

A modified DBT skills training program for oppositional defiant adolescents: promising preliminary findings

Rosemary O. Nelson-Gray*, Susan P. Keane, Ruth M. Hurst, John T. Mitchell,
John B. Warburton, James T. Chok, Amanda R. Cobb

Psychology Department, University of North Carolina at Greensboro, P.O. Box 26170, Greensboro, NC, 27402-6170, USA

Received 13 September 2005; received in revised form 10 January 2006; accepted 10 January 2006

Abstract

A modified skills training component of dialectical behavior therapy (DBT) was implemented in a group therapy format for non-suicidal outpatient young adolescents who met criteria for oppositional defiant disorder (ODD). Thirty-two youths completed the 16-week program, as well as pre- and post-treatment measures. The treatment was effective not only in decreasing negative behaviors, but also in increasing positive behaviors, per caregiver report. The youths reported a significant reduction in externalizing and internalizing symptoms and in depression. Reliable change indices indicated that far more participants were in the improved category than in the deteriorated category on the measures of interest. Despite the absence of control groups but consistent with the treatment outcome research literature for DBT-based treatments for other disorders, this study demonstrated that DBT skills training is feasible and shows promise in improving the behavior of ODD young adolescents.

© 2006 Elsevier Ltd. All rights reserved.

Keywords: Dialectical behavior therapy (DBT); DBT skills training; Oppositional defiant disorder; Adolescent group therapy

Introduction

Oppositional defiant disorder (ODD) is characterized as a recurrent and developmentally inappropriate pattern of negativistic, defiant, disobedient, and hostile behavior toward authority figures that persists for at least 6 months and leads to significant impairment in social, academic, or occupational functioning (American Psychiatric Association, 2000—DSM-IV-TR). ODD behaviors have been shown to have extremely deleterious effects on interactions between children and their caregivers (Stormshak, Speltz, DeKlyen, & Greenberg, 1997). According to the DSM-IV-TR (p. 101), “in a significant proportion of cases,” ODD is a developmental antecedent to an adverse outcome of conduct disorder (CD). Oppositional and conduct problems are among the most commonly referred problems in child psychiatric clinics (Greene & Doyle, 1999). The participants in our treatment program were young adolescents who met at least the minimum four of the eight criterion required for the diagnosis of ODD.

*Corresponding author. Tel.: +1 336 334 5817; fax: +1 336 334 5066.

E-mail address: uncgpsy@aol.com (R.O. Nelson-Gray).

According to various lists of empirically supported treatments (ESTs), the most effective treatments for ODD in children involve parent training. The list of ESTs published by Division 12 of the American Psychological Association (Chambless et al., 1998) cites the parent training programs of Walter and Gilmore (1973) and of Wells and Egan (1988) as well-established treatments for children with ODD. Ollendick and King (2002), in their review of ESTs for children and adolescents, cite Brestan and Eyberg's conclusion (1998) that two parent training procedures are ESTs for ODD: Patterson and Gullion's (1968) *Living with Children* and parent training programs based on Webster-Stratton's (1994) videotape modeling parent training program. According to Chambless and Ollendick (2001), the list of ESTs for ODD or CD children and adolescents has been somewhat expanded to also include cognitive behavior therapy, cognitive problem-solving skills, and multisystemic therapy. Although these treatments, particularly parent training, have been demonstrated to be effective with children, their effectiveness drops with adolescents. For teens with both attention deficit/hyperactivity disorder (ADHD) and ODD, only 23% of families showed reliable change, with no difference between problem-solving communication training (PSCT) alone and behavior management training followed by PSCT (Barkley, Edwards, Laneri, Fletcher, & Metevia, 2001). This treatment protocol is summarized in the *Defiant Teens* manual (Barkley, Edwards, & Robin, 1999), which combines parent training and problem-solving communication training.

Based on our collective experience, parent training and other types of family involvement are sometimes difficult to implement with caregivers of ODD adolescents. Many of these caregivers are unwilling or unable to participate in clinic-based treatment programs, especially those that involve regular clinic attendance as well as contingency management at home. We, therefore, sought an alternative treatment whose goal was to change the adolescent him or herself, rather than relying on family based change. We turned to the skills training portion of Linehan's dialectical behavior therapy (DBT). Linehan's (1993a, b) DBT was first found to be effective with adults diagnosed with borderline personality disorder (Linehan, Armstrong, Suarez, Allmon, & Heard, 1991; Robins & Chapman, 2004). This treatment approach which combines the Western principles of changing behavior with the Eastern principles of acceptance and mindfulness has also been found to be promising, by itself or in combination with other treatments, in the treatment of other disorders, such as post-traumatic stress disorder (PTSD) (Becker & Zayfert, 2001), medically hospitalized patients (Huffman, Stern, Harley, & Lundy, 2003), substance abuse (Linehan et al., 2002), eating disorder (Telch, Agras, & Linehan, 2001), and elderly depressed patients (Lynch, Morse, Mendelson, & Robins, 2003).

