

Further Data on Dialectical Behavior Therapy

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Scheel's review (this issue) of the empirical evidence for dialectical behavior therapy raises issues about how to interpret data on DBT's efficacy as well as how practitioners might best use research on DBT to guide their clinical practice. Recent data that were not included in Scheel's review are presented here, and their implications discussed.

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Scheel (this issue) provides an excellent brief description of dialectical behavior therapy (DBT; Linehan 1993a, 1993b) and then summarizes and critiques the research evidence regarding DBT's efficacy. In addition to highlighting the limited evidence available at the time of her review, Scheel highlights the limitations of the treatment as usual (TAU) comparison design used in Linehan's first randomized clinical trial (RCT; Linehan, Armstrong, Suarez, Allmon, & Heard, 1991) and the subsequent reports from that sample (Linehan et al., 1991; Linehan & Heard, 1993; Linehan, Heard, & Armstrong, 1993; Linehan, Tutek, Heard, & Armstrong, 1994). Although the TAU design has benefits for early investigations of a treatment's efficacy (particularly with this population; Linehan, this issue), the lack of experimental control in a TAU design means that there are competing explanations for findings. Research that replicates Linehan's work is needed to evaluate the efficacy of DBT. Several studies have been conducted and reported in peer-reviewed contexts that were not included in Scheel's review, and we summarize here these further data on DBT's efficacy (see Koerner & Linehan, in press, for more detailed review).

RECENT RESEARCH NOT INCLUDED IN SCHEEL'S REVIEW

DBT organizes standard cognitive-behavioral treatment strategies into protocols intended to guide interventions

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with multidisorder, severely impaired individuals in order to provide comprehensive treatment (see Linehan, this issue). Research to date has investigated the efficacy of the entire comprehensive treatment, of components of the treatment, and of adaptations of the treatment. Further randomized clinical trials and parallel comparison controlled trials comparing DBT to TAU, as well as several quasi-experimental studies from preliminary work as part of new RCTs, have recently been presented, expanding the research base on DBT's efficacy. Table 1 summarizes these studies by highlighting differences in subjects, design, and adherence to standard DBT protocols that influence interpretation of findings.

Two further RCTs (Koons et al., 1998; Linehan et al., in press) and two parallel comparison controlled trials (Rathus & Miller, 1999; Stanley, Ivanoff, Brodsky, & Oppenheim, 1998) investigating DBT versus TAU have been conducted. Koons et al. (1998) conducted a small study ($N = 20$) in a Veterans' Administration clinic and reported outcomes after 6 months of weekly DBT compared to 6 months of TAU. (Therapists in the TAU condition described their orientation to individual therapy as cognitive-behavioral.) Participants were female veterans who met criteria for BPD but, differing from Linehan et al. (1991), were not required to have had a history of parasuicide or a recent parasuicide. This resulted in a sample that was less parasuicidal and less frequently hospitalized than were those in the Linehan et al. (1991) study. Koons et al. found that those in DBT had greater reduction in suicidal ideation, depression, hopelessness, and anger than those in TAU at posttreatment. Those in DBT showed a trend toward significantly fewer psychiatric hospital admissions and inpatient days; however, both groups had low pretreatment frequency of hospitalization. Both treatment conditions had good treatment retention and both groups showed significant decreases in depression, with 60% of those in DBT and 20% of those in TAU showing clinically significant change on the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961).

Linehan et al. (in press) have also reported outcomes from an RCT ($N = 28$) comparing an adaptation of DBT for substance-dependent women with BPD to TAU. The major modifications to standard DBT were the addition of (1) specific targets relevant to drug use, (2) a set of attachment strategies intended to enhance the patient's connection to therapy and the treatment team, (3) a drug-replacement program, (4) three-times-weekly urinalyses, and (5) case management (Linehan & Dimeff, 1997). Sub-

