

Dialectical Behavioral Therapy from the Lifespan Perspective Yaşam Boyu Yaklaşımı Üzerinden Diyalektik Davranış Terapisi

A. Meltem Üstündağ Budak¹, Ezgi Özeke Kocabaş², Helin Göksu³

Abstract

This overview outlines dialectical behavioral therapy and its research findings from a lifespan perspective. Dialectical behavioral therapy is an evidence-based therapy initially developed for adults with severe pathologies including borderline personality disorder, self harm, and suicidality. However, it has since become a more comprehensive treatment model across wider populations. For example, standard dialectical behavioral therapy treatment has been successfully adapted for children and adolescents, and been used as a successful prevention programme as well for intervention. Furthermore, recent advances in the use of empirically-supported treatments through a transdiagnostic approach have made dialectical behavioral therapy dissemination and implementation practices more important. Focusing on current research and implementations of dialectical behavioral therapy from a lifespan perspective and use of dialectical behavioral therapy for interventional or preventional purposes will contribute to the interested researchers and practitioners on its implications across developmental stages.

Keywords: Dialectical behavioral therapy (DBT), lifespan perspective, transdiagnostic approach

Öz

Bu derlemede diyalektik davranış terapisi ve terapinin araştırma bulguları yaşam boyu yaklaşımı üzerinden ele alınmaktadır. Diyalektik davranış terapisi ilk olarak intihar ve kendine zarar verme riski taşıyan borderline kişilik bozulduğuna sahip bireyler için geliştirilmiş, kanıta dayalı yaklaşımlardan biridir. Bununla birlikte, son yıllarda daha geniş bir popülasyon için kapsamlı bir tedavi modeli sunmaktadır. Örneğin, standart diyalektik davranış terapisi çocuklar ve ergenler için adapte edilerek hem önleme hem de müdahale amaçlı olarak başarıyla uygulanmaktadır. Bunun yanı sıra, transdiagnostik bir yaklaşımla kanıta dayalı tedavilerin kullanımındaki son gelişmeler diyalektik davranış terapisinin yaygınlaştırılmasını ve uygulanmasını daha önemli hale getirmiştir. Diyalektik davranışçı terapinin yaşam boyu yaklaşımından güncel araştırma ve uygulamalarına odaklanmak ve diyalektik davranışçı terapinin girişimsel veya önleyici amaçlar için kullanılması, ilgilenen araştırmacılara ve uygulayıcılara gelişimsel aşamalarındaki etkileri konusunda katkıda bulunacaktır.

Anahtar sözcükler: Diyalektik davranışçı terapi (DDT), yaşam boyu yaklaşımı, transdiagnostik yaklaşım

¹ Bahçeşehir University, İstanbul, Turkey

² Mimar Sinan Güzel Sanatlar University, İstanbul, Turkey

³ Private Psychologist, İstanbul, Turkey

✉ A. Meltem Üstündağ Budak, Bahçeşehir University, Department of Psychology, İstanbul, Turkey
aysemeltem.budak@eas.bau.edu.tr

Received: 30.07.2019 | Accepted: 17.10.2019 | Published online: 21.12.2019

THE LIFESPAN perspective (Berger 2011) explains the continuity of development throughout individuals' life while claiming that change is multi-dimensional and multi-directional. Developmental changes take place naturally through the interaction of biological, psychological, and social changes in all directions rather than through a consistent cycle. Contrary to more conventional approaches to development in which development and change only occurs between birth and adolescence, a lifespan perspective claims that change is possible during adulthood as well. The epigenetic framework, which is the foundation of the lifespan perspective, explains how bidirectional interactions between biological and environmental factors influence the lifelong course of development (Berk 2010).

Thus, Marsha Linehan, founder of Dialectical Behavioural Therapy (DBT), explains the biosocial underpinnings for her treatment modality, initially for borderline personality disorder (BPD). Transactions take place between dysfunctions of the emotion regulation system with biological irregularities while a dysfunctional, invalidating environment contributes to increased emotional dysregulation. This transactional model reflects the 'goodness-of fit model' proposed by developmental psychology researchers, Thomas and Chess, which explains how temperament and environment can lead to desirable developmental outcomes (Thomas and Chess 1977). If children with difficult temperament are exposed to parenting that fits poorly with their biological dispositions, they are at risk for adjustment problems that hinder their development.

Given that DBT explains dysfunctional interactions between environment and innate physiological dispositions, while emphasizing that change is possible through learning more adaptive skills to regulate emotions, practitioners can benefit from reviewing the DBT literature from a lifespan perspective. Focusing on interventions and the preventive use of DBT and its skills training, examining the current findings of DBT research from a lifespan perspective is useful for both researchers and practitioners interested in DBT and its implications for understanding developmental stages across childhood, adolescence, and adulthood..

