The Linehan Institute BEHAVIORAL TECH

RESEARCH ON DIALECTICAL BEHAVIOR THERAPY: SUMMARY OF THE DATA TO DATE

Compiled by Marsha M. Linehan, Ph.D., ABPP, Linda Dimeff, Ph.D., Kelly Koerner, Ph.D., & Erin M. Miga, Ph.D

1. Published Randomized Controlled Trials

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Linehan, Armstrong, Suarez, Allmon, & Heard (1991).	Chronically suicidal women with BPD between 18-45 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, Ss were assessed at six-month intervals for one year.	Comprehensive DBT program with individual psychotherapy, 150-minute group skills training including didactic and homework review, and consultation team. Ss were exposed to all skills twice within this 12-month trial.	Ss 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 Ss had significantly fewer inpatient hospital days compared to TAU Ss. These findings were largely maintained throughout the post-treatment follow up year. During the one-year post-treatment follow-up, parasuicide repeat rate was significantly lower for DBT Ss compared to TAU (26% vs. 60%).
Linehan, Heard, & Armstrong (1993).	Chronically suicidal women with BPD. Ss were currently undergoing outpatient individual psychotherapy in the community.	Ss 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).	Ss 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.
Linehan, Schmidt, Dimeff, Craft, Kanter, & Comtois (1999).	Substance dependent, multi-disordered women with BPD between 18-45 years of age; outpatient clinic.	Randomized controlled trial (N=28) comparing DBT to community-based treatment-as-usual. Ss assessed at 4, 8, 12 months and at a 16 month follow-up.	Ss 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 Ss compared to TAU Ss among both intent-to-treat and treated samples; findings corroborated by urinalyses (between-group mean effect sizes varied between .6 and 1.1). DBT more effectively retained subjects in therapy, with a 64% retention of DBT Ss compared to 27% of TAU Ss that remained in treatment with their primary therapist for the duration of treatment. Statistically significant improvements in social and global adjustment in DBT Ss were observed at follow-up when compared to TAU Ss. Within DBT condition, clients of therapists who consistently adhered to the DBT treatment manual had better outcomes than clients of non-adhering therapists suggesting therapist adherence to DBT manual and therapist competence may be important predictors of outcome.
Koons, Robins, Tweed, Lynch, et al. (2001).	BPD women recruited from Veterans' Administration clinic. Ss not 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 six months. Ss were assessed at baseline, treatment midpoint (3 months), and at treatment completion (six months).	This study included all components of standard DBT. Because of shorter treatment duration (six months), all skills were taught one time only.	Ss in the DBT condition showed statistically greater reductions in suicidal ideation, depression, hopelessness, and anger compared to TAU Ss at post-treatment. Upon treatment completion, 3 of 10 DBT Ss continued to meet criteria for BPD compared to 5 of 10 in TAU. This study differs from Linehan's original trial in its shortened duration of treatment (from 12 months to 6 months). Additionally, this study did not include current or past history of parasuicidal behaviors as criteria for inclusion.

RESEARCH ON DIALECTICAL BEHAVIOR THERAPY: SUMMARY OF THE DATA TO DATE

Compiled by Marsha M. Linehan, Ph.D., ABPP, Linda Dimeff, Ph.D., Kelly Koerner, Ph.D., & Erin M. Miga, Ph.D

1. Published Randomized Controlled Trials

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Safer, Telch, & Agras (2001)	Women, ages 18-65, averaging at least one binge/purge episode over previous 3 months; general outpatient clinic setting.	Randomized controlled trial (N=31) comparing 20 weeks of DBT to a 20-week waiting-list condition. Ss assessed at baseline and post-treatment.	DBT Ss received individual psychotherapy sessions aimed at teaching emotional regulation skills to replace binge eating and purging behaviors. DBT adapted for the treatment of bulimia nervosa.	Results show DBT adapted for bulimia nervosa was associated with decrease in binge/purge behaviors. The DBT group had a 0% drop out and significant treatment effects were found for the frequency of binge eating and purging behaviors. Four participants (28.6%) in the DBT group were abstinent from binge/purge behaviors at 20 weeks, compared with no participants in the waiting-list group. Five reduced their number of binge eating episode by 88% and purging episodes by 89%, while the remaining four remained symptomatic.
Telch, Agras, & Linehan (2001)	Females, ages 18-65, meeting full DSM-IV research diagnostic criteria for binge eating disorder; Outpatient treatment.	Randomized controlled trial (N=44) evaluating the use of DBT adapted for binge eating disorder versus a wait-list control condition. Ss were assessed at baseline and after completing 20 weeks of treatment. Ss assigned to treatment were also assessed at 3 and 6 months following treatment.	20 week course with weekly 2-hour group sessions using manual adapted from DBT for BPD. Adaptive emotional regulation skills were taught throughout the course and each participant developed an individualized plan to use the skills to regulate emotions instead of binge eating.	Ss receiving group DBT skills training had significantly fewer binge days and episodes, and 89% of the women receiving DBT abstained from binge eating at the end of the study compared to 12.5% of control Ss. The number of those remaining abstinent in the DBT condition was 56% at 6 month follow-up. DBT Ss also had significantly lower scores on scales of weight concerns, shape concerns, eating concerns, and anger. Participants in the wait-list condition were invited to participate in the treatment after the 20 weeks. Of the 10 who accepted and completed the treatment, 90% were abstinent at the end and 67% remained at 6-month follow up.
Linehan, Dimeff, Reynolds, Comtois, Shaw Welch, Heagerty, & Kivlahan (2002)	Opiate-addicted BPD women, 18 to 45 years old; outpatient clinic.	Randomized controlled trial (N=23) comparing DBT to Comprehensive Validation Therapy (CVT) with 12-Step. Ss assessed at 4, 8, 12 months and at a 16 month follow-up. All subjects (experimental and control) received a maintenance dose of opiate-replacement medication (i.e., ORLAAM or methadone). Ss transferred to methadone maintenance program following completion of treatment for ongoing drug replacement therapy.	DBT Ss received comprehensive DBT, modified for substance abusers with BPD. Modes of treatment included weekly individual psychotherapy, 90 minute group skills training (didactic only) and 30-minute individual skills coaching (homework review) homework review, as-needed case management, pharmacotherapy, and consultation team. Ss were exposed to all skills twice within this 12-month trial. Modes of CVT included weekly psychotherapy, weekly therapist supervision, as needed case management, pharmacotherapy, and optional 12-step sponsor meeting and standard 12-step meeting.	In contrast to DBT, CVT+12S was focused on validating the client and her experiences in a warm and supportive, non-directive atmosphere. Clients were encouraged to develop their confidence in themselves as capable, individuals worthy of therapists' respect, and reinforcing self-verification. Validation of public and private behaviors occurred only when the behavior was valid (e.g., effective in terms of the client's long term goals, was logically consistent with actual data or consistent with normative behavior). Major findings are three-fold: First, Ss in both conditions significantly reduced opiate use over time; at the 16 month assessment, subjects in both treatments had a low proportion of opiate-positive UA (27% DBT; 33% CVT). Secondly, CVT was remarkably effective in maintaining Ss in treatment (100% remained the entire treatment year, compared to 64%in DBT). Finally, Ss in both conditions showed a significant reduction in psychopathology over time.

Compiled by Marsha M. Linehan, Ph.D., ABPP, Linda Dimeff, Ph.D., Kelly Koerner, Ph.D., & Erin M. Miga, Ph.D

