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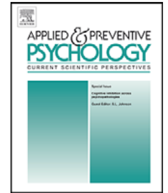

Adolescent non-suicidal self-injurious behavior: The latest epidemic to assess and treat

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ABSTRACT

Non-suicidal self-injury (NSSI) among adolescents is a serious and prevalent problem. This article reviews the epidemiological data as well as the existing treatments for adolescents who engage in NSSI. The authors also present the unique features of dialectical behavior therapy, the gold-standard evidence-based treatment for adults who engage in NSSI, and discuss its promise as an effective treatment for adolescents who engage in NSSI. Finally, the authors present a clinical vignette of an adolescent engaging in NSSI and how DBT works to target this maladaptive behavior.

This article reviews first the epidemiological data and then the existing treatments for adolescents engaging in non-suicidal self-injurious behavior (NSSI). Next, the authors present the unique features of one particular therapy, called dialectical behavior therapy, for adolescents who engage in NSSI. Finally, the article concludes with a clinical vignette in which dialectical behavior therapy is applied to an adolescent engaging in NSSI.

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1. NSSI among adolescents: the scope of the problem

Clinicians in the field are certainly well aware of NSSI as a relatively common problem among adolescents. To date, there is little epidemiological research that specifically addresses adolescent NSSI, as distinct from suicidal behaviors. Thus, the information available is somewhat scarce and limited in its generalizability. Nonetheless, the studies that have addressed NSSI provide valuable information that directly informs clinical intervention and prevention and sets the stage for future research.

In the US, NSSI and suicidal behaviors are often classified by clinicians and researchers based upon the reported intent of a self-injurious act by the adolescent. There are several limitations to this classification system, especially when involving retrospective methods. First, although some intentional self-injury is clearly without any suicidal intent, intentional self-injury often occurs with enormous ambivalence or with swiftly changing intent, such that retrospective analyses of intent may be exceptionally difficult. In other words, adolescents may have difficulty recalling the exact intent of a self-injurious act and/or may change their perception of an act as time passes. Second, a behavior that starts as suicidal can evolve into a non-suicidal act and vice versa. Third, intentional but NSSI can itself be lethal (Miller, Rathus, & Linehan, 2007). Regardless, at the very least, the stated intent of the adolescent at the time of a self-injurious act should always be gathered during the assessment process in order to best inform current and future risk assessments as well as subsequent interventions. It is important to remember that NSSI is in and of itself a potent predictor of eventual suicide (Miller et al., 2007).

There are some youth who engage only in NSSI and never in suicidal behavior, while others engage only in suicidal behavior and never in NSSI (Jacobson, Muehlenkamp, Miller, & Turner, 2008).

Estimates of lifetime prevalence of NSSI based upon high school samples range from 13.0% to 23.2% (Muehlenkamp & Gutierrez, 2004, 2007; Ross & Heath, 2002; Zoroglu et al., 2003). Most of the aforementioned investigators developed their own questionnaires to discriminate NSSI from suicidal behavior but they have not published psychometric data on their instruments. The exception was Gutierrez et al. (2001) who developed the Self-Harm Behavior Questionnaire and they did publish psychometric data on their instrument.

The 12-month prevalence of NSSI ranges from 2.5% to 12.5% (Garrison et al., 1993; Muehlenkamp & Gutierrez, 2007), indicating that as many as 2.1 million high school students may engage in NSSI each year. The age of onset of NSSI typically falls between 12 and 14 years (Kumar, Pepe, & Steer, 2005; Muehlenkamp & Gutierrez, 2004, 2007; Nixon, Cloutier, & Aggarwai, 2002; Nock & Prinstein, 2004; Ross & Heath, 2002) and cutting oneself with a sharp object and self-hitting are among the most common methods of NSSI across several studies (Muehlenkamp & Gutierrez, 2004, 2007; Ross & Heath, 2002; Zoroglu et al., 2003).

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In contrast to clinical lore, it is unclear whether NSSI is in fact more common among females than males, as only two (Muehlenkamp & Gutierrez, 2007; Ross & Heath, 2002) of five community based studies (Garrison et al., 1993; Muehlenkamp & Gutierrez, 2004; Zoroglu et al., 2003) concluded that females were significantly more likely to engage in NSSI than males. The other three studies found no gender difference in frequency of incidents.

It is likely that the majority of adolescents who engage in NSSI have a psychiatric disorder. However, only one community based study (Garrison et al., 1993) included a formal assessment of both NSSI and psychiatric disorders and this study did not report on the rates of disorders among those who reported NSSI. This study concluded, however, that having a diagnosis of major depressive disorder (MDD), specific phobia, and/or OCD was associated with an elevated risk of engaging in NSSI. Studies that included clinical samples of youth have identified elevated rates of MDD, externalizing disorders, substance use, and borderline personality disorder among those who engaged in NSSI compared to those who do not self-injure (Jacobson et al., 2008; Kumar et al., 2005; Nock, Joiner, Gordon, Lloyd-Richardson, & Prinstein, 2006).

In addition to psychiatric disorders, adolescents who engaged in NSSI display elevated levels of hostility (Ross & Heath, 2003; Zoroglu et al., 2003), alexithymia (Kisiel & Lyons, 2001; Zlotnick, Shea, Pearlstein, Costello, & Begin, 1996), emotional reactivity (Nock, Wedig, & Holmberg, in press), and dissociation (Kisiel & Lyons, 2001; Zlotnick et al., 1999) compared to their non-self-injuring peers. Additionally, research indicated that experiencing stressful life events (Garrison et al., 1993), including interpersonal loss (Rosen, Walsh, & Rode, 1990), increased one's odds of engaging in NSSI. Interestingly, research suggests that the greater number of methods used to engage in NSSI the greater the likelihood of making a suicide attempt (Nock et al., 2006; Zlotnick, Donaldson, Spirito, & Pearlstein, 1997). Finally, a fairly substantial amount of research demonstrated a positive association between being the victim of sexual abuse and engaging in NSSI (Kisiel & Lyons, 2001; Lipschitz et al., 1999; Zlotnick et al., 1996; Zoroglu et al., 2003). Thus, these studies highlight the importance of targeting both the NSSI directly as well as the associated psychosocial variables, such as abuse or loss.

2. Interventions

Despite growing concern about NSSI and the need to find effective treatments, there are very few studies that focus on reducing this behavior directly (Miller & Glinski, 2000; Walsh, 2006). Current research evaluating the efficacy of treatments of suicidal behavior have typically subsumed or ignored non-suicidal self-injury. While the results from research on treatments for suicidal behavior are somewhat promising (e.g., Brown et al., 2005; Linehan, Comtois, Murray, et al., 2006; Tryer et al., 2003; Verheul et al., 2003), they are mostly limited to suicidal behavior in adult populations and their effectiveness within adolescent groups is unknown. Still, these positive findings suggest that there may be a range of potentially effective treatments available to practitioners.