Foundations of DBT

As one of the third wave cognitive behavioural-based therapy models, DBT is known for its focus on acceptance. Its evidence-based treatment model was initially developed for suicidal individuals with BPD, targeting the main construct of emotion dysregulation. While problems of emotion regulation, chronic self-harm, and suicidal behaviors were its original targets (Linehan 1993) DBT has since broadened its applicability to individuals with emotion regulation difficulties while transdiagnostic applications appear to be an effective treatment strategy (Ritschel et al. 2015).

As an evidence-based treatment, DBT's effectiveness for different psychological disorders and populations is supported by many randomized controlled trials (RCTs) as well as non-RCT studies (Linehan 1993, 1999, Rathus and Miller 2000, Stoffers et al. 2012). For example, there is a strong evidence via RCTs for the effectiveness of DBT for BPD populations in reducing suicide attempts and self-injury, depression, substance dependence, hopelessness, and anger while improving self-confidence and adjustment abilities (Linehan 1991, 1999, Koons et al. 2001, Courbasson et al. 2012, Andreasson et al. 2016). There is also supportive evidence for DBT in eating disorders, ADHD, PTSD, and mood disorders in children, adolescents, and college students (Linehan

1993, Courbasson et al. 2012, Engle et al. 2013, Fleming et al. 2015, Chugani 2015, Linehan 2015). Studies of DBT with low-risk groups have shown improvements in daily life functioning and wellbeing (Linehan et al. 1991, Fleming et al. 2015).

DBT explains psychological disorders in terms of emotion regulation problems. Drawing on biosocial theory (Linehan 1993, 2015) DBT focuses on both biological vulnerabilities and environmental influences in regulating those emotions that may lead to dysfunctional response patterns in emotionally difficult situations. As well as biological factors, such as predispositions to more intense and frequent emotions or impulsivity, the environment can also be invalidating to the needs of individuals by rejecting or dismissing intense emotions. These invalidating environmental factors may prevent individuals from learning the skills needed to recognize, label, and regulate their intense emotions with effective skills for solving the problems contributing to emotional swings (Linehan 2015, Crowell et al. 2009).

DBT has three important foundations: dialectical philosophy, behavioural science, and Zen/Contemplative practice (Linehan 1993, 2015). Dialectics involves the integration of opposites, so the (behavioraltech.org) therapy model reflects the dialectical philosophy of acceptance and change strategies. To solve problems, the therapeutic approach focuses on finding a dialectical balance between change and acceptance-oriented strategies. The therapy model is also rooted in behavioral science, specifically in practicing change-based strategies, such as problem solving, exposure, and cognitive restructuring. Using behavioral principles and a learning point of view, DBT assesses the needs of clients and helps them define their goals, and acquire skills needed to develop effective behaviors. This in turn contributes to building a more meaningful life. Lastly, Eastern practices of Zen are embedded in the therapy as contemplative practices. These contribute to treatment targets by practicing mindfulness as an acceptance-based strategy.

DBT practice is organized through hierarchical treatment targets (Linehan 1993). In the first stage, treatment has three main aims. First, it assesses and tries to eliminate life-threatening behaviours and thoughts, such as suicidal and non-suicidal self-injurious (NSSI) behaviors. In addition, it focuses on therapy-interfering behaviors, such as cancelling appointments, attending sessions late. Finally, it deals with behaviours that reduce quality of life, such as addictions or poor school or work attendance. During this first stage it is important to improve the person's behavioural skills to deal with problems in life and to maintain a life worth living. The second stage aims to decrease traumatic and emotional reactions, and trauma-related behaviors while strengthening positive emotional experiences and active problem solving. The third stage searches for solutions to general problems that cause dissatisfaction in the person's life, for example solving ordinary life problems, setting individual goals, and increasing self-respect. Stage four aims to strengthen the person's capacity for freedom and joy, decrease their feelings of incompleteness, and eliminate behaviours that inhibit joy and freedom.