1. Published Randomized Controlled Trials

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
van den Bosch, Verheul, Schippers & van den Brink (2002)	Female patients with BPD with or without co-morbid substance abuse, ages 18-70; clinical referrals from outpatient psychiatric or substance abuse treatment; outpatient DBT program implemented at addiction treatment center.	Randomized controlled trial (N=58) comparing efficacy of DBT with treatment as usual, the impact of comorbid substance abuse on the efficacy of DBT, the overall efficacy of DBT on reducing substance abuse, and if standard DBT can be implemented among mixed group BPD patients without and without SA. Pilot phase recruited 9 BPD patients who were interviewed at beginning and end of treatment. Assessments are described in Verheul et al. (2003). Course of substance use behaviors and borderline symptomatology at 18 month follow up are presented.	Standard comprehensive DBT.	The intent of this paper was to examine differential results in treatment outcome among individuals with BPD with and without substance abuse. Implementation in a mixed population of BPD patients took place without any major problems. From exit interviews, all patients judged the program as validating and helpful and the treatment as very important. Session attendance was 81% and there was no difference found for patients with and without SA problems Comorbid SA did not significantly modify the impact of DBT on borderline symptoms; benefits of DBT on BPD symptoms occurred amongst both non-substance using and substance-using patients. Standard DBT is equally effective when suicidal and self-destructive behavior are focus of treatment, however it does not seem to effect substance abuse problems in these patients. There is almost no change over the 18 month follow up period, implying substance use problems were not effectively targeted in the TAU or in treatment condition. The authors recommend developing a multi-targeted DBT program for a broad patient population including several specific impulse control disorders and combinations of them.
Verheul, van den Bosch, Koeter, van den Brink, & Stijnen (2003)	BPD women, ages 18-70; primarily clinical referrals from addiction treatment centers and psychiatric services; outpatient DBT.	Randomized controlled trial (N=58) comparing DBT to TAU. Ss assessed before randomization and at 11, 22, 33, 44, and at 52 weeks after randomization for recurrent parasuicidal and other self- damaging mpulsive behaviors. Self mutilating behaviors were assessed at baseline and at 22 and 52 weeks after randomization. Treatment began 4 weeks after randomization.	DBT Ss received comprehensive, standard DBT. Sessions of DBT individual therapy were rated for adherence across a five-point Likert scale. Median adherence score was 3.8, indicating "almost good DBT.".	Ss assigned to DBT showed statistically significant reductions in self-mutilating and self-damaging behaviors compared to TAU. These differences between the treatment groups could not be explained by differences in the use of psychotropic medications. DBT Ss were significantly less likely to drop out of treatment (DBT=37%, TAU 77%). There were no significant differences between groups in frequency and course of suicidal behavior. Finally, in terms of baseline severity, the impact of DBT was far more pronounced in participants who reported higher baseline frequencies of self mutilating behaviors; DBT was superior to TAU for patients in the high severity group, but not lower severity. For suicidal behavior, results indicated a trend towards greater effectiveness for DBT in severely affected individuals.

Compiled by Marsha M. Linehan, Ph.D., ABPP, Linda Dimeff, Ph.D., Kelly Koerner, Ph.D., & Erin M. Miga, Ph.D

1. Published Randomized Controlled Trials

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
van den Bosch, Koeter, Verheul, & van den Brink (2005)	Female BPD patients with and without substance abuse problems; clinical referrals from addiction treatment centers and psychiatric services; outpatient DBT.	Randomized controlled trial (N=58) examining efficacy of DBT compared to TAU. Ss assessed at baseline, post-treatment (52 weeks), and at a six month post-treatment follow-up (78 weeks). TAU consisted of ongoing outpatient treatment from original referral source. Focus of this paper was specifically on the sustained efficacy of DBT six months after the discontinuation of treatment.	DBT Ss received comprehensive, standard DBT. Sessions of DBT individual therapy were rated for adherence across a five-point Likert scale. Median adherence score was 3.8, indicating "almost good DBT."	Positive outcomes favoring DBT were maintained during the six month post-treatment follow up period for impulsive and self-mutilating behaviors. At 18 months, no relapse was observed for these behaviors in the DBT group; additionally, they showed significantly larger reductions in alcohol use both at 12 months and 18 months. No differences were found between conditions for substance abuse.
Linehan, Comtois, Murray, Brown, Gallop, Heard, Korslund, Tutek, Reynolds, & Lindenboim (2006)	Women, ages 18-45, who met criteria for BPD and reported at least two suicide attempts and/or self-injuries in the past five years and at least one in the past eight weeks; outpatient clinic and community practice.	Randomized controlled trial (N=101) comparing 1 year of DBT to a non-behavioral community-treatment-by-experts (CTBE) to address whether DBT's effectiveness in treating suicidal and BPD patients can be accounted for by treatment factors common to most psychotherapies. Ss were assessed prior to treatment assignment and at 4-month intervals through the 1- year treatment and 1-year follow-up periods.	Standard comprehensive DBT.	DBT had better outcomes on intent-to-treat analysis in most target areas over the two-year treatment and follow-up period. DBT Ss were half as likelyh to make a suicide attempt, were less likely to be hospitalized for suicide ideation, and had lower medical risk across all suicide attempts and self-injurious acts combined. DBT Ss were significantly less likely to drop out of treatment (DBT=25%, CTBE=59%). DBT Ss had significantly fewer psychiatric emergency room visits and fewer psychiatric hospitalizations. Ss in both conditions showed statistically significantly improvement over time on depression, reasons for living, suicide ideation. This study was the first to examine DBT for the purpose of identifying the specific elements of treatment that are necessary and sufficient for an efficacious outcome with BPD individuals. The findings indicate that the efficacy of DBT cannot reasonably be attributed solely to general factors associated with receiving expert psychotherapy. DBT appears uniquely effective in reducing suicide attempts.

Compiled by Marsha M. Linehan, Ph.D., ABPP, Linda Dimeff, Ph.D., Kelly Koerner, Ph.D., & Erin M. Miga, Ph.D

1. Published Randomized Controlled Trials

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Linehan, McDavid, Brown, Sayrs, & Gallop (2008)	24 females (M age=37) with BPD and high levels of irritability and anger; outpatient clinic.	RCT compared 6-month DBT + olanzapine condition (n=12) or DBT + placebo (n=12). Participants assessed at pretreatment (time 0), week 7(time 1), week 14(time 2) and week 21(time 3). Clinicians monitored patient verbal and physical aggression weekly. Psychopharmacologists assessed somatic symptoms at each medication visit.	Comprehensive DBT provided.	Random-effects (multi-level linear) regression models: both the DBT + olanzapine and DBT + placebo conditions demonstrated significant reductions in anger and aggression over time, olanzapine group demonstrated larger and faster decreases in irritability over time. Between condition differences on irritability and aggression levels not significant. Participants in the placebo condition had larger reductions in NSSI and suicidal behavior, but these between group differences not significant. Participants in olanzapine condition had a significant decrease in depression over time, while those in the placebo group did not demonstrate a similar reduction in depression. Olanzapine may have a beneficial, additive effect on irritability and aggression, over and above that of DBT. Preliminary, unexpected findings suggest that olanzapine may have been linked to slowed improvements in suicidal ideation as compared to placebo. Further research needed before more definitive conclusions can be drawn regarding the role of olanzapine in suicidal behavior.
Harned, Jackson, Comtois, & Linehan (2010)	52 females (M age= 29) with BPD, recent suicide attempts and/or NSSI, ptsd symptoms; outpatient clinic.	Participants drawn from a larger RCT; were assessed at pre-treatment and at 4-month intervals during the 1 year treatment. Composites of typical exclusionary criteria for prolonged exposure were assessed: Composite 1: suicidality and self-injury; Composite 2: suicidality, self-injury, substance dependence and dissociation.	Comprehensive DBT was conducted.	T-tests: individuals with BPD & PTSD met criteria for more Axis I disorders than those without PTSD. Symptoms of self -injury and suicide risk decreased over time in the intent-to-treat sample, regardless of PTSD status. Substance dependence and dissociation (typical exclusionary criteria for PTSD protocol treatments) decreased significantly over time for the BPD-PTSD patients only, and not for the whole sample.
Neacsiu, Rizvi, & Linehan (2010).	108 females (M age 31 years) with recurrent suicidality and BPD or drug dependence and BPD; outpatient clinic.	Study drawn from three larger RCTS, compare DBT vs. controls on frequency of DBT skills use. Participants assessed at pretreatment, 4, 8, and 12 months, and at 4 month follow-up.	Comprehensive DBT	Linear mixed models: participants in DBT conditions reported higher skills use and significant increases in skills use over time at post treatment, as compared to control conditions. Further, the use of DBT skills (across both conditions) fully mediated relationship between time in treatment and decreased suicide attempts and depressive symptoms, and increased anger control. DBT skills use partially mediated association between time and NSSI.

Compiled by Marsha M. Linehan, Ph.D., ABPP, Linda Dimeff, Ph.D., Kelly Koerner, Ph.D., & Erin M. Miga, Ph.D

1. Published Randomized Controlled Trials

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Safer, Robinson, & Joyce (2010)	101 individuals with BED(86 % female, M age=52). DBT-BED group outpatient therapy.	RCT compared 20 session DBT-BED (n=50) to an active control group (ACGT, n=51). Participants assessed at pre, post, and at 3, 6 and 12 month follow-up.	DBT adapted for BED by Tech et al., 2000, 2001. Followed manual of Safer, Telch, & Chen, 2009. Weekly 2 hr skills group held aimed at teaching emotion regulation to reduce binge eating. No individual therapy, coaching, or consultation team included. The ACGT was group therapy from a supportive, Rogerian approach. Adherence coding was conducted on DBT-BED based on an instrument developed by UW BRTC, and clinicians were given weekly feedback.	Linear mixed models: treatment drop-outs were significantly lower for those in DBT. Further, those in the DBT group achieved binge-eating abstinence and reductions in binge frequency more quickly than ACGT, although differences between groups at follow-up were non-significant. Those in the DBT group demonstrated significantly greater reductions in eating disorder restraint at post treatment and 12 month follow up, and greater reductions in eating concerns at post treatment, vs. ACGT.
Feigenbaum, Fonagy, Pilling, Jones, Wildgoose, & Bebbington, (2011).	42 adults (72% female, M age=35 years) with BPD or other personality disorder, half diagnosed with co-morbid MDD;DBT outpatient.	RCT compared DBT (n=26) to TAU (n=16). Only 11 people in the DBT condition completed the full 1- year DBT program. measures were administered at pre, 6 months, and post treatment.	Included all elements of comprehensive DBT.	Intent-to-treat analyses: DBT and TAU conditions were equally effective in reducing psychiatric symptoms. Number of hospitalizations and duration of stay unaffected by condition. Individuals in DBT demonstrated a more marked decline in PTSD severity and self-reported risk (to self and others) relative to TAU.