Most recently, Wallerstein and Nock (2007) published an interesting case study of a 26-year-old woman, who demonstrated a significant decrease in the number of incidents of NSSI following repeated physical exercise, which was the sole "therapeutic" intervention of this study. The authors suggested that exercise contributed to the release of endogenous opioids and beta-endorphins which may be central to the process of emotion regulation and thereby decreased her frequency of NSSI. The results of this single case study were promising as the NSSI completely remitted and remained so at the 8-week follow-up phase. Further research is necessary to investigate the effectiveness of exercise as a legitimate treatment for NSSI.

There are only a few randomized controlled trials of therapy for NSSI among adolescent samples and the results are mixed. To further complicate the picture, many of these studies below do not differentiate NSSI from suicide attempts so interpretation of the findings warrants caution. For example, Harrington et al. (1998) examined the efficacy of adding a four-session family problem-solving therapy to routine care for adolescents who deliberately poisoned themselves. Of note, the intent of such behaviors was not formally assessed to distinguish suicidal from NSSI behavior. Results indicated that there were no significant differences between treatment groups on general outcomes or on acts of repeated self-poisoning. However, within the treatment group, a subgroup of adolescents who were diagnosed with major depressive disorder reported a significant reduction in suicidal ideation. Huey et al. (2004) reported significant findings in their study, which also emphasized working with families systems. One hundred and fifty-six adolescents who presented to an emergency department following an act of self-harm (unclear whether suicidal or NSSI) were randomly assigned to receive either multi-systemic family therapy (MST) or inpatient treatment as usual. The authors reported that MST resulted in significantly fewer acts of self-harm and greater reduction of symptoms than treatment as usual over a 1-year follow-up. However, the findings are confounded by the fact that 44% of the MST sample also received inpatient care during the treatment period.

In addition to examining family interventions, some have evaluated the effectiveness of group-based interventions. In a sample of 105 adolescents discharged from an inpatient unit following a suicide attempt, Cotgrove, Zirinsky, Black, & Weston (1995) did not find significant differences between their experimental treatment (group management plus re-admission to inpatient on demand) and treatment as usual (group management). More promising results were reported by Wood, Trainor, Rothwell, Moore, & Harrington (2001), who evaluated the effectiveness of treatment as usual versus treatment as usual plus group therapy for adolescents engaging in "deliberate self-harm." The group therapy intervention was described as being an integrated blend of multiple treatment modalities including problem-solving and cognitive–behavioral therapies, dialectical behavior therapy, and psychodynamic interventions that were developmentally appropriate. Results indicated that adolescents in the group intervention were less likely to repeat their self-injury. However, the two groups did not differ on outcome measures of depression, suicidal ideation, or global functioning; this suggests that the experimental group may have had a specific impact on self-injury.

Initial DBT studies with adolescents that target both suicide attempts and NSSI are promising; however, randomized controlled studies with this age group have yet to be conducted (Goldstein, Axelson, Mirmaher, & Brent, 2007; Katz, Gunasekara, Cox, & Miller, 2004; Rathus & Miller, 2002). Based on the large number of well controlled randomized trials with adults in multiple settings by numerous research groups, Dialectical Behavior Therapy (DBT; Linehan, 1993a, 1993b; Linehan, Armstrong, Suarez, Allmon, & Heard, 1991; Linehan, Comtois, Brown, Heard, & Wagner, 2006; Koons et al., 2001) is considered the gold standard when it comes to treatment efficacy and effectiveness of reducing NSSI and suicidal behavior among adult outpatients diagnosed with borderline personality disorder (BPD). Miller et al. (2007) recently published a book describing their adaptation of this well established treatment for use with adolescents engaging in suicidal behavior and NSSI. Preliminary data finds DBT with teens to be clinically meaningful and preferred by providers and consumers alike (Goldstein et al., 2007; Katz et al., 2004; Rathus & Miller, 2002; Trupin, Stewart,

Beach, & Boesky, 2002). Using a quasi-experimental design, Rathus and Miller (2002) compared adolescent DBT to treatment as usual in a 12-week outpatient study. Adolescents referred to the clinic were assigned to either DBT ($n = 29$) or treatment as usual ($n = 84$). At the conclusion of the 12-week treatment, the DBT participants had fewer hospitalizations, lower suicidal ideation, and were more likely to have completed their course of treatment. The two groups, however, did not differ on the number of suicide attempts, and it is unclear whether DBT led to improvements in NSSI because this behavior was not formally assessed. More recent studies have reported findings that DBT does lead to reductions in NSSI as well as improved psychosocial functioning when applied in both inpatient and outpatient settings (Katz & Cox, 2002; Katz et al., 2004; Turner, 2000).

DBT has been applied not only in a range of treatment settings but also to a range of diagnostic profiles. For example, Goldstein et al. (2007) recently administered outpatient DBT to 10 bipolar adolescents in an effort to evaluate its feasibility and tolerability with this population. At the start of treatment eighty percent of adolescents reported a history of attempted suicide and none of the adolescents reported attempting suicide during the course of the year-long study. Additionally, ratings of suicidal ideation significantly decreased during treatment and at the conclusion of treatment. Although statistically significant differences were not found on follow-up measures of NSSI, it is important to note that there were no reports of NSSI post treatment.

Numerous studies (adult and adolescent) have found DBT to be uniquely effective at reducing NSSI and suicidal behaviors as primary targets of treatment (Miller et al., 2007). As a result, the American Academy of Child and Adolescent Psychiatry (2001) recommends in their Practice Guidelines that DBT should be considered with suicidal adolescents. Randomized trials of DBT with adolescents are now being conducted internationally.

3. What is DBT?

DBT blends standard cognitive–behavioral therapy with Eastern philosophy and meditation practices sharing elements with psychodynamic, client-centered, gestalt, paradoxical and strategic approaches (Koerner et al., 1998). DBT is based on Linehan's (1993a) biosocial theory in which BPD is conceptualized primarily as a dysfunction of the emotion-regulation system. Emotional dysregulation is viewed as the result of the transaction between a biologically emotionally vulnerable individual and an environment that is a poor fit with this vulnerability. The theory suggests that BPD behavior (e.g., NSSI) may develop when a child who has difficulty regulating her emotions is placed in an invalidating environment, that is, one that pervasively and chronically communicates that the child's responses are inappropriate, faulty, inaccurate, or otherwise invalid (Koerner et al., 1998). Thus, DBT conceptualizes NSSI and suicidal behaviors as having several potential functions, including affect-regulating and help-eliciting behavior from an otherwise invalidating environment. From this perspective, NSSI is considered a maladaptive solution to overwhelming and intensely painful negative emotions.

DBT views NSSI as an ineffective problem-solving behavior with unbearable emotional pain being the central problem. DBT helps adolescents build a meaningful life and replace maladaptive problem-solving attempts with effective problem-solving behavior. DBT is framed as a life enhancement program that is designed to help individuals "build a life worth living." The skills and strategies employed in DBT help adolescents cope with or change the many life stressors, crises, relationship difficulties, school related problems, and dysfunctional behavior patterns which exacerbate and reinforce the problems that often lead to the desire to end one's life. Thus, the therapist avoids colluding with the teenager in seeing NSSI as a viable choice while helping her to expand options for effective problem solving.