In standard (comprehensive) DBT, which is on behavioural treatment targets, there are four modes of treatment delivery: Individual psychotherapy, DBT skills training, phone coaching, and consultation team support for therapists (Linehan 1993). Individual therapy with a one-year commitment is required to continue the treatment, which includes one-to-one work with therapists focusing on goals and treatment targets, and the acquisition of new skills and behaviours. Along with individual therapy, clients receive group skills training in two six-month cycles to eliminate skill deficits and maladaptive coping behaviours. DBT skills training has four modules, namely Mindfulness, Distress

Tolerance, Emotion Regulation, and Interpersonal Effectiveness. Dialectical strategies of acceptance and change are utilized to contribute to meeting treatment targets. Clients are taught acceptance-based strategies (Mindfulness and Distress Tolerance) and change-based strategies (Emotion Regulation and Interpersonal Effectiveness) in different modules to overcome their problems. The main focus of therapy is the acquisition, strengthening, and generalization of these skills, and establishing a dialectical balance between acceptance-based and change-based strategies. In standard DBT, clients are also supported by phone coaching when they need assistance to apply the skills in their daily life. In addition, therapists have weekly team meetings to discuss their DBT delivery and consult each other. These standard DBT programs are adaptable to meet the needs of different groups.

DBT research on children and adolescents

Although DBT was originally designed for adults, an adapted version has been found to be as effective with adolescents (Fleischhaker et al. 2011), such as for adolescents with a predisposition to attempt suicide and self-harm (Mehlum et al. 2016). DBT is particularly prominent for treating suicidal adolescents who meet BPD diagnostic criteria and have serious emotional dysregulation. As mentioned earlier, the problems caused by emotional dysregulation result from a combination of biological and environmental factors (Linehan 1993). According to Linehan's biosocial theory, individuals with biologically-based abnormalities in emotion regulation are more likely to experience intense responses to emotional stimuli. Emotion regulation develops throughout childhood and adolescence whereas emotional vulnerability, genetically determined via physiological disposition (Linehan 1993). Adolescents gradually internalize emotion regulation skills during their cognitive development. Working with adolescents may be more beneficial for internalizing lifelong DBT skills since frontal lobe development continues until late adolescence. One neurological study found that participants who engaged in DBT experienced significant reductions in emotion dysregulation associated with reduced amygdala activity (Goodman et al. 2014).

DBT-A is a revised version of DBT for adolescents who need support for building a life worth living. It teaches skills to regulate emotions and reduce interpersonal problems. One study shows that DBT as adapted for adolescents benefits youth through specific modules like the Walking the Middle Path, which aims to help parents and adolescents negotiate. The module helps adolescents to feel more positive about their parents while eliminating conflicts and emotion dysregulation (Neece et al. 2013).

The main approach in DBT for adolescents is accepting them exactly as they are while helping them to change (Neece et al. 2013). Thus, DBT-A take a nonpejorative stance toward adolescents and families. In childhood and adolescence, the formation of children's emotion regulation skills is affected by the relationship between child and caregiver(s). Infants develop emotional responses according to their caregivers' behaviours. Therefore, inconsistent or negative responses can inhibit the development of primitive emotion skills and may establish an invalidating environment. While working with adolescents in DBT, therapists should also work with family members to ensure that they are not themselves provoking problem behaviours (Miller et al. 2007). Because most adolescents live with their families and are still dependent, working with family members enables a therapist to modify an invalidating environment. Studies show that family

therapy is effective in dialectical behaviour therapy with adolescents (Miller et al. 2007). Mostly conflicts come from the family and the family interactions which means by witnessing family relationships the therapist can see dialectical dilemmas in family. There are main three dilemmas occur in families, excessive leniency versus authoritarian control, normalizing pathological behaviors versus pathologizing normative behaviors and forcing autonomy versus fostering dependence (Rathus and Miller.2000). By observing family interactions, the therapist develops an empathetic view which means the therapist is able to observe the adolescents' family and has the opportunity to know their parents, he develops a stronger bond, empathy and understanding. Thus, from observing the family, DBT-A aims to develop behaviours in the parents that can inhibit or reinforce the adolescent's behaviours as appropriate. When families also learn dbt skills, they become skill "coachers" in the home, leading their adolescents to positive behaviors and also by developing their skills, they notice and decrease rationalizing dysfunctional behaviors (Miller et al. 2007).

Similar to adult population, empirical studies of DBT with adolescents demonstrate that it is highly effective in reducing suicide attempts and self-harm among 12 to 18-year-old adolescents (McCauley et al. 2018). It is similarly effective for BPD. For example, one study showed that, one year of DBT eliminated symptoms in six of seven adolescent patients according to DSM-IV criteria (Wetterborg et al. 2020). Clearly, such DBT programmes can improve the behaviour of adolescents.

Lenz, Conte, Hollenbaugh, and Callender carried out a predictive analysis of a 7-week DBT-A treatment with 66 adolescents with anxiety and depression symptoms (Lenz et al. 2017), measuring the relationship between the hypothesized procedure of change and psychiatric symptoms of adolescents. They found an interaction between therapy content and the adolescents' developmental stage. DBT statistically significantly reduced the adolescents' symptoms of anxiety and depression by improving emotion regulation and interpersonal effectiveness skills while eliminating the mental health symptoms related to emotion dysregulation. During DBT, the adolescents who learned emotion control skills were able to reduce their anxiety and depression symptoms. The clinical observations showed that the adolescents applied DBT skills more effectively if they learned them through concrete exercises and action. While this study has limitations regarding sample size and evaluation sensitivity, by the end of the treatment, the participants had gained in self-awareness and experienced social interactions with fewer symptoms of anxiety.