A number of descriptive reports have concluded that DBT can be successfully applied to adolescents, but those adolescents tended to be suicidal and/or in a residential facility (e.g., Grove Street Adolescent Residence of the Bridge of Central Massachusetts Inc., 2004; Katz, Cox, Gunasekara, & Miller, 2004; Miller, Rathus, Linehan, Wetzler, & Leigh, 1997; Rathus & Miller, 2002; Sunseri, 2004). It has also been suggested that DBT for adolescents be combined with family therapy (e.g., Miller, Glinski, Woodberry, Mitchell, & Indik, 2002).

The young ODD adolescents in the present study were non-suicidal outpatients. We chose DBT because of the observed similarities between adults diagnosed with borderline personality disorder and our ODD adolescents, namely, emotional dysregulation, difficulties with interpersonal relationships, and poor response to stress. In addition to mindfulness training, the other three DBT skills training modules address emotion regulation, interpersonal effectiveness, and distress tolerance (Linehan, 1993b), presumably seen as core problems in adults diagnosed with borderline personality disorder. Similarly, the diagnostic criteria for ODD (DSM-IV-TR, p. 102), include emotion dysregulation (e.g., "often loses temper", "is often spiteful or vindictive"), interpersonal difficulties (e.g., "often argues with adults," "often deliberately annoys other people"), and poor distress tolerance (e.g., "is often touchy or easily annoyed by others," "is often angry and resentful"). On a more theoretical level, there is a possibility that people with borderline personality disorder and children with ODD share a common temperament, for example, strong behavioral approach systems (BAS), which according to Gray's theory is related to an over responsiveness to rewards (Gray & McNaughton, 2000). In fact, ODD children have been found to be overly responsive to rewards (van Goozen et al., 2004). Similarly, overactive BAS functioning has been linked to borderline personality disorder (Farmer & Nelson-Gray, 1995).

We chose to implement only the skills training portion of DBT because the skills training is manualized and replicable. We also chose to use a group format, so that the skills could be generalized to interactions with

other group members. The hypothesis was that DBT skills training would improve the behavior of ODD youth.

Method

Participants

Fifty-four adolescents who met criteria for ODD were recruited from a wide variety of sources: public and private schools; the juvenile justice system; community mental health center, university psychology clinic, and other youth mental health facilities; television and radio announcements; group homes; community social workers; and posters in public facilities. Those who met diagnostic criteria for ODD were assigned to one of seven 5–9 member groups for 16 weekly, 2-h group therapy sessions at the University of North Carolina at Greensboro Psychology Clinic, with an eighth group conducted at a local public high school. The eight treatment groups were formed on the basis of convenience (e.g., 6–8 participants became available at a particular time).

Of the original 54 participants, five youths completed the treatment and chose to repeat the program in a subsequent group (herein called “repeaters”). The retention rate for those who completed 12 or more group sessions and for whom post-treatment assessment measures were sufficiently completed, including the five repeaters, was 69% (37 of 54). Results are reported on 32 participants, excluding the second round of treatment for repeaters.

In addition to meeting criteria for ODD, 34% of the 32 participants also met diagnostic criteria for conduct disorder based on the diagnostic interview schedule for children, parent version (DISC-P; Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000). Eighty-five percent of the 32 participants were male, 15% were female. This gender distribution is consistent with rates reported by the DSM-IV-TR (American Psychiatric Association, 2000) for ODD. The sample ages ranged from 10 to 15 years ($M = 12.63$, $SD = 1.39$). The racial makeup of the participants was 43.2% African American (13 males, three females), 40.5% Caucasian (13 males, two females), and 2.7% Hispanic (one male).

The participants who did not complete the study presented with more pretreatment comorbidity than those who did complete the study. Of the 32 participants, 31.3% had comorbid ADHD (compared to 40% of noncompleters); 34.4% comorbid conduct disorder (compared to 40% of noncompleters); and 8.1% major depressive disorder (compared to 20% for noncompleters). The completers and noncompleters did not differ on pretest measures (BERS, CBCL, CDI, ODD criteria—see below), with the exception that completers had significantly higher pretest scores on YSR total t scores, $t(42) = 2.03$, $p = .0487$. The percent of youth completing the study varied across the eight groups from 42.9% to 100%. There was no systematic relationship across the groups in terms of therapist compliance to the treatment protocol and drop-out rate, $r = -.19$.

Parental or caregiver consent was obtained for all participants. This study received approval from the local university Institutional Review Board for protection of human participants.