Table 1. Summary of research findings on dialectical behavior therapy

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Linehan et al. (1991)	Chronically suicidal women with BPD between 18 and 45 years of age; outpatient clinic.	Randomized controlled trial comparing DBT ($n = 24$) to community-based treatment as usual ($n = 23$). Treatment was 12 months in duration. Following completion of treatment, subjects were assessed at 6-month intervals for one year.	Comprehensive DBT program with individual psychotherapy, 150-minute group skills training including didactic and homework review, and consultation team. Subjects were exposed to all skills twice within this 12-month trial.	Subjects assigned to DBT showed statistically significant reductions in parasuicidal behavior, were significantly more likely to start treatment (100% vs. 73%) and were significantly more likely to complete treatment (83% vs. 42%). DBT subjects had significantly fewer inpatient hospital days compared to TAU subjects. These findings were largely maintained throughout the posttreatment follow-up year. During the one-year posttreatment follow-up, parasuicide repeat rate was significantly lower for DBT subjects compared to TAU (26% vs. 60%)
Linehan et al. (1993)	Chronically suicidal women with BPD. Subjects were currently undergoing outpatient individual psychotherapy in the community.	Subjects already in psychotherapy with therapist in the community were matched and randomly assigned to DBT group skills training condition as an add-on to existing individual therapy ($n = 11$) or assessment-only condition ($n = 8$).	Subjects in DBT condition only were exposed to DBT group skills training.	Despite strong prediction that adding DBT skills training group to ongoing individual psychotherapy would enhance treatment outcomes, no such effects emerged.
Koons et al. (1998)	BPD women recruited from Veterans' Administration clinic. Subjects required to have history of parasuicidal behavior.	Randomized controlled trial comparing DBT ($n = 10$) to treatment as usual ($n = 10$) in outpatient setting. Length of treatment was 6 months. Subjects were assessed at baseline, treatment midpoint (3 months), and at treatment completion (6 months).	This study included all components of standard DBT. Because of shorter treatment duration (6 months), all skills were taught one time only.	Subjects in the DBT condition showed statistically greater reductions in suicidal ideation, depression, hopelessness, and anger compared to TAU subjects at posttreatment. Upon treatment completion, 3 of 10 DBT subjects continued to meet criteria for BPD compared to 5 of 10 in TAU. This study did not include current or past history of parasuicidal behaviors as criteria for inclusion.
Linehan et al. (in press)	Substance-dependent, multidisordered women with BPD between 18 and 45 years of age; outpatient clinic.	Randomized controlled trial ($N = 28$) comparing DBT to community-based treatment as usual. Subjects assessed at 4, 8, 12 months, and at a 16-month follow-up.	Subjects received year-long treatment, including individual psychotherapy and group skills training. Each skills training module was reviewed twice during the duration of the year. Therapists attended a weekly one-hour consultation team meeting.	Statistically significant reduction in substance abuse among DBT subjects compared to TAU subjects among both intent-to-treat and treated samples; findings corroborated by urinalysis (between-group mean effect sizes varied between 0.6 and 1.1). DBT more effectively retained subjects in therapy, with a 64% retention of DBT subjects compared to 27% of TAU subjects that remained in treatment with their primary therapist for the duration of treatment. Statistically significant improvements in social and global adjustment in DBT subjects were observed at follow-up when compared to TAU subjects. Within DBT condition, clients of therapists who consistently adhered to the DBT treatment manual had better outcomes than clients of nonadhering therapists, suggesting therapist adherence to DBT manual and therapist competence may be important predictors of outcome.
Stanley et al. (1998)	All subjects were females with BPD.	Nonrandomized pilot project comparing efficacy for patients in standard DBT with a matched group of patients receiving treatment as usual in the community.	This study included all components of standard, comprehensive DBT but was provided for a shorter treatment duration (6 months) than Linehan's original trial. Hence, all skills were taught one time only.	Statistically significant reductions in self-mutilation behaviors, self-mutilation urges, suicidal ideation, and suicidal urges were observed favoring DBT. No differences in self-reported psychopathology were reported. There were no suicide attempts in either group during the duration of the study.

(continued)