A treatment acceptability study, tested the Middle Path in the skills training component of DBT with adolescents and their caregivers along with the revised version of DBT-Social Responsiveness Scale by Rathus et al. (Rathus et al. 2015) to evaluate its suitability, and effectiveness on 50 adolescents with least 3 DSM-IV criteria for BPD. The skill training module was applied to adolescents and their families, who were ranked on a skills-rating scale. Acceptability ratings were high while participants found Middle Path skills to be the most helpful and validation was judged the most beneficial aspect of skills training. Adolescents and parents rated DBT skills and found the middle path skill of validation most helpful. Both adolescents and caregivers reported reduced conflict from practicing validation. Using the Treatment Acceptability Scale, participants strongly agreed that the module was helpful, applicable, and beneficial. However, another study to evaluate the usefulness of DBT on adolescents in a residential treatment

setting reported that participants found Walking the Middle Path and Interpersonal Effectiveness skills to be relatively unhelpful (McCredie et al. 2017).

Fischer and Peterson (2015) assessed the feasibility and effectiveness of DBT with 10 adolescent outpatients with binge eating disorder. After 3 patients dropped out within a month, the 7 remaining participants were followed for one year during 6 months of DBT treatment and 6 months of follow-up assessments. By the end of the intervention, self-harm, binge eating, purging, and behavioural disturbances like depression and non-suicidal self-injury had significantly decreased in all seven adolescents. There were also no symptoms of eating disorders at the 6-month follow up. The researchers concluded that the treatment had been successful because maladaptive behaviour patterns had been replaced by adaptive emotion regulation skills. This study highlights how DBT may help with comorbidity by providing clients with acceptance and validation. Moreover, multiple forms of psychopathology could be treated in this age group during treatment for bulimia nervosa symptoms.

Perepletchikova et al. (2011) assessed the feasibility and acceptability of adapting materials for adaptation of DBT for 11 pre-adolescent children aged 8-11 with mild to moderate symptoms of anxiety, depression, and suicidal behaviours. Participants received twice-weekly sessions of group skills training for 6 weeks using didactic materials adapted from both adult and adolescent manuals. Adapted materials included cartoons, animations, large font sizes of cards, colorful handouts, multimedia, experimental exercises and games, and discussion. Symptom changes were assessed by the children's self-report measures and parents' reports. DBT can only achieve its goals within the context of acceptance that allows a validating family environment to be formed to enable the children's adaptive responses. The study reported that DBT not only improved the children's use of skills but also enabled families to develop their own emotion-regulation capabilities. Children's symptoms, specifically behavioural problems, depressive symptoms, and suicidal ideations, also declined while adaptive coping skills improved from pre to post-treatment. The study has some limitations in terms of small sample size and no control group. Nevertheless, there were considerable effect sizes for all results.

To summarize, DBT has been linked with remarkable reductions in dissociative symptoms, impulsivity, hopelessness, and emotion dysregulation (MacPherson et al. 2013). Moreover, behaviours and general psychopathology can be reduced by learned DBT skills (Goldstein et al. 2015). From this review of the DBT literature regarding adolescents, we can observe that researchers mostly focus on patients with psychopathologies like BPD and depression. However, DBT can also help treat all types of psychological problems related to emotion dysregulation. If studies show that DBT improves behaviour, then it may be useful for individuals without psychopathologies but who nevertheless need significant help for regulating their behaviours.

DBT research on adults

In adult populations, similar to the studies with adolescents, the literature supports the effectiveness of DBT in treating pathologies, particularly for emotion regulation problems and BPD (Linehan 1993, Linehan et al. 1999, Linehan 2015).

Recent DBT research has focused on treating a wide range of problems in addition to BPD. Both RCT and non-RCT studies indicate that treatment is effective for different populations and new adaptations. For example, a pilot study for treating generalized

anxiety disorder (GAD) in primary care evaluated DBT mindfulness skills training with and without virtual reality. The results showed significant improvements in GAD for both groups, while the virtual reality treatment group showed greater adherence to treatment, which could help reduce dropout rates (Navarro-Haro et al. 2019). Another study evaluating the effectiveness of the DBT mindfulness module for BPD patients showed improvements in emotion regulation and impulsivity (Farrés et al. 2018).

