Potential Benefits of Dialectical Behavioral Therapy for Adolescents Receiving Treatment for Borderline Personality Disorder Traits: Implications for Psychiatric Nurses

Sara Hagen1, Cheryl L. Woods-Giscombe2*, Jeehae Chung2
Linda S. Beeber2

1Pride in North Carolina, Cary, North Carolina 27511
2The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27599
*Corresponding Author: Cheryl.Giscombe@unc.edu

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Abstract Borderline personality disorder (BPD) involves a complex constellation of symptoms including suicidal threats, suicidal gestures, and self-harming behaviors. There are limited effective treatment options for adolescent patients with BPD or BPD traits in the inpatient hospital setting. This paper discusses BPD and BPD traits in adolescents, examines challenges faced by inpatient nurses, summarizes evidence supporting Dialectical Behavioral Therapy (DBT) for adolescents with BPD traits, and proposes specific inpatient setting programming to address the needs of this population. This paper suggests that DBT may be successfully implemented to optimize outcomes. DBT has typically been used in adult outpatient settings. However, research suggests that the integration of DBT strategies in inpatient settings serving adolescents could facilitate effective outcomes. Nurses in particular are critical members of the hospital treatment paradigm. Outcomes could be enhanced if nurses have a better understanding of DBT and if they received training to enable them to contribute to DBP programming.

Keywords Dialectical Behavioral Therapy, Borderline Personality Disorder, Adolescents, Nursing, Inpatient

1. Introduction

Adolescents with borderline personality traits or diagnosis of borderline personality disorder (BPD) who require inpatient hospitalization need specialized care (Cailhol et al., 2013). This is particularly the case for adolescent patients engaging in suicidal gestures and non-suicidal self-injurious behaviors. Inpatient nurses caring for these patients face the potentially challenging task of offering interventions that are therapeutic, maintain patient safety, and optimize symptom management. Dialectical Behavioral Therapy (DBT) has been shown to be effective with adults diagnosed with BPD (Lieb, Zanarini, Schmahl, Linehan, & Bohus, 2004), and a growing body of research demonstrates the application of DBT for adolescents in outpatient settings (Miller, Rathus, Dubose, Dexter-Mazza, & Goldklang, 2007); however, there is currently no standardized, systematic approach for the treatment of adolescents with traits of the disorder, especially in the inpatient setting.

Nurses on inpatient units play a significant role in maintaining the well-being of their patients. They provide the structure and management of the milieu on an inpatient unit and also provide most of the education that hospitalized patients receive. Nurses are well-positioned to facilitate behavioral change in this setting. They are available around-the-clock to intervene and reinforce therapeutic concepts that patients learn as various issues arise on the unit. If nurses receive training in DBT, they could be an integral part of the DBT team, collaborating with an inpatient primary therapist and other members of the treatment team. Given the documented benefits of DBT for adults and adolescents in outpatient settings (Andion et al., 2012), the implementation of DBT on adolescent psychiatry inpatient units could potentially prevent future hospitalizations, provide adolescents with BPD traits the skills to manage symptoms, and prevent future suicide attempts and self-harming behaviors (Andion et al., 2012; Memel, 2012).

This paper will discuss BPD in adolescents, examine the extent of the challenges faced by nurses in the inpatient setting, systematically review and summarize the evidence supporting DBT for adolescents with borderline personality traits, and propose specific inpatient setting programming to address the needs of this vulnerable population.
2. Borderline Personality Disorder in Adolescents

