

Dialectical Behavioral Therapy:
A Comprehensive Multi- and Trans-diagnostic Intervention

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Abstract

Dialectical behavior therapy (DBT[®]), (Linehan, 1993a; Linehan, 1993c) is a comprehensive multi-diagnostic, modularized behavioral intervention designed to treat individuals with severe mental disorders and out of control cognitive, emotional and behavioral patterns. It has been commonly viewed as a treatment for individuals meeting criteria for borderline personality disorder (BPD) with chronic and high risk suicidality, substance dependence, or other disorders. However, over the years, data has emerged demonstrating that DBT is also effective for a wide range of other disorders and problems most of which are associated with difficulties regulating emotions and associated cognitive and behavioral patterns. This chapter describes DBT in terms of its origins, theoretical foundation in social behavior theory, dialectics and Zen, its organization with an emphasis on modularity and hierarchical structure at different levels, its associated empirical support and future directions for development.

Keywords: Dialectical behavior therapy (DBT), modular and hierarchical psychotherapy, comprehensive and trans-diagnostic psychotherapy, stages of disorder and treatment targets in DBT, history of DBT, social behavioral theory and DBT, dialectics and DBT, overview of DBT research.

History of DBT

Formal development of Dialectical Behavior Therapy started in the early 1980s and has continued uninterrupted for more than three decades. Development of DBT emerged from efforts to apply outpatient cognitive behavior therapy to treat suicidal individuals with current high risk for suicide. By asking area hospitals to refer their most severe and difficult suicidal patients, the initial treatment efforts focused on individuals who were not only highly suicidal but also had severe and complex problems and met criteria for multiple mental disorders. The fundamental

focus of treatment from the beginning (as well as now) was to help individuals build “lives worth living.” The original treatment (as well as the first complete draft of the treatment manual) focused primarily on ameliorating suicidal behaviors. Subsequent grant funding, however, required adding a mental disorder diagnosis. This led to a series of clinical trials focused on chronically suicidal individuals meeting criteria for BPD, a population with a known high rate of suicide (Leichsenring, Leibing, Kruse, New, & Leweke, 2011).

Development of DBT was primarily a trial and error clinical effort based originally on attempts to apply basic principles of behaviorism (Skinner, 1974), social learning theory (Staats & Staats, 1963; Staats, 1975) particularly as applied to suicidal behaviors (Linehan & Egan, 1979; Linehan, 1981), experimental findings from social psychology as well as the traditional practices of cognitive-behavior therapy (Goldfried & Davison, 1976; Wilson & O’Leary, 1980) that had led to the development of efficacious treatments for many other disorders. It rapidly became clear, however, that the available behavioral interventions were inadequate for the goal. Solving the various problems encountered in developing an effective intervention for such a high risk, complex, and multi-diagnostic population then shaped the treatment’s subsequent theoretical and philosophical underpinning, its structure as well as its specific treatment strategies.

The focus of treatment from the very beginning was on teaching clients how to more effectively problem solve and build lives experienced as worth living. In practice however, building such a life required clients to embrace and work towards making substantial changes in their lives. Such a focus on change, however, was routinely experienced by the client not only as invalidating some specific behaviors of theirs but as invalidating themselves as a whole. This often led to clients’ subsequent attacks on the therapist, emotional shut downs, storming out of

therapy sessions or abandoning therapy altogether. Research by Swann (Swann, Jr., Stein-Seroussi, & Giesler, 1992) may explain how such perceived invalidation leads to problematic behavior in therapy. Their research revealed that when an individual's basic self-constructs are not verified, the individual's arousal increases. The increased arousal then leads to cognitive dysregulation and the failure to process new information.

Jumping to the other extreme in treatment, to an approach focused primarily on acceptance and emotional support only led to clients again abandoning therapy, feeling misunderstood and invalidated asking how can acceptance be the solution given the extent of their suffering and their need for a different life? To continue treating these clients effectively it became clear that therapists had to both push for change to help clients transform their lives while at the same time accepting client's often slow rate of progress with a risk of suicide while also communicating to clients acceptance of them as they were in that moment.

From a different perspective, clients had their own problems with both acceptance and change. Suicidal behaviors and other problem behaviors functioned to reduce pain experienced as intolerable. The complexity of their disorders, problems and crises required an ability they did not have to accept and tolerate one set of problems in order to work on another problem. For many, the tragedy of their pasts and/or present lives elicited emotions that, untolerated, led them to a series of extreme and dysfunctional responses. At the time DBT was created the focus of the behavioral movement was on alleviating suffering rather than teaching individuals how to tolerate suffering. Something new was needed. It was clear that at its core, effective treatment had to provide a framework simultaneously pressing for the apparently opposite strategies of acceptance and change for both therapists and clients.

To balance the therapists focus on helping clients change, a corresponding focus was required on what were valid client's responses that did not need to change, finding the "kernel of gold in the cup of sand" so to speak. This led to a requirement that within each clinical interaction therapists find ways to balance problem-focused change strategies with validation strategies, changing focus as needed to keep progress on track.

