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Intervention based on Dialectical Behavioral Therapy for the Treatment of Problems related to substance use

Intervención basada en la Terapia Dialectico Conductual para el tratamiento de problemas relacionados con el consumo de sustancias

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Abstract:

Substance Use Disorder is a condition that generally presents comorbidity with other mental health problems, in addition to representing one of the most important health problems with high costs. However, despite social and health efforts, the data show an increase in the incidence and prevalence of this problem, and traditional treatments have high dropout and relapse rates. Therefore, it is necessary to contribute to the study of the phenomenon of substance consumption and generate more effective intervention proposals. One of the therapies that has shown effectiveness over traditional interventions aimed at substance use is Dialectical Behavioral Therapy (DBT). This may be because this therapy offers a multimodal, comprehensive, and flexible treatment that can be used transdiagnostically in adults and adolescents and because it addresses problematic emotions and behaviors, such as the abuse of psychotropic substances. The present theoretical review aims to show the bases of DBT dialectical behavioral therapy, the adaptations made for substance abuse cases, and the evidence, so far available, of the effectiveness of interventions based on DBT for managing problems related to the use of substances.

Keywords:

Intervention, Dialectical Behavioral Therapy, Skills, Substance Use Abuse, Substance Use Disorder

Resumen:

Los trastornos por consumo de sustancias psicoactivas es una condición que generalmente presenta comorbilidad con otros problemas de salud mental, además de representar uno de los problemas de salud más importantes con altos costes. Sin embargo, pese a los esfuerzos sociosanitarios los datos muestran un alza en la incidencia y prevalencia de dicho problema y los tratamientos tradicionales presentan altos índices de deserción y recaídas. Por lo anterior, es necesario contribuir al estudio del fenómeno de consumo de sustancias y generar propuestas de intervención más eficaces. Una de las terapias que ha mostrado mayor efectividad frente a las intervenciones tradicionales basadas en la terapia cognitiva conductual clásica dirigidas al consumo de sustancias es la Terapia Dialectico Conductual (TDC), esto puede deberse a que esta terapia ofrece un tratamiento multimodal, integral y flexible que se puede utilizar de forma transdiagnóstica tanto en adultos como en adolescentes y a que se dirige a emociones y comportamientos problemáticos como es el caso del abuso de sustancias psicotrópicas. La presente revisión teórica pretende mostrar las bases de la terapia dialéctica conductual TDC, las adaptaciones realizadas para casos con abuso de sustancias y la evidencia, hasta ahora disponible, de la eficacia de intervenciones basadas en la TDC para el manejo de problemas relacionados con el consumo de sustancias.

Palabras Clave:

Intervención, *Terapia Dialectico Conductual, Habilidades, Abuso de Consumo de sustancias, Trastorno por uso de sustancias*

INTRODUCTION

The use of psychoactive substances leads to the development of different social, psychological, and health problems such as accidents, illnesses, unplanned pregnancies, school or work dropouts, poor academic performance, substance use disorders, violence, and death, generating significant costs at the individual, local, national and global levels.[1]

According to the World Drug Report, in 2022 and 2023, prevalence continued to rise. During 2020, approximately 284

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million people worldwide aged 15-64 years consumed drugs[2], while it was estimated that in 2021 more than 296 million people consumed some drugs, reaching an increase of 23% compared to the previous decade.[3] On the other hand, it is relevant to mention that the number of people who presented a drug use disorder in 2021 soared to 39.5 million, an increase of 45% in 10 years.[3]

In Africa and Latin America, most people undergoing treatment for drug use are under 35 years of age, which may be related to the fact that the age of onset of drug use is increasingly younger.[2]