Pre-and post-treatment measures

Diagnostic interview schedule for children, parent version (DISC-P; Shaffer et al., 2000). ODD was assessed with the oppositional behavior disorder module of the DISC-P. The DISC is a structured interview designed to assess children ages 9–17. In this study, it was administered to the parent or primary caretaker by trained predoctoral graduate-level therapists. In addition to the ODD module, the mood, anxiety, ADHD, and conduct disorder modules of the DISC-P were administered. To be included as a participant, the caretaker must have endorsed at least four of the eight diagnostic criteria for ODD. There were no reliability checks on the interview-based diagnoses in this study, given the well-established psychometric properties of this interview. Parent test–retest reliability for the modules used range from 0.43 to 0.96 in clinical samples (0.54 for ODD diagnosis) (Shaffer et al., 2000). Formal validity of the version of the DISC-P used in this study has been demonstrated (Friman et al., 2000).

Child behavior checklist (CBCL; Achenbach & Edelbrock, 1983). The CBCL is a parent questionnaire that yields problem profile scales (withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, and aggressive behavior) and two overall scales labeled externalizing (delinquent and aggressive behavior) and internalizing (withdrawn, somatic complaints, and anxious/depressed), and a total problems score. Clinical and borderline cutoff scores are $t > 70$ (98th percentile) and $t: 67–70$ (95th–98th percentile), respectively; clinical and borderline cutoff scores for the total scores are $t > 63$ (90th percentile) and $t: 60–63$ (82nd–90th percentile) respectively.

Youth self-report (YSR; Achenbach, 1991). The YSR is a self-report questionnaire that yields problem profile scales: withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, and aggressive behavior. These subscales compose three summary scales: total problems, total internalizing, and total externalizing. All items refer to problems or symptoms during the past 6 months. Clinical and borderline cutoff scores are the same as the CBCL. Test–retest reliability has been reported to be highly reliable (DeFrancesco, Armstrong, & Russolillo, 1996).

Behavioral and emotional rating scale (BERS; Epstein & Sharma, 1998). The BERS is a 52-item strength-based questionnaire that is standardized, reliable, and validated for assessing behavioral and emotional strengths in children, as assessed by familiar adults. The present study used parents/caregivers as the raters. The BERS is made up of five factor analysis derived subscales and an overall strength quotient and is administered on a 4-point Likert scale (0 = not at all like the child, 1 = not much like the child, 2 = like the child, 3 = very much like the child). The five subscales include interpersonal strength, family involvement, intrapersonal strength, school functioning, and affective strength. Of particular interest here, the 15-item interpersonal strength subscale identifies a child's ability to interact with others in social situations, such as accepting criticism and responsibility (Epstein & Sharma, 1998).

Child depression inventory (CDI; Kovacs, 1992). The CDI is a 27-item self-report depression rating scale designed for school-aged children and adolescents. The CDI yields a total score and five subscales that measure disturbed mood, hedonic capacity, vegetative functions, self-evaluations, and interpersonal behaviors. Items are administered on a scale of 0, 1, or 2 (absence of symptoms, mild symptoms, and definite symptoms, respectively) and are converted to t scores based on norm samples by gender and age (e.g., ages 7–12 and 13–17). Alpha coefficients of reliability for the CDI indicate good internal consistency, ranging from .71 to .89 in both clinical and community samples. The CDI also has been shown to have acceptable stability (ranging from .50 to .87). The validity for the CDI is well established and has been utilized numerously since its initial development; particularly the CDI has strong explanatory and predictive utility in characteristic child and adolescent depressive symptoms (Kovacs, 1992).

Procedure

Treatment protocols were based on Linehan's (1993b) *Skills training manual for treating borderline personality disorder* modules. All components of the core mindfulness, interpersonal effectiveness, emotion regulation, and distress tolerance modules were taught with modifications intended to make the material more age-appropriate. Modifications primarily involved inclusion of age appropriate wording and examples, and the use of more illustrative activities than didactic training. For example, in teaching "wise mind," the following metaphor was used to the adolescents: it is grasping the whole picture when before only parts were understood. The corresponding activity was a puzzle-making task: Each group member was given puzzle pieces and told to help assemble the puzzle; the members were told to raise their hand when they "got" what the puzzle was; the idea was that "getting it" was when "wise mind" was happening for that person.

Participants received 16 2-h sessions of group treatment distributed over 16 weeks from two trained graduate student co-therapists. The first session consisted of introductory material, the next four sessions were on core mindfulness, the next three sessions were on interpersonal effectiveness, Session 9 was a review session, the next three sessions were on emotion regulation, the next three sessions were on distress tolerance, and Session 16 was a review session. Weekly homework was assigned in order to encourage generalization from the group therapy sessions. The homework consisted of self-monitoring CALM skills (connecting; attending; listening; manners), and providing short written and oral examples of the use of prosocial skills. Each participant could earn up to \$5 weekly for remembering homework notebooks and completing homework.