Other research demonstrates the effectiveness of DBT for different populations. For example, pilot studies evaluating the effectiveness of skills-only DBT treatment on suicidal ideation of military veterans (Decker et al. 2019) and standard DBT intervention for forensic psychiatric patients in Italy both showed improvements in emotion regulation and reductions in motor impulsiveness (Bianchini et al. 2019). Finally, another clinical trial for men with BPD and antisocial behaviour concluded that DBT is an effective alternative treatment for this population (Wetterborg et al. 2020).

DBT clinical trials with adults continue to focus on a wide range of problem areas in addition to BPD, such as binge eating disorder, anxiety disorders, suicidal ideation, and self-harming while working with different populations, such as pregnant women and university students. Relevant reviews regarding standard DBT has been well documented. Comparative research with other treatment approaches is also helping to demonstrate the therapy's effectiveness (see Behavioraltech, LLC online resources, Kaya and Alyanak 2017, Linehan 2015, Panos 2014). The following section will detail the recent implication of adapted DBT or skills only programs at various settings.

Adapted DBT and skills training-only programs

In the DBT literature, DBT skills training is also used as a standalone or adjunct treatment. A review of the use of DBT skills training as a stand-alone treatment concluded that it successfully targets Axis I mental health symptoms in contrast to Axis II. However, it is not sufficient to modify self-harm or suicidality behaviours (Valentine et al. 2015).

As well as stand-alone use, we also see DBT informed therapies (DBT-I) emerging in practice. DBT-informed therapy is not standard DBT, which involves individual therapy, group skills training, telephone coaching, and team consultations. Instead, DBT-I encompasses the principles of DBT while not necessarily including all components of the standard program. The focus is on individual needs as opposed to progressing to specific stages. This flexible personalized approach is only able to target certain issues in particular individuals, as with stand-alone DBT skills training. Thus, severe behavioural problems and pathologies still require standard DBT programs.

An early case study by Kerr and colleagues (2009) adapted and implemented standard DBT for the a setting with limited resources with no better alternative. Their findings indicated that DBT-I was effective for a client with BPD as both qualitative and quantitative findings indicated amelioration of various issues, such as suicidality and depression. Although suicidality and feelings of misery ratings were high in the early weeks, negative symptoms generally declined towards the end of treatment.

Similarly, DBT and its skill training have been successfully adapted and implemented for the needs of the college counseling centers (Chugani et al. 2013, Chugani 2015, Muhomba and Chugani 2017). These implementations included skills-only training as an adjunct to the individual therapy already being offered in the counselling centres, and

stand-alone skills training groups that did not include the individual therapy provided by the counseling centers (Üstündağ Budak and ÖzekeKocabaş 2019, Üstündağ Budak et al. 2019).

Recent DBT-I examples include integrating DBT skills with art therapy. Heckwolf, Bergland, and Mouratidis combined art therapy principles with DBT to create a merged therapeutic approach to facilitate therapy delivery of and reinforce skill retention (Heckwolf et al. 2014). Their case study with a young university student showed how to integrate DBT with art therapy. In this case the client received simultaneously DBT and art therapy. The therapists' joint efforts facilitated the client's therapeutic process. Other examples of integrating DBT and art therapy have incorporated DBT skills and core concepts with art therapy (Clark 2017) and music therapy (Chwalek and McKinney 2015). However, the variety of settings and populations complicates generalization of the findings. Thus, DBT-I adaptations require further rigorous research to inform current practice.

As presented, DBT and its implications are widening to range different populations with emotion regulation difficulties (Linehan 1993, 2015) and also becoming an effective transdiagnostic approach for psychological problems with emotion regulation (Ritschel et al. 2015). These developments reflect the growing and changing aspect of DBT and suggests the gerotranscendence (old and rising above, Rajani & Jawaid, 2015) as appears in lifespan perspective. Compiling research suggests that the modality and its implications are affective interventions with various age groups and the transdiagnostic application of DBT indicates the modality is becoming more versatile.

Transdiagnostic applications of DBT

Studies of evidence-based therapies, also known as empirically supported treatments (ESTs), have produced much evidence regarding the psychological mechanisms underlying emotional and behavioural disorders, and effective interventions to target them. The recently emerging transdiagnostic approach (Sauer-Zavala et al. 2017) extends the use of ESTs into the processes that underlie clinical syndromes rather than focusing on specific diagnostics. The transdiagnostic approach allows clinicians to treat various disorders via proven techniques. DBT and its underpinnings has already been implemented transdiagnostically.

