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Dialectical Behavior Therapy and Suicidal Behavior in Adolescence: Linking Developmental Theory and Practice

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Adolescent suicide is a significant public health concern; however, relatively little empirical research has investigated the etiology or effective treatment of adolescent suicidal behaviors. Linehan's biosocial theory posits that problems with regulating emotions underlie suicidal and self-harm behavior, and Dialectical Behavior Therapy (DBT) was developed to improve emotion regulation skills (Crowell, Beauchaine, & Linehan, 2009; Linehan, 1993). Currently, DBT is an empirically supported treatment for adults, and results of nonrandomized trials with adolescents have been promising. This article discusses the application of DBT with adolescents from a developmental perspective, drawing links between Linehan's biosocial theory and the development of emotion regulation. More specifically, the authors (a) review the biosocial theory, (b) review research on the development of emotion regulation in childhood and adolescence and highlight areas of overlap with the biosocial theory, (c) describe specific DBT interventions that are developmentally appropriate for adolescents, and (d) provide a clinical case example illustrating the application of these techniques.

Keywords: Dialectical Behavior Therapy, developmental psychopathology, emotion regulation, suicide, adolescence

Suicide is a significant public health concern for adolescents. It is the third leading cause of death among adolescents, preceded only by accidents and cancer among children 10 to 14 years of age and accidents and homicide among 15- to 19-year-old youth (Martin et al., 2008). According to the national Youth Risk Behavior Survey, in 2007 14.5% of American high school students reported having seriously considered attempting suicide, 11.3% made a plan for how they would attempt suicide, and 6.9% reported making one or more suicide attempts (Eaton et al., 2008). Suicide attempts, defined as self-injurious behavior performed with some intent to die (O'Carroll et al., 1996), also have serious consequences. Data suggest that suicide attempts are 10 to 40 times as prevalent as completed suicides (Brundtland, 2002) and are associated with an increased likelihood for repeated attempts and eventual death by suicide among adolescents (Lewinsohn, Rhode, & Seeley, 1994; Shaffer, Gould, Fisher, & Trautman, 1996). Recent work using samples of depressed adolescents has also shown that nonsuicidal self-injury (e.g., self-injury performed to achieve goals other than death) is a predictor of future suicide attempts (Asarnow et al., 2011; Wilkinson et al., 2011). Taken together, these data clearly suggest that adolescents who engage in suicidal and self-harm behaviors are a high-risk population in need of effective suicide prevention strategies.

Despite the severity of the problem, at present, there are no treatments specifically targeting suicidal behavior in adolescents that meet criteria for a "well-established" empirically supported treatment (e.g., as defined by APA, 2006). There are only two studies that meet criteria for a "probably efficacious" treatment, neither of which has been replicated (Huey et al., 2004; Wood, Trainor, Rothwell, Moore, & Harrington, 2001). In one study, authors found that multisystemic therapy (MST), a behaviorally based treatment that focuses on enhancing protective factors and decreasing risk factors in the adolescent's environment, decreased subsequent suicide attempts significantly more than emergency hospitalization (Huey et al., 2004). Another study found that a brief group therapy approach that included cognitive–behavioral strategies decreased subsequent "deliberate self-harm" (including suicide attempts and nonsuicidal self-injury) to a greater extent than routine care (Wood et al., 2001); however, a more recent study failed to replicate these findings (Green et al., 2011).

Dialectical Behavior Therapy (DBT; Linehan, 1993) has a great deal of evidence demonstrating its efficacy in decreasing suicidal

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and self-harm behaviors in multiple randomized clinical trials (RCTs) with adults who engage in suicidal and self-harm behaviors (e.g., Linehan, Armstrong, Suarez, & Allmon, 1991; Linehan, Heard, & Armstrong, 1993; Linehan et al., 2006). Examining whether or not DBT is similarly effective with adolescents is of importance. An adaptation of DBT for adolescents has been developed and (Miller, Rathus, & Linehan, 2007) has yielded promising preliminary results in open trials (Rathus & Miller, 2002; also see Woodberry & Popenoe, 2008). DBT has also been adapted for use with adolescents with bipolar disorder (Goldstein, Axelson, Birmaher, & Brent, 2007) and oppositional defiant disorder (Nelson-Gray et al., 2006) and been tested in small, open trials with encouraging results. Two large randomized trials of DBT with adolescents are currently underway, one in Norway (Mehlum, 2012) and one in the United States (Linehan, McCauley, Berk, Pearson, & Sherrill, 2012), with the goal of providing definitive evidence that the approach reduces suicidal and self-harm behaviors in this age group.