The Diagnostic and Statistical Manual of Mental Disorders (DSM; American Psychiatric Association [APA], 2013) requires five of the following nine criteria for diagnosing borderline affective disorder: (a) frantic efforts to avoid real or imagined abandonment, (b) pattern of unstable and intense interpersonal relationships, (c) identity disturbance, (d) impulsivity, (e) recurrent suicidal behavior or self-mutilating behavior, (f) affective instability, (g) chronic feelings of emptiness, (h) inappropriate intense anger, and (i) transient paranoid ideation or dissociative symptoms. According to the American Psychiatric Association (2013), the main features of BPD include significant impulsive behavior, chronic instability in interpersonal relationships, disturbances in self-image, and affective instability. This constellation of symptoms creates emotional dysregulation and lability, which can result in a number of maladaptive coping strategies, notably chronic suicidality, including threats, gestures, and attempts, as well as non-suicidal self-injurious behaviors like cutting and burning. Other maladaptive coping strategies include overspending, eating disorders, substance abuse, and unsafe sex (APA, 2013). Linehan’s biosocial theory of personality functioning posits that BPD develops when one has a biologically based emotional sensitivity paired with an invalidating environment (Linehan & Schmidt, 1995). An invalidating environment consists of people and life situations that communicate that the person is incorrect, inaccurate, or inappropriate (Klein & Miller, 2011).

The topic of diagnosing BPD in adolescents has been controversial, and there has been great discussion and developing evidence regarding the appropriateness of the diagnosis so that younger patients with these issues can receive appropriate treatment as early as possible. The DSM does not include a definitive diagnosis of BPD in adolescents for several reasons. The personality is still evolving as it develops in response to interpersonal exposure, personal reflection, and neurocognitive changes (Meechings & O’Brien, 2004). Another reason it is difficult to diagnose BPD in adolescents is that the course of illness is not yet fully understood, and the diagnosis is not always stable because adolescents can quickly move in and out of meeting criteria (Biskin, Paris, Renaud, Raz, & Zelkowitz, 2011). Nevertheless, the DSM does allow the diagnosis before age 18 if dysfunctional personality traits are deemed pervasive, persistent, and not likely limited to one particular developmental stage or an episode of an Axis I disorder (such as major depressive disorder or schizophrenia); also, the features must have been present for at least one year (APA, 2013). The DSM also states that features of a personality disorder become recognizable in adolescence or early adult life. Becker et al. (2002) found that symptoms of BPD appear as frequently for adolescents as they do for adults. The authors propose developing distinct BPD criteria for adolescents that address core features that differ from adults (Becker, Grilo, Edell, & McGlashan, 2002). For example, the authors found that the subjects who had abandonment fears had about an 85% chance of meeting full DSM criteria for BPD. Further, Meechings and O’Brien (2004) found that many BPD symptoms persist in subjects who no longer met criteria for diagnosis. Biskin et al. (2011) found that BPD can indeed develop in early adolescence. Based on their findings, the authors recommend that patients with BPD be directed to appropriate treatments at an early age and that the BPD diagnosis include “difficult,” “manipulative,” “attention seeking,” and “demanding” (Aviram, Brodsky, & Stanley, 2006, p. 250). This stigma has the potential to affect how health care professionals care for BPD patients (Aviram et al., 2006) because there can be a misconception regarding outcomes of interactions and interventions with patients who have BPD. Whether this is conscious or unconscious among providers, it is vital to increase awareness of and address these misconceptions in order to provide the most effective care for these patients. A common reaction of health care providers is the creation of emotional distance between the provider and the patient, which can result in the patient experiencing increased stress (Aviram et al., 2006). A stress reaction may contribute to engagement in self-destructive

3. Nursing Care of Patients with Borderline Personality Disorder

The complex work of caring for patients with BPD has been well explored and documented (Bland, Tudor, & McNeil Whitehouse, 2007; Deans & Meocevic, 2006). Osborne and McComish considered treatment of BPD to be one of the greatest challenges facing mental health care professionals today (Osborne & McComish, 2006). There is a stigma and negative connotation often associated with the BPD diagnosis. Pejorative phrases associated with the diagnosis include “difficult,” “manipulative,” “attention seeking,” and “demanding” (Aviram, Brodsky, & Stanley, 2006, p. 250). This stigma has the potential to affect how health care professionals care for BPD patients (Aviram et al., 2006) because there can be a misconception regarding outcomes of interactions and interventions with patients who have BPD. Whether this is conscious or unconscious among providers, it is vital to increase awareness of and address these misconceptions in order to provide the most effective care for these patients. A common reaction of health care professionals is the creation of emotional distance between the provider and the patient, which can result in the patient experiencing increased stress (Aviram et al., 2006). A stress reaction may contribute to engagement in self-destructive
behaviors, ultimately creating a self-fulfilling prophecy (Aviram et al., 2006).