To increase acceptance of both clients and therapists Linehan began searching for a way to teach acceptance to both. Treatments that stressed acceptance, such as client centered therapy (Rogers, 1946), inherently used acceptance to further change and, thus, did not address the problem at hand. Searching for individuals who could teach pure acceptance (without a linkage to a change related goal) ultimately led to the study and practice of Zen and other contemplative practices in the mystical traditions (Aitken, 1982; Jager, 2005) both of which teach and encourage radical acceptance of the present moment without attempts to change it. Most importantly for the development of DBT, Zen as it moved west evolved into primarily a trans-confessional practice applicable to individual of all faiths and of no faith ([http: & willigisjaeger-foundation.com/zen.html](http://willigisjaeger-foundation.com/zen.html), 2013) focusing on acceptance, validation, and tolerance, exactly what was needed to balance behavior therapy's emphasis on change.

Once it became clear that many of the individuals being treated simply could not meditate in silence (i.e. focus attention on their breath or inner sensations, etc.) a new approach to integrating contemplative and acceptance practices was needed. First, basic Zen practices along with aspects of other contemplative practices were translated into a set of behavioral skills that could be taught to both clients and therapists. Second, it was needed to create a focus on acceptance per se and not on religion non-religious names for the skills. The term mindfulness was used to describe the skills translated from Zen. The term was adopted from the work of both

Ellen Langer (Mindfulness, (Langer, 1989)) and Thich Nhat Hanh (The miracle of mindfulness, 1976 (Hahn, 1976)). The skills translating contemplative practices were labeled “reality acceptance skills” and drew heavily from the work of Gerald May (May, 1987).

The tensions arising from this attempt to integrate the principles of behaviorism with those of Zen and contemplative practices required a framework that could house opposing views. The dialectical philosophy, which highlights the process of synthesizing oppositions, provides such a framework. Once dialectics as a foundational philosophy was adopted, the entire treatment was scrutinized to be sure the manual was consistent with dialectics and the first final version of the treatment was published (Linehan, 1993a; Linehan, 1993b). Through the continual resolution of tensions between theory and research versus clinical experience and between western psychology versus eastern practice, DBT continues to evolve in a manner similar to the theoretical integration model described by psychotherapy integration researchers (Arkowitz, 1989; Arkowitz, 1992; Prochaska & Diclemente, 2005; Ryle, 2005; Norcross & Goldfried, 2005).

Theory Underpinning DBT

DBT is founded on three theoretical underpinnings: social behavioral theory, Zen practice, and dialectics. Behavior therapy, rooted in social behavioral theory, represents the technology of change so necessary to transform the lives of individuals experiencing extreme suffering such as those who are suicidal or meet criteria for severe mental disorders. However, as discussed above, to be effective with this population a technology of change needs to be balanced by a technology of acceptance. In DBT the technology of acceptance comes from translating the fundamentals of Zen practice into behavioral terms. Dialectical philosophy is the framework that keeps the treatment together containing the tension inherent in synthesizing a technology of change with

one of acceptance.

Social Behavioral Theory and DBT

The behavioral model that underpinned the development of DBT was Staats' social behavioral model of personality (Staats et al., 1963; Staats, 1975). An important aspect of this model is the notion that it can be profitable to conceptualize human functioning as occurring in one response system or a combination of separate but interrelated response systems: the overt behavior response system, the cognitive response system, and the physiological/affective response system. The lines between the systems are not always clear, and many molar responses are best viewed as cross-system response patterns. Thus, emotions include simultaneous physiological arousal together with specified cognitive and overt behavioral contents. Since there is always a physiological aspect of any emotion, affect is defined as part of the physiological system.

An important aspect of this approach to behavioral analysis - a core component of any behavioral intervention, including DBT - is its emphasis on the interdependence of the three systems. Changes in one system effect changes within the other systems, thereby bringing about changes in the total organism. In a similar manner, from this theoretical vantage, people are viewed as dynamically related to their environments. Thus, not only do situational stimuli affect people, people also influence their own situational surroundings; people create their own environments, both cognitively by acting on the stimuli impinging on the senses and objectively by influencing events. The observed responses that people make are products of interactions both within the person (via the three response systems) and between the person and the environments in which he or she exists.

The importance of this theoretical approach to both suicidal behavior and to severe emotion dysregulation is fourfold. First it links suicide and other dysfunctional behaviors, including behavioral dyscontrol and dysfunctional thoughts, beliefs, and appraisals to both emotion dysregulation and environmental factors. DBT as a treatment for emotion dysregulation is based on the view that emotions are complex, brief, involuntary, patterned, full-system responses to internal and external stimuli. DBT emphasizes the importance of the evolutionary adaptive value of emotions in understanding them today (Tooby & Cosmides, 1990)). From this perspective, emotions can be viewed as arising from six transacting subsystems: 1) distal and proximal events that increase vulnerability, 2) internal and/or external events that serve as emotional cues, 3) appraisal/interpretations of cues, 4) emotional response tendencies, including physiological responses, cognitive processing, experiential responses and action urges, 5) non-verbal/verbal expressive responses and actions, and 6) after-effects of the initial emotion including secondary emotions (see Linehan 1993a). Second, the model highlights those areas of functioning important for an adequate understanding of the phenomena in question. Third, it points to the potential impact of the environment on the person and the potential impact of the person on environmental contingencies. Finally, it suggests that interventions for the reduction of suicide and emotion dysregulation will be most effective if focused on the individual person as an integrated and dynamic system of behavioral-environment linked patterns.