Compliance with homework was 93%. Connecting skills involved answering questions, offering information, or smiling with someone. Attending skills involved looking at the speaker. Listening skills involved stopping and listening to the speaker. Manners included the use of courtesies like “please,” “thank you,” “excuse me,” and apologizing. The typical format of each session was a review of the previous week’s homework and previously learned material (depicted on a poster), during which the participants had a pizza meal. This was followed by introduction of new material, including didactic instruction, discussion, and illustrative activities. Participants could earn up to an additional \$5 for appropriate participation in the group therapy session, including the use of CALM skills.

If a participant was absent from a session, he or she was invited to come early to the next session to review missed material with a therapist. To facilitate attendance, taxi rides were available for those participants without other transportation.

There were eight groups, each with two graduate student co-therapists and a graduate student assistant (who escorted the adolescents from their transportation to the group room, procured the pizza meal, etc.). A total of 15 graduate students were involved. The therapists were trained during a graduate class on behavior therapy, and by watching tapes of previous sessions and by rating compliance. Several therapists also attended workshops with certified instructors. The treatment was manualized.

Compliance with the treatment protocol for therapists was 88%. Compliance was content-based and was determined by adherence to a list of expected steps or components of each session. All sessions were videotaped. Therapist compliance was assessed for 25% of the sessions by two independent graduate student raters. The independent raters’ agreement on ratings of compliance was 92%.

Parents or caretakers were not involved in the monetary contingencies given to the youth. Parents were informed of the content of the four DBT skills training modules, both by being invited to discussion meetings (with poor attendance) and by receiving written outlines of the modules.

Additional procedures. Several additional procedures were conducted, but are not included in this report. The teacher report form (TRF; Achenbach & Edelbrock, 1986) was sent to one or more teachers of each participant. Despite reminders and monetary incentives, the TRF is not included in the data analyses because of low rates of teacher returns. Of the 32 participants, the teacher return rate including both pre- and post-treatment was 34%. One entire group had no teacher returns because the group was conducted largely in the summer.

A follow-up data-collection period was attempted for all participants, with low rates of family compliance. Moreover, due to practical reasons, the time between post-treatment assessment and follow-up assessment varied considerably across participants. Therefore, follow-up assessments are not reported here.

Four monthly booster sessions were offered to all participants. These sessions were intended to assist in generalization of learned DBT skills. The first booster session was held in a restaurant and focused on mindfulness skills. The second booster session was held in a game arcade and focused on interpersonal effectiveness skills. The third booster session was held in a gymnasium and focused on distress tolerance. The fourth booster session was held in a bowling alley and focused on emotion regulation. Fourteen participants attended 1, 2, 3, or 4 booster sessions. Because of lack of follow-up data, the outcome of these booster sessions is not reported.

Results

The results are based on the 32 participants who completed the study. The data from the five repeaters are included from only their first participation. The group results for the pre- and post-treatment measures are presented first, followed by the reliable change indices.

Pre- and post-treatment measures

A 2-tailed *t*-test for related samples was conducted for each of the pre/post-treatment measures to assess whether or not participants’ functioning improved over the course of treatment (Table 1). Alpha levels were conservatively set using an ordered Bonferroni correction procedure (Holland & Copenhaver, 1988) to minimize Type I error related to possible distortion of significance levels due to the use of multiple *t*-tests. Six

of eleven measures completed by the caregivers and participants showed statistically significant change in the direction of improved functioning, and one additional test closely approximated a statistically significant difference. Specifically, *t*-tests revealed a significant increase in interpersonal strength and reductions in ODD symptoms and externalizing behaviors based on caregiver reports (Table 1). Further, participant reports showed significant reductions in depressive symptoms and internalizing behaviors, and their reports of externalizing behaviors closely approximated significant reduction.

The reliable change index (RCI; Jacobson & Truax, 1991), which is useful in assessing the clinical significance of change, and a determination of clinical status at pre- and post-treatment was completed for all

Table 1

Measure	Pre-treatment			Post-treatment			Prob < <i>t</i>	Ordered Bonferroni alpha level
	Mean	Range	SEM	Mean	Range	SEM		
<i>Caregiver measure:</i>								
BERS-IS (<i>N</i> = 31)	5.79	1–14	0.47	8.10	5–14	0.45	<.0001*	.0045
CBCL (<i>N</i> = 31)								
CBCL AGG	74.21	54–95	2.23	68.78	52–95	2.46	.0242	.0125
CBCL TOTAL	69.79	56–83	1.43	66.71	52–89	1.88	.0605	.0167
CBCL INT	64.50	44–80	1.67	61.25	31–90	2.51	.0826	.0250
CBCL EXT	71.71	56–88	1.57	66.89	47–86	1.94	.0075*	.0083
DISC—ODD	6.32	1–8	0.37	4.08	0–8	0.48	.0004*	.0050
<i>Participant Measure:</i>								
CDI (<i>N</i> = 31)	52.23	36–71	1.62	47.87	38–80	1.68	.0093*	.0100
YSR (<i>N</i> = 28)								
YSR AGG	61.71	50–89	1.90	59.75	50–81	1.97	.1165	.0500
YSR TOTAL	60.11	45–86	2.01	54.86	35–82	2.49	.0013*	.0056
YSR INT	57.53	41–81	2.23	52.25	26–80	2.46	.0015*	.0062
YSR EXT	60.57	47–88	1.92	56.14	37–81	2.50	.0072	.0071