In Mexico, the latest data obtained from the National Survey on Drug, Alcohol, and Tobacco Use (ENCODAT) 2016-2017 have shown that the age of consumption initiation is decreasing and, in addition, there is an increase in the availability of both licit and illicit drugs. In the case of tobacco, an increase of 3 percentage points was found from 2011 (48%) to the 2016-2017 reported results (51%), respecting persons aged 12 to 65 years who reported having smoked once in their lifetime. Regarding alcohol consumption, a percentage of 71% of persons aged 12 to 65 years who reported having consumed alcohol once in their lifetime remained from 2011 to 2016. Regarding illicit drugs, a continuous increase has been noted in the number of people who consume them. In 2008 there was 5.2%, according to the National Addictions Survey. In 2011 7.2% and in 2016 9.9%.[1]

It must be mentioned that, in terms of demand, amphetamine-type stimulants have become the primary cause of treatment in Mexico. From 2017 to 2022, the consumption of amphetamines, methamphetamines, ecstasy, or stimulants for medical use grew by 218%. The demand of these substances accounted for 46.2% of cases, followed by alcohol, with 24.6% of cases, and marijuana, with 13.3% of cases.[2,4]

These data correspond to the findings in the State of Hidalgo, Mexico, where the most commonly consumed drugs identified are crystal methamphetamines, alcohol, marijuana, tobacco, and cocaine. An alarming 450% increase in crystal meth use was detected from 2017 to 2022 among adolescents aged 12 to 17 years old and adults aged 18 to 29 years old, of which 90% are men.[5]

On the other hand, according to a study conducted by Villatoro et al.[6] in 2016, with Mexican students, having ever used tobacco was 30.4% and the average age of initiation with this substance was 13.4 years. 53.2% had drunk alcohol, and 14.5% had drunk to excess. The prevalence of having ever used drugs was 17.2%. The drugs of choice among adolescents are marijuana (10.6%), inhalants (5.8%) and cocaine (3.3%).

In the state of Hidalgo, according to the 2014 national survey on drug use among students, drug use ("any drug") is lower than the national average in high school youth, both in the categories "ever in life" (10.3%), "in the last year" (6.8%) and in the "last month" (3.2%). However, at the undergraduate level, students exceeded the national average for the use of "any drug" in all categories: "once in a lifetime" (25.3%), "in the last year" (17.7%) and the "last month" (10.6%). In addition, it is possible to note that at both the high school and secondary levels, there are no significant differences between the percentages for "any drug" and "illegal drugs".[7]

It is relevant to pay special attention to the incidence of substance use in adolescents and young people since this is a stage considered to be a high-risk stage for the initiation of substance use, generating various health damages that have an impact on their individual, family, and social development.[8] The characteristics of this age group, such as lack of planning, curiosity, or the desire to gain acceptance from others, may predispose adolescents to substance use. While at the same time, they normalize their behavior and minimize the consequences.[9]

So far, although the factors involved in substance use have been extensively studied, the results are inconclusive.[10] This may be due to the complexity of the behavior. Nevertheless, they can be classified into different spheres: individual, family, peer, school, and community.[10-13] Many factors can make an adolescent more vulnerable to the consumption of psychoactive substances or that can intervene in the consumption behavior. However, it is important to consider that the presence of these factors only increases the probability of the behavior occurring but does not determine it.[13]

In addition, it should be considered that early onset of drug use increases the risk of dependence due to the biological, psychological and social vulnerability characteristic of this population group.[8] It may be related to the fact that prolonged use of psychoactive substances modifies the functioning of brain structures so that early drug use increases the likelihood that a person will develop psychopathological problems, such as Substance Use Disorder (SUD).[14] SUD can be understood with the problematic use of a substance such as alcohol, drugs, or prescription drugs and according to the DSM-V,[15] two of the following criteria must be met, at least during a twelve month period:

- Hazardous use of the substance
- Consumption-related social or interpersonal problems
- Non-fulfillment of the essential roles due to consumption.
- Withdrawal syndrome
- Development of substance tolerance
- Repeated attempts to quit or control consumption
- Spending more time than previously thought on consumer-related activities
- Present physical or psychological problems related to consumption.
- Stopping other activities due to consumption

