug abuse. Contingency management reinforces positive behaviors and reduces negative behaviors through the use of rewards and incentives.

Introduction

Drug addiction is a significant public and clinical health concern. The latest report by UN Office on Drugs and Crime (UNDOC) estimates that 284 million people around the world are involved in substance abuse. Moreover, the report showed that over 35 million people were diagnosed and received treatment for drug addiction. A majority of these people are in the age group of between 15 - 64 years. Drug addiction is a serious problem that can lead to significant physical, psychological and social problems. Drug addiction affects the way neurons send, receive and process signals via neurotransmitters. It may also increase the risk of death of the victims from other diseases and injury processes. As a result, various treatment approaches such as pharmacotherapy are used to treat the victims [1]. Cognitive Behavioral Therapy (CBT) is also one of the interventions used in the treatment of drug addiction. Although a relatively newer approach to addiction treatment, CBT has gained a lot of interest among researchers and remains one of the favored approaches for the treatment of drug use disorders. Its efficacy in treatment is well supported by the available empirical evidence from well-controlled trials [2].

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Overview of cognitive-behavioral therapy (CBT)

According to Magill, et al. [3], Cognitive Behavioral Therapy (CBT) is a collaborative, structured, skill-building time-limited treatment approach that involves several stages and the use of specific techniques to modify thoughts and behaviors. From its early days in the 1970s, CBT has grown rapidly to become one of the most important models of psychotherapy available and used globally [3]. By the 1970s, behavior therapy began expanding from focusing primarily on observable behavior to a broader context of internal cognitions and emotions. Particular forms of CBT have been determined as important for the treatment of many substance abuse disorders [4]. CBT is pegged on several fundamentals as well as the ideas that (a) cognition facilitates the association between activating stressors and the responses to those stressors, (b) with proper training and technology, it is possible to monitor cognitions and (c) gradual and systematic changes to cognition can bring about therapeutic outcomes.

CBT works on the principles that psychological disorders are based, in part, on inaccurate ways of thinking and learned patterns of negative behavior. Moreover, CBT contemplates



that people suffering from psychological behaviors can potentially learn better ways of coping which can result in the creation of positive change in their lives [5]. The rationale for using CBT in drug addiction treatment includes the fact that it is a short-term, comparatively brief approach that is suited for most clinical programs. CBT is also structured and goal-oriented and focuses on immediate problems faced by patients starting treatment who are struggling to control their drug use. CBT helps the patient recognize the situation where they are most likely to use drugs and avoid the situation, and cope better with problematic behaviors related to substance abuse [5]. Many studies quantitative and qualitative reviews have demonstrated that CBT is effective in the treatment of drug abuse disorders because it enhances the functioning and quality of life [4].

Today, CBT is frequently utilized in the fight against addiction [4]. Those receiving treatment for a Substance Use Disorder (SUD) are taught how to use CBT to make connections between their ideas, feelings, and behaviors and to become more conscious of how these factors affect recovery. Components of CBT for drug addiction treatment include 1) Acquisition of skills and training to cultivate alternative behaviors to substance abuse, 2) approaches for managing urges, rejecting drugs, improving social aptitudes, and 4) amplifying non-substance-related activities as well as other positive stimuli that may lead to a transformation in behavior.

In CBT, there is no consensus regarding which treatments qualify as CBT but it is commonly held that such treatments combine cognitive and behavioral techniques (Rachman, 2015). Consequently, most of the treatments focus on controlling panic such as in the case of panic disorder as well as a social anxiety disorder. Nevertheless, some specific CBT treatments have emerged, for example, cognitive therapy for depression and particular behavioral treatments. Although widely used for many psychiatric disorders, it remains unclear what constitutes CBT. This is because of the nature of CBT to encompass a wide range of treatments. To bridge this gap, this review has narrowed to the primary cognitive techniques which include problem-solving and cognitive restructuring of irrational beliefs, as well as primary behavioral techniques such as contingent management and exposure to feared stimuli. The review opines that gaining a deeper understanding of these techniques will trigger new sentiments regarding the perception and application of CBT in drug addiction.