SEM, standard error of the mean; BERS-IS, behavioral and emotional rating scale-interpersonal strength; CBCL, child behavior checklist; YSR, youth self report; AGG, aggression; INT, internalizing; EXT, externalizing; CDI, child depression inventory; DISC, diagnostic interview schedule for children; ODD, oppositional defiant disorder.

**p*-value is statistically significant (i.e., less than the alpha value of the ordered Bonferroni correction).

Table 2
Summary of clinically significant change

	Changed from C to NC status	Significantly improved (RCI)	Significantly deteriorated (RCI)
<i>Caregiver measures</i>			
DISC-ODD	9 of 18 (50%)	9 of 25 (36%)	0 of 25 (0%)
BERS-IS	14 of 25 (56%)	14 of 29 (48%)	1 of 29 (3%)
CBCL-Agg	8 of 15 (53%)	11 of 28 (39%)	3 of 28 (11%)
CBCL-Total	6 of 14 (43%)	12 of 28 (43%)	4 of 28 (14%)
CBCL-Int	4 of 9 (44%)	9 of 28 (32%)	2 of 28 (7%)
CBCL-Ext	10 of 17 (59%)	11 of 28 (39%)	3 of 28 (11%)
All caregiver measures	23 of 30 (77%)	22 of 31 (71%)	4 of 31 (13%)
<i>Participant measures</i>			
CDI	5 of 6 (83%)	8 of 27 (30%)	2 of 27 (7%)
YSR-Agg	4 of 7 (57%)	1 of 28 (4%)	1 of 28 (4%)
YSR-Total	3 of 7 (43%)	2 of 28 (7%)	0 of 28 (0%)
YSR-Int	4 of 5 (80%)	0 of 28 (0%)	0 of 28 (0%)
YSR-Ext	2 of 7 (29%)	0 of 28 (0%)	0 of 28 (0%)
All participant measures	10 of 11 (91%)	10 of 28 (36%)	3 of 28 (11%)

CBCL, childhood behavior checklist; YSR, youth self report; CDI, child depression inventory; BERS-IS, behavioral and emotional rating scale-interpersonal strength; Agg, aggression; Tot, total; Int, internalizing; Ext, externalizing; C, clinical status; NC, non-clinical status; RCI, reliable change index.

pre- and post-treatment measures. The RCI takes into account the reliability of the measure, the variability in the obtained scores in the group, and the change in the individual's score from pre- to post-treatment to determine whether change is clinically significant. RCIs were determined using the [Jacobson and Truax \(1991\)](#) formula. Clinical status was determined using clinical cut-off scores provided for each measure (e.g., a t score ≥ 70 on the CBCL and YSR is within the clinical range); t scores outside of the clinical range were classified as non-clinical and those within the clinical range were classified as clinical. Caregivers completed measures for 31 of the 32 participants, and 28 participants completed measures. [Table 2](#) summarizes data in terms of clinically significant change, either from clinical to non-clinical status or significant improvement or deterioration based upon the RCI. Of participants who were in the clinical range on at least one caregiver-completed measure at pre-treatment, 77% changed to the non-clinical range by the end of treatment. In addition, 71% showed clinically significant improvement, while 13% of participants showed clinically significant deterioration from pre- to post-treatment on at least one caregiver-completed measure. For measures completed by participants, 91% of those who were in the clinical range at pre-test improved to the non-clinical range at post-test. Thirty-six percent of participants showed clinically significant improvement and 11% of participants were significantly poorer on at least one measure when pre- and post-treatment scores were compared.

Discussion

This group application of DBT skills training to 32 ODD young adolescents was shown to be feasible, and to produce promising results. There were significant reductions in caregiver reports of ODD symptoms (DISC-P), and of externalizing symptoms (CBCL). Caregivers also reported a significant improvement on a measure of interpersonal strength (BERS). The youth themselves reported a significant reduction in internalizing symptoms and total score (YSR) and in depression (CDI). The youth report of change on the YSR externalizing measure very closely approximated a significant reduction in symptoms, as well. The Reliable Change Index indicated that far more participants were in the improved category than in the deteriorated category on the measures of interest. The treatment was beneficial not only in decreasing negative behaviors, but in increasing positive behaviors.