In addition, it is classified into three states of severity according to the number of criteria met: mild (2 to 3 criteria), moderate (4 to 5 criteria), and severe (6 or more criteria).[15]

The need arises to continue studying the phenomenon of consumption and to find more effective alternatives to interventions based on classical cognitive behavioral therapy

(CBT), which show high dropout and relapse rates.[16] Third-generation interventions, so-called contextual, include Dialectical Behavioral Therapy (DBT), which pay special attention to the context and function of psychological phenomena and not only their form. In addition, they emphasize strategies for changing context and experience, seeking the construction of broad and flexible repertoires of behavior that are effective.[17] Because DBT targets problematic emotions and behaviors, which occur in a variety of psychological disorders, it is widely applicable as a transdiagnostic treatment strategy. This type of treatment focuses on treating the common factors underlying various psychological disorders and not just the symptoms of a specific disorder. It is necessary to identify these factors and examine the risk factors (maintenance) and personal resources to design the intervention, making it a comprehensive treatment.[18]

SUBSTANCE USE DISORDER AND COMORBIDITY

Many individuals with substance use disorders also have other mental health disorders.[14] This condition is called "comorbidity," "co-occurring disorders," "dual pathology," "dual disorder," or "dual diagnosis", the conditions of both pathologies interact with each other, influencing each other, which complicates diagnosis and treatment.[19]

It has been found that approximately half of the people who experience a mental illness during their lifetime will also experience a substance use disorder and vice versa.[20] This is similar to what has been found in other studies, which show that the co-occurrence between SUD and Other Psychiatric Disorders (OPD) ranges between 20% and 50% in the general population and between 40% and 80% in a clinical population.[19]

The disorders found with high rates of comorbidity among the consumption of psychoactive substances are anxiety disorders, among which generalized anxiety, post-traumatic stress disorder, and social anxiety stand out, as well as depression, bipolar disorder, attention deficit hyperactivity disorder, psychotic disorders, borderline personality disorder and antisocial personality disorder.[21] Dual pathology likely shows differences by gender according to a study of adolescents with substance use who attended the emergency department of a psychiatric hospital where conduct disorders (39.9%), psychotic disorders (10.3%) and pervasive developmental disorders were more prevalent in males, while mood disorders (24.3%), adjustment disorders (5.7%), and anxiety disorders (20.4%) were more prevalent in females.[9]

This condition of dual pathology generates high levels of biopsychosocial and quality of life deterioration in those who suffer from it, as it is associated with greater severity of addiction and psychiatric symptoms, greater use of medical services, more relapses and treatment abandonment, injection drug use, risky sexual behavior, violent or criminal behavior, homelessness and social adjustment problems (work, school, financial and family burden), increasing the risk of disability and social marginalization.[19]

In the case of dual pathology, treatment should address both conditions using appropriate medications, where required.[14] Because DBT addresses problematic emotions and behaviors and, in addition, offers a multimodal, comprehensive and flexible treatment it can be used transdiagnostically in both adults and adolescents.[18]

BACKGROUND AND BASIC PRINCIPLES OF DIALECTICAL BEHAVIORAL THERAPY

Although Dialectical Behavior Therapy (DBT) was developed to treat problems related to borderline personality, with emphasis on impulsivity and instability symptoms, it has also demonstrated its efficacy in other psychological and behavioral disorders, such as substance use, which is one of the main comorbidities with Borderline Personality Disorder.[22-25] This can be explained by the fact that the general objective of DBT is to contribute to the patient's effective behavior implementation, even when experiencing strong emotions or when experiencing emotional dysregulation.[26]

Emotional dysregulation is defined as the inability to respond flexibly and control emotions. This symptom is not only implicated in BPD but also in multiple mental disorders.[27,28] Referring to Substance Use Disorder, the results of the systematic review developed by Sanchez-Alonso[29], which included twenty studies published between 2016 and 2020, showed that emotional dysregulation has a strong influence in the drug-dependent population. Other studies support that drugs are often used as a way to modulate emotional states.[30-32]