Compiled by Marsha M. Linehan, Ph.D., ABPP, Linda Dimeff, Ph.D., Kelly Koerner, Ph.D., & Erin M. Miga, Ph.D

1. Published Randomized Controlled Trials

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Hill, Craighead, & Safer (2011)	32 females (M age 22 years) with sub threshold Bulimia-Nervosa (BN); University outpatient clinic.	RCT compared 12 week DBT for BN (n=18) to a 6-week delayed treatment control (n=14). First 6 DBT sessions lasted 90 minutes. Participant assessed at baseline, 6 weeks, and post-treatment.	Modified DBT with Appetite Awareness Training (AAT). DBT skills training followed Safer's DBT for Binge Eating and Bulimia; AAT followed Craighead's manual. DBT diary card and chain analysis tools were modified to include appetite monitoring. No phone consultation, skills group, consultation team were provided. DBT clinicians trained by Safer, while additional therapists trained by reviewing manual and tapes of Safer conducting DBT. No formal adherence ratings, but therapists completed self-assessed adherence ratings after every session.	ANCOVA analyses: at week 6, participants in the treatment group reported lower frequency of purges, lower past month frequency of objective binge episodes, lower overall eating pathology than controls. Participants in treatment group also reported improved appetite awareness, but not improved emotional awareness. No significant between group differences found for subjective binge episodes, negative affect, emotional eating or self -efficacy. Intent-to-treat (ITT) analyses: 16/26 participants who started treatment no longer met full or sub threshold criteria for BN. As predicted, ITT analyses: 72% of post-treatment reduction in binge episodes occurred by week 6; rates of improvement similar among the treatment completers.
Safer & Joyce(2011)	101 adults with BED (86% female, M age=52). DBT-BED outpatient program.	RCT compared 20-session DBT-BED (n=50) to an active control group (ACGT, n=51). Participants assessed at pre, post, and at 3, 6 and 12 month follow-up.	DBT adapted for BED by Tech et al., 2000, 2001. Followed manual of Safer, Telch, & Chen, 2009. Weekly 2 hr skills group held aimed at teaching emotion regulation to reduce binge eating. No individual therapy, coaching, or consultation team included. The ACGT was group therapy from a supportive, Rogerian approach. Adherence coding was conducted on DBT-BED based on an instrument developed by UW BRTC, and clinicians were given weekly feedback.	Chi square analyses: 41% of total sample showed a rapid response (RR) to treatment. RRs significantly more likely to achieve binge eating abstinence, and report reductions in depression and eating disorder pathology at end of treatment and 12 month f/u than non-RRs. Further, DBT-RRs had higher rates of BED abstinence at post treatment and f/u than DBT-non RRs.

1. Published Randomized Controlled Trials

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Priebe, S., Bhatti, N., Barnicot, K., Bremner, S., Gaglia, A., Katsakou, C., ... & Zinkler, M. (2012)	80 participants (87.5% female, M age = 32.3years) with personality disorder and ≥5 days of self-harm in the previous 12 months. Treatment provided through National Health Service in UK (outpatient).	RCT comparing 12 months of DBT vs TAU (TAU = referred back to referrer and encouraged to receive treatment from other National Health Service provider – e.g. psychotherapist, psychiatrist, general practitioner, user-run support group, etc). Assessed frequency of days with self-harm, BPD symptoms, general psychiatric symptoms, subjective QOL, and costs of care.	12 months of DBT delivered according to Linehan (1993) treatment and skills training manuals: weekly hour-long individual therapy, weekly 2-hour skills group, out-of-hours skills coaching via telephone, 4-miss rule in place. Individual treatment sessions audio recorded and 10% rated for adherence using a 63-item scale; subset were rated by a second person for interrater reliability. Group sessions also rated for adherence.	48% of DBT group completed treatment and showed greater reduction in self-harm compared to drop-outs; rate of discontinued intervention in TAU group was not applicable (N/A). Relative to TAU, for every 2 months spent in DBT, risk of self-harm decreased by 9%. No differences on BPD symptoms, psychiatric symptoms, or QOL. Total mean cost of 6,786 EUR in DBT vs. mean of 4,481 EUR in TAU, but difference was not significant (95% CI).
van Dijk, S., Jeffrey, J., & Katz, MR. (2012)	26 adults (75% female, M age = 42.3 years) with bipolar I or II in outpatient setting; 75% of participants had been hospitalized an average of 2.3 times. Randomly assigned to intervention or wait-list group.	RCT compared 12 week DBT-based psychoeducational group to a wait-list control group. Participants were directed to maintain concomitant therapy with psychiatrist, case manager, or other professionals as normal. Participants assessed at pre and post for depression, mindfulness, affective control, and mania/hypomania.	Standard DBT model adapt to fit 12-week course; DBT intervention included 90 minute sessions that taught DBT skills, mindfulness techniques, and bipolar disorder psychoeducation (e.g. symptoms, medications, self-care); 4 of the 12 classes addressed bipolar disorder psychoeducation; remaining 8 classes taught distress tolerance, emotion regulation, and interpersonal effectiveness; and mindfulness was taught throughout the 12 week course. Information on adherence rating not available.	RM-ANOVA: Treatment group showed trend toward decreased depressive symptoms, less fear toward and more control of emotional states, and significant improvement in several mindfulness-based self-efficacy scales. Treatment group also had reduced emergency room visits and mental health admissions at 6 month follow up.

2. Published Quasi Experimental Studies

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Miller, Rathus, & Leigh (AABT, 1996, Nov). Rathus & Miller (2002)	Suicidal teens (M age=16); outpatient services in the Bronx, NY. 22% were male. Ethnicity: 68% Latino; 17% African American. DBT Ss met following inclusion criteria: BPD or BPD features plus current suicidal ideation or engaged in parasuicidal behavior within past 16 weeks.	Non-randomized 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. Ss in DBT received twice weekly individual and multi-family skills training; TAU Ss 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 3 times, other modules were taught only once each. Treatment length was 12 weeks.	Ss in DBT group were significantly more likely to complete treatment than TAU Ss (62% vs. 40%). Ss in DBT had significantly fewer psychiatric hospitalizations (13% hospitalized in TAU vs. 0% in DBT-A). No significant differences in parasuicidal behaviors were observed. However, since Ss 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 SCL-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.
Bohus, Haaf, Stiglmayr, et al. (2000).	BPD female Ss in an inpatient setting; had at least two parasuicide episodes in past two years.	Using a pre-post study design, Ss were assessed at admission to hospital and at one-month post-discharge.	All DBT Ss 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.	Significant decreases in the number of parasuicidal acts post-treatment as well as significant improvements in ratings of depression, dissociation, anxiety and global stress.
McCann & Ball, (1996). McCann, Ball, & Ivanoff (2000)	Primarily male forensic inpatients on medium & intermediate security wards; most committed violent crimes. 50% with BPD; 50% with ASPD. Recruited from 5 wards.	Quasi-experimental study comparing DBT (n=21) to treatment as usual (n=14) over 20 months. TAU was described as "individualized supportive care" that combined psychotropic medications, individual and group therapy.	DBT ward assumed DBT philosophy and patient assumptions. Individuals in DBT ward received DBT individual therapy, DBT group skills training, as well as skills coaching on the ward. Inpatients were encouraged to conduct a chain analysis of ward-interfering behavior, as well as therapy-interfering behavior.	In comparison to TAU, DBT Ss had a significant decrease in depressed and hostile mood, paranoia, and psychotic behaviors. Furthermore, DBT Ss had a significant decrease in several maladaptive interpersonal coping styles and an increase in adaptive coping in comparison to TAU. Finally, a trend towards reduction in staff burn-out was reported, again favoring DBT.