In this article, we build on prior work that's adapted DBT for adolescents by considering DBT interventions from a developmental psychopathology perspective. Given that DBT was originally designed for adults, and adapted downward for adolescents, it is worth examining whether DBT techniques are congruent with findings from the developmental science literature that investigate the development of emotion regulation in infancy and childhood. In this article, we link developmental theory to specific DBT interventions. More specifically, we (a) review the biosocial theory that underlies DBT, (b) provide a brief overview of the normative development of emotion regulation abilities in children and teens, (c) describe developmentally sensitive DBT interventions (particularly those that may be used with parents and families), and (d) illustrate these interventions using a case example.

The Biosocial Theory

In the biosocial theory, persistent and severe difficulty regulating emotions (i.e., "emotion dysregulation") is seen as the primary dysfunction contributing to suicidal and self-harm behaviors, as well as other features of Borderline Personality Disorder. Difficulty regulating emotion is thought to develop in childhood based on the interaction between a biological predisposition to emotional vulnerability on the part of the child and an invalidating home environment. The model is transactional in that both factors need to be present beginning early in development for pervasive emotional dysregulation to develop (Linehan, 1993).

According to Linehan's (1993) biosocial theory, emotional vulnerability is biologically based and present from birth. It is characterized by the child's heightened sensitivity to experiencing emotion (e.g., a low threshold for an emotional reaction to an event), increased emotional intensity, and a slow return to emotional baseline. The invalidating environment is defined as one in which communication of emotion is met with caregiver responses that are inconsistent, inappropriate to the emotion expressed, and/or trivializing of the emotional experience. As a result, "the child does not learn how to adequately label or control emotional reactions" (Linehan, 1993, p. 51). In this article, we focus on the interaction of the invalidating parent–child relationship and the adolescent's emotion regulation skills; however, it is also possible that aspects of other relationships may be invalidating (e.g., sibling relationships, peer relationships, or school relationships). In line with developmental theory, an invalidating environment is seen as particularly problematic early in development because young children rely heavily on caregivers to regulate their emotions and help them alleviate distress (Calkins & Hill, 2007). Hence, it is proposed that repeated, unsuccessful child–caregiver transactions may lead to the child's emotion regulation skills deficits, which persist into adulthood (Crowell et al., 2009; Linehan, 1993). Consequently, according to Linehan (1993), suicide attempts and nonsuicidal self-injurious behaviors are developed as means to manage severe emotion dysregulation in the absence of more constructive coping strategies. Crowell and colleagues (2009) recently reviewed evidence for the biosocial model from a developmental psychopathology perspective. Supporting Linehan's (1993) original theory, they described recent findings showing a transactional relationship between specific biological vulnerabilities (e.g., genetic influences, abnormalities in brain systems, or frontal-limbic dysfunction) and environmental risk factors (e.g., invalidation, reinforcement of emotional liability, or inadequate emotion coaching) that contribute to the development of emotion dysregulation, self-harm behavior, and borderline personality disorder (BPD; Crowell et al., 2009). Experimental studies have found evidence for a heighted vulnerability to negative emotion among patients with Borderline Personality Disorder as evidenced by increased baseline physiological arousal (Kuo & Linehan, 2009) and a heightened sensitivity for recognizing fearful faces (Wagner & Linehan, 1999). Additional correlational research has found an association between problems controlling negative emotions and suicidal ideation and behavior, even after controlling for depressive illness severity (Zlotnick, Donaldson, Spirito, & Pearlstein, 1997; Zlotnick, Wolfsdorf, Johnson, & Spirito, 2003; Tamás et al., 2007), providing further support for the biosocial model.

Based on the biosocial theory, DBT focuses on eliminating self-injurious behaviors by teaching more adaptive coping skills for decreasing emotion dysregulation. DBT incorporates a range of cognitive–behavioral strategies, as well as practices derived from Eastern philosophy and religion (e.g., mindfulness and radical acceptance), aimed at teaching and developing clients emotion regulation skills. The effectiveness of DBT in multiple RCTs with adults (e.g., Linehan, Armstrong, Suarez, & Allmon, 1991; Linehan et al., 2006; Linehan, Herd & Armstrong, 1993), provides indirect support for the theory that emotional dysregulation is a primary mediator of suicidal behavior.

Overview of the Development of Emotion Regulation

Although theoretical perspectives may differ in focus, emotion regulation is generally defined as the ability of an individual to control, modify, change, and manage emotional reaction and expression to achieve one's goals and effectively manage social, interpersonal relationships (e.g., Cole, Martin, & Dennis, 2004). The acquisition of emotion regulation skills occurs in the context of interactions between the child and the caregiver evolving from infancy to adolescence (Calkins & Hill, 2007). Over time, children transition from early reliance on caregivers for emotion regulation to independent management of emotional distress using internal strategies later in development (Kochanska, Coy, & Murray, 2001).