DBT has proven to be effective in reducing emotional dysregulation, impulsive behaviors, cases of comorbidity, and in resistant patients. Being an integrative model, the techniques used are compatible with those used by other treatments for SUD, so its development and application could provide numerous benefits at different levels of prevention.[22]

It is also relevant to consider that DBT has been adapted to the adolescent population, obtaining favorable results in its application. DBT must be used for adolescents since this is a developmental stage in which there is a higher prevalence of emotional dysregulation and the appearance of some problem behaviors, including the use and abuse of psychotropic substances.[33,34]

According to this approach, reality is composed of opposing forces that are in tension. Each thesis contains its antithesis. Dialectical change occurs when a thesis and its antithesis can find a synthesis, which is nothing other than a new dialectic, the most important dialectic for DBT is the one between change and acceptance.[35]

The dialectical view of reality, the world, and behavior can be synthesized in the following points[25]:

1. Reality is constructed of parts that interrelate and function as a whole. An individual's behaviors cannot be understood individually, but as parts of a broad repertoire within a complex environment. Therefore, if a subject learns skills, he must also

learn other related skills and become capable of influencing the environment and carrying out his learning.[25]

2. Reality is a set of forces that oppose each other. The BPD patient is trapped in polarities and is unable to achieve synthesis. The therapist must help the patient achieve a viable synthesis between the need to accept himself and his need to change.[25]

3. The fundamental nature of reality is change or process. The individual and the environment are in an ongoing transaction; therapy focuses on helping the patient become comfortable with change.[25]

The main objective of DBT is to create a dynamic activity, a balance between the opposites: acceptance and change.[22] The oscillation between acceptance and transformation is the element that leads the dialectical element to achieve an increase in cognitive, emotional, and behavioral flexibility, and breaks the tendency to polarization.[36] Thus, the essence of DBT lies in the therapist's skillful combination of strategies based on acceptance and change.[18]

Acceptance-oriented strategies base themselves on Zen principles. Patients learn to observe and describe their behaviors, thoughts, emotions, and environments without judging or trying to change themselves and their situations.[18] In general, these strategies seek to get the patient to generate ideas of acceptance (as they are) and to understand that their behaviors make sense and are in context.[37]Moreover, change-oriented strategies are based on behavioral principles, addressing interventions such as exposure, contingency management, problem solving, cognitive restructuring, and/or social skills training.[18] The strategies used are nuclear, dialectical, stylistic, and case management. Nuclear (change-oriented), validation (acceptance), and dialectical understanding strategies are the pillars of DBT.[37]

DBT skills can be divided into four major groups[38]:

1) Mindfulness Skills seek self-awareness that allows the person to be aware despite negative thoughts, events, and emotions; 2) Emotional Regulation allows emotion regulation, allowing the patient to experiment and express these emotions; 3) Discomfort Tolerance, which allows the tolerance of dysfunctional emotions, and better manage the crisis by accepting it as it is and finally; 4) Interpersonal Effectiveness Skills involve the ability to express positive emotions and assertive communication.

The flexibility and adaptability of this treatment can be explained by two main factors: first, the emphasis on balancing change and acceptance strategies and, second, its focus on working on emotional dysregulation, which is a common element in psychological distress and which is proven to be an alternative approach to other emotional regulation strategies that have proven ineffective in some patients. The adaptation of standard DBT to substance use is one of the adaptations with outstanding empirical support.[18]

DIALECTICAL BEHAVIORAL THERAPY FOR SUBSTANCE USE DISORDER (DBT-SUD)

When practicing DBT-SUD, therapists employ the same principles, strategies, and interventions used in standard DBT.[39] From a DBT perspective, the use of psychoactive substances is a learned behavior that can occur as a result of three possible situations: 1) It is an attempt to mitigate emotions perceived as excessively negative or replace them with a pleasurable state, such as drunkenness; 2) Substances are ingested to produce a state similar to dissociation, or; 3) The use of addictive substances can be triggered by factors related to the social environment.[18,40]