2. Published Quasi Experimental Studies

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Katz, Cox, Gunasekara, & Miller (2004)	Adolescent patients, aged 14 to 17 years, admitted for suicide attempts or suicidal ideation; psychiatric inpatient units.	Quasi-experimental pilot study (N=62, 10 boys, 52 girls) to evaluate the feasibility of DBT implementation in general child and adolescent psychiatric inpatient unit. Ss were 62 adolescents with suicide attempts or suicide ideation, admitted to one of two units, one of which applied DBT (n=26) and ther other TAU. Ss were assessed at pretreatment, - and a 1-year follow-up.	Adapted from adolescent DBT model developed by Miller et al. (1997). Two week program comprised of 10 daily, manualized DBT skills training sessions. Also seen twice per week for individual DBT psychotherapy and participated with DBT-trained nursing-staff in DBT milieu to facilitate skills generation. Staff met regularly for consultation meetings and DBT consultation was brought into evaluate the treatment program.	Follow up data was available for 26 DBT Ss (83% of those initially enrolled) and 27 TAU Ss (90% of those initially enrolled). The first study to evaluate implementation of DBT along with one-year clinical outcome follow up for suicidal adolescents on an inpatient unit compared to TAU. In comparison to TAU, DBT Ss had significantly fewer behavioral incidents and problems on the ward. There were no completed suicides in either group and both groups demonstrated highly significant reductions in parasuicidal behavior, depressive symptoms, and suicidal ideation at 1 year. Study supports feasibility to conduct abbreviated DBT program on an adolescent inpatient unit.
Comtois, Kerbrat, Atkins, Harned, & Elmwood (2010)	30 participants (80% female, M age= 37 years) with BPD. Public mental health service; outpatient clinic.	A pre-post evaluation examined the impact of DBT-Accepting the Challenges of Exiting the System (DBT-ACES) on outcomes of employment, hospital admissions, self-injury, and quality of life. Length of treatment included one year of standard DBT (SDBT), followed by one year of DBT-ACES. Participants assessed at pre and post SDBT, pre and post DBT-ACES, and at one year follow up after DBT-ACES.	After receiving 1 year of standard DBT, patients received DBT- ACES, an adapted form of DBT that teaches contingency management and exposure strategies that specifically aid psychiatrically disabled individuals in finding employment, and exiting the public mental health system. Individuals in DBT-ACES receive weekly individual DBT and skills group. Phone coaching/consultation team not mentioned in article.	Random-effects regression models (RRMs): participants significantly more likely to be employed or in school at the end of SDBT, and were more likely to be working 20 or more hours at end of DBT-ACES. Participants had significant reduction in inpatient admissions, and reported an improved quality of life between end of SDBT and end of DBT-ACES.
McDonell, Tarantino, Dubose, Matestic, Steinmetz, Galbreath, & McClellan (2010)	106 adolescent patients with histories of NSSI, suicidality, and mood disorder diagnoses (58 % female, M age=15 years) in long term inpatient care.	This controlled (nonrandomized) study compared DBT to TAU in an adolescent inpatient unit. Historical medical records were collected across both conditions, including diagnosis, length of stay, and NSIB. Global functioning, medications, and discharge placement were not available for comparison group.	Inpatient program included all elements of comprehensive DBT. However, Participants received varying "intensities" of DBT (i.e., DBT vs. skills group only) based on clinical need. All staff received DBT training, although the nature of this training was not specified.	Repeated measures ANOVA: patients in the DBT demonstrated significant reductions in psychiatric medications upon discharge, and significant increases in global functioning over time. Individuals in DBT group also demonstrated significant reduction in NSSI over time, while DBT had little effect on seclusion rates. Patients in DBT also had significantly lower rates of NSSI than controls.

3. Unpublished Quasi Experimental Studies

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Stanley, Ivanoff, Brodsky, Oppen-heim, & Mann (AABT, 1998, Nov).	All Ss were females with BPD.	Non-randomized pilot project comparing efficacy for patients in standard DBT with a matched group of patients receiving TAU in the community.	This study included all components of standard, comprehensive DBT but was provided for shorter treatment duration (six 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 observed. There were no suicide attempts in either group during the duration of the study.

4. RCTS, Quasi-Experimental and Uncontrolled Studies Incorporating Elements of DBT/ Skills-only/Quasi DBT

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Barley, Buie, Peterson, Hollings-worth, Griva, Hickerson, Lawson, & Bailey (1993).	Mostly female (79%) on an inpatient personality disorders unit. M age = 30 years (range=16-57). Length of stay in hospital: M = 106 days (range=3-629 days).	Quasi-experimental study (N=130). Study compares outcomes between Ss 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; psychodynamic 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 Ss 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 Ss on a personality disorders unit. Because this study lacks randomization, other competing hypotheses for these findings are not eliminated. Its obvious strengths include its naturalistic setting on an inpatient unit.

4. RCTS, Quasi-Experimental and Uncontrolled Studies Incorporating Elements of DBT/ Skills-only/Quasi DBT

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Springer, Lohr, Buchtel, & Silk, (1996).	General inpatient unit. M length of stay = 13 days. Ss were selected for group on the basis of having a personality disorder.	Quasi-experimental study where investigators compared outcomes of Ss 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.	Creative coping group format where Ss were encouraged to discuss parasuicidality in group. Ss only exposed to a limited number of DBT skills from three of four modules (emotion regulation, distress tolerance, and interpersonal effectiveness).	Ss in both conditions attended an average of six sessions and improved during their hospital stay. Ss 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 Ss in the modified treatment group engaged in significantly *more* "acting out" behaviors during their hospital stay which they attribute to "discussing parasuicidality in the CC (creative coping) 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 in Linehan's Skills Training manual: with chronically parasuicidal patients, do not encourage discussion of parasuicidal acts in a group setting because of contagion effects (p.24).
Evans, Tyrer, Catalan, Schmidt, Davidson, Dent, Tata, Thornton, Barber, & Thompson (1999).	Ss ranging in age from 16-50 with recent episode of deliberate self-harm as well as at least 1 other episode of parasuicidal behavior in the past year. All Ss had a personality disturbance in Cluster B.	Randomized controlled trial (N=34) comparing a manual-assisted cognitive-behavioral brief intervention (MACT) to TAU. Following baseline, Ss were assessed at 6 months. Exposure to MACT ranged on a continuum from 2 to 6 sessions of problem-focused psychotherapy along with bibliotherapy (a manual of 6 short chapters covering problem-solving & basic cognitive techniques to manage emotions & negative thinking & relapse prevention strategies). Substance dependent clients were excluded from this study.	In contrast to comprehensive DBT, MACT constitutes a very brief treatment, up to 6 sessions of psychotherapy. Ss in MACT were instructed how to conduct a behavioral chain analysis using materials developed by Linehan and used in DBT and encouraged to conduct a chain analysis on their last episode of parasuicidal behavior. Ss were taught DBT crisis survival skills, including pros & cons and encouraged to practice these skills during the week.	During the six month assessment period, 10 Ss (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.

4. RCTS, Quasi-Experimental and Uncontrolled Studies Incorporating Elements of DBT/ Skills-only/Quasi DBT

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Telch, Agras, & Linehan (2000).	Female Ss between 18 and 65 years of age in outpatient treatment program for Binge Eating Disorder.	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.	Ss only received DBT group skills training. 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 Ss 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.	Both the number of binge episodes and binge days decreased significantly from baseline to post-treatment and included weight loss. Three and six-month post-treatment assessment data showed strong continued abstinence from binge eating and maintenance of lower weight. No treatment drop outs were reported and attendance was strong.
Turner (2000)	Ss recruited from ER after suicide attempts; outpatient.	Randomized controlled trial (N=24) comparing DBT-oriented therapy to client-centered therapy (session range: 49-84 sessions). Ss assessed at baseline and at 6- and 12-month follow-ups. Ss received	Psychodynamic techniques added to standard DBT to conceptualize Ss' emotions and cognitions. To keep treatment conditions equal with regard to clinical contact hours, DBT skills training took place during individual therapy sessions, not in a separate group. Both treatment conditions received six sessions of group focusing on significant persons in the Ss environment.	Modifications to standard DBT made at theoretical and applied level, including incorporating of psychodynamic strategies and elimination of distinct DBT skills training mode. Results support efficacy of DBT-oriented treatment. At 6- and 12-month follow-up, Ss in DBT condition showed statistically significant gains in suicide/self-harm behavior compared to CCT Ss. At 12-month follow-up, DBT Ss showed significantly less anger, impulsivity, and depression than CCT Ss, as well as significantly improved global mental health functioning. At both 6-and 12-month follow-ups, DBT-oriented therapy significantly reduced hospitalization stays.
Trupin, Stewart, Beach, Boesky (2002).	Juvenile female offenders in a mental health cottage in a correctional facility.	Quasi-experimental study comparing pre-post outcomes. Compared outcomes from cottage implementing DBT to a treatment as usual cottage with comparable characteristics. With Junveim	Application primarily of DBT skills as well as consultation team. Each skills module taught over four week period in 60-90 minute groups occurring 1 to 2 times weekly. Skills strengthening occurred through coaching in the milieu.	Behavioral problems (aggression, parasuicide, and class disruption) were significantly higher within the experimental cottage at pretreatment and decreased significantly during intervention compared to other cottage. Following the DBT intervention, staff in the DBT cottage used fewer restrictive punitive responses. Following the DBT intervention, youth showed significantly improved transition to and participation in on-campus therapeutic, educational and vocational services.