At birth, infants have limited internal resources for emotion regulation and, as a result, depend on caregivers to regulate emotional distress (Calkins & Hill, 2007). Caregivers help to regulate infants' emotions by consistently responding to their needs and soothing them when they are distressed (e.g., rocking, touching, speaking to the infant with a calm tone, singing, or distracting with a favorite toy [see Kopp, 2003]). This early regulation of emotion by the parent lays the groundwork for the child's understanding that his or her negative emotions can be ameliorated, are understood by the caregiver, and warrant a response. On the other hand, a caregiver's inconsistent or inappropriate response is likely to hinder the development of primitive emotion regulation skills. This, in turn, likely further disrupts the caregiver's ability to be a source of emotion regulation for the infant and may facilitate the development of an invalidating environment.

As infants develop into toddlerhood, caregivers focus more on verbal methods of teaching about the control and regulation of emotions, and children's increased verbal skills allow caregivers to discuss emotions and emotion control (Denham, 1998; Dunn, Brown, & Beardsall, 1991; Lagattuta & Wellman, 2002). Preschool-aged children, though still limited in their emotion regulation capacity, are capable of using a range of methods to regulate their own emotions, including self-distraction (e.g., playing with toys, singing to self), self-soothing statements (e.g., telling self, "It's ok") or behaviors (e.g., thumb sucking, hugging a favorite stuffed animal), and seeking comfort from a caregiver (e.g., asking for a hug, discussing their feelings, see Kopp, 2003). Later in childhood, children come to rely more on active cognitive strategies, such as cognitive restructuring and problem solving, as a means to regulate emotions (Silk, Steinberg, & Morris, 2003). Thus, a parent's response to his or her child's emotions, as well as the parent–child relationship itself, remains critical to the development of emotion regulation skills. Similar to when the process is disrupted in infancy, the child will be at increased risk for impairments in emotion regulation skills because of deficits in emotion identification and/or expression, an inability to consistently use self-regulating strategies, an inability to rely on the caregiver for assistance, or a combination of these factors.

During adolescence, youth begin to internalize emotion regulation skills acquired through transactions with the caregiver and rely more on cognitive strategies for regulating emotions. Changes in cognitive development (e.g., increased social cognition, response inhibition, monitoring, and abstract thinking), as well as changes in social development (e.g., socialization pressures that include peer and adult expectations for mature, socially considerate, and gender-typical behavior), contribute to the increased reliance on internal, cognitively based emotion regulation strategies (Steinberg, 2005). However, there is also increased vulnerability to emotion dysregulation in adolescence. Adolescents normatively exhibit an increase in emotional arousablity, novelty seeking, and motivation for peer acceptance (Galvan et al., 2006; Trimpop, Kerr, & Kirkcaldy, 1999). At the same time, self-regulatory competence is not complete until late adolescence or early adulthood, because of continuing development of the frontal lobes and associated increases in neural connectivity (Galvan et al., 2006; Steinberg, 2005). Reductions in adult monitoring and intervention during this period also contribute to adolescents' heightened vulnerability to poor regulation of affect and behavior (Yap, Allen, & Sheeber, 2007). Thus, adolescence appears to be a time when youth are at increased risk for emotion dysregulation as a result of normal developmental processes. This risk may be heightened among individuals born into an invalidating environment with a biological vulnerability, which, according to the biosocial theory and illustrated above, inhibits the maturation of foundational emotion regulation skills early in development.

DBT Interventions for Adolescents, Parents, and Families

Both the biosocial theory (Linehan, 1993) and the literature reviewed above suggest that pervasive emotion dysregulation may occur because of interruptions in the normative development of emotion regulation abilities. Hence, suicidal individuals likely possess fewer skills for regulating emotions and what skills they have may be less developed, resembling those of younger children. From a developmental psychopathology perspective, this deficit in emotion regulation skills is the core deficit that requires remediation in order to reduce suicidal and self-harm behaviors. Accordingly, the DBT approach provides a range of skills designed to improve emotion regulation abilities.

The DBT approach consists of four mandatory modalities: (a) individual therapy, (b) group skills training (conducted in a multifamily format with adolescents), (c) telephone-based skills coaching between sessions, and (d) a weekly consultation team meeting with therapists. Individual therapy sessions utilize a range of cognitive–behavioral interventions to address treatment targets and improve emotion regulation abilities. DBT is a behaviorally based therapy, and hence, contingency management is a central intervention. The therapist conducts a detailed behavioral analysis of each episode of self-injurious behavior that occurs during treatment in order to determine which coping skills are needed to prevent the behavior from occurring in the future, as well as the triggers and reinforcers of the behavior. The therapist is careful to avoid inadvertently reinforcing suicidal/self-harm behaviors and other dysfunctional behaviors in his or her behavior toward the client. With adolescents, the therapist also works with family members to ensure that they are not reinforcing the adolescent's problem behaviors and that positive behaviors are being rewarded (Miller et al., 2007). Emotion-regulation and other coping skills are taught in the multifamily group sessions. The group is run in a didactic format, in which adolescents and parents are taught a new skill each week and complete homework on that skill. The individual therapist then works with the client to select which skills are relevant to his or her particular difficulties, engage in comprehensive skills practice, and troubleshoot difficulties using skills.