DBT-SUD is a treatment for people with co-occurring disorders, i.e., those who have both SUD and a mental health diagnosis. Most of the research on DBT-SUD is conducted with people who have both SUD and borderline personality disorder. Although some research has been conducted with people with other mental health diagnoses involving severe emotional dysregulation.[39] That is why Marsha Linehan believes that this treatment benefits especially those patients who have problematic substance use and who also have emotional dysregulation.[22]

The adaptation of DBT in the treatment of substance use disorders is characterized by a) Adding specific information about substance use to didactic and counseling strategies; b) Expanding and organizing therapeutic objectives considering those related to substance use and; c) Developing skills that allow the person to function in a way that allows him/her to build a life worth living.[22]

DIALECTICAL BEHAVIORAL THERAPY - SUBSTANCE USE DISORDER OBJECTIVES

In substance abuse treatment, the hierarchy of goals is as follows[22]:

a) Reduce behaviors that present imminent life- threatening danger;

b) Reduce behaviors that hinder or are not therapy-compatible;

c) Reduce behaviors that diminish the patient's quality of life; and

d) Increase behavioral skills. The therapist will focus on achieving several of these goals but will pay the most attention to the higher behavioral problem order manifested by the patient.

For substance-dependent persons, from the DBT approach, substance abuse is the target that occupies the first hierarchical place within the category of behaviors that diminish the quality of life.[22] Thus, in SUD treatment, the specific goals are[41]:

a) Decreasing substance abuse, including both illicit drugs and medications;

b) Alleviating physical discomfort associated with withdrawal and/or abstinence;

c) Decreasing urges, cravings, and temptations to abuse;

d) Avoiding opportunities and cues to abuse;

e) Reducing behaviors that lead to substance abuse; and

f) Increasing community reinforcement of healthy behaviors.

THERAPEUTIC ATTACHMENT STRATEGIES

From the first individual DBT-SUD therapy session, the provider should be able to use therapeutic attachment strategies. The eight most commonly used DBT-SUD strategies are[18,42]:

1) Orient the client to the problems that may arise with attachment due to SUD. Work collaboratively with the client to assess potential barriers to engagement in treatment and plan how to overcome them by identifying warning signs.

2) Increased contact: Providers work with clients to have high levels of contact at the beginning of treatment to facilitate positive associations with therapy and provide more opportunities to reduce chaos in clients' lives.

3) Provide in vivo therapy: Sometimes, attachment can increase by having the provider bring the treatment to the client rather than having the client come to the treatment.

4) Establish connections with the client's network: obtain the client's consent to talk to the most important people for him/her in case he/she "disappears".

5) Provide longer or shorter sessions as needed: The provider varies the session's length (and potentially the frequency) to maximize benefits and client attachment.

6) Actively seek out clients who do not attend: Providers use multiple communication channels, including the possible physical search for clients who have stopped attending sessions.

7) Mobilize the team when the DBT-SUD provider becomes demoralized: Not only does the DBT team help address burnout and improve provider motivation, but team members also help take steps to re-engage clients who are in danger of dropping out (i.e., even if they are not the individual therapist).

8) Build the client's connection to the provider network: The more connections a client has to treatment, the more likely these connections can help the client adhere to treatment.

Each of these strategies is used to help clients stay connected to treatment when their substance use disorder may inhibit this connection, although they should be employed more frequently initially, they will also be used throughout treatment.[42]