Ritschel et al. (2015) reviewed transdiagnostic adaptations of DBT for both adolescents and adults, including for eating disorders, substance use disorders, and posttraumatic stress and overcontrol disorders. For example, radically open dialectical behavioural therapy (RO-DBT, Lynch 2018) adapts DBT treatment to focus on emotion regulation difficulties for clients with control disorders that are extremely difficult to treat, such as chronic depression, obsessive-compulsive disorder (OCD), and anorexia nervosa. Similarly, developmentally appropriate protocol modifications have been made to target children and adolescents while standard DBT has been adapted to target substance use problems (DBT-SUD). The effectiveness of DBT-SUD has been confirmed by various studies (Linehan et al. 1999, Linehan et al. 2002). In addition, DBT eating disorder (DBT-ED) transdiagnostic applications are also available for individuals who do not respond well to CBT or those with both BPD and an eating disorder (ED). DBT is also an effective treatment for eating disorders particularly for bulimia nervosa (BN) or binge eating disorder (BED) (Telch et al. 2000). The flexibility and adaptability of DBT ma-

kes successful transdiagnostic applications possible, such as DBT for comorbid PTSD (DBT- PE) (Foa et al. 2007, Ritschel et al. 2015).

Conclusion

This overview examined DBT and its related research findings from a lifespan perspective. The main aim was to provide a review for the recent advancements of DBT and its applications but at the sametime draw attention to the conceptual framework between lifespan perspective and DBT and its developmental course. Recent advances in DBT-related research underlines the modality's effectiveness with both children and adolescent populations. Research generally shows that adapted programs for children and adolescents are beneficial in terms of gaining particular DBT skills which in turn help preventing dysfunctional behaviors and psychopathology.

In addition to the comprehensive therapy model, adapted or DBT skills-only programs are also emerging as effective interventions with promising results. DBT has recently becoming more inclusive with many populations being treated in various settings. Recent advances in the use of empirically supported treatments (ESTs) through the transdiagnostic approach, DBT dissemination, and implementation practices appear to be gaining more importance and finding new application areas. The therapy is becoming more inclusive with age groups and the adapted DBT and skills only programs are also revealing promising results for DBT based salient prevention programs as well as an effective interventions. While growing body of research appear to focus on adapted versions of DBT and its skills training use in preventative programs, yet there is a need for further evidence by rigarous research designs such as RCTs and follows up to establish the effectiveness of such programs.

References

- Andreasson K, Krogh J, Wenneberg C, Jessen HK, Krakauer K, Gluud C et al. (2016) Effectiveness of dialectical behavior therapy versus collaborative assessment and management of suicidality treatment for reduction of self-harm in adults with borderline personality traits and disorder: a randomized observer-blinded clinical trial. *Depress Anxiety*, 33:520–530.
- Berger K (2011) *The Developing Person Through the Lifespan*. New York, Worth Publishers.
- Berk LE (2010) *Exploring Lifespan Development*. Boston, Allyn & Bacon.
- Bianchini V, Cofini V, Curto M, Lagrotteria B, Manzi A, Navari S et al. (2019) Dialectical behaviour therapy (DBT) for forensic psychiatric patients: An Italian pilot study. *Crim Behav Ment Health*, 29:122-130.
- Chugani CD, Ghali MN, Brunner J (2013) Effectiveness of short term dialectical behavior therapy skills training in college students with cluster B personality disorders. *J College Stud Psychother*, 27:323-336.
- Chugani CD (2015) Dialectical behavior therapy in college counseling centers: Current literature and implications for practice. *J College Stud Psychother*, 29:120-131.
- Chwalek CM, McKinney CH (2015) The use of dialectical behavior therapy (DBT) in music therapy: A sequential explanatory study. *J Music Ther*, 52:282-318.
- Clark SM. (2017) *DBT-informed Art Therapy: Mindfulness, Cognitive Behavior Therapy, and the Creative Process*. London, Jessica Kingsley Publishers.
- Courbasson C, Nishikawa Y, Dixon L (2012) Outcome of dialectical behaviour therapy for concurrent eating and substance use disorders. *Clin Psychol Psychother*, 9:434-449.

