

The Application of Dialectical Behavior Therapy

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Abstract. Dialectical behavior therapy (DBT) was founded by Linehan and her colleagues which was initially created for treating borderline personality disorder (BPD). It is recognized that it's an effective way to cope with emotion dysregulation and it has now been put into wider use in clinical practices, dealing with eating disorders, generalized anxiety disorder, drug abuse, schizophrenia and bipolar disorder etc. The exploration into its neurobiological mechanisms has made some progress which suggests that the application of DBT has broad prospects which cannot be ignored. There are issues emerge during the development of DBT, such as the cultural adaptation of DBT and its novel application in different domains. It is worth mentioning that DBT can also be considered as a daily practice that benefits people's mental health in everyday life. Research and trials on the application of DBT is still in progress. The present review mainly outlines applications of DBT in clinical practices and analyzes the possibility of culturally adapted DBT and the online delivery of DBT. Directions of future studies are also discussed.

Keywords: dialectical behavior therapy; DBT, application; psychiatric disorders; cultural adaptation.

1. Introduction

DBT was founded by Linehan and her colleagues in Washington State University in 1991 which was initially created for treating BPD. Based on biosocial theory and dialectics, the therapy integrates various therapeutic methods such as psychodynamics, cognitive therapy and interpersonal therapy, and derives from Eastern philosophy and Zen Buddhism to become a widely adaptable psychological treatment. DBT emphasized on the balance between acceptance and change, balancing between the acceptance of inner experience and the change of what is within control.

Standard DBT involves several modes that plays different roles in the treatment, including individual psychotherapy, group skills training, telephone coaching and consultation team. After the completion of DBT, clients are expected to acquire techniques including mindfulness, emotion regulation, interpersonal effectiveness skill and distress tolerance skill.

DBT first served to treat female patients who suffer from suicide thoughts and BPD symptoms. As the number of trials and researches conducted around DBT increasing, its efficacy was examined and verified when treating other psychiatric disorders and mental health problems in clinical practice. Aiming at coping with emotional problems, the application of DBT can be found in various domains, including mental problems such as eating disorders, generalized anxiety disorder, drug abuse, schizophrenia and bipolar disorder. The research towards novel applications of DBT is at its infant stage and studies show that it is a field worth further exploring. For instance, efforts to improve parenting quality with the assistance of DBT can prevent psychopathology in children of parents with psychopathology [1].

For groups that do not have psychiatric disorders but suffer from emotional flooding or other challenges, DBT serves to build a life worth living. "Dialectical" means, two things that might seem opposite could both be true at the same time. DBT helps clients to reach a balance between acceptance and making changes and then guides them to approaching the target step by step. Common targets are decreasing behaviors such as thinking of suicides, restricting meals, engaging in high-risk sexual behaviors, physical aggression. The company and encouragement of DBT therapists during every stages of the treatment are crucial which results in the high degree of therapists' involvement during the whole process. Clients are able to reach the therapists by phone and receive skills coaching any time if is needed.

In recent studies, neurobiological mechanisms of DBT came to the attention of the public. After individuals with BPD received DBT therapy, neural alterations were identified [2], which highlighted the biological basis of change in BPD, indicating the broad application prospects of DBT.

This review mainly focuses on summarizing the broad application and adaptation of DBT in clinical and non-clinical practices, at the same time gives some suggestions to the issues emerged during the development of DBT. New development direction and adaptation will be included in the article.

2. Method

Various combinations of the words “dialectical behavior therapy” “DBT” “borderline personality disorder” “application” and “treatment” were searched in PubMed, China National Knowledge Infrastructure (CNKI), ELSEVIER and VIP-CSTJ, to review and summarize the literature on current application of DBT in various domains. Several trials examining the efficacy of DBT intervention to psychiatric disorders were selected and mentioned in the article.