DBT for adolescents also includes family therapy, collateral sessions with parents, and telephone skills coaching for parents, as needed (Miller et al., 2007). These modifications to the adult DBT approach are critical in making the intervention developmentally sensitive, as emotion regulation skills typically develop in the context of parent/child transactions (e.g., Calkins, 1994; Calkins & Hill, 2007), and hence, may be most effectively remediated in this context. Moreover, because adolescents typically still live with their parents or caregivers, the use of DBT with adolescents offers the unique opportunity to directly modify the invalidating environment, and perhaps prevent the suicidal and self-harm behaviors from persisting into adulthood (although this remains an empirical question). As with adults, DBT is designed to treat multiproblem

clients, because individuals who engage in suicidal and self-harm behaviors frequently present with multiple, comorbid psychiatric diagnoses and life stressors, as well as severe emotion dysregulation and traits of Borderline Personality Disorder (Miller et al., 2007). As such, it stands to reason that the DBT approach would be most appropriate for multiproblem youth, whereas adolescents who present with suicidal behavior in the context of a single Axis I diagnosis, such as Major Depressive Disorder, may be effectively treated with other cognitive–behavioral therapy approaches for these disorders. However, at present, there is insufficient empirical evidence to support algorithms matching patient characteristics with particular treatment approaches.

In the following sections, we will discuss interventions from DBT as they apply to the adolescent, the parent, and the parent–teen dyad, illustrating how these skills map onto a developmental psychopathology perspective.

Adolescent-Focused Interventions

As noted, a primary focus of DBT is teaching skills needed to regulate emotions. Skills are taught in both the individual and group modalities and are designed to improve the adolescent's ability to regulate his or her emotions, and include mindfulness skills, interpersonal effectiveness skills, distress tolerance skills, and emotion regulation skills (Linehan, 1993). An additional module has been included specifically for adolescents, called the Middle Path module, which focuses on dialectics, validation, and behavioral principles in the context of the parent-teen relationship (Miller et al., 2007). Each skills domain is likely to be beneficial in increasing the adolescent's ability to self-regulate his or her emotions. Mindfulness skills are used to help the youth increase attentiveness to his or her emotions without evaluating them (i.e., without judging the emotion as good or bad, right or wrong) or impulsively acting upon them (Linehan, 1993; Miller et al., 2007). The interpersonal effectiveness module teaches adolescents adaptive ways to communicate their needs to others and cope with interpersonal problems that lead to strong negative emotions (Linehan, 1993; Miller et al., 2007). Distress tolerance skills, including distraction and self-soothing, are rehearsed to help teens tolerate intense negative emotions in the short-term without engaging in self-harm or other destructive behaviors (Linehan, 1993; Miller et al., 2007). In the emotion regulation module, youth learn ways to decrease emotion dysregulation in the long-term by reducing vulnerabilities (e.g., attending to physical illnesses, proper nutrition, adequate sleep) and increasing behaviors likely to elicit positive affect (e.g., scheduling pleasant activities) and decrease negative affect (e.g., approaching something one fears to ultimately decrease anxiety; Linehan, 1993; Miller et al., 2007). Last, skills in the Middle Path module help teens reduce emotion dysregulation in the context of relationships via understanding others' perspectives, finding a middle ground when there are disagreements (dialectics), and receiving validation of their emotions and behaviors from caregivers (Miller et al., 2007).

As illustrated, DBT interventions targeting the adolescent focus directly on improving emotion regulation abilities and, consistent with the developmental psychopathology perspective, these skills are taught in a format that aligns with the youth's developmental level. In contrast to the adult model, these interventions are tailored to adolescents by simplifying the concepts and language and using adolescent-relevant examples (Miller et al., 2007). Finally, the emotion regulation model also contains basic instruction on labeling and identifying emotions. Hence, the adolescent-focused components of the treatment appear to align well with the developmental psychopathology approach.

Parent-Focused Interventions

Given the prominence of parenting behaviors as a proposed etiological factor in the development of emotion dysregulation and suicidal behavior (Linehan, 1993), intervention with parents of suicidal teens is of considerable importance. This is consistent with Miller and colleagues' (2007) application of DBT for adolescents where families are involved in all aspects of the treatment, including individual family sessions, multifamily skills group, and telephone coaching. In our clinical experience, we have found that frequent collateral sessions with parents of suicidal adolescents improve treatment outcomes for the adolescent. Moreover, many parents have their own histories of emotion regulation difficulties and personal histories of inadequate parental responses to their own emotions (Wagner, 1997). Hence, we have found that parents of suicidal adolescents may also benefit from learning basic emotion regulation skills, such as identifying their own and their teen's emotions, prior to assisting their teen with these skills.