Table 1. Continued

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Miller et al. (1996)	Suicidal teens (mean age = 16); outpatient services in the Bronx, NY; 22% were male. Ethnicity: 68% Latino, 17% African American. DBT subjects met following inclusion criteria: BPD or BPD features plus current suicidal ideation or engaged in parasuicidal behavior within past 16 weeks.	Nonrandomized control quasi-experimental pilot study comparing DBT for adolescents to treatment as usual. Of total (N = 111), most severe teens were referred to DBT program. Subjects in DBT received twice-weekly individual and multifamily skills training; TAU subjects received twice-weekly individual and family sessions.	Modifications to standard DBT included inclusion of as-needed family therapy (added onto individual therapy) and inclusion of family members in group. Skills handouts modified for ease with teens, and number of skills in modules reduced. Core mindfulness skills were taught three times; other modules were taught only once each. Treatment length was 12 weeks.	Subjects in DBT group were significantly more likely to complete treatment than were TAU subjects (62% vs. 40%). Subjects in DBT had significantly fewer psychiatric hospitalizations (13% hospitalized in TAU vs. 0% in DBT). No significant differences in parasuicidal behaviors were observed. However, since subjects in DBT were recruited for this condition because of their suicidal behaviors, no difference between conditions on this outcome variable is noteworthy. Additional outcome measures from DBT (pre-post within DBT group): significant decreases in suicidal ideation, significant reductions in global severity index and positive symptoms distress index, and significant changes on Symptom Checklist-90: anxiety, depression, interpersonal sensitivity, and obsessive compulsive; and trend toward significance on paranoid scale; reductions on Life Problems Inventory in total LPI scores as well as four problem areas: confusion about self, impulsivity, emotion dysregulation, and interpersonal difficulties.
Barley et al. (1993)	Mostly female (79%) on an inpatient personality disorders unit. Mean age = 30 years (range = 16–57). Mean length of stay in hospital = 106 days (range = 3–629 days).	Quasi-experimental study (N = 130). Study compares outcomes between subjects during three phases of integrating DBT onto unit: (1) no DBT, (2) phasing in/introducing DBT to unit, (3) full DBT program. To control for effects of time, investigators compared changes in parasuicide episodes across three intervals to changes in parasuicide rates across intervals on another psychiatric unit within hospital during same period of time.	Program was evolving from sole psychodynamic focus to incorporation of DBT; psychodynamics continued to inform case conceptualization and aspects of treatment with DBT skills training group as an adjunct to psychodynamic treatment. Included DBT skills training group, a separate "homework group" using problem-solving strategies when subjects didn't complete homework, and "fundamentals" group for new patients to provide general overview of skills and extensive exposure to crisis survival skills.	Mean monthly parasuicide rate on the personality disorders unit was significantly lower following the implementation of DBT on the unit. Rates of parasuicide on the general psychiatric unit were not significantly different at any of the three time periods. Results suggest that, once incorporated onto the unit, use of DBT skills reduces parasuicidal behavior among subjects on a personality disorders unit. Because this study lacks randomization, other competing hypotheses for these findings are not eliminated. The study's obvious strengths include its naturalistic setting on an inpatient unit.
Springer et al. (1996)	General inpatient unit. Mean length of stay = 13 days. Subjects were selected for group on the basis of having a personality disorder.	Quasi-experimental study where investigators compared outcomes of subjects assigned to a treatment group that included DBT skills in a creative coping group (CC) to a treatment as usual lifestyles and wellness discussion group.	CC format where subjects were encouraged to discuss parasuicidal in group. Subjects only exposed to a limited number of DBT skills from three of four modules (emotion regulation, distress tolerance, and interpersonal effectiveness).	Subjects in both conditions attended an average of six sessions and improved during their hospital stay. Subjects in the CC treatment group were significantly more likely to believe that the lessons learned in group would help them manage their lives better upon discharge from the hospital. Investigators also note that subjects in the modified treatment group engaged in significantly more "acting out" behaviors during their hospital stay, which they attribute to "discussing parasuicidal in the CC group and listening to

patients describe their self-mutilative behaviors or fantasies." Two of the six individuals who engaged in self-mutilative acts while in the CC group had no prior history of such behavior. Authors conclude that adaptation of DBT to a short-term inpatient setting may not be in the patient's best interest because of possible contagion effect. This finding validates an important DBT principle described by Linehan (1993b): with chronically parasuicidal patients, do not encourage discussion of parasuicidal acts in a group setting because of contagion effects (p. 24).

Significant decreases in the number of parasuicidal acts posttreatment as well as significant improvements in ratings of depression, dissociation, anxiety, and global stress.

Both the number of binge episodes and the number of binge days decreased significantly from baseline to posttreatment and included weight loss. Three- and 6-month posttreatment assessment data showed strong continued abstinence from binge eating and maintenance of lower weight. No treatment dropouts were reported, and attendance was strong.