3. Clinical Practices

3.1. Borderline Personality Disorder

As one of the third wave cognitive behavioral therapies, DBT initially emerged to treat suicidal behaviors, but it was discovered to be effective in treating BPD, which has characteristics marked by inability to regulate emotions, insufficient impulse control, identity disturbances, and frequent suicidal or destructive behaviors, which can lead to unstable interpersonal relationships and even social harms. It is recognized that symptoms can be reduced by training cognitive skills such as mindfulness, emotion management, interpersonal effectiveness, and distress tolerance. These assisted in reinforcing the ability to tolerate challenging or painful experiences, and emotional distress was leveled down. With the therapist’s none-judging acceptance and validation, the feeling of helpless and overwhelmed alleviated. The treatment not only value one’s acting and personal involvement in change after practicing techniques, but also acceptance [3]. As a result, the long-term efficacy of DBT have been confirmed. The outcome of an one-year follow-up to individual with BPD found that DBT as a psychotherapy for BPD is superior to other interventions [4]. According to the findings, DBT successfully lowers the likelihood of suicide and the usage of crisis services in a long term. DBT’s superiority was also demonstrated in psychosocial functioning and mental inpatient days, as well as in lowering rage expression and experience avoidance. According to Linehan’s research, following DBT treatment, BPD patients’ self-harm, and attempted suicides were dramatically decreased, while gambling, drug misuse, and other behaviors were successfully managed. DBT can also help patients manage their feelings of depression, anger, and despair, as well as enhance their eating disorders and social connections.

Besides theses, there are evidence shows that neurobiological changes can also be seen on patients with BPD receiving DBT treatment. According to a review done by Adam and Emily from Hofstra University, there are changes in neurobiology following DBT and they stated it in detailed way. They analyzed nine studies and whose imaging method were mainly unctional magnetic resonance imaging (fMRI) and functional near-infrared spectroscopy (fNRS), and each lasted for 10 weeks to 12 months. It can be concluded that patients with BPD were shown to have altered neurotrophin methylation and a substantial reduction in amygdala activity after receiving DBT. Significantly less activity was observed in the anterior insula and ACC. The inferior frontal gyru’s structure and functioning were also discovered to have changed. The methylation of BDNF could potentially be related to DBT treatment. The findings supported the widespread use of DBT for treating patients with BPD and demonstrated its efficacy, despite the fact that the studies mentioned only used one neuroimaging technique and that neurobiological research on DBT is still in its early stages.

The implementation of outpatient DBT is proven to be effective which suggests that the DBT in inpatient settings may also be effective in alleviating mental health problems among those who are diagnosed with BPD and admitted to inpatient psychiatric unit [5]. Inpatient DBT appears to facilitate symptoms such as self-harm behaviors, depression, anxiety and dissociative experiences.

3.2. Eating Disorders

Eating disorders (ED) have become a severe social problem that many people may suffer from, which characterized abnormal eating or weight-control behaviors. It has been reclassified as feeding and eating disorders in the DSM-5 which includes anorexia nervosa (AN), bulimia nervosa (BN), binge-eating disorder (BED) and avoidance\restrictive food intake disorder. The treatment of anorexia includes three major parts: nutritional treatment, psychological therapy, and pharmacological therapy, while there have been fewer advances in pharmacological treatments in contrast to psychological care. As one of third-wave behavioral therapies, DBT has also been put into use in clinical practice when treating BD, especially binge-type eating disorders including BN and BED. Prior studies have concentrated primarily on using DBT only for binge eating. According to an efficacy research, DBT performed better than cognitive behavior therapy (CBT) in the long-term treatment of binge-eating disorder. Even overall eating disorder psychopathology decreased more quickly as a result of CBT, relapse was on the rise at the 6-month mark [6].

Along the lines of Linehan's DBT for BPD, the DBT-BED handbook was created which has 20 sessions. As a treatment for BED, DBT-BED helps patients to practice emotion management and to replace binge eating. The treatment starts by 2 introductory sessions presenting rationale and orientation and commitment to change. In sessions 3-18, emotion management skills are taught which includes 3 modules as mentioned in the introduction. Instead of focusing on eating behaviors during this procedure, instruction on a balanced diet and frequent exercise is prioritized. The final 2 sessions devoted to review and relapse prevention. In brief, DBT is able to help patients with BED to reduce symptoms of depression and emotion dysregulation. Compared to CBT, DBT-BED has a better long-term effect when treating BED although CBT works faster. As a less costly psychotherapy, DBT can be considered as a feasible and effective treatment for BED.

3.3. Anxiety Disorders

Anxiety disorders (AD) are different from temporary emotional flow or stress-induced transient anxiety, it is persistent and impairing daily functioning. It is characterized by symptoms include worries, restlessness, unreasonable fear, triggered\sudden panic attack, avoidance behaviors and so on. In clinical practice, anxiety disorders have different forms including panic disorder, selective mutism, social anxiety disorder, specific phobias, separation anxiety disorder, agoraphobia, and generalized anxiety disorder (GAD). First-line treatments for anxiety disorders include both pharmacotherapy and psychotherapy. CBT has been recognized as the most empirically supported psychological treatment for people with anxiety disorders which is skill-based, goal-oriented and short-term. However, although anxiety symptoms can be significantly reduced by CBT, DBT remarkably affects executive function [7]. Researches show that training involved in DBT cater for the needs of patients with AD, especially GAD. By engaging in mindfulness and emotion management practices, symptoms of restricted perception of emotional events, strong emotional reactivity, and failure to use suitable ways to cope can be substantially reduced. Although the main stream psychotherapy for AD is still CBT, mindfulness and acceptance-based approaches are growing in popularity, DBT's efficacy in treating anxiety disorders is noticeable and non-negligible.