One important issue to consider is that caring for BPD patients can be a source of burnout in health care providers (Mullen, 2009). Inpatient nurses in particular are commonly at the receiving end of verbal abuse, manipulation, and splitting, which can create a negative impact on other patients as well (Bland et al., 2007). “Splitting” is a defense mechanism where the patient sees staff members as “all good” or “all bad,” and it causes the patient to seek different staff members to provide the help or answers they think they need, lashing out at times when these perceived needs are not met.

It can be difficult for the nurse to practice from a framework of recognizing that various behaviors demonstrated by BPD patients are reflecting the “nature of the pathology” and not the “nature of the person” (Aviram et al., 2006, p. 249). This makes a therapeutic relationship difficult to establish, especially with time and staffing restraints. Patients with BPD often initially idealize caregivers and then devalue them as the relationship grows and the caregiver “fails” to meet his or her needs and demands. In addition, most staff nurses lack sufficient knowledge and skills to use appropriate approaches (Swenson, Sanderson, Dulit, & Linehan, 2001). These particular approaches can be especially unsettling for caregivers and then devalue them as the relationship grows and the caregiver “fails” to meet his or her needs and demands (Mullen, 2009). Inpatient nurses in particular are commonly at the receiving end of verbal abuse, manipulation, and splitting, which can create a negative impact on other patients as well (Bland et al., 2007). “Splitting” is a defense mechanism where the patient sees staff members as “all good” or “all bad,” and it causes the patient to seek different staff members to provide the help or answers they think they need, lashing out at times when these perceived needs are not met.

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5. Dialectical Behavioral Therapy

DBT was developed by Linehan and was designed specifically for BPD pathology (Linehan, 1993). It integrates the principles of traditional cognitive behavior therapy with principles of eastern philosophy (Katz, Fotti, & Postl, 2009), including observing, mindfulness, and avoidance of judgment (Klein & Miller, 2011). Although DBT was initially intended for outpatient treatment, it is the only evidence-based treatment for suicidal adults with BPD (Klein & Miller, 2011). More recently, DBT has been adapted for other settings and for a wider range of diagnoses (Bohus et al., 2004). There is considerable evidence to support the validity of using DBT for adults in inpatient settings, and a growing body of evidence supports its use for adolescents.

DBT is based on the Greek philosophical concept of dialectics, which is the practice of logical discussion (Osborne & McComish, 2006). The dialectical perspective involves recognizing that there are inherent opposing forces of reality and that the “truth” lies somewhere in between (Klein & Miller, 2011). This concept is especially important for patients with BPD, who often have very fixed thinking. The main dialectic concept of DBT is acceptance of the patient as they are and concurrently encouraging change (Klein & Miller, 2011). Other important dialectics mentioned by Klein and Miller (2011) include “flexibility and stability, challenging and nurturing, and deficits and capabilities” (p. 206).

There are four basic tenets of DBT: mindfulness, interpersonal effectiveness, emotion regulation, and distress tolerance. What follows is an overview of each, as described by Linehan (1993).

Mindfulness skills are the “core skills” of DBT and are therefore the skills taught first. The theory guiding the mindfulness tenet of DBT describes three states of mind: reasonable mind, emotional mind, and wise mind. Reasonable mind is the part that is rational and able to solve problems intellectually. If one only responds to this state of mind, then their emotional needs may not be met. Emotional mind includes thoughts and behaviors that are emotionally driven, and if one only responds to this state of mind, they may react impulsively and without thinking things through. Wise mind combines both the reasonable mind and the emotional mind to consider thoughts, feelings, and behaviors from both domains in order to make the best decisions.