During the 6-month assessment period, 10 subjects (56% MACT, 71% TAU) engaged in a parasuicidal behavior. The rate of parasuicidal acts per month was lower with MACT than in TAU (median 0.17/month vs. 0.37/month, respectively). This finding was not statistically significant ($p = 0.11$), which may be due to lack of statistical power. A statistically significant difference between conditions was noted on self-report of depression favoring MACT. The observed average cost of care was 46% less with MACT.

All DBT subjects received DBT individual psychotherapy as well as DBT group skills training for the duration of their hospital stay. Additionally, skills coaching was provided in the milieu to further strengthen skills.

Subjects received DBT group skills training only. With the exception of the interpersonal effective module, all DBT modules were taught. Additionally, chain analysis was taught as a self-management skill within group and subjects were instructed to conduct a chain analysis using specifically developed behavioral targets for mindful eating. Skill modules taught once, although a review of all skills in a particular module was provided at the end of each module.

In contrast to comprehensive DBT, MACT constitutes a very brief treatment, up to six sessions of psychotherapy. Subjects in MACT were instructed how to conduct a behavioral chain analysis using materials developed by Linehan and used in DBT and were encouraged to conduct a chain analysis on their last episode of parasuicidal behavior. Subjects were taught DBT crisis survival skills, including pros and cons, and encouraged to practice these skills during the week.

Using a pre-post study design ($N = 24$) subjects were assessed at admission to hospital and at 1-month postdischarge.

Small preliminary pre-post design ($N = 11$) adapting DBT to treatment of binge eating disorder; 20-session group format that includes skills training as well as behavioral chain analysis.

Randomized controlled trial ($N = 34$) comparing a manual-assisted cognitive-behavioral brief intervention (MACT) to treatment as usual. Following baseline, subjects were assessed at 6 months. Exposure to MACT ranged on a continuum from two to six sessions of problem-focused psychotherapy along with bibliotherapy (a manual of six short chapters covering problem-solving and basic cognitive techniques to manage emotions and negative thinking and relapse prevention strategies). Substance-dependent clients were excluded from this study.

BPD female subjects in an inpatient setting who had at least two parasuicide episodes in past 2 years.

Female subjects between 18 and 65 years of age in outpatient treatment program for binge eating disorder.

Subjects ranging in age from 16 to 50 with recent episode of deliberate self-harm as well as at least one other episode of parasuicidal behavior in the past year. All subjects had a personality disturbance in cluster B.

Bohus et al. (1999)

Telch et al. (1999)

Evans et al. (1999)

jects meeting criteria for BPD as well as for polysubstance use disorder or substance use disorder for amphetamines, anxiolytics, cocaine, cannabis, hypnotics, opiates, or sedatives were randomly assigned to either DBT ($n = 12$) or TAU ($n = 16$) for a year of treatment. Subjects were assessed at 4, 8, 12 months and at a 16-month follow-up. Subjects assigned to DBT had significantly greater reductions in drug abuse measured by both structured interviews and urinalyses throughout the treatment year and at follow-up than did subjects assigned to TAU. There was a trend for DBT to have significantly higher retention (36% dropout in DBT, 73% dropout in TAU). There were no significant differences in amount of medical and psychiatric inpatient treatment received during the course of treatment. There were no significant differences in global and social adjustment and state and trait anger between the groups during treatment or at 12 months, but those in DBT showed significantly greater gains in global and social adjustment and state and trait anger at follow-up compared to those in TAU.

Stanley et al. (1998) have recently presented further evidence on DBT as a treatment for suicidal BPD patients using matched controls rather than random assignment. They conducted a small pilot study ($N = 30$) examining the efficacy of a 6-month treatment comparing DBT versus TAU. The baseline mean number of suicide attempts did not differ between the DBT and TAU groups. At follow-up, investigators found that patients in DBT had significantly greater reduction in self-mutilation acts, suicide ideation, suicidal urges, and urges to self-mutilate than did subjects who received TAU. Neither group had a suicide attempt.