4. RCTS, Quasi-Experimental and Uncontrolled Studies Incorporating Elements of DBT/ Skills-only/Quasi DBT

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Lynch, Morse, Mendelson, & Robins (2003)	Ss of depressed individuals age 60 and older; outpatient treatment	Randomized controlled trial (N=34) comparing DBT to treatment as usual plus clinical management in 28 week treatment. All Ss received anti-depressant medications. Ss assessed at baseline, 28 weeks, and at 6-month follow up.	Ss only received DBT group skills training mode of treatment, in addition to anti-depressant medications. Targets modified to emphasize treating depression in elderly population. Skills modules taught once.	Between group analyses revealed one significant difference. The DBT condition showed significantly less maladaptive Pleasing Others compared to TAU. The numbers of individuals with clinically significant minimal depression at post treatment using the BDI were similar across condition, but favored DBT at follow-up. For the HAMD, 67% of DBT patients met criteria for being both significantly improved and asymptomatic at post treatment, as opposed to 50% of TAU patients. At the 6-month follow-up, 73% of DBT patients and 40% of TAU patients were within the asymptomatic range. Analyses revealed a number of significant changes over time within group on secondary measures of functional status and coping style, with the vast majority favoring the DBT condition.
Sambrook, Abba, & Chadwick (2006)	34 participants with self-injurious behavior (4 skills groups were all female, 1 group included 2 men, 20-53 years). Skills group in outpatient program.	Pre-post evaluation study assessed a DBT- informed skills group for outcomes of self- injury, psychopathogy, and use of crisis services. Data was collected for 18 months prior to beginning a group, and for the subsequent 18 month period following the skills group.	The program included an Emotional Coping Skills (ECS) groups and individual pre-commitment meetings. Groups utilized DBT skills, including crisis survival, mindfulness, understanding and regulating emotions, and assertiveness modules. Clinicians were "trained in DBT" although nature of their training not specified. No phone coaching, individual therapy, or consultation team were included.	30% of the participants had significant decreases in number of inpatient hospitalization days, and 61% had decreases in outpatient appointments, evidencing a drop in crisis-related service utilization. Participants reported a significant decrease in CORE scores, a measure of general psychopathology and functioning, from pre to post treatment.
Hoffman, Fruzzetti, & Buteau (2007)	55 family members of individuals with BPD (M age=53 years).	Replication of original, Hoffman et al. (2005) study, Pre-post study of family members completing Family Connections (FC). Participants assessed pre, post, and 3 months post completion.	Family Connections: 12 week education program based on Lazarus' stress –coping-and-adaptation model, and standard DBT/ DBT for families. Program provides: a) current information on BPD research and family functioning b) coping skills based on balance of acceptance and change c) relationship and family skills and d) opportunities to build family member support network. Group led by trained family members.	Hierarchical linear modeling: supported findings from the initial FC study (significant reductions in grief and burden, increases in master from pre to post-FC). Gender differences were found, women reported greater reductions in burden and grief across pre to post assessment than men.

4. RCTS, Quasi-Experimental and Uncontrolled Studies Incorporating Elements of DBT/ Skills-only/Quasi DBT

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Wasser, Tyler, McIlhaney, Taplin, & Henderson (2008)	14 adolescents (14 % female, M age= 14)	This pre-post treatment study utilized nonrandomized matching to compare adolescents in a residential DBT program (n=7) to another state that applied a Standard Therapeutic Milieu residential program (STM) (n=7). Secondary matching yielded a comparison of 12 adolescents per group on their second Axis I diagnosis. Length of residential stay ranged from 172 to 532 days, length of DBT was 17 weeks. Participants assessed at baseline and discharge.	DBT program consisted of weekly skills groups. 2 of the 6 clinicians had participated in a 2 day onsite training in DBT, and additional DBT training. Families attended sessions periodically. No individual DBT or consultation team. Fidelity to DBT was not assessed.	Repeated measures two-way ANOVA: significant within -subject improvement over course of treatment for depression, psychomotor excitation, and anxiety, while improvements for withdrawal and organicity were seen at the trend level. Participants in the STM were observed to have significant reductions in psychomotor excitation at discharge, as compared to the DBT group. No other significant between group differences were observed. Repeated measures t-tests: participants in the DBT group reported significant improvement in depression, and improvement in anxiety that approached significance. Improvement in anxiety also approached significance for participants in STM group.
Feldman, Harley, Kerrigan, Jacobo, & Fava (2009)	24 individuals (75 % female, M age 41 years) with Major Depressive Disorder; Outpatient psychiatry division of a major health system.	Pilot RCT compared 16 week DBT based skills group (n=13) to waitlist control group (n=11) for major depression. Participants assessed at pre and post treatment.	Patients received weekly 1.5 hr long DBT skills group. Patients received DBT, non-CBT or non-DBT individual therapy. No details were provided regarding whether phone coaching or consultation teams were included. Group leaders were intensively trained, and 7 years of DBT skills group experience.	2x2 repeated measures ANOVA revealed individuals in both DBT and waitlist conditions demonstrated increases in emotional processing over time. Greater emotional processing was associated with decreases in depressive symptoms in the DBT group, and *increases* in depression in the waitlist condition.
Iverson, Shenk, & Fruzzetti (2009)	31 females (M age=41) with histories of domestic abuse victimization; outpatient clinic.	This pre-post pilot treatment study examined an adapted 12 week DBT group; participants assessed at pre and post-treatment.	Program ran a weekly 2 hr DBT skills group that closely followed Linehan's (1993) manual, as well as DBT relationship skills(Fruzzetti & Iverson,2006). Each clinician had engaged in "extensive DBT training" prior to coleading groups, and all therapists were supervised by Fruzzetti. Weekly consultation teams and phone coaching provided by group therapist. No Individual therapy.	Within subjects repeated measures ANOVA: women reported significant reductions in depression, hopelessness, social adjustment, and overall psychopathological symptoms at post treatment. Independent sample t-test: no significant differences between completers and non- completers on clinical outcomes, or based on whether the females lived with their abuser during the study. Women who dropped out of the study had fewer years of education than completers, but they did not differ on any other demographics.

4. RCTS, Quasi-Experimental and Uncontrolled Studies Incorporating Elements of DBT/ Skills-only/Quasi DBT

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Ritalin, Wickholm-Pethrus, Hursti, & Jokinen (2009)	13 family members of individuals with BPD (M age 44); family outpatient group skills program.	Pre-post pilot study evaluated a 9 week Family Connections program on outcomes of burden, psychic health, and well-being. Participants assessed at pre and post treatment.	Program was 9 week adaption of Fruzzetti's Family Connections program: 12 week education program based on Lazarus' stress – coping-and-adaptation model, as well as standard DBT and DBT for families. Program provides: a) current information on BPD research and family functioning b) coping skills based on balance of acceptance and change c) relationship and family skills and d) opportunities to build a support network for family members. Group is led by trained family members.	Paired samples t-tests: significant improvement in global psychiatric health, anxiety levels, and perceived family member burden at post-treatment. No significant differences found on measures of quality of life, and reduction of depressive symptoms approached significance. Family members also perceived as less critical and less emotionally over involved at post-treatment.
Shelton, Sampl, Kesten, Zhang, & Trestman (2009)	63 participants (71% female, M age=28) with impulsive behavior problems; correctional facilities in Connecticut.	This non-equivalent control group design evaluated a 16 week DBT-corrections-modified (DBT-CM) skills group for participants in a prison setting. Participants assessed at baseline, week 16 (post skills group), and at 6 and 12 month follow up. Participants randomly assigned to a DBT-coaching or case management condition following completion of the 16 week skills group.	Program consisted of a twice-weekly skills group held over 16 weeks, followed by weekly 30 minute case management or DBT coaching sessions. No individual therapy or weekly consultation teams included. Details regarding the skills and structure of the DBT-CM group not provided.	Mixed effects regression models: participants had significantly fewer disciplinary tickets from baseline to post skills group, and male participants in particular were less physically aggressive at follow-up. Participants also demonstrated healthier means of coping at follow up. Further, participants in the DBT coaching group demonstrated greater reductions in psychopathology at 6 month follow up than the case management condition. The most drastic reductions in symptoms over the course of treatment seen among adolescent males and females.
Waltz, Dimeff, Koerner, Linehan, Taylor & Miller (2009)	30 individuals with BPD (97 % female, M age=32); university treatment development clinic.	RCT-within subjects design evaluated association between experimental video (Opposite Action) viewing and outcomes of DBT skills knowledge, acquisition and homework practice. Assessed on outcome expectancies before and after experimental video, given a pretest and posttest knowledge measure after each video viewing. Participants completed homework sheet on skills use and effectiveness for 1 week period following video viewing.	This study evaluated one DBT skill from the Emotion Regulation module, Opposite Action.	Paired-samples t-tests: participants demonstrated significant increase in DBT skills knowledge and increased confidence that skill would be helpful. Experienced a significant decrease in intensity of painful emotions after utilizing opposite action skill.