STRATEGIES FOR REDUCING CONSUMPTION BEHAVIOR AND INCREASING EFFECTIVE BEHAVIORS

DBT-SUD integrates several strategies that have proven to be successful in other substance abuse treatments, such as the Relapse Prevention Model[44], Motivational Interviewing,[45] and the 12-step approach.[46] Like the Relapse Prevention Model, DBT-SUD uses problem-solving strategies, such as chain analysis, to address interpersonal and contextual factors of high risk for relapse; however, DBT-SUD places equal emphasis on abstinence. Likewise similar to Motivational Interviewing, DBT-SUD employs change motivation and validation strategies focusing on empathy and acceptance. Finally, DBT-SUD emphasizes, like the 12-step approach, abstinence as the ultimate goal of treatment, uses reinforcement and contingency management strategies, and recognizes the importance of a supportive community for recovery. Both approaches incorporate spiritual principles, Christianity in AA, and Zen in DBT. The main difference being that while for the 12-step approach, substance abuse is a disease, for DBT, it is a learned behavior.[18]

The DBT-SUD therapist will also use skills training to help clients avoid substance use, particularly skills for when the crisis is addiction. Each of these skills supports the individual avoid engaging in addictive behaviors, which may include those listed below.[22,42]

Dialectical abstinence. The dialectical approach (opposites) to abstinence in DBT combines a) staying abstinent, oriented to change, and b) focusing on problem-solving and harm reduction in the face of possible relapse, oriented to acceptance that relapse will occur. The therapist will maintain a non-judgmental attitude, helping the patient to mitigate the experience of guilt or other negative emotions about relapse, thus avoiding hopelessness and resignation of the patient.[41]

In DBT, the therapist must communicate the expectation of abstinence, asking the patient to commit to stopping using drugs immediately (with a period of abstinence that the patient feels he/she can assume). On the other hand, the patient learns the behavioral skill of anticipating possible signs of risk in the immediate future and can proactively prepare responses to high-risk situations.[22]

Community reinforcement is a skill in which individuals learn to alter their environments to support the development of abstinence behaviors.[39]

Burning bridges is a skill that also helps the client alter the environment by making changes that increase the difficulty of accessing substances.[39]

Building new bridges involves customers using images and smells to compete with drug cravings.[39]

Alternative rebellion is a skill in which clients use less destructive forms of rebellion in addition to substance use.[39]

Adaptive denial involves clients using their thoughts to motivate further abstinence behaviors.[39]

Clear Mind. During the process of seeking dialectical abstinence, the patient moves from the "addicted mind," characterized by thoughts, beliefs, actions, and emotions under the control of drugs, to a "clean mind," characterized by thoughts without drug use, but feeling immune to future problems, which may set the stage for a relapse. The alternation between the addicted mind and the clean mind leads to the appearance of a third state of mind, the "clear mind," in which the patient enjoys abstinence without ceasing to be fully aware of the proximity and tendencies of the addicted mind, the therapist will help the patient to stay in this third state of mind where he can see his life out of consumption but being aware that there will be risks that may bring him closer to the addicted mind where he will have to apply strategies or skills to stay within the clear mind.[22]

Finally, the DBT-SUD therapist teaches the client to use the skills of mindfulness, interpersonal effectiveness, distress tolerance, emotional regulation, and self-control, which are used in standard DBT, to avoid addictive behaviors.[39]

EFFICACY OF DIALECTICAL BEHAVIORAL THERAPY-BASED INTERVENTIONS FOR SUBSTANCE ABUSE

Several studies have demonstrated the efficacy of DBT in addressing problems related to substance use. One of the first studies to show the adequacy of DBT versus traditional treatments, based on classical CBT, was conducted by Linehan et al.[24] It was a randomized clinical trial conducted with drug-dependent women with BPD, two groups were randomly assigned to receive treatment for one year with a regular treatment or with a treatment based on DBT. Urine studies were conducted, and their consumption (quantity-frequency) was assessed by structured interviews at 4, 8, and 12 months (during treatment) and after 16 months follow-up. Participants assigned to DBT had significantly higher reductions in drug abuse throughout the year of treatment and at follow-up than participants assigned to treatment as usual. DBT also had better outcomes at sample maintenance. In addition, participants assigned to DBT had significantly higher gains in global and social adjustment at follow-up than those assigned to treatment as usual. DBT has proven to be more effective than treatment as usual. Treatment as usual in substance abuse treatment in this study, provides further support for DBT as an effective treatment for severely dysfunctional BPD patients across a variety of presenting problems.