As mentioned above the treatment was initially developed for chronically suicidal individuals, then for BPD, and is now expanding to target emotion dysregulation trans-diagnostically. From DBT's perspective suicide, BPD, and many other disorders can best be viewed as disorders of pervasive emotion dysregulation. Emotion dysregulation can be defined as the inability to change or regulate emotional cues, experiences, and actions even when desired

and when best efforts are applied (Gross, 2009). Pervasive emotion dysregulation refers to cases when the dysregulation occurs across a wide array of emotions, adaptation problems, and situational contexts.

A specific *biosocial model of emotion dysregulation* (Crowell, Beauchaine, & Linehan, 2009) was developed by Linehan to better understand and articulate the developmental factors that likely led to and maintained the pervasive dysregulation of the clients being treated. Under the biosocial theory pervasive emotion dysregulation is developed due to a transactional pattern being established, over time between an individual with a *biological vulnerability* for heightened emotional responses and an *invalidating social environment*. More precisely the biological vulnerability refers to an array of biological causal factors (heredity, epigenetics (Henikoff & Matzke, 1997; Zhang & Meaney, 2010), intra-uterine, childhood, or adult neural insults) that contribute to an individual being more sensitive to emotional cues as well as having a heightened and longer lasting response once the emotion unfolds. For example developmental research has identified two dimensions of infant temperament: effortful control and negative affectivity that contribute to a propensity for developing emotion and behavioral dysregulation. Effortful control can be defined as “the ability to inhibit a dominant response to perform a subdominant response, to detect errors, and to engage in planning ... and self regulation” and negative affectivity “is characterized by discomfort, frustration, shyness, sadness, and nonsoothability” (Rothbart & Rueda, 2005) p.169 as cited in (Crowell et al., 2009). Because the human emotion regulation system is complex, dysfunction in different parts of the system can result in vulnerability to develop emotion dysregulation.

The second developmental contributor to pervasive emotion dysregulation is an invalidating social environment. Such an environment is a poor fit to the child’s biological makeup and is

characterized by a tendency to invalidate emotions, to inappropriately model emotional expression, and to reinforce extreme emotional displays. Overall, the invalidating environment is ineffective in teaching the child how to label and modulate emotions, to tolerate distress, and to inherently trust his/her own understanding of events and responses. Within an invalidating environment normative displays of emotional distress are not acknowledged or reinforced until they escalate to extreme levels. The development of pervasive emotion dysregulation emerges thus within a system as a learning transaction over time between the biological vulnerability to emotion dysregulation and an invalidating environment. Ineffective behaviors such as extreme, impulsive, often destructive behaviors of suicidal or BPD individuals or avoidance behaviors in anxiety disorders are conceptualized in the context of high suffering as ways of regulating emotions that although might work in the short term to bring negative emotion down are ineffective strategies in the long term. Within a context of a client's significant emotion dysregulation the task of the therapy becomes, in large part, to teach the client to regulate emotion in an effective way, to better tolerate distress, and to build ability to self-validate their emotions, behaviors, and thoughts.

Dialectical philosophy and DBT

As the name implies, dialectical philosophy is a critical underpinning of DBT. The principles of dialectics go back thousands of years; however both Marx and Hegel have been associated with developing and applying dialectics to a more modern context. In the context of behavior therapy dialectics can be understood and defined as both a method of persuasion and as a worldview (Basseches, 1984; Kaminstein, 1987).

Simplified, dialectics as persuasion represents a method of logic or argumentation by disclosing the contradictions (antithesis) in an opponent's argument (thesis) and overcoming

them (synthesis). Further, the dialectical process of change unfolds when an idea or event (thesis) generates and is transformed into its opposite (antithesis), is persevered and fulfilled by it, leading to a reconciliation of opposites (synthesis). Thus dialectics becomes particularly relevant to therapy if we understand it as the process of enacting change through persuasion. Within DBT, dialectics guide assumptions about the nature of reality, provide the conceptual foundation for understanding the pathogenesis of a biosocial etiology of disorder, and balances treatment goals and strategies.

Dialectics as worldview is comprised of three fundamental principles. The world is viewed as holistic, connected, and in continuous change. A “whole” is comprised of heterogeneous “parts” that cannot be understood in isolation but become meaningful only in relation to each other and as they together define the “whole”. In this way, dialectical thinking is systemic, parts can only be understood as they function within a system; the same part can change completely when it becomes attached to a different whole or system. For example, in DBT a client cannot be understood in isolation from his or her environment and the inherent transactions. The parts of a system are seen as complex, oppositional and in polarity. An “inside” can only exist in relation to an “outside”. The connected nature of reality together with the opposition and polarity of parts leads to a world of continual and transactional change. A stasis is not desirable as the only constant is change. Identity in such a system is also relational and in continuous change. As mentioned above, this worldview of understanding reality as systemic and interconnected matches well the philosophy of behavioral science and Zen.