The development of mindfulness skills allows patients to...
be “present” and calm in the moment, rather than thinking about the past or future. In order to begin to practice mindfulness, they are taught “what” skills, which are observing, describing, and participating. They are also taught “how” skills, which are taking a nonjudgmental stance, focusing on one thing in the moment, and being effective. In essence, these skills encourage the patient to be conscious of “what” they are doing and “how” they are doing it in the present moment. Once these concepts are understood, they can be used to see things without placing meaning or judgment.

The second tenet of DBT is interpersonal effectiveness. A common challenge for patients with BPD is maintaining relationships (Miller, Neft, & Golombeck, 2008). They often end relationships secondary to lacking skills in tolerating distress, emotion regulation, and problem solving. The interpersonal effectiveness component of DBT looks at building these types of skills for enhancing relationships. It includes assertiveness training and targets issues such as abandonment issues and social skills. The term “effective” for purposes of DBT means “obtaining changes one wants, maintaining the relationship, and maintaining your self-respect” (Linehan, 1993, p. 70).

The third tenet of DBT is emotion regulation. This is important for patients with BPD because their difficulty in managing their emotions is what frequently manifests in unhealthy behaviors. In fact, the behaviors are often the patient’s attempt not to feel their emotions at all. In this part of DBT, the patient is taught to identify current emotions and other factors surrounding them, such as triggers for the emotion, interpretations of the triggers, the actual physical experience of the emotion, and so forth.

Specific skills taught in the emotion regulation portion of DBT include: (1) identifying obstacles to changing emotions; (2) reducing vulnerability to “emotion mind”; (3) increasing positive emotions; (4) increasing mindfulness to current emotions; (5) taking opposite action; and (6) applying distress tolerance techniques. Specific distress tolerance techniques include distraction, improving the moment, self-soothing, and thinking of pros and cons of tolerating the distress.

DBT includes homework assignments for each of the skills listed above. An important part of therapy includes the patient completing daily diary cards. The cards assist the patient in reflecting on the day and keeping track of unsafe thoughts, therapy-interfering behaviors, the skills they may have used to combat these thoughts and behaviors, as well as how effective the skill was in each instance. Another handout is behavioral chain analysis (BCA), which is used after problem behavior such as self-injury. The BCA compels the patient to consider target feelings and actions associated with the behavior and what the person could have done differently to prevent the problem behavior.

6. Dialectical Behavioral Therapy for Adolescents with Borderline Personality Traits

To support the proposition that the integration of DBT strategies would be beneficial for adolescents with BPD or BPD traits on inpatient psychiatric units, the research literature on this topic was examined. A systematic literature search was conducted in accordance with guidelines outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement (Moher, Liberati, Tetzlaff, Altman, & Group, 2009) to identify intervention studies that implemented DBT with adolescents with BPD or BPD traits at either outpatient or inpatient settings. Papers that met the following criteria were included: experimental or quasi-experimental intervention studies, participants between the ages of 13 and 25 with BPD or BPD traits, including history of suicide attempts, suicidal ideations, non-suicidal self-injurious behavior (NSIB), inpatient or outpatient intervention setting, English language, published between the years 2000 and 2014. The literature search for this paper included key word searches in electronic databases, including PubMed, CINAHL, Google Scholar, and PsycINFO; key search terms included DBT and adolescents, DBT and BPD, and BPD and adolescents. Subsequent searches were expanded to include self-injury, nursing, and BPD and adolescent psychiatric hospitalization. Seventy-nine papers were initially identified from the initial search using electronic databases; an additional 14 papers identified through other sources. A total of eight peer-reviewed published articles met the inclusion criteria (see Figure 1 for the PRISMA diagram); these articles are described below.
It is important to note that an early adaptation of DBT with tailoring for adolescents was first developed by Miller and colleagues in 1997 (see MacPherson, Cheavens, & Fristad, 2013; Miller, Rathus, & Linehan, 1997). The basic principles and skills of DBT were maintained with some minor changes. Modifications included shorter duration of treatment term (16 weeks rather than a full year), which may be more feasible for adolescents to complete. Next, family members were included in skills training groups and encouraged to be coaches and to provide more validating environments. Family therapy sessions were also included to address this. There were also modifications to the wording on the handouts to make them more developmentally appropriate. Lastly, a fifth skills-training module “Walking the Middle Path” (Klein & Miller, 2011) was added, which addresses the various dialectics that exist in parenting, such as extreme leniency versus an authoritarian approach and “pathologizing normative behaviors versus normalizing pathological behaviors” (Katz et al., 2009, p. 104).