Rathus and Miller (1999) conducted a nonrandomized controlled pilot study to examine whether DBT for adolescents was more efficacious than TAU at reducing suicide attempts, reducing psychiatric hospitalization, and increasing treatment retention. Participants in the study were referrals ($N = 111$) to an adolescent depression and suicide program in the Bronx (78% female). The most severe and suicidal participants were referred to the DBT condition (i.e., all individuals in DBT had made a suicide attempt within the last 16 weeks or had current suicide ideation). All participants met three or more criteria of borderline personality disorder as measured by the Structured Clinical Interview for DSM-IV Axis II Personality Disorders. TAU consisted of 12 weeks of twice weekly

individual and family sessions. The DBT condition consisted of 12 weeks of twice weekly individual and multi-family skills training. Because of nonrandom assignment, the DBT group had lower socioeconomic status, was more ethnically diverse, and was more severely impaired than was the TAU group at pretreatment. Significant differences in psychiatric hospitalization (DBT 0%, TAU 13%) and treatment retention (DBT 62% completed, TAU 40%) were observed favoring DBT. No group differences were observed in the number of suicide attempts. However, given that the most suicidal and severe individuals (i.e., greater number of Axis I disorders and prior hospitalizations, more impulsivity) were assigned to DBT, this finding is noteworthy.

These studies each found that individuals receiving DBT showed reductions in targeted problem areas when compared to TAU. In the more severely impaired populations of borderline personality disordered individuals, DBT reduced parasuicidal behavior and substance abuse, increased treatment retention, and improved global functioning at posttreatment and/or follow-up. With a less severe population of BPD patients, DBT appeared to produce specific improvements in suicidal ideation, depression, and hopelessness, even when compared to a TAU condition that also produces clinically significant changes in depression. The studies by Koons et al. (1998), Stanley et al. (1998), and Rathus and Miller (1999) suggest that the findings favoring DBT over TAU are replicable by independent investigators (i.e., are not unique to research conducted by Linehan, the treatment developer), that these outcomes can be obtained within naturalistic clinical settings, and that a 6-month treatment (or for adolescents perhaps even a 12-week treatment) may have efficacy.

These findings taken as a group increase confidence that effects are likely due to DBT, but the TAU comparison design does not allow sufficient experimental control for certain conclusions. For example, it is almost impossible to determine whether it is DBT itself that is responsible for treatment gains or simply well-organized psychotherapy. The question remains of whether the results are attributable to the efficacy of DBT or to any of a number of competing factors, including (1) therapist factors (expertise, training, or clinical experience), (2) availability of clinical supervision, (3) hours of individual psychotherapy offered, (4) general factors associated with receiving any psychotherapy, (5) institutional prestige

associated with receiving treatment in a university setting for the DBT condition, or (6) other factors associated with design flaws.

Linehan and colleagues recently reported preliminary findings from two further RCTs underway at the University of Washington. In these studies they evaluated the efficacy of DBT by using more rigorous experimental control conditions developed specifically to maximize internal validity and to control for effects on clinical outcomes by factors not controlled for in previous DBT studies. In a replication study (Linehan, Comtois et al., 1998) treating individuals with BPD and parasuicidal behavior, DBT was compared with a more rigorous control condition, treatment by experts in the community (TBE). TBE therapists were nominated by community mental health leaders (i.e., heads of inpatient psychiatric units, clinical directors of mental health agencies, and training directors of psychiatry, psychology, social work, and nursing) as expert and experienced with BPD and suicidal patients (controlling for therapist expertise). TBE therapists were asked to provide the therapy they believed most suited to the patient they were treating, and the content of the treatment they provided was not interfered with or controlled by the research study (controlling for therapist allegiance to treatment provided). Clinical supervision was provided to TBE therapists by a well-respected expert supervisor (therapists were paid to attend, controlling for the availability of clinical supervision). As with the DBT consultation team function, the purpose of supervision was to assist therapists in doing psychotherapy to the best of their abilities, to provide an opportunity for therapists to get support from their peers, and to be on call for therapists in emergencies. The TBE condition was associated with an institution committed to excellence (Seattle Institute for Psychoanalysis, controlling for institutional prestige associated with therapy offered). The study paid (at the same rate of pay) for psychotherapy in both conditions, and subjects were required to pay only a small amount on a sliding fee (controlling for availability of affordable treatment and for hours of individual psychotherapy offered). TBE therapists were matched on treatment-relevant variables (controlling for therapist gender, training, and clinical experience).

In their report on preliminary data from 4-month assessments of this more rigorous replication design, Linehan et al. (1998) found promising results favoring

DBT. Compared to a treatment by experts in the community control condition designed to maximize internal validity, those individuals receiving DBT showed greater reduction in suicidal behaviors, increases in treatment retention, and reduction of use of inpatient psychiatric care and emergency services.