4. Dialectical world view

A dialectical philosophy provides the theoretical foundation of DBT treatment strategies. This dialectical philosophy views reality as an interrelated system with opposing internal forces and in a state of continuous change. Dialectics refer further to the multiple tensions that emerge in treating adolescents who engage in NSSI. The core dialectic in DBT involves accepting adolescents exactly as they are in the moment (including teaching them self-acceptance) while working to help them change. In a treatment style characterized by movement, speed, and flow, the therapist maintains an active stance, often weaving in irreverent communication intended to keep the adolescent attentive and slightly off balance to avoid getting into polarized positions and ultimately getting "stuck." The individual therapist employs a dialectical focus on two levels. On one level, the therapist balances change and acceptance, and flexibility and stability, to maintain a collaborative relationship with the individual in the context of the therapeutic interaction. On the second level, the therapist teaches and models dialectical thinking and behavior for the adolescent. The therapist employs specific dialectical strategies to highlight contradictions in the teenager's behavior and thinking by offering opposite or alternative positions to these behavioral patterns and thought processes. With regards to NSSI, a therapist might take a dialectical position (balancing acceptance and change) with this behavior by saying, "I completely understand that cutting calms you down when you are angry . . . AND, at the same time, we need to figure out alternative ways of helping you calm down if we are going to help you get your parents off your back, stop scarring your body, and potentially save your life".

5. DBT treatment targets

In DBT with adolescents, the foci of therapy are pre-treatment targets (agreement on goals and commitment to change) and first-stage targets (safety, stability, behavioral control of actions, and enhancement of basic capabilities). In the first stage of DBT, the therapist structures each treatment interaction to address the following specific targets in a hierarchical order of importance:

1. decreasing life-threatening and NSSI behaviors;
2. decreasing behaviors that interfere with treatment, particularly noncompliance and pre-mature drop-out;
3. decreasing behaviors that have an adverse effect on quality of life, including substance abuse, school truancy, high-risk sex, and those that necessitate inpatient psychiatric care;
4. increasing behavioral skills.

As stated above, DBT targets suicide-related behaviors as the highest priority. NSSI is placed among Stage 1 targets, above all other treatment targets (e.g., depression, substance use, family problems), as it is highly comorbid with suicide attempts (Nock et al., 2006; Zlotnick et al., 1997) and is a risk factor for completed suicide.

The individual therapist applies the DBT strategies to the highest priority target relevant at the moment. Identification of this target is indicated by the adolescent's diary card. This card is completed daily and brought to the individual session. The card tracks instances of suicidal behavior, urges to commit suicide, urges and acts of NSSI, use of substances, and urges and acts of other quality of life interfering behaviors (e.g., binging, purging, fighting, etc.).

The adolescent also uses the diary card to track emotions at varying gradations as well as the use of new behavioral skills. The function of the diary card is to help the adolescent self-monitor the agreed upon target behaviors (both maladaptive and adaptive) that have occurred during the week and to serve as a guide for the subsequent week's individual session. For example, if a suicide attempt or a NSSI occurred during the week, which should be noted on the adolescent's diary card, it is always treated first in the next session. The therapist takes an active stance early in treatment. Thus, the therapist sets the agenda collaboratively with the teenager according to hierarchically ordered behavioral treatment targets and then uses this agenda to guide the session. Other treatment orientations may take a more passive stance at the start of treatment and allow the adolescent to freely choose the session topic. In DBT, however, it is the extent of the disordered behavior (e.g., severity of dysfunction and complexity of other problems) that determines the focus of treatment both over the course of treatment as well as within a given treatment interaction. This adherence to pre-determined behavioral targets must be balanced with letting the session unfold and skillfully weaving in the necessary components identified below. A common mistake by a beginning DBT individual therapist is to force the agenda on the patient; we call this error "following the manual instead of following the moment".

6. Comprehensive multi-modal treatment approach to NSSI

DBT for adolescents is a comprehensive treatment program that requires the adolescent and family to commit to 16 weeks of at least twice-weekly therapy.[1] The program is designed to decrease life-threatening behaviors, decrease therapy-interfering behaviors, decrease quality-of-life interfering behaviors and expand the individual and her parents' behavioral repertoire via five functions and modes of treatment (Miller, 1999). The first function of the program is to increase the teenager's motivation to change via individual and family therapy sessions. The second function is to enhance the adolescent's and her parents' behavioral skills repertoire. This is typically achieved by participating in a multi-family skills training group. The five sets of skills that are taught in the skills training group include: mindfulness skills to address the confusion about oneself, emotion-regulation skills to address emotional dysregulation, distress tolerance skills to target impulsivity, interpersonal effectiveness skills to address interpersonal problems, and walking the middle path skills to target adolescent family conflicts and dilemmas. The third program function is to ensure that the teenager is able to generalize skills through the use of in vivo coaching interventions (i.e., telephone consultation when in crisis, and individual, group, and family therapy interactions). The fourth function serves to provide treatment team members with the technical help and emotional support that is needed to assist therapists in adhering to DBT principles, solve problems, and provide effective treatment. The DBT consultation team allows the individual therapists to increase their motivation to change and to further develop their abilities to perform DBT competently. The final function of a DBT program is to structure the environment of the adolescent and the therapist. The individual therapist addresses family, school, and work issues with the adolescent and relevant parties on an as-needed basis to ensure effective contingencies are being applied within the teenager's environment (i.e., reinforcement vs. punishment of adaptive behavior). Additionally it is important for the DBT team leader to structure the DBT program to allow sufficient time for supervision and consultation meetings. Attention to the structure of the program enables therapists to deliver the treatment effectively and competently in an effort to provide optimal care while avoiding therapist burn out.

In outpatient DBT, these aforementioned five functions are assigned to five concurrent modes of outpatient treatment including multi-family skills training group, individual therapy, telephone consultation, therapist consultation meetings, and family therapy/case management services. The primary therapist (i.e., the individual therapist) ensures that the system as a whole is providing each function.

7. Multi-family skills training group

DBT's overarching goal is to build a life worth living. Thus, the therapist works to reduce the aforementioned target behaviors while simultaneously increasing behavioral skills. The multi-family skills training group is the primary forum for the acquisition and strengthening of these skills, while the individual and family therapy sessions help the adolescent generalize the skills to the situations they encounter in their lives. The skills group allows teens to learn in the context of other teenagers and exposes parents to other families struggling with similar issues. Typically, this "universality" experience promotes an atmosphere of connectedness and support while reducing anxiety.