The dialectical worldview translates into case conceptualization and treatment in several ways. First, dialectics provides a foundation for biosocial etiology of disorder by emphasizing the transactional development and maintenance of disorder as well as its systemic nature,

viewing disorder in an environmental context. Further, disorder is assumed to have multiple as opposed to singular causal factors. Second, disorder is also not seen as separated from normal functioning but both are viewed along a continuum, perspective that questions the utility of the current diagnostic system organized in a categorical fashion. Third, dialectics as a framework balances the treatment strategies of acceptance and change which are central to DBT. Indeed the tension between acceptance and change that permeates treatment is the fundamental dialectic of DBT. When polarities occur between client and therapists, or among therapists during the treatment consultation team, the approach is for each party to search for “what is left out” such that a synthesis between the two poles can be reached. A specific characteristic of DBT treatment is that of maintaining “movement, speed, and flow” throughout therapy, coming back to the continuous change of reality, from a dialectical worldview. Related to this, DBT also allows and trusts in natural change to occur.

This dialectical worldview becomes apparent also in the perspectives and behaviors of DBT therapists as they work with their clients and other therapists. In their work with clients DBT therapists have to dialectically synthesize the capability model with the motivation model as explanatory for what is blocking client’s way towards a life worth living. The capability model views client’s lack of skills as the main factor interfering with progress while the motivation model views lack of motivation towards change as the culprit. DBT therapists integrate the two models by viewing increasing client motivation as a treatment target in itself and also by relentlessly working on building needed skills through both group skills training and strengthening and generalizing skills in individual session and outside of session.

The most fundamental dialectic in DBT is that between acceptance and change. DBT therapists thus must fully accept their clients as they are moment by moment while at the same

time being adamant about working with them towards change. Maintaining that balance between acceptance and change with clients is crucial for both keeping a client in treatment and ensuring they are making progress towards their goals. Leaning too heavily towards acceptance leads to the clients feeling invalidated in that the therapists don't understand their emotional pain because if they did how could the therapists not help them change? Similarly, pushing for change too much leads to the clients again feeling invalidated and rejected as it communicates they are not acceptable as they are. This focus on change is probably responsible for the high drop-out from therapy that BPD clients are notorious for.

Finally, as is the case for many of the DBT strategies used by therapists with clients in their individual sessions, clients are also specifically taught how to be dialectical themselves through a specific skill.

DBT components and organization

DBT as modular

Because DBT was built for high risk, multi-diagnostic, complex clients, the clinical problems which were addressed in therapy were complicated. Well-known strategies for approaching and resolving complex problems are modularity and hierarchy. Modularity can be used to separate the functions of a treatment/intervention into independent modules such that each module contains everything necessary to carry out one specific aspect of the desired treatment. At a conceptual level modularity infers separation of concerns by emphasizing logical boundaries between components. For modularity to work in solving a complex problem each module needs to have clearly defined its goals, how to reach them, and throughout this process, how to communicate outcomes or difficulties and problems to be solved with the other modules. When decision making is also involved, modularity needs to be augmented with hierarchy to

specify where the responsibility lies in making a decision.

DBT is conceptually modular at several levels. First DBT clearly articulates, at a high level, the functions of treatment that it addresses, namely: 1) to enhance individual's capability by increasing skillful behavior, 2) to improve and maintain client's motivation to change and be engaged with treatment, 3) to ensure generalization of change occurring through treatment, 4) to enhance motivation of therapists to deliver effective treatment, and 5) to assist the individual in restructuring or changing his or her environment such that it supports and maintains progress and advancement towards goals (see **Figure 1**).

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Second, to effectively provide these functions, treatment is delivered in a variety of modes (individual therapy or case management, group and individual skills training, between session coaching, and regular team consultation for therapists), each having different targets and also different strategies available for reaching those targets (see **Figure 2**). There is also clarity in how the different modes of treatment communicate and collaborate.

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Third, the skills training itself is modular in the focus of acceptance skills versus change skills such that both clients and therapists can remember that for any problem encountered, effective approaches can include acceptance as well as change (see **Figure 3a**). Skills are further modular by the topics they address (mindfulness, emotion dysregulation, interpersonal effectiveness, and distress tolerance) such that clients can work on a single set of skills at a time that limits being overwhelmed by all the things they need to learn and change (see **Figure 3b**). At the same time, once clients have mastered or made progress in a set of skills they can easily incorporate those skills while working on a new module. Some of the more complex skills, such

as the interpersonal assertiveness skills (see the “DEAR MAN” skill in the original DBT manual (Linehan, 1993b)) are also modular in that they are comprised of smaller parts, taught separately to increase comprehension and accessibility (see **Figure 3c**). The skills training is modular also in following the same well defined structure in how the skills training sessions unfold as a succession of steps.