Parental expectations and psychoeducation are also important targets for intervention and emphasized in DBT for adolescents (Miller et al., 2007). Parents often lack sufficient information about psychopathology and thus attribute the teen's negative behaviors to willfulness or defiance, rather than mental health problems, which leaves parents with unreasonably high expectations for the teen (Kennard et al., 2009). Inherent in the principles of DBT is a nonjudgmental perspective of the youth's behavior, and parents are taught that their children are doing the best they can (Miller et al., 2007; see also Linehan, 1993). This perspective encourages parents to see their children's problematic behaviors as products of emotion dysregulation rather than as a choice to behave badly, thus increasing parents' ability to validate their children's emotional experience. There may also be a discrepancy between parental expectations of the adolescent's emotion regulation capacities and the adolescent's actual emotion regulation abilities. The parent may benefit from assistance in matching a parenting strategy to the teen's developmental level of emotion-regulation ability. For example, given that these teens are likely to have delays in their emotion regulation abilities, an effective parent-provided intervention for these adolescents might be simple soothing techniques typically used with young children (e.g., physical affection, simple verbal reassurance, or distraction; see Kopp, 2003) versus cognitively based strategies, such as reasoning or pointing out distortions in the teens' thinking. DBT also emphasizes the use of behavioral versus cognitive strategies in coping with emotion dysregulation (Linehan, 1993), which is consistent with a developmental psychopathology perspective. These skills may be addressed in collateral sessions with parents, family sessions, and/or skills group-all of which are components of DBT.

Family-Based Interventions

Based on our review of the literature, parent–child relationships are fundamental in the development of emotion regulation

(Calkins & Hill, 2007), and, therefore, teaching emotion regulation strategies in the context of the parent–child relationship is likely advantageous; however, a positive parent/teen relationship must be established before this can take place. Parent–child conflict is often observed in adolescence and may be even more likely for adolescents who display suicidal and self-harm behaviors because of the probability that negative interpersonal exchanges and conflict with caretakers have become exacerbated over time (Eisenberg et al., 2008; Steinberg, 2001). Family conflict is a significant risk factor for suicidal behavior in teens and is a critical treatment target in its own right (Lewinsohn, Rohde, & Seely, 1994). Establishing positive interactions and improving communication between the teen and parent is crucial to enhancing safety, because the more information the teen shares with the parent, the better equipped the parent is to identify risk factors for suicidality (Klaus, Mobilio, & King, 2009). In line with this, Miller et al.'s (2007) adaptation of DBT for adolescents emphasizes that the primary target for the family in Stage I is to "decrease family interactions that contribute to the adolescent's life-threatening behavior" (Miller et al., 2007, pp. 189–190). Thus, this application of DBT is consistent with the developmental model of emotion regulation which indicates that families are critical in the developmental process and, therefore, critical targets for intervention.

DBT for adolescents contains multiple skills aimed at strengthening the relationship between suicidal youth and their parents (Miller et al., 2007). In the "Walking the Middle Path" skill (2007), youth and parents are taught to resolve conflicts in ways that maintain the relationship. They learn to listen to each other's points of view, find the truth in all perspectives, and establish a middle path solution that honors each person's needs. Parents and teens are encouraged to avoid extreme words (e.g., "always" or "never") in parent–child conversations, to recognize that different opinions can be true (i.e., there is no absolute truth), and to be open to alternative viewpoints.

As specified in the biosocial model (Linehan, 1993), invalidation plays a key role in the development of severe emotion dysregulation and the reduction of invalidation in the environment is a critical component of treatment. In DBT for adolescents, validation is also taught in the context of the parent–teen relationship (Miller et al., 2007). Parents and teens learn to communicate that the other person's feelings, thoughts, and actions make sense in a specific situation. Validation differs from agreement in that validation communicates that one *understand*s the other person's perspective, whereas agreement indicates that one *approves* of the other's thoughts, feelings, or behaviors (Linehan, 1993). The validation skill involves both the ability to differentiate oneself from others and the ability to engage in perspective-taking. In our clinical experience, we have found that teaching family members basic skills such as how to identify and label the emotions of self and others early on in treatment increases their ability to use the validation techniques effectively. The inclusion of parent and family interventions in DBT with adolescents is critical in ensuring that the approach is developmentally sensitive.

Clinical Case Example

In the following section, we provide a case example to illustrate how the interventions discussed above may be applied. The patient and family gave written consent to present aspects of their treatment and identifying details have been altered to maintain confidentiality.