Similarly, in the meta-analysis conducted by Haktanir and Callender,[47] six studies were integrated that studied the impact of DBT-based treatment in decreasing symptoms associated with substance use disorder. The DBT groups were superior to the alternative treatment and waiting list groups in remission of substance use symptoms or in increasing abstinence from substance use. When compared with other groups on follow-up DBT assessment scores, there were no significant differences observed. However, after eliminating a U.S. population study, significant differences were shown between the DBT-treated and comparison groups on these assessments. The findings suggest that DBT is an adequate approach to treating substance-related problems, as demonstrated by the post-treatment evaluation and the follow-up assessment. These results are consistent with those obtained by Warner and Murphy[48], who conducted a systematic review of quantitative studies written in the English language studying the effects of a DBT intervention for substance use disorder, retained nine studies, which they reviewed in depth, and found that overall DBT-ST was acceptable and feasible for people with substance use disorder. The findings offered preliminary support for DBT-ST for reducing substance use and improving emotional regulation for this population. However, the DBT-ST interventions that were described for substance use disorder were implemented and adapted differently across studies.

Other research has studied the relationship between emotional dysregulation and substance use, implementing a DBT-based intervention such as the study conducted by Maffei et al.[49] It was based on an open trial involving 244 individuals, evaluated with a urine toxicology test and the Difficulties in Emotion Regulation Scale (DERS). One hundred and fifty-seven patients completed the treatment, which shows a low experimental death; of these, 73.2% presented abstinence and improved their emotional regulation, regardless of the initial severity of their consumption and dysregulation. Regarding the results of substance use, a partial mediation role was found for the improvement in emotional regulation.

According to a theoretical review developed by García-Badillo[50], which aimed to analyze the efficacy and effectiveness of DBT for the treatment of SUD with and without comorbidity, where 16 articles were included for review, finding that DBT appears to be an effective therapy to treat SUD without comorbidity and in comorbidity with various pathologies, showing significant reductions in substance use, improvement in emotional regulation and reduction of psychopathological symptoms. According to the studies reviewed, DBT also proved superior efficacy, compared to other treatments without comorbidity (cognitive therapy, cognitive behavioral therapy, naltrexone) and with comorbidity (motivational interviewing + cognitive behavioral and verbal behavioral therapy + 12 steps). Regarding treatment adherence, DBT maintained mean adherence rates, which were high in all studies that analyzed it in Social Anxiety Disorder (SAD) without comorbidity and medium-high adherence in SAD with comorbidity. Moreover, DBT also managed to maintain improvements at four- and six-month follow-ups, both in cases without comorbidity and in those with comorbidity.

Although several studies have shown promising results, findings are not generalizable, so more studies are needed to demonstrate the efficacy of DBT in addressing substance abuse. Cavicchioli et al.[51] conducted dialectical behavior therapy skills training. They found that specifically emotional regulation skills and experiential avoidance are relevant therapeutic mechanisms in the treatment of addictive behaviors. The study was conducted with a group of 186 individuals diagnosed with ED (110 males and 76 females), who underwent pre- and post-assessments on the PROMIS Questionnaire, Emotional Regulation Questionnaire and the Acceptance-Action Questionnaire II and provided with an intervention in DBT Skills. Clinical variables improved significantly during treatment, regardless of their baseline levels. Changes in emotion regulation showed significant overall effects on improving addictive behaviors. Moreover, they found significant indirect effects for changes in experiential avoidance for compulsive buying and dysfunctional eating behaviors.

Similarly, McCool[52]studied the effect of a DBT skills intervention on daily alcohol consumption in 48 individuals in a partial hospitalization program at a community mental health center; the variables were measured through diary cards. To examine the effects of each DBT skill domain, he used multilevel modeling procedures and total DBT skills about the number of drinks consumed that day and the following day. Mindfulness skills on the previous day were the only predictor

to reach significance when a p-value correction was applied. Before a p-value correction, same-day emotion regulation and distress tolerance skills were associated with decreases in alcohol consumption, which may demonstrate that DBT skills may be related to decreases in drinking behaviors.