Linehan and colleagues have also replicated DBT for individuals with BPD and opiate addiction in a second RCT with a more rigorous control condition (Linehan, Dimeff, Comtois, & Kanter, 1998). In this “dismantling” study, a component control treatment, DBT-validation (DBT-V), was used to examine which components of DBT are necessary for change. The rationale for DBT-V is based on the work of William Swann as interpreted by Linehan (1997) for treatment of drug abusers. The rationale suggests that emotion dysregulation (and, by extension, BPD) is related to previous experiences in invalidating environments that inhibit the individual’s natural responses to situations and teach the individual to invalidate his or her own natural responses. This inability to self-validate precipitates extreme emotional arousal and a sense of loss of control when important people invalidate the individual. Clinical progress requires the therapist’s use of validation procedures, communicating to the patient that she can trust herself, and reinforcing self-verification even when the environment is invalidating. In this control condition, the only focus on patient change concerns patient’s attendance at psychotherapy, Narcotics Anonymous meetings, and meetings with sponsors. Preliminary findings from this outcome study suggest that validation strategies may be powerful when working with substance-dependent women with BPD. All participants were retained for the entire duration of the 12-month treatment in DBT-V; 64% were retained in DBT. Both treatments performed comparably, as measured by self-report and thrice weekly urinalyses, in reducing substance abuse over time. By the completion of treatment, 68% of participants in DBT reported abstaining from drug use in the prior month compared to 55% in DBT-V. Rates of abstinence held through 16 months for DBT and increased to 65% abstinent in DBT-V.

Further data are also available regarding the efficacy of DBT within an inpatient setting. Bohus, Haaf, and Stiglmayr (in press) reported pre-post data for an inpatient DBT protocol. Study participants were 24 female patients who met criteria for BPD according to Diagnostic Inter-

view for Borderline-Revised (Zanarini, Gunderson, Frankenburg, & Chauncey, 1989) and *Diagnostic and Statistical Manual for Mental Disorders* (4th ed.; American Psychiatric Association, 1995) and who had at least two parasuicide acts within the past two years. Patients were excluded if they met criteria for schizophrenia, bipolar I disorders, or alcohol or drug dependence (current or within the last 6 months), or if suicide attempts or self-injurious behavior occurred only during major depressive disorder episode or under influence of alcohol or drugs. Patients were assessed at admission to the hospital, at discharge, and at one month after discharge on frequency of parasuicide and psychopathology. They found a significant decrease in number of parasuicidal acts and significant improvements in ratings of depression, dissociation, anxiety, and global stress. The reported effect sizes were strong and indicate that BPD patients not only did not decompensate in inpatient DBT but also may perhaps show some benefit.

Two other studies have investigated adaptations or modifications of components of DBT. Telch, Agras, and Linehan (1999) have reported preliminary pilot data on DBT adapted to treatment of binge eating disorder. The adaptation was based on the theoretical model that binge eating functions as affect regulation and, therefore, that teaching adaptive emotion regulation skills will eliminate maladaptive emotion regulation behaviors. Telch developed a 20-session group format that modified DBT to binge eating problems by tailoring the treatment target hierarchy and creating experiential exercises to teach and strengthen skills (e.g., mindful eating exercises). Telch also made the treatment distinct from interpersonal psychotherapy (by removing the interpersonal effectiveness module) and distinct from standard cognitive-behavioral therapy for eating disorders (i.e., standard cognitive-behavioral therapy components such as self-monitoring of food intake, prescriptions for normalization of eating and meal patterning, and cognitive restructuring of weight and shape concerns were not included). Data from a small ($N = 11$) pre-post design are very promising: both the number of binge episodes and the number of binge days decreased significantly from baseline to posttreatment, and participants also lost weight. At 3- and 6-months posttreatment, participants showed strong continued abstinence from binge eating and maintenance of lower weight. Telch et al. (1999) report having no dropout from treatment and good attendance at group sessions.