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Fourth, DBT strategies are divided into three sets, 1) acceptance strategies, 2) change strategies and 3) dialectical strategies that incorporate both acceptance and change (see **Figure 4a**). Strategies are then further divided into core strategies (problem solving vs. validation) communication strategies (irreverent vs. reciprocal/warm) and environmental management strategies (teaching clients to manage their own environments vs. environmental intervention on behalf of the client). Furthermore, applications of both core strategies (problem solving and validation) are further broken down into smaller modules. Within the change strategies five sets of basic behavioral procedures are outlined and applied as needed: 1) behavioral assessment, 2) contingency management, 3) skills training, 4) exposure-based procedures, and 5) cognitive modification. Within the acceptance strategies, validation is further divided into six steps each providing a stronger sense of validation than the previous step (see **Figures 4b and 4c**).

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The dialectical thesis that reality is change encourages DBT therapists to stay up to date, in terms of the research with both acceptance and behavioral change procedures, changing the application of the procedures as the science changes. DBT also has a specified protocol for incorporating new or updated interventions and protocols once assessment has identified a specific largely self-contained problem that interferes with client’s reaching his/her goals, not

ideally addressed with current DBT strategies and procedures. When this is the case DBT remains a framework for treatment delivery incorporating the ancillary intervention to address the target identified. The treatment team follows a specific protocol for transitioning ancillary procedures in and out of DBT. For example, part of this transitioning protocol specifies in what stage of disorder a particular intervention can be applied (see below for description of stages). Incorporating treatment for post-traumatic stress disorder (PTSD) for a population with high risk for suicide is an example where such a protocol needs to be in place. Recently such protocols has been devised and research is emerging supporting the efficacy of applying adapted versions of standard PTSD interventions for this group (Harned & Linehan, 2008; Harned, Korslund, Foa, & Linehan, 2012; Bohus et al., 2013).

DBT as hierarchical

The concept of hierarchy is apparent in DBT also in several ways. First, DBT uses the notion of stages of disorder in conceptualizing the clinical presentation of a particular client. Introducing different stages of disorder captures the different levels of clinical complexity and difficulty that a client can be facing at a particular time. This is hierarchal form and modularity. It organizes the treatment in terms of the main targets that need to be addressed in therapy and specific strategies for addressing them. The stages of treatment are based on the levels of disorder addressed and at each level treatment targets have a hierarchical organization dictated by clinical importance (see **Figure 5a**), with serious behavioral dyscontrol at the top (Stage 1 disorder) , followed by quiet desperation (severe emotional suffering with action under control) (Stage 2 disorder), basic problems in living and low grade Axis 1 disorders (Stage 3 disorder), and addressing a sense of incompleteness or emptiness (Stage 4 treatment). Each level of disorder is then linked to a hierarchical set of specified targeted categories of behavior (see

Figure 5b) This hierarchical organization is used in structuring treatment both at the level of a more stable case conceptualization and in structuring each therapy session where the clinical content to be addressed can change from week to week.

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Second, in comprehensive DBT where all four components of treatment are provided, hierarchy is present in structuring the treatment staff. At the top of the hierarchy is the client in the sense that all treatment staff is working for the client. From a clinical perspective the main decision maker in terms of treatment plan and interventions is the primary individual (therapist or case manager), with the other treatment providers in a sense reporting to the individual therapist. (see **Figure 6**).

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Stages of disorder and treatment targets

The concept of stages of disorder globally refers to the severity of the clinical presentation of a particular individual incorporating the pervasiveness of dysfunction, the complexity of the problems that block client's progress as well as the extent of comorbidity of disorder. Taking stage of disorder into account is particularly important when we try to determine what treatment and treatment dose work for whom as well as evaluate treatment outcomes (Chambless et al., 1998; Garfield, 1994). DBT conceptualizes four different stages of disorder progressing from the most severe clinical presentation of behavioral dyscontrol (Stage 1), to less severe problems, quiet desperation (Stage 2), problems in living (Stage 3), and incompleteness (Stage 4). Stages of disorder largely organize case conceptualization for a client and determine the treatments targets. A client can progress through all stages or skip some of them; clients can also sometimes regress to a more severe stage. Also, the stage the client is in

identifies the critical treatment targets to be working on, but additional less severe treatment targets can be added given sufficient therapy time.

The treatment is structured to accommodate treatment plans for Stage 1 individuals. However, as described above DBT has a modular and flexible structure and can be scaled down to also treat clients who start therapy with simpler clinical presentations or who progress in therapy to simpler problems. Also, as mentioned DBT takes an integrative approach to treating comorbidity by treating all problems within the context of the same treatment and by the same therapist (although potentially at different times). Different disorders are treated depending on a treatment hierarchy with protocols within DBT or protocols brought in from other treatments for specific contained problems (for example formal exposure for specific phobias).

Stage 1 disorder: Behavioral dyscontrol. This is the most severe stage of disorder and refers to clients entering therapy with complex clinical presentations, meeting criteria for multiple DSM Axis I and/or Axis II diagnoses, being potentially actively suicidal or self-harming. The characteristic of this stage is a lack of behavioral control particularly when under emotion dysregulation. The main goal of this stage is to help the client gain control over their behaviors. However, multiple treatment targets must be followed to reach this goal. Treatment with Stage 1 individuals can be chaotic if the therapist does not maintain a hierarchy of treatment targets guiding therapy accordingly.