Woodberry & Popenoe (2008) and James and colleagues (2008) investigated the effects of DBT in adolescents using one-group pretest-posttest designs in community-based outpatient settings (James, Taylor, Winmill, & Alfoadari, 2008; Woodberry & Popenoe, 2008). In Woodberry & Popenoe’s study, a total of 46 adolescents with suicidal and self-injury symptoms were included in an intervention that included DBT principles and strategies. Nineteen of the 46 participants were studied with their parents. Adolescent participants reported improvements on self-harm thoughts, depressive symptoms, anger, dissociation, and functional difficulties. The parents reported improvements in their adolescents’ emotional well-being and reductions in problem behaviors. Parents also reported improvements in their own depressive symptoms. In the James (2008), a DBT intervention was implemented with 16 female adolescents who exhibited persistent and severe deliberate self-harm. The study resulted in improvements in depression, hopelessness, deliberate self-arm, and general functioning, and these improvements were maintained at the 8-months post-intervention follow-up assessment.

James and colleagues (2011) conducted a study in to investigate the implementation of DBT in a community, outpatient setting, with 18 adolescent participants with a history of repeated self-harm behaviors (James, Winmill, Anderson, & Alfoadari, 2011). The contents of DBT intervention were similar to other studies, but the duration of intervention was the longest among the studies reviewed. The intervention spanned one year, divided into two 6-month
blocks of active engagement. This intervention resulted in significant improvement in depression, hopelessness, and self-harm.

Geddes and colleagues (2013) conducted a one group pretest-posttest pilot test with 6 girls in an outpatient setting (Geddes, Dziurawiec, & Lee, 2013). In this study, a parent needed to accompany the adolescent during the intervention. The intervention included individual and family skills training group sessions, phone consultation, and consultation team. Through the intervention, symptoms decreased significantly, and results were maintained at the 3-month follow-up.

Miller and colleagues (2000) conducted a one-group pretest-posttest study with adolescents who were participants in an adolescent depression and suicide program. The 27 participants in the study completed a 12-week DBT intervention, which resulted in significant reductions in BPD symptoms, including confusion about self, impulsivity, emotional instability, and interpersonal problems (Miller, Wyman, Huppert, Glassman, & Rathus, 2000). Participants reported improvements in distress tolerance and mindfulness skills.

Fleischhaker and colleagues conducted research that also supported DBT for adolescents with BPD symptoms (Fleischhaker et al., 2011). That research team implemented the DBT intervention designed by Rathus and Miller (2002), coined in their paper as “DBT-A.” Their pilot study included twelve girls, aged 13-19, that had a BPD diagnosis or at least three BPD criteria. The outpatient treatment lasted from 16-24 weeks and included one hour of individual therapy and two hours of skills training group each week. A one-year follow-up was also included in the research. Nine girls completed the DBT treatment, and they experienced a reduction of suicidal and self-injurious behaviors as well as increased quality of life for both the patients and their parents. Other areas that showed improvement were emotion dysregulation and depressive symptoms (Fleischhaker et al., 2011).