The skills taught in DBT correspond directly to Linehan's reorganization of the DSM-IV BPD symptoms (Linehan, 1993a). According to this reorganization, the symptoms fall into areas of dysregualtion across four domains. DBT for adolescents maintains this conceptualization for multi-problem adolescents who engage in NSSI, even when full criteria for BPD is not met (Miller et al., 2007). The five areas of dysfunction and the corresponding skill modules are:

(1) Self-dysregulation	Core Mindfulness Skills
(2) Interpersonal dysregulation	Interpersonal Effectiveness Skills
(3) Behavioral dysregulation	Distress Tolerance Skills
(4) Emotional dysregulation	Emotion-Regulation Skills
(5) Cognitive dysregulation	Walking the Middle Path Skills

Core mindfulness skills increase awareness of the present moment and allow for non-judgmental observations of the self and environment. Specifically, the adolescent may have difficulty experiencing or identifying what she feels, why she feels the way she does, and has difficulty maintaining a stable sense of self. Moreover, she may report a pervasive sense of emptiness and have problems maintaining her feelings, opinions, or decisions around others. Teaching the suicidal teen how to non-judgmentally observe and describe what she is feeling and thinking in the moment may be one of the most difficult, but also the most critical, skills for suicidal teens to learn.

The interpersonal effectiveness skills module addresses patients' difficulties in maintaining consistent and rewarding relationships. These adolescents typically have intense and unstable relationships, and often experience panic-type anxiety and dread over relationships ending. In addition, they may stay in abusive relationships because of an intense fear of being alone. Interpersonal problems are common precipitating events for NSSI and suicidal behaviors among adolescents in general (Lewinsohn, Rohde, & Seeley, 1996).

The distress tolerance skills address impulsivity by teaching adolescents how to effectively distract and soothe themselves while considering the pros and the cons of their actions. This skills set typically replaces some of the following behaviors: self-inflicted cutting or burning, overdosing, engaging in physical fights, abusing alcohol or drugs, engaging in unprotected or promiscuous sex, cutting classes and school truancy.

[1] The 16-week model is one developed by Miller et al. (2007); however, there are many other models that employ a longer treatment duration.

Emotion-regulation skills target extreme emotional sensitivity, rapid, intense mood changes, as well as unmodulated emotional states characterized by chronic depression, anxiety, or problems with either overcontrolled or undercontrolled anger. Identifying and labeling emotions, learning how to increase positive emotions, and reducing vulnerability to negative emotions are a few of the emotion-regulation skills.

The walking the middle path skills module addresses non-balanced thinking and behaviors among teens and family members. These skills involve learning about principles of behavior change, validation, and finding the middle path between common dialectical dilemmas in their families (e.g., authoritarian control vs. excessive leniency).

8. Individual therapy

DBT individual outpatient therapy with adolescents consists of 16 weeks of 50–60 min weekly sessions. The individual therapist is the "primary" therapist for that patient and oversees the entire treatment plan and all the providers. In individual therapy, adolescents learn to apply skills taught in the multi-family behavioral skills group to their own lives. During the individual session the therapist balances problem-oriented change strategies (i.e., standard cognitive–behavioral techniques including behavioral analyses, contingency management, cognitive modification, and exposure to emotional cues), irreverent communication strategies, and consultation to the patient strategies with environmental interventions and acceptance strategies (i.e., core validation and reciprocal communication strategies) in an effort to "drag out" the adolescent's more skillful responses to replace her maladaptive behaviors.

The problem focus of each individual DBT session is determined by the teen's behavior since the last session and where the behavior falls on the target behavioral hierarchy. For example, if the adolescent engaged in NSSI since the last session, the first task in session is to conduct a behavioral and solution analysis of that target behavior. A behavioral analysis is a step-by-step examination of a problem behavior, including an exhaustive description of the moment-to-moment chain of environmental and behavioral events, including the antecedents and consequences of the target behavior. During the behavioral analysis, the therapist identifies emotions, cognitions, and skill deficits as well as behavioral and environmental factors that interfere with more adaptive solutions. The solution analysis identifies more effective behaviors the adolescent could have used and is encouraged to use next time.

During all sessions, the therapist actively teaches and reinforces adaptive behaviors, including those that occur within the therapeutic relationship, while consistently withholding reinforcement for maladaptive behaviors (i.e., those that are targeted for change). Between sessions, the patient is strongly encouraged to use phone consultation with the individual therapist to help problem-solve during crises, increase skills generalization, or to repair the relationship with the therapist.

8.1. *Commitment strategies with adolescents*

At the initial stages of therapy, the individual therapist seeks an explicit, verbal commitment from the teenager to participate in DBT for the length of the program and to reduce her maladaptive behaviors. Commitment strategies are critical to obtaining and to maintaining an adolescent's engagement in the treatment process. In our experience, an inadequate commitment from the adolescent, the therapist, or both, can lead to therapy failures and/or early treatment terminations. The adolescent may make an insufficient or glib commitment in the initial stages of the change process, or more often, events within and/or outside of therapy may dissipate her previous commitments to change. This is particularly relevant to adolescents given that they usually reside in their invalidating environments and often report that they feel hopeless about their situation improving. The adolescent's commitment to DBT is both an important prerequisite for effective therapy and, in itself, a goal of the therapy. Therefore, DBT views the adolescent's commitment to treatment and to change as a behavior itself, which can be elicited, learned, and reinforced. For example, rather than assuming the adolescent is committed to implementing new behavioral solutions to old problems, the therapist works collaboratively with the adolescent to facilitate her commitment to change these problems. When working in a brief treatment model (16 weeks), the therapist must figure this out quickly.

In-session behaviors that are inconsistent with this initial degree of commitment and collaboration include refusing to work in therapy, avoiding or refusing to talk about feelings and events connected with target behaviors, and rejecting all input from the therapist or attempts to generate alternative solutions. It is important that the therapist actively target these in-session problem behaviors. At these moments in session, the therapist should discuss the adolescent's commitment to therapy itself with the goal of eliciting a recommitment.

Eliciting commitment necessitates a certain amount of salesmanship—the product being sold is new behavior and sometimes life itself. To obtain commitment to DBT, the therapist needs to be flexible and creative while employing one or more commitment strategies. Linehan (1993a) identified eight commitment strategies: (1) selling commitment, evaluating pros and cons, (2) playing devil's advocate, (3) foot-in-the door/door in the face techniques, (4) connecting present commitments to prior commitments, (5) highlighting freedom to choose and absence of alternatives, (6) using principles of shaping; (7) cheerleading, and (8) agreeing on homework. Several examples are highlighted below.

In evaluating the pros and cons of proceeding with treatment, the therapist starts by laying out the counterarguments of pursuing treatment that the adolescent herself would likely consider. This is followed by a discussion of the advantages of participating in treatment. For example, the therapist might say: "Now, thinking of the disadvantages of committing to treatment, it is going to take a huge effort, possibly too much effort, to change some of your longstanding behavioral patterns. The time commitment necessary for group and individual sessions, as well as therapy homework assignments, and phone consultations, may be too much for you right now. On the other hand, by making a commitment to treatment, we will work together to help you achieve your goals of reducing your self-cutting, keeping you out of the hospital, and helping you stay in school so that you can graduate. So we should weigh out the pros and cons before you make a final decision".

In the Devil's Advocate approach, the therapist argues against a commitment to treatment with the intent that the adolescent will herself make her argument for participating in treatment. The therapist might say "this treatment requires a huge time commitment and I am not sure that you are up to it right now". This technique becomes quite useful with teenagers who are more likely to offer quick agreements without thinking through the consequences of those agreements, such as, "oh yeah, I definitely want to do this therapy . . . and yes, I will never cut myself again". Further discussion of commitment strategies with adolescents can be found in Miller et al. (2007).