3.4. An Effective Treatment for Adolescent Group

On searching the essays published concerning DBT, it is found that a large number of researches are conducted around adolescents. Studies support that the implementation of DBT in clinical practices when dealing with matters among adolescent group including anger management, acute-

care inpatient, depression, bipolar disorder, especially suicidal and self-harm behaviors, are significantly effective.

Suicidal behavior and other types of self-injury are directly addressed by DBT, a globally renowned evidence-based therapy. A trial conducted by Elizabeth McCauley and colleagues empirically supported the efficacy of DBT on decreasing repeated suicide attempts and self-harm behaviors in adolescents [8]. According to studies on its use with adolescents hospitalized, DBT may be successfully used in inpatient as well as outpatient situations [9]. Following the completion of DBT, the hours spent in constant monitoring for self-injury, instances of committing suicide and self-harm and hospital stays reduced and DBT gave a better performance than treatment as usual for adolescents. Besides, DBT demonstrated similar efficacy as treatment as usual in treating patients with aggressive behaviors towards patients. Thus, the adoption of DBT in an acute-care adolescent psychiatric inpatient hospital is believed to have a promising future.

3.5. Application in Other Domains

The complete procedure of DBT includes multiple modes of treatment. During the treatment, patients practice essential skill that help patients to accept and embrace the true self, then begin to change by using behavioral analysis and problem-solving skills to change patients' negative cognitive and behavioral responses. Thus, DBT is an effective way to cope with emotion dysregulation symptoms and it can further apply to a larger range of mental disorders which feature emotion dysregulation. While searching for the researches conducted around DBT, keywords of some disorders emerged repeatedly which indicated that DBT now has been put in a wider use in the clinical practice. In addition to the mental problems discussed above, the application of DBT can be seen in treating many problems including, but not be limited to, depression, substance abuse, schizophrenia, post traumatic stress disorder (PTSD), chronic pain, insomnia, bipolar disorder, high-risk dissociative behaviors, antisocial behaviors, stalking offenders.

Besides these, DBT has been considered as a potential psychiatric crisis service in unexpected events. Take the breakout of COVID-19 pandemic as an example. It is supported that DBT is able to play a role in psychological crisis intervention at the initial stage of a pandemic [10]. In this stage, with unknown transmission routes, diverse transmission channels, long incubation period, and high infectivity, large-scale isolation and prevention measures are needed to prevent pandemic from large-scale spreading. Many people in this situation may be stressful and response with feelings such as anger, anxiety, sadness, and this may even develop into violent tendencies. Over time, more and more people will experience adverse psychological reactions, some of which may even develop into depression, anxiety, and psychiatric disorders that may occur after crisis events such as post-traumatic stress disorder. Standard DBT aims at coping with emotion dysregulation. The techniques of acceptance and dialectic in the treatment strategy play a certain guiding role in short-term psychological crisis intervention. It effectively reduces the crisis risks and stabilizes the emotion of help seekers.

DBT may also be a useful clinical therapy that treats problems apart from those that are typically treated, such as parenting issues [11]. The symptom of emotion dysregulation demonstrated by parents may lead to greater emotion dysregulation. Children may show disability in problem-solving and more sadness when facing frustration triggering events under poor parenting. Thus, with the assistance of DBT, parents' own emotion regulation skills are promoted, and it further contributes to reduce potential psychopathology in these children.

A few specific populations have been the subject of research on the effectiveness of DBT, such as children with behavior problems, adolescents overusing interactive media and alcoholic behavior of college students. To sum up, DBT is becoming more widely utilized and is effective for treating a range of psychological problems as well as preserving people's psychological well-being.