Two studies included two-group designs. Rathus & Miller (2002) completed a two-group quasi-experimental study in outpatient setting. The number of participants in each group was different; 29 participants in DBT group and 82 participants in TAU group. The DBT group had DBT-based individual therapy and a family skills training group each week, and the TAU group had individual therapy (supportive/psychodynamically based) and weekly family therapy. The researchers found that the DBT group had “significantly fewer” hospitalizations during treatment, less suicidal ideation, and fewer BPD symptoms. They emphasized the appropriateness of DBT for adolescents, highlighting its focus on minimizing life-threatening behaviors as well as reducing therapy-interfering behaviors and quality-of-life behaviors. This study also found that adolescents in the DBT group were more engaged in treatment compared to adolescents who received TAU. Further, the authors highlighted how the target skills of DBT correspond to basic issues of adolescence such as mood lability, unstable relationships, and identity disturbances.

Katz and colleagues (2004) conducted the only study that was conducted in an inpatient setting among the studies included in this review (Katz, Cox, Gunasekara, & Miller, 2004). This study involved a two-group quasi-experimental design. The 62 participants with a history of suicide attempts or suicidal ideation were divided into two groups based on the hospital unit. An adaptation of Klein and Miller’s (Miller et al., 1997)-DBT model was used for the DBT group. The TAU group received individual therapy, group therapy, and a milieu that were all psychodynamically based. After the intervention, participants in the DBT group reported fewer incidents on the ward; both groups were improved in their symptoms at discharge. The investigators found that DBT programming can positively affect safety, morale, and reduce hospitalization costs (Katz et al., 2004). They also found that DBT engaged promoted retention and adherence (Katz et al., 2004).

7. Implications for Future Research and Nursing Practice

The development of a structured inpatient treatment for adolescents based on DBT principles and skills training could create a bridge between outpatient and inpatient treatment modalities. Regardless of whether the patient has already been receiving DBT or not, hospitalization could potentially introduce or reinforce this evidence-based treatment for adolescent patients with borderline traits. In addition, DBT training for psychiatric nurses can facilitate understanding of the underlying dynamics of BPD, which is critical for working with these patients (Bland et al., 2007).

An important component of DBT philosophy is that hospitalization should be avoided if possible for BPD patients; outpatient treatment is preferable (Bohus et al., 2004). However, the reality is that BPD patients are hospitalized frequently. Nurses in the inpatient setting could play an integral part in reinforcing philosophies included in DBT to guide their practice, improve their interactions with patients with BPD, and facilitate a validating milieu and program. As stated in the introduction, nurses have the most exposure and the most interaction with patients of any member of the treatment team (Institute of Medicine, 2011). The essence of psychiatric nursing is the development of a therapeutic relationship, which requires building rapport and trust, as well as demonstrating empathy. If the skillset for working with patients with BPD is limited or compromised as a result of reactions to challenging behavior of the BPD, the good intentions of providing quality nursing care can be impeded. With appropriate training, supervision, and support, nurses at all levels of education could have increased confidence, more positive attitudes, and improved interpersonal skills to care for adolescents with BPD traits (Osborne & McComish, 2006). They could use their...
enhanced knowledge about the pathology of the disorder to maintain a therapeutic relationship in the midst of conflict (Talkes & Tennant, 2004). For example, a nurse with training in DBT could encourage the patient to accept things as they are, as she or he also challenges herself or himself to accept and validate the patient as he or she is.

In Rathus and Miller’s (2002) adapted DBT program, four of the five treatment modes could reasonably be replicated in the hospital: individual therapy, multi-family skills-training groups, family therapy sessions, and therapist consultation meetings. The fifth treatment mode, telephone consultation, would be unnecessary while the patient is in the hospital. Nurses could potentially be involved in any of these modalities, depending on the educational level of the individual nurse.