8.2. *Behavioral analysis*

In DBT, the first step in changing problematic behavior, such as NSSI, is to identify the variables that control the behavior. If

more than one instance of NSSI occurred, then the most severe, best remembered instance is chosen. The therapist and the adolescent then develop a complete account of the chain of events that led to and followed the NSSI; this is referred to as a behavioral analysis. During the behavioral analysis, the therapist looks for controlling antecedent and maintaining variables. He or she also tries to identify each point at which an alternative behavior could have kept the problem behavior from occurring. The detail obtained in an effective analysis is similar to that of a movie script. In other words, the description of the chain provides enough detail that one would be able to visualize it sufficiently to replicate and reenact the sequence of events. Included in this analysis is an assessment of vulnerability factors (e.g., sleep difficulties, experienced pain, smoking marijuana), prompting events (e.g., boyfriend threatened to break up the relationship) and consequences (e.g., after she cut herself, the boyfriend agreed not to end the relationship) that are maintaining these target behaviors.

8.3. Problem solving

Problem solving requires the therapist to weave in possible solutions for the behavioral analysis. The therapist and adolescent must ask: "What solutions other than NSSI (the target behavior) could be applied to the problem at hand?" More specifically, the therapist looks for different points in the behavior chain to intervene and there are many possible places to intervene. For example, solutions can target (a) potential vulnerability factors (e.g., the sleep factor mentioned above), (b) precipitating events, (c) key links in the chain (i.e., specific cognitions, emotions, and behaviors), (d) specific contingencies that may be maintaining dysfunctional behaviors, and (e) extinguishing or punishing adaptive behaviors. The therapist then helps the adolescent to generate alternative solutions and encourages the use of effective long-term solutions over ineffective short-term solutions (Miller et al., 2007).

Alternative solutions to the adolescent's problems can be found among a variety of empirically validated cognitive and behavioral technologies including: (1) skills training, (2) exposure, (3) contingency management, and (4) cognitive modification. When conducting a solution analysis, the therapist must consider all change procedures available and quickly prioritize them in an effort to reduce the target behavior as quickly and efficiently as possible.

9. Family therapy

Just as it is important to assume a non-pejorative, non-blaming stance with teens engaging in NSSI, it is equally important to assume the same stance with family members. Parents or caregivers often experience intense feelings of anxiety, shame, and failure, which may come across to their teens and therapists only as anger. It is important to validate the full range of the family members' emotions and help them identify their primary emotions (typically not anger); these emotions are often easier for the adolescent to understand and even validate. Thus, family sessions need to target parental emotional vulnerability not only to increase treatment compliance but also to strengthen parental capacity for learning new behavioral skills.

Family sessions might be indicated for various reasons such as orienting parents to DBT, providing psychoeducation about NSSI and environmental contingencies, working to facilitate communication between the adolescent and her family member(s) about an important issue, conducting a behavioral analysis of a target behavior, or handling a crisis (see Miller et al., 2007).

When a teen and therapist determine that specific family interactions are relevant to NSSI, the primary treatment target is to *decrease family interactions that contribute to the context of the adolescent's NSSI*. Conducting a family behavioral analysis typically involves first obtaining the adolescent's detailed report of the antecedents and consequences of NSSI and then obtaining the same information from the parent/s in the subsequent family session. Data from these behavioral analyses helps to identify the controlling variables (e.g., specific thoughts, emotions, skills deficits, or contingencies) that lead down the pathway to NSSI. Once these variables are identified, a solution analysis is generated to help each family member identify a new behavior to employ the next time a similar situation arises (see Miller et al., 2007).

DBT family sessions also target *reduction of family or parent behaviors that interfere with the treatment*. To target only the adolescent's treatment-interfering behavior without considering the parent's treatment-interfering behavior ignores the reality that parents often have a great deal of power over the adolescent's capacity to participate in treatment.

The third target is to *reduce family interactions that interfere with the family's quality of life*. The focus is on helping the family, as a group, function in a more effective, respectful, and loving manner. One of the most common quality of life targets in family problems is communication. Over time, many families become chronically emotionally dysregulated. The family may present as continually angry or with the sense that they need to continually walk on eggshells. As a result, family members tend to avoid direct communication with one another due to fear of aversive consequences. A DBT family therapy session first addresses skills training in validation (Target 4) to set the stage for future behavioral and solution analyses regarding specific family problems. Often, family members are eager to start problem solving. Thus, it is important to orient families to the rationale for teaching validation and interpersonal effectiveness skills before engaging in problem solving (Miller et al., 2007).

10. Telephone consultation

The individual therapist invites telephone calls or pages from the patient for (a) coaching skills during in vivo problematic situations, (b) repairing the relationship alliance, and (c) reporting good news. For example, if an adolescent has urges to engage in NSSI and is unsure which DBT skills to use to avert the behavior, the adolescent is encouraged to page her therapist (24/7) to receive coaching as to how to manage their distress differently. This requires both a strong commitment on behalf of the adolescent to reduce this behavior as well as a sufficient therapeutic alliance that would foster such a call. Family members in the multi-family skills group are instructed to call the skills group leaders for telephone consultation as well for purposes of skills generalization.

11. Therapist consultation meeting

The adolescent DBT therapist consultation team is a weekly 90-min meeting that all therapists are required to attend. The primary goals of the consultation meeting are to help therapists remain effective and motivated in delivering DBT and to ensure that each member of the team is adhering to the principles of the therapeutic framework. When therapists discuss their individual challenges in providing therapy, it is the responsibility of the team to both provide support to the therapist and to assist the therapist in changing or generating treatment strategies so that the therapist can be as effective as possible in working with the adolescent. The function of the team is to balance acceptance of the therapist's vantage

point with the necessary strategies to promote change; thereby the team serves to provide therapy for the therapist. Further, the treatment explicitly acknowledges and strives to address the stress and burnout that can occur when working with adolescents who engage in frequent NSSI. The team members accomplish this through remoralizing and re-energizing therapists and helping therapists to maintain a dialectical position in treatment. Overall, the consultation team "treats" the DBT therapists with the DBT treatment. As in treating patients, treating the therapist occurs in the context of balancing validation with problem-solving strategies. The synthesis of the consultation team with the aforementioned treatment modalities enables DBT to provide treatment for a community of patients by a community of therapists.

12. Case example

Our composite patient is "Elena", a 14-year-old Hispanic female who currently lives with her biological parents in a small two bedroom apartment. Elena was referred to our outpatient DBT program following an incident in which she took five of her mother's opiate-based pain pills after an argument with her father. Elena took the pills with the intention to kill herself, but began to have second thoughts. She then told her father, who took her to the emergency room and she was ultimately hospitalized. This was Elena's second suicide attempt and third inpatient stay in the past 2 years; she also has a history of suicidal ideation and repetitive non-suicidal self-injury in the form of cutting herself and occasionally burning herself (both of which began at the time of Elena's mother's diagnosis of cancer nearly 3 years ago.