The highest treatment goal is to decrease life threatening behaviors (such as suicidal and/or homicidal behaviors, accidental drug overdoses, aggressive behaviors, very high risk behaviors, etc.) If such a behavior is present in a client's life, the therapist needs to target it, which however does not mean spending all therapy time on the behavior.

The next important target is therapy interfering behavior, which refers to any behavior, on the side of the client or therapist that might interfere with the client being in treatment. On the side of the client these behaviors include non-collaborative behaviors, non-compliance, non-attending behaviors, behaviors that interfere with other clients receiving therapy or behaviors that burn out the therapist (e.g. the client transgressing the therapist's limits in extent or content of out of session contact). Therapy interfering behaviors of the therapist include behaviors that unbalance the therapy such as extreme acceptance or change orientation, extreme flexibility or rigidity, extreme vulnerability or irreverence or disrespectful behaviors. Additional barriers to therapy can include motivation, transportation, financial factors, the therapist's travel schedule etc. The reason for the high priority placed on this factor is obvious; if the client is not receiving therapy no progress can be made in treatment.

Once there is no immediate danger to life or continuing therapy treatment can target helping the client achieve control over behaviors. Assessment techniques like chain analyses are used to identify controlling variables of behavior and treatment focuses on teaching and motivating (for example using contingency management) alternative behaviors to replace ineffective, out of control ones. Once a reasonable level of control is achieved over behavior the therapy progresses to teach the client at least a minimal level of skill needed for basic problem solving and goal achievement necessary to decrease quality of life interfering behaviors. Such skills are primarily taught in DBT skills group training but are revisited (sometimes re-taught) generalized and reinforced in individual therapy. Quality of life interfering behaviors can be incapacitating Axis I or II disorders (e.g. incapacitating PTSD), engaging in high risk or unprotected sexual behaviors, extreme financial difficulties, criminal behaviors that might lead to jail, unemployment, etc.

In summary, the goals of Stage 1 treatment are to *decrease* life-threatening behaviors, therapy interfering behaviors and quality of life interfering behaviors and to *increase* core mindfulness, distress tolerance, interpersonal effectiveness, emotion regulation and self-management skills. Once these treatment goals have been reasonably achieved the client can progress to Stage 2 or skip to another Stage. It is also possible to the client to return to Stage 1, although usually this happens only temporarily and while major life stressors emerge.

Stage 2 disorder: quiet desperation. Overcoming Stage 1 assumes reasonable control has been achieved over overt behavior, however the fact that external behavior is under control says nothing about control over internal experiencing of emotional pain. The name of this stage was chosen to reflect extreme emotional pain in the presence of controlled action. Globally the goal of this stage is to assist the individual in experiencing emotion in a non-traumatic way. Examples of this stage would be individuals with chronic PTSD, with sequelae from traumatic invalidation as children, severe depression, inhibited or complicated grieving, a sense of being a perpetual outsider. When the emotional pain is experienced in response of trauma cues an important treatment strategy is to coach the clients to expose themselves to new experiences that would provide corrective information and allow learning of new responses to trauma cues. Treatment at this stage thus largely consists of exposure to emotion and experiential emotional processing work. The goals for this stage are to get the client to experience emotion in a non-traumatic, non-anguished way (Garfield, 1994; Gross & Levenson, 1993; Gross & Levenson, 1997; Gross, John, & Richards, 2000), to gain a sense of connection to the environment, a sense of essential goodness and personal validity as an individual.

It can be that case that individuals start treatment at Stage 2 or progress to Stage 2 from Stage 1. Unfortunately it is often the case that individuals starting in Stage 1 take a long time in

therapy to behavioral control and then lack resources to continue therapy at Stage 2. However, even though the emotional suffering can be severe the lack of external behaviors might not communicate to the environment its full extent and such an individual can deteriorate and then fall to Stage 1.

Stage 3 disorder: problems in living. A client can either reach this stage after having worked through severe behavioral dyscontrol (Stage 1) and traumatic emotional experiencing (Stage 2) or can start here when there was never any severe disorder. At this stage therapy deals with problems in living that do not severely interfere with a reasonably functional life and or unacceptable unhappiness. Examples of clinical situations here could be uncomplicated or mild depression, mild to moderate severity Axis I disorders (anxiety, eating disorders) without significant comorbidity, significant interpersonal problems such as severe marital conflict, lack of significant relationships, etc.. The goal at this stage is to achieve an acceptable quality of life and an acceptable level of happiness, increased self-respect, mastery and self-efficacy. This is a stage where it is highly probably for DBT to bring in outside protocols for treating specific contained Axis I disorders (interpersonal or cognitive therapy for depression or relationship problems, cognitive-behavioral therapy for eating disorders, exposure for specific phobias, etc.)