In a recently published study, Evans et al. (1999) reported data from a randomized controlled trial ($N = 34$) comparing a manual-assisted cognitive-behavioral brief intervention (MACT) to TAU. MACT is a problem-focused psychotherapy (problem-solving and basic cognitive techniques to manage emotions and prevent relapse) with accompanying brief bibliotherapy. MACT incorporated the behavioral chain analysis of parasuicide episodes as well as a subset of skills from the DBT distress tolerance module. Patients were included in the study if they had a recent episode of deliberate self-harm and at least one other episode of parasuicide in the last year as well as a cluster B personality disorder. Exposure to MACT ranged from two to six sessions. During the 6-month assessment period, 10 subjects (56% MACT, 71% TAU) engaged in parasuicidal behavior. The rate of parasuicidal acts per month was lower with MACT than in TAU (median 0.17/month vs. 0.37/month, respectively). This finding was not statistically significant ($p = 0.11$), which may be due to lack of statistical power. A statistically significant difference between conditions was noted on self-report of depression favoring MACT. The observed average cost of care was 46% less with MACT.

CONCLUSIONS

Preliminary findings from more rigorously controlled studies suggest that the earlier findings of treatment effects for DBT versus TAU are likely robust and due to DBT and not to other factors. As further data have become available, it appears not only that DBT benefits individuals with chronic suicidal behavior and BPD, but perhaps also that DBT may also be usefully adapted to other disorders in which dysfunctional behaviors serve to regulate emotion such as substance abuse and binge eating disorder.

Scheel suggests that DBT may be difficult to implement within typical community mental health settings, but on the contrary, it may be that DBT can be implemented in an exemplary manner. For example, the American Psychiatric Association awarded the Community Mental Health Center of Greater Manchester in New Hampshire the 1998 Gold Achievement Award for the excellence of their small community-based DBT program (Mental Health Center of Greater Manchester, 1998). DBT may be cost-effective and resource-effective in a community mental health setting. Further, despite the multifaceted combination of treatment strategies in DBT, there is evidence that mental health professionals outside

of academic research centers can learn DBT quite effectively (Hawkins & Singha, 1998). Another strength of the data on DBT is that the patient population studied is similar to those served by community mental health services. In addition to meeting criteria for BPD, participants in studies on DBT have had high rates of comorbid mood and anxiety disorder, substance abuse, eating disorders, and other Axis II disorders.

Although data for DBT are stronger than Scheel's review suggests, we share Scheel's concern that adoption and dissemination of new treatments be guided by data. Toward that end, our own efforts to train researchers and clinicians have purposely tried to maximize factors we think will result in programmatic implementations at a high level of treatment integrity. For example, we encourage trainees to first implement the standard treatment with as much fidelity as possible, rather than in part or piecemeal. We further require trainees to develop plans to evaluate the effectiveness of the approach in their own practice setting as part of the training in the new treatment approach. The rigor and integrity of the training model will strongly determine the quality of implementation. Further development and evaluation of dissemination models that result in high-quality implementation are needed.