Swenson and colleagues (2001) conducted research regarding DBT on inpatient units for adults with BPD. They included several specific interventions that could be replicated for use with adolescents. Many of these proposed interventions could be implemented by nurses with DBT training, including skills training and coaching, as mentioned previously. In addition, they included contingency management, which nurses can also implement. Contingency management interventions involve those associated with principles such as positive reinforcement, negative reinforcement, consequences, and shaping. The purpose of contingency management interventions is to limit or replace interventions that reinforce negative behaviors, such as soothing a patient who has engaged in self-injurious behavior. Swenson and colleagues (2001) also included structured response protocols to implement in response to suicidal and egregious behaviors on the unit. Protocols included requiring the patient to complete a BCA, present it to peers, and make any associated repairs, such as apologizing to others (Swenson et al., 2001). Staff nurses could carry out individual processing sessions with their patients and discuss the interactions with another DBT-trained supervisor or peer (Bland & Rossen, 2005) when appropriate.

The development of a structured inpatient treatment for adolescents based on DBT principles and skills training could create a bridge between outpatient and inpatient treatment modalities. Regardless of whether the patient has already been receiving DBT or not, hospitalization could potentially introduce or reinforce this evidence-based treatment for adolescent patients with borderline traits. In addition, DBT training can facilitate understanding of the underlying dynamics of BPD, which is critical for working with these patients (Bland et al., 2007). DBT could also provide the critical skillset for nurses in caring for patients with BPD.

8. Summary

The growing body of evidence regarding BPD as a valid diagnosis for adolescents, the emerging empirical evidence supporting the use of DBT for BPD, and the positive outcomes associated with implementing DBT in adolescents with BPD diagnosis or traits (see MacPherson et al., 2013; Groves, Backer, van den Bosch, & Miller, 2012) suggest that future research is warranted to examine the potential benefits of psychiatric nurses receiving training in DBT and taking the lead to develop appropriate programming for adolescent inpatient units. Future research should incorporate larger sample sizes, randomized-controlled design, and longitudinal assessment to produce additional evidence for the effectiveness of nurse-facilitated DBT among adolescents with BPD or BPD traits. In doing so, inpatient hospitalization of adolescents with BPD or BPD traits (an experience often wrought with stress for both patients and health care professionals) could potentially be met with hope and confidence for improved therapeutic relationships and increased capacity to make hospitalization, and life, more manageable for this vulnerable population.