Stage 4: Incompleteness. This stage is for individuals who, despite achieving a reasonable level of functioning remain unhappy and unable to experience much joy in their lives. This can be the case for example for clients who've progressed from Stage 1 who are in search of some meaning for the past tragedy of their lives. Not finding this meaning can lead to a sense of incompleteness and dissatisfaction. This sense of meaningless and incompleteness though can also occur outside of a traumatic past in individuals who don't experience other clinical problems. A maladaptive way of satisfying this craving for meaning or peak experiencing can be

consuming illicit drugs which can simulate the 'high' experience that sometimes follows intense spiritual practice. Many individuals, if not most don't need of a Stage 4 treatment. For those that do though, the treatment goals can be expanded awareness of self, of others, spiritual fulfillment, developing the capacity to have peak experiences. Such goals could be achieved through long-term insight oriented psychotherapy, spiritual direction, mindfulness practice, etc.

Pre-treatment stage of therapy. Regardless of stage of disorder all treatment must begin with a pre-treatment stage where a negotiation takes place between the therapist and the client with respect to goals and responsibilities in therapy, treatment approach, fees and requirements, duration of therapy etc. This treatment stage is tremendously important as it can determine whether the client stays in treatment or drops out prematurely, as well as the specific treatment goals. The therapist and client need to reach agreement and commitment to goals and approach for treatment to have a high chance of success. The specific agreements that clients entering DBT have to agree to are to stay in therapy for the specified time period, attend scheduled therapy sessions, work towards changing targeted behaviors (as appropriate to level of disorder), work on problems that arise that interfere with progress in therapy, participate in skills training for the specified time period, abide by any research conditions of therapy, and pay agreed upon fees. The therapist in standard DBT must also commit to a series of agreements: to make every reasonable effort to conduct competent and effective therapy, to obey standard ethical and professional guidelines, to be available to clients for weekly therapy sessions, phone consultations and provide back-up, to respect confidentiality and integrity of clients, and to obtain consultation when needed.

Overview of research across multiple problems and populations

Comprehensive DBT RCTs

Several randomized controlled trials have evaluated the efficacy of DBT for individuals meeting criteria for BPD recruited for high suicidality (Linehan, Armstrong, Suarez, Allmon, & Heard, 1991; Linehan et al., 2006; Mcmain et al., 2009; Pistorello, Fruzzetti, MacLane, Gallop, & Iverson, 2012). DBT was superior in decreasing *suicide attempts* compared to treatment as usual (Linehan et al., 1991), community treatment by experts (CTBE, (Linehan et al., 2006)), and psychodynamic treatment supervised by experts (Pistorello et al., 2012) but not general psychiatric management plus emotion-focused psychotherapy (Mcmain et al., 2009). Specifically when comparing DBT to treatment by expert therapists in the community, participants in the DBT condition were half as likely to attempt suicide or to visit an emergency department for suicidality and were 73% less likely to be hospitalized for suicidality. Together these results provide evidence that DBT is an efficacious treatment for suicidal individuals. Although all studies have shown DBT results in significant reductions in *suicide ideation* some RCTs find significant reductions in DBT compared with usual treatment (Koons et al., 2001) while others have found no differences (Linehan et al., 1991; Linehan et al., 2006).

Another high target in DBT is the decrease of *non-suicidal self-injury behaviors* (NSSIs). Most studies found DBT to be superior in improving NSSI compared to the control condition (Bohus et al., 2004; Koons et al., 2001; Linehan et al., 1991; Pistorello et al., 2012; Turner, 2000; van den Bosch, Verheul, Schippers, & Van den Brink, 2002), with some studies finding no between condition differences (Carter, Willcox, Lewin, Conrad, & Bendit, 2010; Feigenbaum et al., 2012; Linehan et al., 2006). As noted above, DBT has also been found effective in reducing the *use of crisis services* such as visits to the emergency rooms, hospital admissions and length of stay (Koons et al., 2001; Linehan et al., 1991; Linehan et al., 2006) although some studies found no differences compared to the control condition (Carter et al., 2010; Feigenbaum et al.,

2012; Mcmain et al., 2009).

DBT has also been evaluated and found effective with individuals meeting criteria for BPD and comorbid *substance dependence* (Linehan et al., 1999; Linehan et al., 2002). DBT has also been found effective in targeting and improving high prevalence, co-morbid disorders such as *depression* and *anxiety* in some studies significantly more so than the control condition (Bohus et al., 2004; Koons et al., 2001; Koons, Betts, Chapman, O'Rourke, & Robins, 2004; Pistorello et al., 2012; Soler et al., 2005) while other studies found both treatments effective with no significant differences (Linehan et al., 1991; Linehan et al., 2006; Mcmain et al., 2009). During one year of treatment there was similar remission from depression and anxiety for both DBT and the control condition, although remission from substance dependence was higher in DBT (Harned et al., 2008). Similarly, both DBT and the control condition were effective in decreasing anger, impulsivity, irritability over one year of treatment (Bohus et al., 2004; Clarkin, Levy, Lenzenweger, & Kernberg, 2007; Feigenbaum et al., 2012; Linehan et al., 1999), with some studies finding DBT superior (Koons et al., 2001).