REFERENCES

- American Psychiatric Association. (1995). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Barley, W. D., Buie, S. E., Peterson, E. W., Hollingsworth, A. S., Griva, M., Hickerson, S. C., Lawson, J. E., & Bailey, B. J. (1993). The development of an inpatient cognitive-behavioral treatment program for borderline personality disorder. *Journal of Personality Disorders, 7*, 232–240.
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4*, 561.
- Bohus, M., Haaf, B., & Stiglmayr, C. (in press). Evaluation of inpatient dialectical-behavioral therapy for borderline personality disorder—a prospective study. *Behavior Research and Therapy*.
- Evans, K., Tyrer, P., Catalan, J., Schmidt, U., Davidson, K., Dent, J., Tata, P., Thornton, S., Barber, J., & Thompson, S. (1999). Manual-assisted cognitive-behavior therapy (MACT): A randomized controlled trial of a brief intervention with bibliotherapy in the treatment of recurrent deliberate self-harm. *Psychological Medicine, 29*, 19–25.
- Hawkins, K. A., & Singha, R. (1998). Can line clinicians master the conceptual complexities of dialectical behavior therapy? An evaluation of a State Department of Mental Health training program. *Journal of Psychiatric Research, 32*, 379–84.
- Koerner, K., & Linehan, M. M. (in press). Research on dialectical behavior therapy for borderline personality disorder. *Psychiatric Clinics of North America*.
- Koons, C. R., Robins, C. J., Bishop, G. K., Morse, J. Q., Tweed, J. L., Lynch, T. R., Gonzales, A. M., Butterfield, M. I., & Bastian, L. A. (1998, November). *Efficacy of dialectical behavior therapy with borderline women veterans: A randomized controlled trial*. Paper presented at the meeting of the Association for the Advancement of Behavior Therapy, Washington, DC.
- Linehan, M. M. (1993a). *Cognitive behavioral therapy of borderline personality disorder*. New York: Guilford Press.
- Linehan, M. M. (1993b). *Skills training manual for treating borderline personality disorder*. New York: Guilford Press.
- Linehan, M. M. (1997). Self-verification and drug abusers: Implications for treatment. *Psychological Science, 8*, 1–3.
- Linehan, M. M., Armstrong, H. E., Suarez, A., Allmon, D., & Heard, H. L. (1991). Cognitive-behavioral treatment of chronically parasuicidal borderline patients. *Archives of General Psychiatry, 48*, 1060–1064.
- Linehan, M. M., Comtois, K. A., Koerner, K., Brown, M., Dimeff, L. A., Tutek, D., Schmidt, H., Kanter, J., Recknor, K., Cochran, B., & Mar, C. (1998, November). University of Washington study of dialectical behavior therapy: A preliminary report. In C. Robins (Chair), *Dialectical behavior therapy: Dissemination and efficacy across sites and populations*. Symposium conducted at the meeting of the Association for Advancement of Behavior Therapy, Washington, DC.
- Linehan, M. M., & Dimeff, L. A. (1997). *Dialectical behavior therapy manual of treatment interventions for drug abusers with borderline personality disorder*. Seattle: University of Washington.
- Linehan, M. M., Dimeff, L. A., Comtois, K. A., & Kanter, J. (1998, November). *Dialectical behavior therapy for opiate abusers with borderline personality disorder: Findings to date from two randomized controlled trials*. Paper presented at the meeting of the Association for the Advancement of Behavior Therapy, Washington, DC.
- Linehan, M. M., & Heard, H. L. (1993). Impact of treatment accessibility on clinical course of parasuicidal patients: Reply. *Archives of General Psychiatry, 50*, 157.
- Linehan, M. M., Heard, H. L., & Armstrong, H. E. (1993). Naturalistic follow up of a behavioral treatment for chronically parasuicidal borderline patients. *Archives of General Psychiatry, 50*, 971.
- Linehan, M. M., Schmidt, H. I., Dimeff, L. A., Craft, J. C., Kanter, J., & Comtois, K. A. (in press). Dialectical behavior therapy for patients with borderline personality disorder and drug-dependence. *American Journal on Addictions*.

- Linehan, M. M., Tutek, D. A., Heard, H. L., & Armstrong, H. E. (1994). Interpersonal outcome of cognitive behavioral treatment for chronically suicidal borderline patients. *American Journal of Psychiatry*, *151*, 1771.
- Mental Health Center of Greater Manchester, New Hampshire. (1998). Integrating dialectical behavioral therapy into a community mental health program. *Psychiatric Services*, *49*, 1338–1340.
- Miller, A. L., Rathus, J. H., Leigh, E., & Landsman, M. (1996, November). *A pilot study: Dialectical behavior therapy adapted for suicidal adolescents*. Poster presented at the first annual meeting of the International Society for the Improvement and Teaching of Dialectical Behavior Therapy, New York.
- Rathus, J. H., & Miller, A. L. (1999). *DBT for suicidal adolescents: A pilot study*. Manuscript submitted for publication.
- Springer, T., Lohr, N. E., Buchtel, H. A., & Silk, K. R. (1996). A preliminary report of short-term cognitive-behavioral group therapy for inpatients with personality disorders. *Journal of Psychotherapy Practice and Research*, *5*, 57–71.
- Stanley, B., Ivanoff, A., Brodsky, B., & Oppenheim, S. (1998, November). *Comparison of DBT and "treatment as usual" in suicidal and self-mutilating behavior*. Paper presented at the meeting of the Association for the Advancement of Behavior Therapy Convention, Washington, DC.
- Telch, C., Agras, W. S., & Linehan, M. M. (1999). *Group dialectical behavior therapy for binge eating disorder: A preliminary uncontrolled trial*. Manuscript submitted for publication.
- Zanarini, M. C., Gunderson, J. G., Frankenburg, F. R., & Chauncey, D. L. (1989). The revised diagnostic interview for borderlines: Discriminating BPD from other Axis II disorders. *Journal of Personality Disorders*, *3*, 10–18.

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