Background

J., a 16-year-old Caucasian female, was referred to our DBT clinic after being unable to complete standard cognitive–behavioral therapy for obsessive–compulsive disorder (OCD) because of severe emotion dysregulation and self-harm behaviors. Her emotion dysregulation prevented her from participating in the treatment protocol for OCD symptoms (e.g., during sessions she cried uncontrollably, was argumentative with the therapist, and became too distracted by emotions to follow the therapist's instructions), and was causing her significant difficulty with her parents, peers, and at school. Although the patient and her family initially considered OCD to be the primary problem needing treatment, it quickly became evident that severe emotion dysregulation was the most urgent target.

In the past, J. had been hospitalized two times for drug and alcohol overdoses, she had cut herself one time, and had physically injured her mother approximately 10 times in the last year. J. reported that the times she used substances, cut, and/or physically hurt someone typically followed intense arguments with her parents. J. said that before engaging in these maladaptive behaviors she felt overwhelmed by negative emotions (e.g., anger, hopelessness) and said she used the substances, cutting, and physical aggression to escape her emotional pain, although she denied having had the intent to die. J.'s parents were very concerned about the possibility of her attempting suicide in the future, because one of her overdoses had resulted in severe alcohol poisoning and had been potentially life-threatening. J. also reported a longstanding history of obsessive thoughts about weight and body image and engaged in compulsive behaviors several times a day (such as repeatedly looking in the mirror) to decrease the anxiety associated with these thoughts. She also had other OCD symptoms such as a grooming routine that needed to be completed repeatedly before leaving the house. Prior to treatment in our clinic, J. had spent time in a residential treatment program and had a long history of severe emotion dysregulation.

As is standard in DBT, in our outpatient adolescent DBT program, youth receive 1 hr of individual therapy and 2 hr of multifamily skills group (parents are included in group) per week. Youth and their parents are also offered telephone coaching. J. and her parents received these services for approximately 1 year and used the phone coaching services 1–3 times per week on average. During her participation in the DBT program, J. was treated by a psychiatrist and placed on antidepressant medication and a mood stabilizing medication in order to treat her OCD and severe emotional lability. At present, there are no medications that have been proven effective or received U.S. Food and Drug Administration (FDA) approval to treat BPD symptoms (Berk, Grosjean, & Warnick, 2009).

Diagnoses at Intake

Axis I: Mood Disorder NOS, characterized by significant mood lability; OCD; and Eating disorder NOS, characterized by intense fear of gaining weight and disturbance in perceptions of body weight and shape. Axis II: Borderline traits.

Initial Safety Interventions

During the intake, the therapist conducted a risk assessment and collected information on J.'s current and past history of suicidal ideation, intent, plans, and attempts from both J. and her parents. Given her history of self-injurious behaviors, initial sessions focused on J.'s safety. The therapist developed a "safety plan" with J. and her parents that identified triggers for J.'s dangerous and self-harm behaviors (e.g., conflict with parents and peers), outlined adaptive coping skills she could use when upset (e.g., listening to music and singing), and listed the names and phone numbers of people she could call for help, as well as emergency phone numbers. J. made a commitment to the therapist to follow this safety plan if she became emotionally dysregulated. Also, J.'s parents committed to remove J.'s access to lethal means and means of self-harm, in addition to increasing their monitoring of J. J. also made a "self-soothe" box that contained items and mementos that could be used to help her calm down (e.g., relaxing bubble bath, CD with calming music) and served as reminders of reasons to live (Berk, Brown, Wenzel, & Henriques, 2008).

Adolescent-Focused Interventions

In line with the DBT model, individual treatment with J. involved reviewing and applying skills learned in the multifamily DBT skills group (e.g., mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness). Consistent with a developmental psychopathology perspective, the application of these skills was adapted to match J.'s level of emotional development. For example, J. learned the "self-soothe" skill in the distress tolerance module; however, she required substantial assistance in soothing herself, similar to what would be expected of a younger child. In an initial session when J. became very dysregulated after discussing worries about her body image, the therapist instructed J. to lie down on the couch, offered step by step instructions to help her engage in deep breathing, and calmly provided her reassurance that these feelings were not going to last forever and that she was going to be all right. Paralleling the process in typical emotion regulation development, the therapist phased out of the intervention and became less active in de-escalating J. over time as J. learned to soothe herself independently. In one of the final sessions, J. started to get upset about her body image after looking at pictures of a model on a magazine cover; however, this time she told the therapist that she was getting upset looking at the pictures, closed her eyes, engaged in diaphragmatic breathing for a few minutes independently, calmed herself down, and then informed the therapist she was ready to proceed with the session.