Evidence from many trials and quantitative reviews shows that CBT is an effective treatment for drug addiction. Conducting this meta-analytic review entailed searching for the articles in Google Scholar, Research Gate, PubMed, NCBI, PMID, and PMCID. A total of 19 randomized trials (cases) (with over 1400 patients treated) were selected and studied. In the various cases, results showed that patients were treated with different drugs with the majority being those who

abused cannabis, cocaine, alcohol, and other opioids. Most of these cases reported that the CBT treatment approaches used included contingency management, relapse prevention cognitive restructuring among others. Consistent with these review results is a meta-analytic review of randomized trials by Magill, et al. [6] who found CBT to be equally effective in the treatment of drug addiction with 15-20% better than average outcomes in untreated, or minimally treated controls.

CBT Techniques for drug addiction

Cognitive restructuring is one of the CBT techniques which focuses on changing behavior. Cognitive restructuring concentrates on identifying misconceptions and influencing the way people think about themselves by eliminating distorted thinking. In drug addiction, cognitive restructuring assists patients to identify and change negative thought patterns that may contribute to their addiction [7,8]. It achieves this by diminishing anxiety and promoting reasoned practice among victims. During treatment, cognitive restructuring works by first identifying negative thoughts followed by challenging the negative thoughts. The thoughts are then replaced with positive ones and the individual is encouraged to practice positive self-talk [9]. The cognitive restructuring approach alone may, however, not be sufficient and need to be used alongside other evidence-based treatment options for drug addiction to foster long-term recovery [7].

Relapse prevention's cognitive-behavioral approach to drug addiction treatment focuses on the identification and prevention of high-risk situations that may trigger the patient to engage in drug abuse. Relapse Prevention (RP) insists on functional analysis of cues for drug use and training to cultivate alternative responses to those cues [10]. Techniques for relapse prevention include identifying the triggers, developing coping skills such as providing psychoeducation about the dangers of substance use, creating a relapse prevention plan, and monitoring progress [11]. A review to determine the efficacy of RP across 26 studies showed that RP is effective in the treatment of drug addiction and helps improve psychosocial adjustment.

The contingency management approach to the treatment of drug addiction is based on operant learning theory and entails the provision of a non-drug reinforcer to patients upon demonstration of refraining from the use of drugs [12]. It aims to reinforce positive behaviors and minimize negative behaviors through the use of rewards and incentives such as attending therapy sessions. The efficacy of this treatment CBT technique has been demonstrated by various meta-analytic reviews [13]. However, the efficacy varies from greater to moderate across the various substances often abused.

Other techniques of CBT for drug addiction comprise treatments for negative automatic thoughts that look for factual evidence either proving or disproving those notions. They compare and contrast the arguments in favor of and against



their preconceived notions [14]. By critically assessing what they are thinking, the intention is to assist them in developing more sophisticated and accommodating mental patterns [15]. The next exercise is a behavioral experiment, which compares positive and negative ideas to find which is more effective at altering behavior [16-20]. Self-kindness works better for certain people while self-criticism works better for others. The goal of behavioral experiments is to identify the individual's optimal behavior. Also, during imagery-based exposure, people in recovery recall an experience that triggers strong negative emotions. They record each sensation, sound, feeling, idea, and impulse that they have at that same instant.

Conclusion

Drug addiction remains a major health concern following its devastating consequences to the users and the economy. Current statistics show a rising trend in substance abuse around the globe with approximately 284 million people engaging in drug abuse. Cognitive behavior therapy, a form of nonpharmacological intervention, has been shown to be an effective treatment option for drug addiction. The use of CBT has grown since the 1970s to become one of the most important models of psychotherapy in this decade. The most common CBT techniques for drug addiction include cognitive restructuring, relapse prevention, and contingency management. In this review, a total of 19 randomized trials (cases) (with over 1400 patients treated) were selected and studied. In the various cases, results showed that the CBT techniques were effective against drug addiction.

Components of CBT for drug addiction include skills and training, amplification of non-substance related activities and approaches for managing urges, drug rejection, and improvement of social aptitudes.

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