- Crowell SE, Beauchaine TP, Linehan MM (2009) A biosocial developmental model of borderline personality: Elaborating and extending linehan's theory. *Psychol Bull*, 135:495-510.
- Decker SE, Adams L, Watkins LE, Sippel LM, Presnall-Shvorin J, Sofuoglu M et al. (2019) Feasibility and preliminary efficacy of dialectical behaviour therapy skills groups for Veterans with suicidal ideation: pilot. *Behav Cogn Psychother*, 47:616-621
- Engle E, Gadischkie S, Roy N, Nunziato D (2013) Dialectical behavior therapy for a college population: Applications at Sarah Lawrence College and beyond. *J College Stud Psychother*, 27:11–30.
- Farrés CC, Pascual JC, Elices M, Navarro H, Martin Blanco A, Soler J et al. (2018) Factors predicting early dropout from dialectical behaviour therapy in individuals with borderline personality disorder. *Actas Esp Psiquiatr*, 46:226-233.
- Fischer S, Peterson C (2015) Dialectical behavior therapy for adolescent binge eating, purging, suicidal behavior, and non-suicidal self-injury: A pilot study. *Psychother*, 52:78-92.
- Fleischhaker C, Böhme R, Sixt B (2011) Dialectical Behavioral Therapy for Adolescents (DBT-A): Clinical trial for patients with suicidal and self-injurious behavior and borderline symptoms with a one-year follow-up. *Child Adolesc Psychiatry Ment Health*, 5:3.
- Fleming AP, McMahon RJ, Moran LR, Peterson AP, Dreessen A (2015) Pilot randomized controlled trial of Dialectical Behavior Therapy group skills training for ADHD among college students. *J Atten Disord*, 19:260-271.
- Foa E, Hembree E, Rothbaum BO (2007) *Prolonged Exposure Therapy for PTSD: Emotional Processing of Traumatic Experiences Therapist Guide*. Oxford, Oxford University Press.
- Goldstein TR, Fersch-Podrat RK, Rivera M, Axelson DA, Merranko J, Yu H et al. (2015) Dialectical behavior therapy for adolescents with bipolar disorder: Results from a pilot randomized trial. *J Child Adolesc Psychopharmacol*; 25:140-149.
- Goodman M, Carpenter D, Tang CY, Goldstein KE, Avedon J, Fernandez N et al. (2014) Dialectical behavior therapy alters emotion regulation and amygdala activity in patients with borderline personality disorder. *J Psychiatr Res*, 57:108-116.
- Heckwolf JI, Bergland MC, Mouratidis M (2014) Coordinating principles of art therapy and DBT. *Art Psychother*, 41:329-335.
- Kaya İ, Alyanak B (2017) Diyalektik davranışçı terapi. *Türkiye Klinikleri Journal of Child Psychiatry-Special Topics*, 3(2):127-31.
- Kerr PL, Muehlenkamp JJ, Larsen MA (2009) Implementation of DBT-informed therapy at a rural university training clinic: a case study. *Cogn Behav Pract*, 16:92-100.
- Koons CR, Robins CJ, Tweed JL, Lynch TR, Gonzalez AM, Morse JQ et al. (2001) Efficacy of dialectical behavior therapy in women veterans with borderline personality disorder. *Behav Ther*, 32:371–390.
- Lenz AS, Conte GD, Hollenbaugh KM, Callendar K (2017) Emotional regulation and interpersonal effectiveness as mechanism of change for treatment outcomes within a DBT program for adolescents. *Counseling Outcome Research and Evaluation*, 7:73-85.
- Linehan MM (1993) *Cognitive-Behavioral Treatment of Borderline Personality Disorder*. New York, Guilford Press.
- Linehan MM (2015) *DBT Skills Training Manual*. New York, Guilford Press.
- Linehan MM, Armstrong HE, Suarez A, Allmon D, Heard HL (1991) Cognitive-behavioral treatment of chronically parasuicidal borderline patients. *Arch Gen Psychiatry*, 48:1060-1064.
- Linehan MM, Dimeff LA, Reynolds SK, Comtois KA, Welch SS, Heagerty P et al. (2002) Dialectical behavior therapy versus comprehensive validation therapy plus 12-step for the treatment of opioid dependent women meeting criteria for borderline personality disorder. *Drug Alcohol Depend*, 67:13-26.
- Linehan MM, Schmidt H, Dimeff LA, Craft JC, Kanter J, Comtois KA (1999) Dialectical behavior therapy for patients with borderline personality disorder and drug dependence. *Am J Addict*, 8:279-292.
- Lynch, TR (2018) *Radically Open Dialectical Therapy: Theory and Practice for Treating Disorders of Overcontrol*. Context Press, New Harbinger Publications.