Of course, we have no direct evidence that it was the treatment itself that produced the changes across time because we did not have a treatment comparison group or a waiting list control group in this preliminary demonstration of effectiveness ([Stricker, 2000](#)). Nonetheless, there does seem to be a logical link between the treatment modules and symptom change. For example, the reduction in ODD symptoms (e.g., often loses temper, often argues with adults, often blames others for his or her mistakes or misbehavior, is often angry and resentful, is often touchy or easily annoyed by others) could logically be attributed to the attainment of skills learned through the emotion regulation and distress tolerance modules used in this treatment program. Similarly, the increase in interpersonal strength on the BERS (which measures a youth's ability to control his or her emotions or behavior in social situations, with items such as "Accepts no for an answer" or "Reacts to disappointment in a calm manner") could logically be attributed to modules in interpersonal effectiveness, emotion regulation, and distress tolerance.

Qualitative data also support the potential treatment effectiveness of this demonstration study. Following the group therapy, participants' parents commented extensively on the changes observed in their children, including:

"My child now has a better state of mind. He has calmed down his attitude and has better use of manners".
"The DBT group gave my child the tools to control his anger".

The participants' comments, during and following the treatment phase, similarly demonstrate the potential utility of this treatment approach in encouraging alterations in their behavior:

"Last week in the group home this kid stole something from another kid and then blamed it on me. They came in and searched my room even though I told them I didn't do it. I felt like beating the kid up and smashing up my room...I was still mad for a while, but later on I was all right. I was using my wise mind".

“My dad is always getting mad at me when I help him at work. He was in a bad mood and was really pissing me off. It was hard, but I just listened to him because I thought about how things usually get worse when I get mad back. Since I’ve been in the group I think more when I’m mad about how to act. Before, I would just act.”

These results are also consistent with the treatment outcome research literature for DBT-based treatments, as summarized by [Robins and Chapman \(2004\)](#). The DBT therapy approach has been shown to be effective with adults diagnosed with borderline personality disorder, as well as with other disorders. Several descriptive reports have concluded that DBT can be used successfully with suicidal and/or residentially placed adolescents. DBT skills training is an important component of DBT therapy. The current study demonstrates that it is feasible to implement DBT skills training, with non-suicidal young adolescents seen in a non-restrictive outpatient setting with promising results.

There are many strengths of this treatment approach, and of this study demonstrating its potential effectiveness. The standardized treatment protocol was replicated across a large number of graduate student therapists, with 88% compliance, and across eight different groups. The therapy was portable. Seven of the groups were in our clinic, but one of the groups occurred after school in a high school. We attempted to increase generalization of DBT skills not only through the group therapy format, but also through homework assignments and booster sessions. The retention rate was quite good at 69%. We believe that this high retention rate was due to age-appropriate modifications in the DBT skills training protocols; the provision of dinner and monetary rewards; and the availability of taxi transportation for those who needed it. The sample of 32 participants was quite diverse in age (within young adolescence), racial, and gender composition. Every attempt was made to collect data from caregivers, for example, by using telephone calls or home visits, if necessary.

Conversely, this treatment demonstration study had several weaknesses. There was no treatment comparison group or waiting list control group. By choice, only the DBT skills training of the DBT approach was utilized. Moreover, the skills training modules were modified to be age appropriate. There were no direct measures of knowledge obtained from the treatment modules (e.g., weekly quizzes). We had difficulty obtaining follow-up measures from families (despite a monetary remuneration) because families moved, changed phone numbers, or had disconnected phone numbers. We had difficulty in obtaining data from teachers, despite a monetary remuneration and frequent reminders. Even though treatment implementation did not rely on families, we had no measure of family functioning or cohesiveness that could have been used as a covariate in data analysis.

Future research directions include a randomized control trial to demonstrate treatment efficacy, repeating this treatment with the addition of a treatment comparison group and/or a waiting list control group. In addition to pre- and post-treatment measures of change, intermediate measures could also be added, including weekly or biweekly outcome measures, and measures of the acquisition of module content. The treatment approach could be refined, such as by altering the order of modules, intermittently repeating the presentation and practice of core mindfulness skills, implementing the treatment in other schools (perhaps by school professionals), attempting the treatment in an individual format and not only in groups, including families in a more systematic way (such as teaching DBT skills to adults in a parallel group so that they could teach or model these skills to their children), and including additional measures (such as measures of family functioning, or psychophysiological measures of emotion regulation in response to stressful stimuli).

In the interim, this study provides a demonstration of the feasibility of implementing DBT skills training in a group format with non-suicidal outpatient young adolescents with promising results. This demonstration is consistent with the treatment outcome research literature that the DBT treatment approach, which typically includes but is not limited to DBT skills training, is effective not only with adults diagnosed with borderline personality disorder, but also with a wide range of other populations with diverse problems.