4. RCTS, Quasi-Experimental and Uncontrolled Studies Incorporating Elements of DBT/ Skills-only/Quasi DBT

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Davenport, Bore & Campbell (2010)	17 participants (82 % female, M age=29 years) with BPD. Outpatient metropolitan DBT program attached to a private hospital.	This controlled (nonrandomized) study compared participants that had completed DBT in the past 3 years (n=10) to participants who were in a "pre-treatment" control condition (n=7). Those in pre- treatment, control condition were either waitlisted for DBT or were in first 8 weeks of DBT skills group. Length of treatment was 14 months; participants assessed at one timepoint, scores were then compared to assess differences in personality traits between "pre-treatment" and "post-treatment" groups.	The DBT program followed the model developed by Linehan (1993) and included skills group, consultation team, phone coaching and individual DBT. Details around frequency and content of sessions, and DBT adherence not provided.	Nonparametric tests: pre-treatment group had significantly lower scores on self-control, agreeableness and neuroticism, compared to post treatment group. Further, participants in post treatment group did not significantly differ from norms on each test, except for high scores on neuroticism.
Keuthen, Rothbaum, Shaw Welch, Taylor, Falkenstein, Heekin.. Jenike (2010)	10 females (M age=30 years) with a primary diagnosis of trichtillomania (TTM); hospital-based outpatient program.	This uncontrolled pre-post pilot study examined the application of a 11-week DBT-enhanced habit-reversal treatment (HRT) for TTM severity, global improvement, and emotion regulation capacity. After 11 week acute treatment, four booster sessions held over 3 month period. Participants assessed at baseline, post-treatment, and at the 3-month maintenance point.	Standard DBT not conducted; DBT acceptance and change strategies were incorporated into a HRT protocol for TTM. Details regarding the nature of the DBT strategies not provided. DBT skills groups, phone coaching and consultation teams not included.	Two-tailed Wilcoxon signed ranks tests: significant improvement in TTM severity and impairment, depression and most emotion regulation scores, between baseline and post treatment. TTM severity , depressive and anxiety symptoms, and emotion regulation capacity were significantly improved from pre- treatment to 3-month maintenance. Spearman correlations: generally revealed that changes in hair pulling severity were significantly associated with changes in emotion regulation capacity, from pre to post treatment, and from pre-treatment to 3 month maintenance.
Sakdalan, Shaw & Collier (2010)	6 participants with intellectual disabilities (ID) in a forensic setting (17% female, M age= 26 years)	This pilot pre-post study evaluated an adapted 13 week DBT program for individuals with intellectual disabilities. Participants assessed at pre and post treatment.	Program adapted from Linehan's (1993) manual and Verhoeven's coping skills program. The program included 1.5 hr group sessions that focused on quality of life and therapy interfering behaviors and utilized materials and teaching example suitable to the needs of the target population.	T-tests: significant increases in strength related areas and global functioning, and significant decreases in risk behaviors over the course of treatment. All participants reported enjoying the program and felt they learned a great deal, but recommended more help with homework, more use of visual aids, and further simplification of hand-out information.

4. RCTS, Quasi-Experimental and Uncontrolled Studies Incorporating Elements of DBT/ Skills-only/Quasi DBT

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Williams, Hartstone, & Denson (2010)	140 individuals with BPD, 68 individuals completed group program(81 % female, M age=19-59 years). Community outpatient clinic.	This quasi-experimental study measured effectiveness of a 20 week DBT skills group for BPD symptoms and service utilization. All individuals receiving group DBT were in individual DBT (n=31) or individual TAU (n=109). Participants assessed pre and post treatment.	The program consisted of a weekly 2 hour DBT skills group and either individual DBT or individual TAU. All DBT therapists met for weekly consultation team, no DBT phone coaching provided.	One- way and mixed ANOVAs: participants in individual DBT had significantly higher completion rates than those in individual TAU. Inpatient hospitalization days and symptoms of BPD, depression and anxiety all decreased significantly for those who completed Group DBT across both individual therapy conditions.
Hirvikoski, Waaler, Alfredsson, Pihlgren, Johnson, Ruck,...Nordstrom (2011)	51 adults (63% female, M age=38.5 years) diagnosed with ADHD in a Swedish outpatient psychiatric unit.	RCT compared a 24-session DBT-based method developed in Germany for ADHD (n=26) to a loosely structured discussion based control group (n=25). Participants assessed at pre and post.	Ss in DBT condition only were provided a weekly, 2 hr, DBT-based skills group, adapted from the Hesslinger et al. 2004 manual. No individual DBT, phone coaching, or consultation team incorporated. Groups led by CBT-trained clinicians, a few clinicians had previous training in DBT.	Repeated measures ANOVA: trend-level reduction in ADHD symptoms in DBT skills group only. Participant-rated satisfaction and treatment feasibility high in both groups. Skills group rated as more credible at pre and post. No reduction in comorbid psychiatric symptoms found in either group.
Rizvi, Dimeff, Skutch, Carroll, & Linehan (2011)	22 individuals (82% female, M age= 34 years) who met criteria for BPD and Substance Use Disorder (SUD). Participants were enrolled in 1 of 3 standard outpatient DBT programs.	This quasi-experimental study was conducted to test the feasibility and outcomes of using DBT Coach, mobile device technology designed to facilitate the in vivo use of opposite action (OA) skills. Participants used DBT Coach for a period of 10-14 days; measures were administered to clinician and participant at pretrial and post trial, and emotion ratings were recorded every time participant used DBT coach. Participants also asked to complete a very brief assessment about their phone use and substance urges on a daily basis.	Participants were enrolled in one of three comprehensive DBT programs in the Pacific Northwest.	Hierarchical linear modeling: significant reduction in emotional intensity and urge to use substances from pre coaching to post coaching. Individuals also reported a significant decrease in psychopathology and urge to use substances, and increase in ability to identify and appropriately use OA, over course of entire trial.

4. RCTS, Quasi-Experimental and Uncontrolled Studies Incorporating Elements of DBT/ Skills-only/Quasi DBT

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Roepke, Schroder-Abe, Schutz, Jacob, Dams, Vater...Lammers (2011)	40 women with BPD (*M* age 30). DBT inpatient program.	Quasi- experimental study compared 12-week inpatient DBT (n=20) to 12-week outpatient TAU (n=20). measures were administered at pre -treatment, and after 10 therapy sessions to avoid hospitalization discharge effects.	Weekly 1hr individual therapy, weekly skills group(3 hrs), mindfulness, peer group meetings, & group psychoeducation(8 hrs total), therapist consultation team (2 hrs/week). No phone coaching as individuals were in inpatient milieu. DBT program followed Linehan's manual adapted for inpatient milieu (Bohus et al., 2004). All DBT therapists had completed DBT certification in Germany, or were in final stages of completion. Certification included 96 hrs of theory training, one or more supervised therapy cases, leading a 6 month skills group, and a final oral examination.	ANCOVA: significant increases in self -concept clarity, as well as basic and global self -esteem, in DBT intervention group only. Changes in global self -esteem were primarily attributed to improvements in social and emotional self-esteem in particular.
Wolf, Ebner-Priemer, Schramm, Domsalla, Hautzinger, & Bohus (2011)	24 females with BPD (ages 22-47). DBT group skills training(ST) in outpatient context, and computer based skills training(CBST).	RCT compared 24-week group ST alone (n=11) to group ST & CBST (n=13). Participants assessed at pre -treatment and 1 week post treatment.	Skills training group was 2 hrs in duration, and "generally followed Linehan's manual, with some content shortened and modified." Details regarding modifications not provided. Individual therapy was either psychodynamic or behavioral individual therapy, not DBT. No consultation team or phone coaching. Senior skills group leaders supervised monthly by an experienced DBT supervisor.	Individuals in ST + CBST demonstrated a greater increase in DBT skills acquisition, greater ability to link DBT concept to appropriate module, and spent more time studying skills than individuals in ST only group.