Parent-Focused Interventions

Throughout J.'s treatment, the therapist had weekly collateral sessions with J.'s parents. Early parent sessions focused on psychoeducation of J.'s behavior and emotional reactions. First, J.'s parents were introduced to the DBT assumptions (e.g., "J. is doing the best she can") and were not permitted to use judgmental or pejorative words (e.g., "J. is manipulative") about J. in session, in order reduce parental negativity and facilitate empathy development. Next, the therapist provided parents with a list of typical and atypical adolescent behaviors from the adolescent DBT manual (Miller et al., 2007) to help them depathologize many of J.'s behaviors and decrease their tendency to correct and criticize J. several times per day. At the start of these collateral sessions, the therapist asked J.'s parents to make a list of behaviors that concerned them in order to clarify and prioritize which behaviors to target. Their list included a variety of behaviors, a few of which were high-risk (e.g., unprotected sex), but many of which were more typical for adolescents (e.g., sleeping in too late, not wanting to do her homework). The therapist reviewed each of the parents' concerns and worked with them to separate developmentally appropriate behaviors from behaviors that were less typical, which led them to realize that many of J.'s behaviors were a result of her being a teenager, rather than a significant mental health problem. Finally, J.'s parents were educated about the development of emotion regulation. The therapist highlighted that J. appeared to be at an earlier stage of emotional development relative to her chronological age, which led her parents to adjust their expectations of J.'s emotion regulation abilities.

After J.'s parents recognized her level of emotional development, they were better able to match J.'s emotional need to the equivalent emotion regulation strategy. For instance, similar to younger children, J. required a great deal of external assistance in regulating her emotions and, therefore, the therapist coached J.'s parents on how to soothe their teenager. This was difficult for J.'s parents because they typically used strategies reasonable for her chronological age during episodes of dysregulation (e.g., tried to reason with her or encourage her to restructure her thinking). Not only was J. unable to do this, these parental interventions often increased J's level of dysregulation because of her extreme self-criticism about being unable to use her parents' suggested strategies. This mismatch between her parents' suggestions and her emotion regulation abilities made J. feel further invalidated. As is emphasized in DBT (Linehan, 1993), the therapist explained to J.'s parents that cognitively based strategies were difficult to employ when their daughter was overwhelmed with emotion and used role plays in collateral sessions to help J.'s parents practice soothing techniques. After parents demonstrated some mastery over these techniques, the therapist used in vivo coaching during family sessions and instructed J.'s parents on how to apply soothing techniques in the moment when J. became dysregulated.

Furthermore, when J. became dysregulated at home, parents called the therapist for in-the-moment phone coaching on how to soothe J. (which had the added benefit of increasing generalization of the skill). For example, J. and her boyfriend broke up during treatment, which resulted in J. becoming very dysregulated. She had grabbed a knife to cut herself when J.'s father called the therapist for phone coaching. The therapist instructed J.'s father to validate J.'s feelings (e.g., tell J. "It makes complete sense that you are very upset right now"), physically soothe her (e.g., hug her, rub her back), gently remove the knife from her hands, and tell J. that it would be okay and that the pain would not last forever. The therapist remained on the phone with J.'s father for about 10 min until J. became calm and was safe. The therapist and J.'s father then discussed other ways he could help regulate her emotions (e.g., distract her by going for a drive). As the parents utilized these soothing techniques with J. more regularly, she began to display improved emotion regulation and increased communication with her parents. This provided the parents with reinforcement

(e.g., an improved relationship with their daughter) for continuing to use these skills.

Treatment also addressed parental emotion regulation skills. Like J., her parents participated in the DBT multifamily skills group where they learned distress tolerance, emotion regulation, and mindfulness skills that they could use to regulate their own emotions. J.'s parents required assistance managing significant anxiety about her, which would often precipitate a transactional cycle of emotion dysregulation between J. and her parents. For example, her parents' anxiety led them to become increasingly intrusive (e.g., reading her text messages and emails) and to severely restrict her independent activities, which exacerbated J.'s emotion dysregulation and feelings of invalidation. The therapist used distress tolerance techniques and cognitive restructuring, specifically decatastrophizing, to help the parents manage their anxiety. Acceptance-based strategies were also used to help the parents identify areas in which they could exert control as well as those in which they could not and had to accept.

Dyadic Interventions

At the start of treatment, the conflict between J. and her parents was so severe that J.'s parents could not name one positive thing about her. J. also reported that she would prefer to be in a residential treatment program than live at home with her parents. J.'s episodes of emotion dysregulation were most often precipitated by an argument with her parents and, at times, J. became physically violent with her mother when she was dysregulated. Because conflicts with her parents were occurring multiple times per day, it seemed unlikely that progress could be made teaching J. emotion regulation skills until this trigger was reduced. Moreover, J.'s feelings of detachment from her parents were leading her to hide information about her risky behaviors, making it difficult for the parents to ensure her safety. Thus, family relationships were a key initial target for intervention.