Acknowledgements

Gratitude for funding is expressed to the Community Health Improvement Fund of the Moses Cone-Wesley Long Community Health Foundation (CHIF) and to the UNCG Dean’s Initiative Fund. Gratitude is also

expressed to an additional faculty contributor, P. Scott Lawrence, Ph.D., and to additional student contributors: Angelea C. Balentine, Bushra Chaudhry, Becky deMayo, Michelle J. Dennis, Tracy Dobbins, Suzanne E. Farley, Laura Hennis Rhoads, Lora Lyons Johnson, Rachael McNamara, and David Topor. Attempts were made to utilize the TREND statement (DesJarlais, Lyles, Crepaz, & the TREND group, 2004) in reporting these data. Portions of these data were presented at the meeting of the North Carolina Psychological Association in Chapel Hill, NC, March 2003; and at the meeting of the Association for Advancement of Behavior Therapy in New Orleans, November 2004.

References

- Achenbach, T. M. (1991). *Manual for the child behavior checklist/4-18 and 1991 profile*. Burlington, VT: Department of Psychiatry, University of Vermont.
- Achenbach, T. M., & Edelbrock, C. (1983). *Manual for the child behavior checklist and revised child behavior profile*. Burlington, VT: Department of Psychiatry, University of Vermont.
- Achenbach, T. M., & Edelbrock, C. (1986). *Manual for the teacher's report form*. Burlington, VT: Department of Psychiatry, University of Vermont.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders 4th ed., text revision*. Washington, DC: American Psychiatric Association.
- Barkley, R. A., Edwards, G., Laneri, M., Fletcher, K., & Metevia, L. (2001). The efficacy of problem-solving communication training alone, behavior management training alone, and their combination for parent-adolescent conflict in teenagers with ADHD and ODD. *Journal of Consulting and Clinical Psychology, 69*, 926–941.
- Barkley, R. A., Edwards, G., & Robin, A. L. (1999). *Defiant teens: a clinician's manual for assessment and family intervention*. New York: Guilford.
- Becker, C. B., & Zayfert, C. (2001). Integrating DBT-based techniques and concepts to facilitate exposure treatment for PTSD. *Cognitive and Behavioral Practice, 8*, 107–122.
- Brestan, E. V., & Eyberg, S. M. (1998). Effective psychosocial treatments of conduct-disordered children and adolescents: 29 years, 82 studies, and 5, 272 kids. *Journal of Clinical Child Psychology, 27*, 179–188.
- Chambless, D. L., Baker, M. J., Baucom, D. H., Beutler, L. E., Calhoun, K. S., Crits-Christoph, P., et al. (1998). Update on empirically validated therapies II. *The Clinical Psychologist, 51*, 3–16.
- Chambless, D. L., & Ollendick, T. H. (2001). Empirically supported psychological interventions: controversy and evidence. *Annual Review of Psychology, 52*, 685–716.
- DeFrancesco, J. J., Armstrong, S. S., & Russolillo, P. J. (1996). On the reliability of the youth self-report. *Psychological Reports, 79*, 322.
- DesJarlais, D. C., Lyles, C., Crepaz, N., & the TREND group. (2004). Improving the reporting quality of nonrandomized evaluations of behavioral and public health interventions: the TREND statement. *American Journal of Public Health, 94*, 361–366.
- Epstein, M. H., & Sharma, J. M. (1998). *Behavioral and emotional rating scale: a strength-based approach to assessment*. Austin: PRO-ED.
- Farmer, R. F., & Nelson-Gray, R. D. (1995). Anxiety, impulsivity, and the anxious-fearful and erratic-dramatic personality disorders. *Journal of Research in Personality, 29*, 189–207.
- Friman, P. C., Handwerk, M. L., Smith, G. L., Larzelere, R. E., Lucas, C. P., & Shaffer, D. M. (2000). External validity of conduct and oppositional defiant disorders determined by the NIMH diagnostic interview schedule for children. *Journal of Abnormal Child Psychology, 28*, 277–286.
- Gray, J. A., & McNaughton, N. (2000). *The neuropsychology of anxiety: an enquiry into the functions of the septo-hippocampal system* (2nd ed). New York: Oxford University Press.
- Greene, R. W., & Doyle, A. E. (1999). Toward a transactional conceptualization of oppositional defiant disorder: implications for assessment and treatment. *Clinical Child and Family Psychological Review, 2*, 129–148.
- Holland, B. S., & Copenhaver, M. D. (1988). Improved Bonferroni-type multiple testing procedures. *Psychological Bulletin, 104*, 145–149.
- Huffman, J. C., Stern, T. A., Harley, R. M., & Lundy, N. A. (2003). The use of DBT skills in the treatment of difficult patients in the general hospital. *Psychosomatics, 44*, 421–429.
- Jacobson, N. S., & Truax, P. (1991). Clinical significance: a statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology, 59*, 12–19.
- Katz, L. Y., Cox, B. J., Gunasekara, S., & Miller, A. L. (2004). Feasibility of dialectical behavior therapy for suicidal adolescent inpatients. *Journal of the American Academy of Child Psychiatry, 43*, 276–282.
- Kovacs, M. (1992). *Children's depression inventory manual*. North Tonawanda, NY: Multi-Health Systems Inc.
- Linehan, M. (1993a). *Cognitive-behavioral treatment of borderline personality disorder*. New York: Guilford.
- Linehan, M. (1993b). *Skills training manual for treating borderline personality disorder*. New York: Guilford.
- Linehan, M. M., Armstrong, H. E., Suarez, A., Allmon, D., & Heard, H. L. (1991). Cognitive-behavioral treatment of chronically suicidal borderline patients. *Archives of General Psychiatry, 48*, 1060–1064.
- Linehan, M. M., Dimeff, L. A., Reynolds, S. K., Comtois, K. A., Welch, S. S., Heagerty, P., et al. (2002). Dialectical behavior therapy versus comprehensive validation therapy plus 12step for the treatment of opioid dependent women meeting criteria for borderline personality disorder. *Drug and Alcohol Dependence, 67*, 13–26.