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<table>
<thead>
<tr>
<th>Authors (year)</th>
<th>Design / Setting</th>
<th>Sample size (female / male)</th>
<th>Age Mean (Range)</th>
<th>Participants Inclusion Criteria</th>
<th>Intervention (DBT)</th>
<th>Outcomes</th>
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</thead>
<tbody>
<tr>
<td>Geddes et al. (2013)</td>
<td>One group pretest-posttest pilot test</td>
<td>6 / 0 - A parent accompanied-4 mothers and 2 fathers - 4 out of 6 dyads completed</td>
<td>15.1 (14.6 - 15.7)</td>
<td>Aged between 13-18 years Average cognitive ability and established reading level (year5) Deliberated self-harm and/or suicidal ideation in the previous 12 months A minimum of BPD features according to DSM-IV</td>
<td>8-week engagement and commitment to DBT-A 18-week DBT-A treatment: (for 12 weeks) Individual therapy, family skills training group, phone consultation, supervision/consultation team</td>
<td>Significant decrease in trauma-based symptoms, suicidality, and self-harm; maintained at the 3-month follow-up Improved emotion regulation; maintained (more moderately) at 3-month follow-up.</td>
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<tr>
<td>James et al. (2011)</td>
<td>One group pretest-posttest</td>
<td>22 / 3 - 18 participants completed</td>
<td>15.5 (13-17)</td>
<td>History of more than 6 months of persistent self-harm</td>
<td>2 individual sessions (1 hr/week) Group skills training sessions (2hr/week) Telephone consultation Outreach Consultation Individual skills training Consult for staff</td>
<td>Significant improvement in depression, hopelessness, frequency of self-harm, general functioning, social functioning No significant changes in negative automatic thoughts or quality of life.</td>
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<td>Fleischhaker, et al. (2011)</td>
<td>One-group pretest-posttest</td>
<td>12 / 0 -75% of participants completed the study</td>
<td>13-19</td>
<td>Diagnosis of BPD or at least 3 BPD criteria, non-suicidal self-injurious behavior in the past 16 weeks.</td>
<td>DBT-A for 16-24 weeks, phone coaching; weekly individual therapy and family skills group</td>
<td>Significant reductions in non-suicidal self-injurious behavior during therapy and improvement in global psychopathology and psychosocial adaptation.</td>
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<td>Woodberry &amp; Popeneo (2008)</td>
<td>One group pretest-posttest</td>
<td>41 / 5 - 19 parents accompanied - 29 participants completed</td>
<td>16 (13-18)</td>
<td>History of suicide attempts, self-injury, and/or intense and unstable affect or relationships within the past 3-6 months</td>
<td>15 weeks Individual therapy, multfamilly skills training group, consultation team</td>
<td>Significant improvements in depressive symptoms, anger, dissociative symptoms, overall symptoms, and functional difficulties, and self-harm. Changes in adolescent internalizing, externalizing, total problem behaviors (parent reported).</td>
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<tr>
<td>James et al. (2008)</td>
<td>One group pretest-posttest (with 8 months follow-up)</td>
<td>16 / 0 -14 participants completed</td>
<td>16.4 (15-18)</td>
<td>History of more than 6 months of severe and persistent deliberate self-harm</td>
<td>Skills training group (1.5hr/week) Individual session (1hr/week) Telephone support</td>
<td>Significant improvements in self-reported depression, hopelessness, episodes of deliberate self-harm, general functioning; maintained at follow-up</td>
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<td>Katz et al. (2004)</td>
<td>Two-group quasi-experimental (with follow-up)</td>
<td>52 / 10 - 32 for DBT group, 30 for TAU group</td>
<td>14-17</td>
<td>Recent suicide attempt or suicide ideation Agreed to stay in hospital during the treatment</td>
<td>For DBT group: 10 daily manualized DBT skills training sessions 4 individual DBT psychotherapy sessions DBT milieu For TAU group: Daily psychotherapy group,</td>
<td>Both group demonstrated substantial symptomatic improvement at discharge. DBT group: Significant fewer incidents on the ward No difference in rehospitalizations, ER visits, or adherence</td>
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<tr>
<td>Study</td>
<td>Design</td>
<td>Group 1</td>
<td>Group 2</td>
<td>Intervention</td>
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<tr>
<td>Rathus &amp; Miller (2002)</td>
<td>Two-group quasi-experimental</td>
<td>DBT group: 29 participants (93% female)</td>
<td>DBT: 16.1</td>
<td>Suicide attempt within the last 16 weeks or current suicidal ideation</td>
<td>DBT group: Significantly fewer inpatient hospitalizations and significantly greater completion rate.</td>
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<td>TAU group: 82 participants (73% female)</td>
<td>TAU: 15.0</td>
<td>Diagnosis of BPD or a minimum of three borderline personality features</td>
<td>Significant reductions in suicidal ideation, general psychiatric symptoms and symptoms of BPD.</td>
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<tr>
<td>Miller et al. (2000)</td>
<td>One-group pretest-posttest</td>
<td>23 / 4 participants completed (only examined participants who completed)</td>
<td>16.7 (14-19)</td>
<td>Engaged in parasuicidal behavior within the past 16 weeks or reported current suicidal ideation</td>
<td>No significant difference between groups regarding suicide attempts during treatment.</td>
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<td>Met diagnostic criteria for BPD or a minimum of three BPD features symptoms</td>
<td>Significant reductions in BPD symptoms (confusion about self, impulsivity, emotional instability, interpersonal problems).</td>
<td></td>
</tr>
</tbody>
</table>
REFERENCES