Elena also reported a long history of feeling sad, lonely, and intensely irritable with low self-esteem, and feelings of guilt, as well as racing thoughts and decreased appetite. Both Elena and her parents describe her as "very emotional", and prone to rumination and self-criticism. She restricts food several days a week and defines a "good day" as one in which she eats only one small meal. Elena is believed to have above-average intelligence, but her school grades have been declining during the past 3 years. She recently had what was apparently a panic attack during her gym class, and has since refused to return to school. Elena has limited social contacts outside of her 17-year-old boyfriend of 8 months and her My Space acquaintances with whom she has regular online chats.

Elena's mother has a history of major depression and anxiety disorder, and was diagnosed with breast cancer 3 years ago but is currently in remission. Her father has a history of alcohol abuse. Elena describes her mother as "annoying, but loving" and her father as "too strict". She reports that despite her inner turmoil, her parents only began attending to her emotional struggles when she began self-injuring. Elena frequently engages in oppositional and impulsive behavior at home, and later feels guilty and ashamed. She has a great deal of conflict with her father, which typically results in yelling and Elena calling her father names, cursing, throwing things, storming out of the house, and sometimes shoving him. She feels her father dismisses her negative emotions and stressors by describing them as "nothing" in comparison to her mother's cancer.

12.1. Diagnostic profile

The Schedule for Affective Disorders and Schizophrenia (K-SADS, Kaufman et al., 1997) yielded the following Axis I diagnoses for Elena: Major Depressive Disorder, Recurrent, Moderate; Dysthymic Disorder; Anxiety Disorder NOS and Eating Disorder NOS. Elena met full criteria for Borderline Personality Disorder on the Structured Clinical Interview for DSM-IV Axis II (SCID-II, First et al., 1995).

12.2. Pre-treatment phase

The therapist's essential goals of pre-treatment are to (1) establish a therapeutic alliance and (2) obtain the teen's agreement on goals (e.g., graduate high school, improve relationships with parents) and link them to her DBT primary treatment targets (e.g., reducing NSSI, and depression) while (3) obtaining commitment to engage in such an endeavor. In addition to the aforementioned goals, this process requires orienting and role induction: The adolescent must understand treatment structure and rationale, as well as the expectation that she will work very hard and be an active participant in the treatment. The individual DBT therapist strives to give the teen a sense of control over treatment. This was especially important in Elena's case, because from the outset she was quite defensive and stated she felt "forced" into therapy. The 5 problem areas (associated with the BPD domains of dysregulation (highlighted earlier in this paper) were presented and Elena endorsed 5 of them. Pros and cons, devil's advocate and several other commitment strategies were employed to help develop and strengthen Elena's commitment to treatment.

After Elena's initial commitment to treatment was obtained, her father was invited to join her for the latter portion of the session. The purpose of his presence in this session was to orient him to Elena's therapeutic goals, introduce him to the modes of treatment, and highlight the corresponding skills modules that he would learn during multi-family skills group. Obtaining Elena's father's commitment to treatment was crucial in creating a feeling of optimism and hope within the family system and signifying his role in working together as a team.

Elena's treatment goals were framed into the following *Stage One Target Behaviors*:

Target 1: Decreasing life-threatening behaviors (e.g., reducing suicidal ideation, suicidal behaviors, and NSSI).
Target 2: Reducing treatment-interfering behaviors (e.g., decreasing noncollaborative behaviors, coming late to sessions, and not paging her therapist).
Target 3: Decreasing quality-of-life interfering behaviors (e.g., decreasing depression and anxiety, decreasing interpersonal conflict, decreasing disordered eating, and decreasing absences in school).
Target 4: Increasing skillful behaviors (e.g., increasing use of mindfulness, distress tolerance, emotion regulation, interpersonal effectiveness, and walking the middle path skills).

A pyramid was drawn to illustrate the hierarchy of each Stage One target behavior and to orient Elena to the general structure of an individual session format.

12.3. Stage I

12.3.1. Individual therapy

The focus of Stage I of treatment is to increase Elena's safety and security by increasing her behavioral control over her Target 1 (i.e., life-threatening) behaviors. In session one, Elena was oriented to the function and rationale of a diary card in her treatment. It was explained to her that the purpose of this card is for her to learn how to self-monitor her target behaviors, her emotions, and for her to track her use of the new skills that she will acquire via the course of her treatment. To demonstrate, Elena and her therapist filled out the diary card for the day prior; then, the therapist began to troubleshoot what would potentially interfere in her completing her diary card daily. As anticipated, Elena initially viewed the diary card as "more homework" and half-jokingly stated that

this card must have been invented by her father as "everything my father ever wanted to know is right there at a glance and neatly summarized for him: it's my stalking father's dream. I know when I'm being set-up".

In an effort to set the stage for compliance and commitment, the therapist made clear from the outset that this diary has nothing to do with her father and, in fact, he would be told by the therapist that looking at this diary card would be a breach of confidentiality between her and the therapist. Irreverently the therapist continued,

> "Elena, you've tried to overcome your depression, suicidal thoughts, self-injurious behavior, restricted eating, and constant arguing with your parents for the past three years on your own. You can stay on the same path with these feelings and behaviors and not change a thing, or, you could consider trying something different and actually give this therapy a fair chance for the next sixteen weeks. By completing your diary card daily, you will have real evidence documenting how you are feeling on a daily basis, what urges you are having, what skills you did or did not use, etc. It's up to you, this is your life, and like you said, you only live it once. Think about it, get back to me, and we'll talk about it with your parents".

Elena grudgingly admitted that keeping track of her emotions and her target behaviors "could be" useful in monitoring her changes in her mood and her behavior and a way of officially determining if this "therapy business is a complete waste of my time." Elena then requested a brief meeting with her father to follow-up with his commitment to respecting Elena's privacy and not looking at her card even if she "mistakenly" left it out.

Impressively, during the 16 weeks of DBT, Elena completed her diary card daily, attended all scheduled individual, family skills group, and medication management appointments.

Target 1. Over the course of the initial weeks in treatment, Elena continued to experience frequent passive suicidal thoughts (I don't deserve to be alive; this isn't worth it for me) and at the same time reported significant relief from these painful thoughts by cutting her arms and abdomen. Despite her compliance in completing her diary card, Elena frequently remarked that she had "no idea" what triggered these urges and incidents of NSSI. Subsequently, behavioral analyses (BAs) were conducted during her individual sessions for each act of NSSI. As mentioned above, the functions of a BA are to (1) increase Elena's awareness of her thoughts and feelings in relation to a series of events that led up to her cutting herself, (2) to identify vulnerability factors, precipitating events, contingencies that may contribute to the maintenance of this target behavior, and (3) highlight where in this sequence of events Elena did use skills and where she could have engaged in alternative skillful behaviors to prevent the cutting from occurring in the future.