5. Uncontrolled Studies

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Comtois, Elwood, Holdcraft, Smith & Simpson (2007)	24 participants (96% females, M age=34 years) with histories of chronic self injurious behavior; community mental health(MH) center.	Pre-post replication study examined the 1 year DBT for suicidal and self injurious behavior in community MH context. Participants assessed at pre and post treatment.	Followed comprehensive DBT, with adaptations for community MH population (i.e., twice- weekly 90 minute skills group, DBT-oriented case management as needed, DBT medication management, periodic administrative meetings to structure environment to support DBT). All clinicians intensively trained and over 7 years DBT experience, trained by Dr. Comtois, a senior trainer and former DBT research therapist.	Nonparametric pre-post comparisons: significant reductions in self injurious behavior, number of inpatient admissions and days hospitalized, and number of crisis systems utilized from pre to post treatment . DBT community MH program had higher attrition rate than previous DBT trials. Secondary analyses: community DBT model saved over $12, 000 in hospital charges after one year of DBT.
Chen, Matthews, Allen, Kuo, & Linehan (2008)	8 females (Median age=31 years) with BPD and Binge Eating Disorder (BED) or Bulimia Nervosa (BN); outpatient program.	Uncontrolled case-series design examined 6-month DBT for patients with Binge-eating or BN, and BPD. Participants assessed at pre, post, and 6 month follow up.	Followed comprehensive DBT protocol, with some minor adaptations for an Eating Disordered(ED) population (i.e., binge eating into the treatment hierarchy, treatment model, and diary card). Program only 6 months in length (24 sessions) due to funding constraints.	Significant improvements in all outcomes (self-injury, objective binge-eating, general eating disorder pathology, social functioning., number of non-ED Axis I disorders) over course of treatment. More specifically, effect sizes from pre to post treatment on measures of suicidal behavior, self -injury and non-ED disorders Axis I were medium, and effect sizes for binge eating and eating pathology were large. For the 5 clients with BED and BPD, changes in BMI were variable over the course of treatment, with some losing and some gaining weight at follow up.
Hjalmarsson, Kaver, Perseius, Cederberg, & Ghaderi (2008)	27 female adolescents (M age=20 years) with self-injurious behaviors; outpatient.	Within- subjects design examined 1-year DBT on self -injurious behavior. Participants assessed at pre, mid and post treatment.	Included most modes of standard DBT (Linehan, 1993). Unclear whether phone coaching was provided. Clinicians supervised by a supervisor who had been trained by Alan Fruzzetti. Clinicians followed criteria for a modified treatment adherence protocol: a) session should follow treatment hierarchy b) use of diary cards c) include skills in chain analyses d) assign homework and 3) focus on validation, commitment, balancing of acceptance and change strategies	ANOVA: significant improvements in depression and borderline personality features, as well as anxiety, interpersonal sensitivity, and paranoia over course of treatment (moderate to large effect sizes). Intent-to-treat analyses: generally mirrored completer analyses. Parasuicidal behaviors decreased significantly over course of treatment.

5. Uncontrolled Studies

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Salbach-Andrae, Bohnekamp, Pfeiffer, Lehmkuhl, & Miller (2008)	12 female adolescents (M age=16.5 years) with Anorexia Nervosa (AN) or Bulimia Nervosa (BN); child and adolescent outpatient psychiatry department in Germany.	Pre-post case-series treatment study evaluated a 25-week DBT program for participants with AN or BN. Participants assessed at pre and post treatment.	Program adapted from Linehan, 1993; Miller, 2007, included weekly 50 minute individual DBT(targeting and chain/solution analyses), weekly 100 minutes skills group, weekly therapist consultation group, and intersession phone contact with primary therapist. DBT was adapted for ED population (i.e., disordered eating was incorporated into the diary card & treatment hierarchy, a supplementary 'Dealing with Food and Body Image' module was included in skills group. All clinicians had received intensive DBT training, and an outside consultant evaluated the treatment program.	Paired-sample t-test: significant reduction in vomiting and binge frequency at post treatment, and significant reduction in food restriction. Further, participants demonstrated significant reductions in symptoms of general psychopathology and eating pathology at post-treatment. While all of the patients with restricting AN remitted, none of the patients with BN fully remitted at the end of treatment.
Woodberry & Popenoe (2008)	28 adolescents (82% female, M age=16 years) with suicidal behavior, NSSI or other behavioral problems; naturalistic service-oriented outpatient psychiatry clinic.	Uncontrolled pre-post treatment study evaluated a 15 week DBT treatment package for adolescents with behavioral problems, and their family members. Adolescents and their family members filled out measures of teen functioning at pre and post treatment.	The adapted Adolescent DBT program closely followed Linehan's standard DBT and Miller's adapted DBT program for adolescents and families. Included weekly individual DBT, weekly multi-family skills group, therapist consultation team including review of tapes, and phone coaching between sessions. 5 of the clinicians had attended BTECH intensive trainings, 2 others had attended shorter trainings, and 11 clinicians trained by review of the Linehan text. Many clinicians completed self-assessments following individual sessions to increase DBT adherence.	Matched pairs t-tests: adolescents demonstrated significant reductions in suicidal ideation at end of treatment. 63 % of the original 46 consented adolescents completed the program, while 86% of the parents of treatment completers attended 11 out of 15 skills group sessions. Adolescents self-reported significant reductions in depression, anger, dissociation, impulsivity and relationship functioning at post treatment. Parents similarly reported a reduction in adolescents' depression, internalizing symptoms, and total behavioral problems.

5. Uncontrolled Studies

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Worrall & Fruzzetti (2009)	56 DBT clinicians(78% female).	This feasibility study assessed an internet-based training system (ITS) designed to help train peer supervisors in DBT. Clinicians randomly selected to view one of 5 mock sessions, and rate the session on a variety of DBT-relevant criteria. Clinician answers were then compared to "expert ratings" and clinicians were given feedback on their performance.	Not applicable	Clinicians who used the ITS were able to effectively discriminate between high and low quality DBT, and participants reported that the ITS was very or extremely useful for supervising and training new clinicians.
DiGiorgio, Glass, & Arnkoff (2010)	129 clinicians (79% female, 25—65 years) who completed at least one type of Behavioral Tech-sponsored DBT training.	Uncontrolled study examined relationship between therapist factors (theoretical orientation, degree type, and training) and client factors (diagnosis) to DBT adherence.	The study assesses adherence to DBT through measure called Inventory of DBT Individual Psychotherapy Sessions that parallels DBT concepts outlined in Linehan's 1993 manual. Does not assess Standard DBT.	Over 50% of the clinicians were master's level, and 66% reported a primary orientation of CBT. 39 % had completed a DBT intensive. Therapists more closely adhered to DBT treating clients with BPD vs. other disorders (anxiety). DBT adherence did not differ based on therapist orientation or intensive training attendance.
Kroger, Schweiger, Sipos, Kliem, Arnold, Schunert & Reinecker (2010)	24 females (M age=31 years) with a diagnosis of Anorexia Nervosa(AN) or Bulimia Nervosa(BN) and BPD, as well as a history of non-response to eating disorder treatment; specialized BPD inpatient unit in Germany.	This uncontrolled treatment study examined the efficacy of a 3 month DBT inpatient program(Kroger, 2006) for symptoms relating to BPD-ED. Participants assessed at baseline, end of treatment, and at 15-month follow-up.	Weekly 1 hr individual therapy, 100 minute skills group 3 times per week, and weekly consultation. No phone coaching as it was an inpatient milieu, but coaching and crisis interventions conducted by a nurse on consultation team. Physicians, psychologists and nurses on consultation team were supervised by senior clinicians who are board-certified by the German association for DBT. Senior clinicians also reviewed tapes at regular intervals.	38% of participants with AN recovered, and 50% instead met criteria for BN-BP at follow-up. 54% of participants with BN no longer met criteria. Participants with AN reported significant reductions in eating disorder symptoms at post-treatment and follow-up, and significant increases in BMI at follow up only (large effect size). Participants with BN demonstrated significant improvement in global functioning and general psychopathology at post-treatment and follow-up, while participants with AN demonstrated significant improvement at follow-up only. No significant improvements in BPD observed at either time point, among either ED group.