A common critique to behavioral therapies is that they only change symptoms of a particular disorder, without impacting any of the fundamental underpinnings of the disorder. Contradicting this hypothesis DBT was found superior, compared to treatment by (non-behavioral) community experts in the development of a positive introject including greater self-affirmation, self-love, self-protection, less self-attack during a 1-year treatment (Bedics, Atkins, Comtois, & Linehan, 2009).

Skills only RCTs

In an analysis of data from three independent RCTs participants in the DBT condition have been found to increase in their use of skillful behavior significantly more than participants in the

control condition. Furthermore, increase in skillful behavior has been found to fully mediate main DBT outcomes such as decrease in number of suicide attempts, improvement in depression and anger control (Neacsiu, Rizvi, & Linehan, 2010). DBT skills training thus appears to be a mechanism of change in DBT. Interest in DBT skills only interventions has increased significantly in recent years with RCTs evaluating and finding support for efficacy of such interventions with BPD (Soler et al., 2009), binge eating disorder (Hill, Craighead, & Safer, 2011; Safer, Telch, & Agras, 2001; Safer, Robinson, & Jo, 2010), treatment resistant depression (Harley, Sprich, Safren, Jacobo, & Fava, 2008; Safer et al., 2001; Safer et al., 2010), incarcerated women with childhood abuse (Bradley & Follingstad, 2003), attention deficit hyperactivity disorder (Hirvikoski et al., 2011), bipolar disorder (Safer et al., 2001; Safer et al., 2010; Van Dijk, Jeffrey, & Katz, 2012), trans-diagnostic across mood and anxiety disorders (Neacsiu, 2012).

Future directions for research

The conceptual and theoretical tenets that have guided the initial development of DBT continue to be fundamental in envisioning the future of DBT research. At a high level, DBT's foundation in behavioral science implies keeping DBT flexible and open to change. However, changes need to be motivated by new advances in behavior research and rigorous evaluation of efficacy as opposed to by convenience or by desire to simply create a new treatment.

For decades clinical psychology research has followed a single-disorder diagnosis system based on clinical symptoms (American Psychiatric Association, 1987; American Psychiatric Association, 1994). However, the categories thus identified have not been later validated in terms of common clinical course, separation of disorders, or further laboratory tests (Regier, Narrow, Kuhl, & Kupfer, 2009). Treatment seekers often fall into the "Not Otherwise Specified"

category, have “sub-syndromal” levels of multiple problems, or meet criteria for multiple diagnoses (Howland et al., 2009; Biederman, Newcorn, & Sprich, 1991; Conway, Compton, Stinson, & Grant, 2006). Following an increase in understanding psychopathology driven by behavioral studies and cognitive neuroscience, the field has witnessed the emergence of *trans-diagnostic* treatments (Barlow, Allen, & Choate, 2004; McHugh, Murray, & Barlow, 2009) targeting general dysfunctional processes and mechanisms of change common across disorders. From early on DBT has proposed pervasive emotion dysregulation as the fundamental mechanism underlying BPD. Further research has proposed emotion dysregulation as a trans-diagnostic mechanism of disorder going beyond BPD to other disorders maintained by difficulty regulating emotion. DBT is well equipped with tools to treat emotion dysregulation trans-diagnostically. Rigorous research needs to be conducted to understand how comprehensive DBT can most effectively change emotion dysregulation in terms of impacting different components of a model of emotion (such as factors behind vulnerability to emotion, emotion reactivity, return to baseline, etc.).

As reviewed above, the clinical research community has increased interest in adapting and evaluating skills only interventions focused on different clinical presentations. However, this area is still in its beginning and often lacks rigor in systematically building skills curricula, making decisions on duration of intervention, the DBT components included (e.g. is there a consultation team or skills coaching included?), as well as monitoring and reporting adherence to the DBT model.

Another relatively new direction of clinical research is the emphasis on cost effective treatment dissemination. Many individuals with mental health problems do not receive EBTs fitting their clinical profile although effective treatments have been generated by research for

many disorders (Kessler, Merikangas, & Wang, 2007; Stobie, Taylor, Quigley, Ewing, & Salkovskis, 2007; Shafran et al., 2009). Large-scale treatment dissemination remains a grand challenge for the field (Addis, 2002; Barlow, Levitt, & Bufka, 1999). Common barriers include the high cost of face-to-face treatment, mental health stigma (Wright et al., 2009; Lyons, Hopley, & Horrocks, 2009), and inaccessibility due to geographical locations. Fortunately, technology is undergoing fast advances in availability and interaction modalities and can become an effective vehicle for large-scale dissemination (Newman, 2004; Cartreine, Ahren, & Locke, 2010; Marks, Cavanagh, & Gega, 2007). Computerized psychotherapy treatments have been found efficacious in depression (Richards & Richardson, 2012; Proudfoot et al., 2003) and anxiety (Marks, Kenwright, McDonough, Whittaker, & Mataix-Cols, 2004) disorders and some can be as efficacious as face-to-face interventions (Selmi, Klein, Greist, Sorrell, & Erdman, 1990). DBT, with its established efficacy in face to face interventions for a variety of clinical problems and populations and its structured skills training format is an ideal candidate for dissemination as a computerized intervention.

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