The following behavioral analysis was conducted for Elena's target behavior of cutting herself on the inside of her forearms with a broken CD the night before the 4th session. The therapist helped Elena to identify vulnerability factors that increased the likelihood of her engaging in her target behavior. Elena identified lack of sleep the previous night, restricting food for the past 2 days, and chronic arguments with her father regarding spending time with her boyfriend as important vulnerability factors that required further intervention. In addition, the identified precipitating event was a phone conversation with her boyfriend in which he stated "Maybe we shouldn't see each other anymore, if it's causing this much conflict between you and your Dad". This statement triggered Elena's thoughts ("He doesn't want to be with me anymore. He's going to leave me for someone else,") emotions (fear at the thought of being alone and anger with her boyfriend for not understanding her), and subsequent thoughts ("I can't take this . . . I want to cut myself . . . but that doesn't help me . . . I should try to distract myself"), and behavior (going on her "My Space" page and instant messaging her online friends). When her friends did not immediately respond to her, Elena had the thoughts ("No one wants to talk to me . . . I really am alone"), and emotions (fear, sadness and anger) which then led to her urges and subsequent behavior (breaking a CD and cutting both arms). Soon after when Elena's friends instant messaged her back, she told them that she cut herself. Her friends responded to the news of her cutting with support and validation and chatted with her for the next hour about her boyfriend.

Elena's therapist explicitly identified the relationship between her thoughts, feelings, and her target behavior of cutting highlighting the intervening variables including Elena's interpersonal and emotional dysregulation and impulsivity. The behavioral analysis helped Elena in identifying and understanding the contingencies that have been maintaining her cutting. Specifically, the behavior of cutting temporarily alleviated Elena's emotions of fear, anger, and sadness serving to negatively reinforce her target behavior. Her friends' response of increased attention and validation positively reinforced her target behavior by eliciting feelings of happiness and love. Elena's therapist helped clarify how these learning principles were operating for her and the need to change these reinforcers.

Elena and her therapist then conducted a solution analysis (which is typically woven throughout the BA). Elena was instructed to go back into the chain of events and circle at which points in the link she utilized skills, at which points she should have utilized skillful behaviors, and where she could have done something differently to avert the problem behavior altogether. With the help of her therapist, Elena was able to identify that using mindfulness and interpersonal effectiveness skills when she was on the phone with her boyfriend could have helped her to identify and resolve their communication problems. More specifically, Elena was able to acknowledge that by increasing her mindful awareness of her negative feelings of fear, sadness and anger, she could have then accessed her "Wise Mind" which would then permit her the chance to make use of her interpersonal effectiveness skills in an effort to keep her self-respect and get her boyfriend to assist her. She also remarked that recognizing her "worry thoughts" and making "cheerleading statements" would be important for her when using her interpersonal effectiveness skills as she frequently fears that she will not be able to express her thoughts effectively or that her anxiety will interfere in her ability to think clearly. She further hypothesized that if her communication with her boyfriend did not go as planned, she could utilize distress tolerance skills or call her therapist for skills coaching the next time a similar situation occurred. The therapist further discussed with Elena how cutting herself was not consistent with her long-term therapeutic goals of building a life worth living.

Target 2. The next target behavior in individual therapy is reducing behaviors that interfere with treatment. These behaviors may be on the part of Elena, her parents, or on the part of her therapist. During the course of Elena's treatment, Elena and her father were marked absent on three occasions for group therapy due to their late arrival (over 15 min) to group sessions. When they arrived late, Elena would be emotionally dysregulated and enter the group with her iPod blaring loud heavy metal music in an apparent effort to soothe herself. Elena's father would continue to reproach Elena as they entered the group room and it would take them approximately 10 min to settle in, take out their group materials, and re-regulate their emotions so they could participate effectively in session. Their late arrival to group was disruptive to all group members including the group leaders. A macro-level (i.e., 3 min) behavioral and solution analysis was conducted in skills group for the first two times that Elena and her father were late. The behavior analysis revealed that both Elena and her father were equally responsible for this treatment-interfering behavior. After their third tardiness

to group, the primary therapist (with the help of her consultation team) determined that Elena and her father should do a behavioral analysis, and devise a detailed prevention strategy during the later half of her next family session. During that session, Elena and her father also came up with a suitable repair to the group (i.e., they decided that Elena would plan a mindfulness exercise and that her father would bring some authentic Dominican food to share with the entire group).

Target 3. In an effort to structure Elena's treatment, her numerous quality-of-life interfering behaviors were categorized into a treatment sub-hierarchy. Elena's dysfunctional interpersonal relationship interactions with her parents and her boyfriend were a trigger for much of her NSSI. Therefore, it was collaboratively determined that her interpersonal difficulties and her depression would rank as the highest target behaviors within this category. Elena's anxiety, restricting food, skipping classes and use of alcohol (i.e., drinking one to two beers once a month) were targeted as well.

Target 4. Elena needed to increase the use of skills she already had and acquire new behavioral skills if she was going to build a life worth living. New skills are primarily learned during multi-family skills group sessions and fine-tuned during and between individual and family therapy sessions. During Elena's individual sessions, her therapist reinforced the application of skillful behaviors in all relevant contexts of her life and then provided telephone coaching for Elena when she occasionally called in acute distress.

Multi-family skills group. Elena and her father attended the 16-week multi-family skills training group with five other teenagers and their parents. During group, Elena and the other group members were taught five skills modules (referenced earlier in this paper). Elena took quickly to learning the skills and soon became proficient at utilizing DBT vernacular in group and individual discussions. In spite of her apparent knowledge and understanding of the skills, Elena initially had a great deal of difficulty applying these skills at home when she was dysregulated. Initial individual sessions focused on teaching Elena how to get into Wise Mind and practicing a mindfulness exercise at the start of each individual session. This greatly increased Elena's ability to generalize her skills from group to her home. Once Elena was able to non-judgmentally observe and identify her emotions, she was then able to utilize various skills learned in group. Elena made great progress in decreasing her suicidality and her NSSI via use of distress tolerance skills particularly Distracts with ACCEPTS and self-soothing skills (see Linehan, 1993b). Elena also began to consistently utilize a range of emotion-regulation skills to decrease her depressive and anxiety symptoms. As Elena's father began to develop a rapport with the group leaders, he began to seek them out during the Skills Group breaks and asked for coaching between sessions regarding interpersonal effectiveness skills and how to more effectively validate his daughter's emotions without reinforcing her ineffective target behaviors.

After 16 weeks, Elena and her father graduated from the DBT Multi-Family Skills Training Group and earned a diploma at the DBT graduation ceremony. This ceremony was held during the later half of the final skills group and provided an opportunity for Elena and her father to say goodbye to each group member and provide and receive feedback regarding their progress and areas in need of ongoing development.

Family therapy. Elena and her father participated in five family sessions during their 16-week course of DBT. Elena's mother was present for two of these sessions in which a family behavioral analysis was conducted as she was directly involved in two of Elena's incidents of NSSI. The family BA was used to identify adaptive and maladaptive interactions within Elena's family, highlight contingencies that were maintaining Elena's behavior, and developed a family solution/crisis plan.