4. Cultural Adaptations of DBT

The culture adaptation of a psychotherapy is worth discussing owing to the differences between race, ethnicity and culture of different target groups, which greatly influences the effectiveness of the therapy. Stephanie L. Haft and her colleagues stated the cultural adaptations of DBT in their comprehensive study, including the linguistic adaptation, the integration of metaphors relevant to the culture and other domains [12]. Adapting DBT culturally describes the process of making treatments and interventions more culturally appropriate. The study compared the cultural adaptation of DBT in regions across countries and reviewed 18 related articles. It is found that most adaptations involved modifications to language, metaphors, method and context, distinctions can also be found in person (counselor) and goals. The most common adaptation is language, it can be reflected by the translated version of handouts and materials used during DBT treatment or including specific terms in a non-English language when delivering DBT. Although lacking of trials to evaluate its effectiveness, the study emphasized the feasibility and significance of the cultural adaptation of DBT. Moreover, it pointed out several issues emerged during the adaptation:

Throughout the DBT therapy, the same terminology should be used.

In underdeveloped areas that in need of mental professionals, clinician training is a hard nut to crack.

Idiographic diary card is useful and can be adjusted to fit individual and cultural needs, which is proved to be more accurate when describing and more feasible.

Overall treatment acceptability and feasibility can be improved by setting pretreatment phase talking about stigma from community.

It is encouraged to use somatic symptoms to express emotions.

Additional attention is needed when teaching skills of interpersonal effectiveness, which means adjustments could be made when meeting cross-culture clients, according to their culture situation.

It can be concluded that the successful and efficacious application of DBT in all cultural groups need cultural adaptation. Training DBT therapists that are capable of dealing with clients from various cultural backgrounds and further adapting DBT to different cultural contexts are both important.

5. Online Delivery of DBT

After the abrupt breakout of COVID-19 pandemic, the lifestyle of human-beings has significantly altered. The teaching pattern of DBT programs is adjusted and online services are provided. As a new trend, the effectiveness and feasibility of providing DBT via online modes of delivery are evaluated in Southern Cross University [13]. It is found that most part of online DBT are similar to the traditional one while the attendance performance of online program is better. However, although online program may be more accessible, acceptable, and no less reliable than in-person delivery, challenges such as management difficulties, therapist preparedness, technology difficulties, confidentiality, privacy protection still exist and have to be considered. It is worth mentioning that additional online skills training is recommended for therapists, and standard guidelines are to be developed, so as to increase the effectiveness. It appears to be more economical to employ telecommunications technology for conducting DBT, and patients and institutions are slowly coming around to the idea.

6. Discussions and Future Directions

Although the efficacy of DBT when treating emotion dysregulation related problems, especially when treating BPD, has been widely recognized, some issues remained to be further discussed.

First of all, most of the studies that have shown DBT to be effective include limited numbers of samples, which inevitably does harm to the reliability of the results. Secondly, although DBT integrated the culture and practices of both the East and the West, its founders, research groups and

treatment objects are mostly Western people, and the treatment methods and techniques are mostly based on Western culture. Therefore, the application of DBT in non-Western countries needs further research and adaptation. Thirdly, culture adaptation should be emphasized when put DBT into practice under different culture contexts. Different culture groups differ in the aspect of DBT that may cause stigma. Adapting DBT to the culture of target groups helps to address community stigma, more importantly, to improve the efficacy of the treatment in non-Western countries. Fourthly, since its formation, DBT has been in a dynamic state of flux and is modified in practice to apply to a wider range of psychological disorders, resulting in different versions of DBT, the fusion of DBT and other psychological therapies. In the future, it is suggested to pay more attention to the research of these improved versions and expand the application of DBT. Since DBT was initially created for the problem of emotion dysregulation, in theory, a large number of clinical and non-clinical problems related to emotion regulation can be solved by DBT. Thus, DBT skills training can also be widely used by normal people who want to improve their emotional managements and interpersonal relationships. Finally, it is exciting to see that the neurobiological changes in BPD patients who received DBT have been observed and these areas are closely connected to people's attention and executive function as well as perception and processing of emotion. However, research on DBT treatment success is still at the earliest stages, more research and trials about biological mechanisms should be done so that related researchers and practitioners can work on treatment-related improvement among individuals with BPD and other related disorders.

7. Summary

DBT derived from CBT and combined Eastern philosophy and Zen Buddhism, to develop a psychological therapy that initially created for treating BPD. Its core treatment target is emotion regulation and any psychiatric disorders that involves related symptoms may find DBT helpful. It has been increasingly adapted to other disorders and mental health problems, including eating disorders, generalized anxiety disorder, drug abuse, schizophrenia and bipolar disorder etc. It is found that adolescent problems can be effectively dealt with by DBT and research conducted around the relationship between youth behavior and DBT is in progress. Neurobiological changes have been observed after the completion of DBT and exciting new directions of DBT application has been exploring. To sum up, expanding the application of DBT to more emerging targets is worth exploring, at the same time, adapting it with different cultural context to increase its efficacy is encouraged.

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