- Lynch, T. R., Morse, J. Q., Mendelson, T., & Robins, C. J. (2003). Dialectical behavior therapy for depressed older adults: a randomized pilot study. *Journal of Geriatric Psychiatry, 11*, 22–34.
- Miller, A. L., Glineski, J., Woodberry, K. A., Mitchell, A. G., & Indik, J. (2002). Family therapy and dialectical behavior therapy with adolescents: Part I: proposing a clinical synthesis. *American Journal of Psychotherapy, 56*, 568–584.
- Miller, A. L., Rathus, J. H., Linehan, M. M., Wetzler, S., & Leigh, E. (1997). Dialectical behavior therapy adapted for suicidal adolescents. *Journal of Practical Psychiatry and Behavioral Health, 3*, 78–86.
- Ollendick, & T.H., King, N.J. (2002). Empirically supported treatments for children and adolescents. In: P.C. Kendall (Ed.), *Child and adolescent therapy*. (2nd ed.). New York: Guilford.
- Patterson, G. R., & Gullion, M. E. (1968). *Living with children: new methods for parents and teachers*. Champaign, IL: Research Press.
- Rathus, J. H., & Miller, A. L. (2002). Dialectical behavior therapy adapted for suicidal adolescents. *Suicide and Life-Threatening Behavior, 32*, 146–157.
- Robins, C. J., & Chapman, A. L. (2004). Dialectical behavior therapy: current status, recent developments, and future directions. *Journal of Personality Disorders, 18*, 73–89.
- Shaffer, D., Fisher, P., Lucas, C. P., Dulcan, M. K., & Schwab-Stone, M. E. (2000). NIMH diagnostic interview schedule for children, Version IV (NIMH DISC-IV): description, differences, from previous versions, and reliability of some common diagnoses. *Journal of American Academy of Child and Adolescent Psychiatry, 39*, 28–38.
- Stormschak, E., Speltz, M., DeKlyen, M., & Greenberg, M. (1997). Family interactions during clinical intake: a comparison of families of normal or disruptive boys. *Journal of Abnormal Child Psychology, 25*, 345–357.
- Stricker, G. (2000). The relationship between efficacy and effectiveness. *Prevention and Treatment, 3*.
- Sunseri, P. A. (2004). Preliminary outcomes on the use of dialectical behavior therapy to reduce hospitalization among adolescents in residential care. *Residential Treatment for Children and Youth, 21*, 59–76.
- Telch, C. F., Agras, W. S., & Linehan, M. M. (2001). Dialectical behavior therapy for binge eating disorder. *Journal of Consulting and Clinical Psychology, 69*, 1061–1065.
- The Grove Street Adolescent Residence of the Bridge of Central Massachusetts Inc. (2004). Using dialectical behavior therapy to help troubled adolescents return safely to their families and communities. *Psychiatric Services, 1168–1170*.
- van Goozen, S. H. M., Cohen-Kettenis, P. T., Snoek, H., Matthys, W., Swaab-Barneveld, H., & van Engeland, H. (2004). Executive functioning in children: a comparison of hospitalized ODD and ODD/ADHD children and normal controls. *Journal of Child Psychology and Psychiatry, 45*, 284–292.
- Walter, H. I., & Gilmore, S. K. (1973). Placebo versus social learning effects in parent training procedures designed to alter the behavior of aggressive boys. *Behavior Therapy, 4*, 361–377.
- Webster-Stratton, C. (1994). Advancing videotape parent training: a comparison study. *Journal of Consulting and Clinical Psychology, 62*, 583–593.
- Wells, K. C., & Egan, J. (1988). Social learning and systems family therapy for childhood oppositional disorder: comparative treatment outcome. *Comprehensive Psychiatry, 29*, 138–146.