The following behavioral analysis was conducted for the target behavior of Elena's cutting her legs and her stomach 2 days before her session. At the start of her session, Elena and her therapist outlined a plan for the family session during the first 10 min of session. Elena agreed that she would write down the chain of events on the therapist's dry-erase board as a tool to stay mindful during session. When Elena and her parents were present together, the therapist asked them to identify vulnerability factors that increased their stress levels making them more likely to act on their emotions in ineffective ways. Elena identified lack of sleep, chronic arguments with her boyfriend, and her mother's upcoming follow-up oncology appointment as vulnerability factors. Her father identified Elena's mother's oncology appointment, a letter from Elena's school stating that Elena was in danger of failing, and increased stress at work as vulnerability factors. Elena's mother identified her increased worry about her daughter's and her husband's conflicted relationship, medical bills, and her poor sleep habits as vulnerability factors for herself.

Elena reported that the precipitating event in her behavioral chain was her telling her father that she didn't want to be by herself and requesting permission to go to her boyfriend's house while her parents were at Elena's mother's oncology appointment. Her father responded to her request with "You're stressing your mother out, the last thing she needs to worry about before her doctor's appointment is whether or not you see your boyfriend. All you care about is yourself." This interaction triggered Elena's thoughts ("I'm selfish. I shouldn't be thinking of myself when my mother is ill. What if her cancer is back? He doesn't understand me at all") her emotions (anger towards her father for not understanding that she cares about her mother, shame and self-loathing for thinking about wanting to see her boyfriend, and sadness and fear at the thought of her mother's cancer returning). The shame and self-loathing resulting from her father's comment that all you care about yourself, was a key link in the chain toward NSSI. However, it was Elena's subsequent thought, "You don't deserve to have a mother like this, You should be the one that's ill," that immediately triggered her NSSI (cutting her legs with the glass). Elena's mother then came into the room, saw that Elena had cut herself, hugged Elena, cried, and told her how much she loved her. She then cleaned Elena's cut on her legs. Elena's parents then quickly left the house, as they were late in leaving to go to Elena's mother's appointment. Elena stated that she felt "overwhelmed by my mother's expression of love" and went to the bathroom and cut herself repeatedly on her stomach. She stated that she wanted to feel something other than shame and sadness.

The behavioral analysis helped Elena and her parents to identify the transactional nature of their interaction; specifically the link between her father's invalidation, Elena's self-invalidation, and her parents' inadvertent reinforcement of her cutting. During the solution analysis, Elena's therapist worked with her parents to learn how to validate Elena's initial feelings of loneliness, take Elena's coping suggestions (e.g., see her boyfriend) seriously, and highlight contingency management skills that they could have utilized so that they can learn how their behaviors actually reinforce Elena's cutting. Elena was then encouraged to keep practicing her interpersonal effectiveness skills and was coached where in the chain of events she could have utilized emotion regulation, mindfulness, and distress tolerance skills or, when all else failed, when she could have called her therapist for skills coaching. Elena's parents were then instructed that the next time that they observed Elena to become increasingly angry and frustrated to coach her to use distress tolerance skills or page her therapist for coaching. Elena's father was also encouraged to page their group leader for skills coaching if he mindfully observed his tendency to become judgmental toward his daughter in the heat of the moment.

Telephone consultation. At the start of treatment, Elena was instructed to use her cell phone during her individual session to practice paging her therapist in an effort to add coaching calls to her behavioral skills repertoire. This behavioral rehearsal was assigned to Elena as she specifically stated that she'd "never page" her therapist as she felt "too nervous and uncomfortable". The therapist then asked Elena to enter her therapist's office and pager numbers into her cell phone. Elena was then directed to leave her therapist one voice mail message about the movie that she was going to see after session, and page her therapist one time the following day. The function of this homework was to expose Elena to her anxiety in contacting the therapist outside of session and shape her behavior to effectively call and page her therapist for skills coaching. Following these assignments, Elena gradually felt more comfortable and at ease in asking for help. Her behaviors were subsequently rewarded by praise from her therapist and effective skills coaching.

Therapist consultation group. Elena's therapist attended weekly team consultation meetings with all of the other DBT treatment providers (i.e., individual and group therapists, psychiatrists, nurses, etc.). These team meetings function to "treat" the therapist with DBT in order to enhance her capabilities to provide the best care to her patients. Thus, when Elena's therapist was feeling frustrated by Elena's apparent unwillingness to page her for coaching, her therapist's team members offered phenomenologically empathic interpretations of Elena's behavior. One member stated, "When you think about Elena's tendency to become invalidated by her boyfriend and father when she asks for assistance, it is no wonder why she is not readily calling you (the therapist) when she's in distress . . . It may take a while to see that some people may more effectively validate her concerns when she expresses them." This intervention helped reduce her therapist's frustration. The team also assisted the therapist on how to intervene with Elena's parents in clarifying their role in Elena's NSSI.

Phase two. Following graduation from Phase one of DBT, Elena and her therapist decided that she would continue to benefit from DBT and Elena volunteered to participate in the DBT Graduate Group—which is a maintenance and continuation phase of treatment. Without a continuation phase of treatment, most adolescents will relapse and exhibit further NSSI, depression, and the resurgence of other remitted problems. The Graduate Group requires a 16-week commitment; however, provided an individual adolescent can identify new goals and works towards them, she can re-contract for an additional 16 weeks several times, and in effect can stay in Graduate Group for 2 years or more if the modality is effective. In Graduate Group, Elena practiced the skills every week and continued to work with her group leaders and adolescent group members on keeping her NSSI urges under control, coping with conflict in her home, and building a life worth living.

Case termination. At the time of her discharge from our clinic, Elena and her father graduated from Multi-Family Skills Group, Elena completed one 16-week round of Graduate Group, and was actively working towards her goals. She no longer met DSM criteria for Major Depression and BPD and had reduced her Target One behavior of cutting to one incident in the past 2 months. Elena and her father reported significant improvement in their relationship and they were both very proud of the progress that Elena made in DBT. Elena became more skillful at validating her own emotions and managing her fears of abandonment from those she cared about. She was able to effectively ask for help from others and even joined a support group for teenagers whose parents were diagnosed with cancer. Although Elena had not returned to school, she was receiving home schooling with the plan to start back this coming Fall. Elena denied the experience of suicidal thoughts and behaviors as well as NSSI urges and actions. She reported that she was looking forward to working at a music store this summer and continuing to build what she defined to be a life worth living.

13. Conclusion

Adolescent NSSI is a serious and prevalent problem in American culture and abroad that needs to be addressed. The fledgling epidemiological and treatment outcome research is beginning to expand. While DBT is a promising treatment for NSSI, researchers may find that such a comprehensive treatment is not necessary to treat NSSI in adolescents who present with a single mental disorder or for whom no BPD features exist. Rather, DBT may need to be reserved for those multi-problem and multi-diagnostic adolescents engaging in NSSI. Further research is clearly indicated to examine risk factors for NSSI among adolescents as well as to determine the most effective and efficient psychosocial interventions for this high-risk behavior.

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