In another study, the author, with other researchers, found results similar to those presented above. The intervention of these skills application decreased the consumption of alcohol and other substances, the domains of emotional regulation and mindfulness were associated with diminished impulses in individuals who entered treatment with high frequencies of alcohol and substance use, day-ahead distress tolerance skills were associated with decreased impulses, and day-ahead interpersonal effectiveness skills were associated with reduced impulses for individuals entering treatment with high frequencies of substance use.[53]

At the primary and secondary prevention level, studies have been conducted for the application of skills at the school level, where the aim is to include the content in the students' curricula, with a more generalized approach and for crisis management, in addition to providing teachers with tools oriented to this approach. These programs are taught mainly by counselors or psychologists, who give the workshops for a minimum of 42 minutes per week, besides providing training to teachers. Finally, the creation of workshops for parents or guardians is also proposed. During the school year, parents or guardians are invited to sessions lasting between 1 and 2 hours, where the topics of orientation, biosocial theory, validation, dialectics, learning principles and tolerance to discomfort are addressed.[33]

Some studies have also been conducted on the Latin American population, such as the one developed in the Peruvian population[54] and another in the Brazilian population.[53] In Peru, a study was conducted to prevent alcohol consumption. The sample consisted of 100 university students (50 men and 50 women) of first or second grades who had an alcohol consumption of at least two or three times a week, with an age range between 18 to 21 years, and agreed to participate voluntarily in the study, pre- post-evaluations were conducted and a follow-up at three months through a structured interview of their alcohol consumption, this sample was divided into two groups: experimental group and control group. The experimental group was given an intervention based on DBT skills, two weekly sessions lasting 90 minutes, which addressed emotional regulation, fullness and awareness, interpersonal effectiveness, and motivation goals. After the intervention, it was possible to identify a reduction in alcohol consumption in university students.[54]

The study in Brazil was conducted with a clinical population, with two 51-year-old men diagnosed with Substance Use Disorder who expressed their desire to stop drinking or treat problematic use of alcoholic beverages. The study assessed symptoms of depression and anxiety, stress, degree of alcohol dependence, self-report of craving and confidence, drinking frequency, drink intake and alternative responses to drinking, and target responses. The intervention design was in individual format and divided into four phases: a) assessment; b) functional analysis of consumption; c) training in DBT skills: mindfulness and distress tolerance; d) promoting competing responses and maintaining abstinence, and; an evaluation (post intervention). The results showed that there was a decrease in anxiety, depression, and alcohol dependence scores, as well as in the number of alcoholic beverages consumed.[55]

Finally, it is relevant to mention that according to the results of a study by Van Den Boch et al.[56],it is required an adaptation of the standard DBT intervention to one focused on substance abuse or other impulsive behaviors of interest. The standard intervention showed no effect on substance abuse in the borderline population with and without substance abuse problems. However it did show a higher reduction in severe borderline symptoms than traditional treatments, which are essentially based on classical CBT.

CONCLUSIONS

Evidence regarding the efficacy of DBT in addressing SUD has shown that dialectical behavior therapy can be effective in its treatment. It may be because DBT has an integrative transdiagnostic approach that allows understanding and addressing substance use from different perspectives, combining cognitive-behavioral, mindfulness, and radical acceptance strategies. In addition, skills training provides individuals with tools they can apply in distinct contexts, increasing their quality of life.

A possible limitation in the Latin American context is that DBT intervention involves higher costs than others. However, there are fewer hospital admissions, improvement in psychopathological symptoms, improvement in quality of life and, fewer relapses, generating lower expenses after its application.[57]

Finally, it should be noted that this treatment strategies are designed for individuals with SUD and emotional dysregulation, so that those with both conditions may benefit more.

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