- MacPherson HA, Cheavens JS, Fristad MA (2013) Dialectical behavior therapy for adolescents: theory, treatment adaptations, and empirical outcomes. *Clin Child Fam Psychol*, 16:59-80.
- McCaughey E, Berk MS, Asarnow JR, Adrian M, Cohen J, Korslund K et al. (2018) Efficacy of dialectical behavior therapy for adolescents at high risk for suicide: A randomized clinical trial. *JAMA Psychiatry*. 75:777-785.
- McCredie MN, Quinn CA, Covington M (2017) Dialectical behavior therapy in adolescent residential treatment: outcomes and effectiveness. *Resid Treat Child Youth*, 34:84-106.
- Mehlum L, Ramberg M, Tørmøen AJ, Haga E, Diep LM, Stanley BH et al. (2016) Dialectical behavior therapy compared with enhanced usual care for adolescents with repeated suicidal and self-harming behavior: outcomes over a one-year follow-up. *J Am Acad Child Adolesc Psychiatry*, 55:295-300.
- Miller AL, Rathus JH, DuBose AP, Dexter-Mazza ET, Goldklang AR (2007) Dialectical Behavior Therapy in Practice. In *Dialectical Behavior Therapy for Adolescents* (Eds A Linda, D Koerner & K Koerner):245-363. New York, Guilford Press.
- Muhomba M, Chugani CD, Uliaszek AA, Kannan D (2017) Distress tolerance skills for college students: A pilot investigation of a brief DBT group skills training program. *J College Stud Psychother*, 31:247-256.
- Navarro-Haro MV, Modrego-Alarcón M, Hoffman HG, López-Montoyo A, Navarro-Gil M, Montero-Marin J et al. (2019) Evaluation of a mindfulness-based intervention with and without virtual reality dialectical behavior therapy mindfulness skills training for the treatment of generalized anxiety disorder in primary care: a pilot study. *Front Psychol*, 10:55.
- Neece C, Berk MS, Combs-Ronto LA (2013) Dialectical behavior therapy and suicidal behavior in adolescence: linking developmental theory and practice. *Prof Psychol Res Pr*, 44:257-265.
- Panos PT, Jackson JW, Hasn O, Panos, A (2014) Meta-analysis and systematic review assessing the efficacy of dialectical behavior therapy (DBT). *Res Soc Work Pract*, 24: 213–223.
- Perepletchikova F, Axelrod SR, Kaufman J, Rounsaville BJ, Douglas-Palumberi H, Miller AL. (2011) Adapting dialectical behaviour therapy for children: towards a new research agenda for paediatric suicidal and non-suicidal self-injurious behaviors. *J Child Adolesc Ment Health*,16:116-121.
- Rajani F, Jawaid H (2015) Gerotranscendence: A critical review. *J Psychol Clin Psychiatry* 4(1):00184.
- Rathus J, Campbell B, Miller A, Smith H (2015) Treatment acceptability study of walking the middle path, a new DBT skills module for adolescents and their families. *Am J Psychother*, 69:163-178.
- Rathus JH, Miller AL (2000) DBT for Adolescents: dialectical dilemmas and secondary treatment targets. *Cogn Behav Pract*, 7:425-434.
- Ritschel LA, Lim NE, Stewart LM (2015) Transdiagnostic applications of DBT for adolescents and adults. *Am J Psychother*, 69:111-128.
- Sauer-Zavala S, Gutner CA, Farchione TJ, Boettcher HT, Bullis JR, Barlow DH (2017) Current definitions of “Transdiagnostic” in treatment development: A search for consensus. *Behav Ther*, 48:128-138.
- Stoffers JM, Völlm BA, Rüdiger G, Timmer A, Huband N, Lieb K. (2012) Psychological therapies for people with borderline personality disorder. *Cochrane Database Syst Rev*, (8):CD005652.
- Telch CF, Agras WS, Linehan MM (2000) Group dialectical behavior therapy for binge-eating disorder: A preliminary, uncontrolled trial. *Behav Ther*, 31:569-582.
- Thomas A, Chess S (1977) *Temperament and Development*. Oxford, England, Brunner/Mazel.
- Üstündağ Budak AM, Özeke Kocabaş E (2019) Dialectical behavior therapy and skill training: areas of use and importance in preventive mental health. *Psikiyatride Guncel Yaklasimlar-Current Approaches in Psychiatry*, 11:192-204.
- Üstündağ Budak AM, Özeke Kocabaş E, Ivanoff A (2019) Dialectical behaviour therapy skills training to improve Turkish college students’ psychological well-being: A pilot feasibility study. *Int J Adv Couns*, 41:581-597.
- Valentine SE, Bankoff SM, Poulin RM, Reidler EB, Pantalone DW (2015) The use of dialectical behavior therapy skills training as stand – alone treatment: A systematic review of the treatment outcome literature. *J Clin Psychol*, 71:1-20.

Wetterborg D, Dehlbom P, Långström N, Andersson G, Fruzzetti AE, Enebrink P (2020) Dialectical behavior therapy for men with borderline personality disorder and antisocial behavior: A clinical trial. *J Pers Disord*, 34:22-39.

Authors Contributions: All authors attest that each author has made an important scientific contribution to the study and has assisted with the drafting or revising of the manuscript.

Peer-review: Externally peer-reviewed.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.