5. Uncontrolled Studies

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
McFetridge & Coakes (2010)	40 individuals (M age 31 years) with BPD. Residential therapy within a DBT-informed treatment community in the UK.	This pre-post evaluation study used historical data from the periods of 2000-2007 to assess patient's baseline scores on quality of life, hospital admissions, life events, and used a separate measure on clinical risk and distress (CORE-OM). Researchers mailed questionnaires to patients 5 years (on average) after end of treatment to assess quality of life and life events. Typical length of treatment was 8 months.	Twice weekly DBT skills training and weekly individual DBT "diary-focused interventions". Individuals participated in twice daily community meetings, twice weekly group analytic therapy groups, and a weekly individual therapy with a clinician of unknown orientation. Majority of staff had attended DBT intensive training, and attended weekly consultation team meetings.	T-tests: significant reductions in hospitalizations, psychiatric medications and clinical risk, for those ex-clients who completed the residential therapy program, as compared to non-completers. No significant reductions in clinical risk and distress observed at follow up amongst the non-completers. Qualitative data included suggest that some clients experienced changes in sense of identity, important life events and relationships. Lack of randomization precludes the authors from drawing more definitive conclusions about the benefits of this adapted DBT residential program.
Perroud, Uher, Dieben, Nicastro, & Huguelet (2010)	447 individuals (83% female, M age=30 years) with current suicidal or non-suicidal self-injurious behavior, or other impulse control problems; outpatient treatment program.	This pre-post evaluation study examined an intensive 4 week DBT program (I-DBT) for BPD symptoms, depression, and hopelessness. Participants assessed at baseline and end of treatment.	All therapists had undergone a DBT intensive training led by Linehan and colleagues. DBT program included individual therapy, group skills training (2-4 hrs/day), phone coaching, and weekly team meetings.	Linear mixed models: I- DBT led to significant reductions in depression, hopelessness, and overall symptom distress. Those who completed a second course of DBT-I reported further reductions in general symptom distress, but not depression or hopelessness. High scores on schizoid and narcissistic personality traits predicted poorer response to treatment.
Axelrod, Perepletchikova, Holtzman, & Sinha (2011)	27 women (M age=38 years) who met criteria for BPD and substance dependence; community outpatient substance abuse treatment program.	This uncontrolled treatment study examined the impact of 20-week DBT on substance use and emotion regulation capacity. Participants assessed at baseline, middle, and end of treatment.	DBT outpatient program part of a state-wide DBT training initiative in Connecticut that was overseen by Linehan and colleagues. A DBT trainer (Sinha) supervised other clinicians. Comprehensive DBT.	One-way repeated measures ANOVA: significant reductions in depression from pre to mid- treatment, significant improvement in emotion regulation from pre to post treatment. Significant reduction in substance use from pre to post treatment. Improved emotion regulation appeared to partially account for decreases in substance use over time.

5. Uncontrolled Studies

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Drossel, Fisher, & Mercer (2011)	24 caregivers of individuals with dementia (79% female, 38-87 years). Caregivers met one or more risk factors for elder abuse (current/ past involvement with Elder Protective Services, current/ past substance use, and/or physical disabilities or depressive symptoms; community outpatient clinic.	Uncontrolled pilot study examined adapted 8-week DBT program for high-risk caregivers. Participants assessed at pre and post treatment.	Linehan's (1993) manual adapted for a caregiver population, with references to NSSI, suicidality, and psychopathology replaced with examples suited to caregivers and caregiver burden. Weekly, 2.5 hour DBT skills group held in context of other caregiver services (i.e., psycho-education and problem-solving, phone boosters for skills, and 24/7 helpline. Individuals were in individual therapy, theoretical orientation unknown. Group leaders had been trained in DBT at University of Nevada Reno, other leaders had received previous DBT course instruction or some training.	T-tests: caregivers reported significant increases in psychosocial functioning and use of problem focused coping, decreases in fatigue and improved emotional well-being. 40 % of participants reported reductions in depressive symptoms by at least 10% over course of treatment.
Fleischaker, Bohme, Sixt, Bruck, Schneider, & Schulz (2011).	12 female adolescents (13-19 years of age) with non-suicidal self-injurious behavior(NSSI) and/or suicidal behavior in past 16 weeks; DBT outpatient psychiatric department.	Pilot uncontrolled study investigated DBT-Adolescent (DBT-A) on 12 teens. Length of treatment ranged from 4 to 6 months, participants assessed at baseline, 2-4 weeks into therapy, 4 weeks after end of therapy, and at 1 year follow up.	DBT-A included individual therapy (1 hr/week), multi-family skills group (2 hrs/week), and phone coaching as needed.	Intent to treat analyses: number of BPD criteria, NSSI and suicidal behavior all decreased significantly over course of treatment.

5. Uncontrolled Studies

Authors	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
James, Winmill, Anderson, & Alfoadari (2011)	25 adolescents (84% female, M age =15 years) with a history of persistent self-harm; community outpatient treatment among teens in looked after care system in UK.	This pre-post treatment study examined an adapted 1 year DBT program for teens in a looked after care system. Participants assessed at pre and post treatment.	Program adapted from Linehan's (1993) manual and 12 week package developed by Rathus and Miller (2002). Modes of treatment included weekly 2 hour DBT skills group, telephone consultation, outreach, consultation team, and weekly individual sessions. No individual DBT, individual treatment integrated techniques from CBT, psychodynamic, client-centered, and other approaches.	Paired t-tests: significant reduction in depression, hopelessness scores, and lower frequency of self-harm. No significant changes in automatic thoughts, quality of life or attachment styles at end of treatment. Rates of treatment drop-out relatively high (28%), those who dropped out appeared more depressed and more hopeless, but had higher GAF ratings than those who remained in treatment.
Steil, Dyer, Priebe, Kleindienst, & Bohus(2011)	29 females (20-51 years) with history of childhood sexual abuse (CSA). The majority of patients had received previous treatment for PTSD, and 90% of the sample met criteria for Major Depressive Disorder, 62% reported a history of one or more suicide attempts. DBT-PTSD Residential Program in Germany.	This uncontrolled pilot pre-post evaluation study examined relative change in PTSD severity, depression, anxiety, and other psychopathology over course of DBT-PTSD treatment. Average length of treatment was 82 days. Participants assessed at baseline, end of treatment, and 6-week follow up.	The DBT-PTSD residential program followed the guidelines as described by Bohus, 2004; Swenson, Witterholt, & Bohus, 2007. Program consisted of two weekly 35 min. individual therapy sessions. 25% of the individual sessions dedicated to exposure. Weekly groups held that included the following: 90 min skills training, 60 min group intervention targeting self -esteem, three 25 min mindfulness sessions, and 60 minutes of PTSD-specific psycho-education. No phone coaching/consultation team noted, and therapists' level of DBT training unclear.	Hierarchical linear growth models: DBT-PTSD treatment resulted in significant reductions in patient's PTSD, depressive and anxiety symptoms from baseline to follow-up.

RESEARCH ON DIALECTICAL BEHAVIOR THERAPY: SUMMARY OF THE DATA TO DATE

Compiled by Marsha M. Linehan, Ph.D., ABPP, Linda Dimeff, Ph.D., Kelly Koerner, Ph.D., & Erin M. Miga, Ph.D

Gold Award

Title	Subjects/Setting	Design	Adherence to Standard DBT	Outcomes and Comments
Integrating Dialectical Behavior Therapy Into A Community Mental Health Program: The Mental Health Center of Greater Manchester, New Hampshire (1998)	Comprehensive community-based programs; outpatient DBT program for BPD clients used in pilot study.	Program effectiveness study (N=14) analyzing the outcomes of clients in a newly implemented DBT program. Ss were assessed before, during, and after a 1-year treatment.	The pilot program consisted of basic components of DBT, centered on group skills training, for 12=month duration. Clients are involved in a skills training group for 2.5 hours weekly, one hour each week for individual therapy, and telephone consultation. The staff also developed a medication protocol to alleviate symptoms that interfere with therapy and enhance participation. Finally, ancillary services and audiotaped modules were offered if appropriate. The program now offers a weekly transition group at the end of treatment, which clients may remain in for one year. In addition DBT "lite" is offered for borderline-spectrum clients who are not parasuicidal but exhibit behavioral and emotional dysregulation. A 16 week DBT program has also been implemented for adolescents who display traits consistent with a diagnosis of BPD. Also, treatment teams in support programs for clients with serious and persistent mental illnesses have been trained and applied DBT techniques prescriptively. Finally, a self-help group is offered for program graduates to maintain their skills.	For the first 14 clients who completed the program, there were positive changes in use of services compared with the year before program entry. There was 77% decrease in hospital days, 76% decrease in partial hospital days, 56% decrease in crisis bed days, and face-to-face contacts with emergency services were cut by 80 percent. The costs of these clients' outpatients' visits increased from $49,000 to $141,000, however hospital costs for them decreased from $453,000 to $83,000. Total treatment costs were cut in half from 645,000 to 273,000. For its successful integration of DBT which resulted in improved treatment of seriously ill clients, the Mental Health Center of Greater of Manchester was selected as a Gold Achievement Award Winner by the APA in 1998.