Early family sessions focused on J. and her parents identifying positive qualities about one another (Middle Path Module; Miller et al., 2007). Given that neither J. nor her parents could name one positive thing about the other person(s) early in treatment, the therapist started by asking each family member to think of only one positive quality about each other and increased this over time. Every week the therapist asked all of the family members to identify ways they could use positive reinforcement and praise with each other during the following week, thereby facilitating J. and her parents' recognition and labeling of positive aspects of the family.

J. and her parents also learned validation and middle path skills to enhance their family relationships while participating in the DBT multifamily skills group. Validation was difficult for J. and her parents, specifically because they struggled to distinguish validation from agreement, a common problem in DBT with adolescents (Miller et al., 2007). J.'s therapist provided the family with concrete examples of validation and invalidation, as well as sentence stems to help J. and her parents practice using validating statements (e.g., "I can see you feel [label emotion] and I understand why that would lead you to do [behavior]"). Following the DBT approach, the parents were instructed to make validating statements to J. *before* requesting changes in her behavior (the DBT strategy of validation and change; Linehan, 1993) in order to decrease the odds of her feeling invalidated and/or becoming dysregulated.

J. and her parents also learned the DBT middle path skill (Miller et al., 2007) and practiced this skill in family sessions. For example, the family used this skill in response to J.'s relationship with her boyfriend. J.'s parents thought J.'s boyfriend was a strong negative influence and a danger to their daughter and, therefore, forbid J. to see or speak to him. Conversely, J. felt that her boyfriend was her soul mate and the key to her happiness. Each time J. was forbidden to have contact with him, she would become severely emotionally dysregulated, engage in destructive behaviors (e.g., physical altercations with her mother, sneaking out of the house), and intensify efforts to see him. Thus, the therapist worked with each party to find a middle ground and to help each individual see the truth in the other person's point of view. Each member of the family vocalized his or her position and then the other person was asked to reflect back on what was said (i.e., active listening, a key component of the validation skill; Linehan, 1993). Ultimately, J. and her parents found a "middle path" where J. was not allowed to see the boyfriend, but could speak to him on the phone. Moreover, if J. did not break this agreement or engage in dangerous behavior for 1 month, she would be allowed to see her boyfriend while being supervised. The use of the "middle path" skill throughout treatment led J. to feel more positive about her parents, which reduced conflict and decreased triggers for J.'s emotion dysregulation. The improvement in J.'s ability to manage emotional distress gave her parents more confidence in setting fewer limits and giving J. more autonomy, which further decreased J.'s emotion dysregulation.

Outcomes

Outcomes during treatment and posttreatment suggested that the treatment approach outlined above was effective for J. and her family. During treatment, J. had no hospitalizations, had only one incident of superficial cutting early in treatment, and engaged in only one incident of aggression toward her mother. Since completing treatment approximately 1 year ago, J. has remained out of the hospital, has not engaged in any cutting or other self-harm behaviors, and has not demonstrated any physical aggression or harm to others. In addition to the absence of negative outcomes, J. has experienced many positive outcomes posttreatment and is currently functioning at a very high level. She has developed and maintained friendships with peers, is involved in a stable romantic relationship, lives independently away from home, and is thriving during her first year of college at a 4-year university. Most notably, the relationship between J. and her parents has improved dramatically. In a recent phone call with J.'s parents, her father remarked, "I feel like I have my daughter back again," and her mother informed the therapist that J. is "loving college," doing "incredibly well" and said that she was "so proud" of her daughter. J's case suggests that conceptualizing adolescent suicidal behavior from a developmental psychopathology perspective and utilizing the corresponding interventions can result in positive treatment outcomes. Further research is needed to determine which specific DBT interventions contribute to change and the extent to which these interventions need to be developmentally sensitive.

Conclusions

It has been argued that deficits in emotion regulation underlie many suicidal and self-harm behaviors (Linehan, 1993). A host of developmental studies indicate that emotion regulation abilities develop in the context of the parent–child relationship (Calkins & Hill, 2007), and it is likely that this developmental process has been disrupted for suicidal youth (e.g., Crowell et al., 2009). Given what is known about the developmental context of emotion regulation, it is critical that interventions aimed at reducing suicidal and self-harm behaviors target the adolescent, parent, *and* the dyadic relationship. Research demonstrating the efficacy and effectiveness of DBT for adolescents is still in its infancy and the generalizabilty of current findings to diverse populations (e.g., individuals from other cultural backgrounds, socioeconomic statuses, cognitive disabilities, etc.) is unknown. However, although a rigorous test of the efficacy of DBT for adolescents through a randomized controlled trial is still urgently needed, DBT (Linehan, 1993) and its adaptation for adolescents (Miller et al., 2007) align well with the developmental model of emotion regulation and it's techniques aim to enhance skills that may be delayed as a result of disruptions on this developmental process.

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