Table 2. Published Studies Examining Application of Inpatient DBT (alphabetical listing)

Citation	Inpatient Setting	DBT Sample	Comparison Sample	DBT Modification/ Intervention	Outcome Measures	Results	Effect Size
36	Hospital unit for personality disorders Ashville, NC, USA	130 patients discharged from the hospital unit (79% women, *Median* age = 30, Age range = 16-57 years)	Patients in a General Adult Psychiatry Unit receiving treatment as usual (not DBT). Not assessed more specifically. (Demographics not reported)	Treatment Duration: 3 months Individual Therapy: Frequency not reported; administered by psychodynamically trained therapists adhering to Linehan's (1993) treatment hierarchy Group Skills Training: 90 minutes per week; focused on attentional training, emotion regulation, distress tolerance/ reality acceptance, and interpersonal effectiveness Consultation: Therapists available during morning rounds Therapist Consultation Group Included; frequency not reported Additional Components: *Homework groups*: Led by nurses to review assignments from skills training. *Other therapeutic groups and activities:* To address other	Monthly rates of parasuicidal behaviors based on incident reports from the units for the months before, during, and after the transition to DBT	Mean monthly rates of parasuicide decreased for the DBT gropu after the introduction of DBT No change in mean monthly rates of parasuicide for the comparison group during this time period	Not given

				aspects of individual/ community functioning			
13	University hospital unit for borderline personality disorder Freiburg, Germany	31 women (*Mean* age = 29.1 years, *Range* = 18-44)	19 female (waitlisted) treatment as usual controls at admission (19 women at follow-up). TAU = professional mental health care in the community [some inpatient care (*n* =12) & outpatient care (*n* = 14)]. Not reported more specifically. (*Mean* age = 29.5 years, *Range* = 19-38).	<u>Treatment Duration</u>: 3 months <u>Individual Therapy</u>: 2 hours per week; followed standard DBT protocol <u>Group Skills Training</u>: 2 hours per week; followed standard DBT manual <u>Consultation</u>: Available through milieu support <u>Therapist Consultation Group</u>: 2 hours per week <u>Additional Components</u>: *Group psychoeducation*: 1 hour per week *Peer group meetings:* 2 hours per week *Mindfulness group:* 1 hour per week *Individual body-oriented therapy:* 1.5 hours per week	BDI DES GAF HAMA HAMD IIP LPC SCL-90-R STAI STAXI Assessed at pretreatment and 1 month post discharge	DBT group showed significant improvement on all outcomes except anger 1-month post treatment (finding was maintained when non-completers were included in analysis). TAU group showed no significant change on any measure 1-month post treatment Fewer DBT patients engaged in self-harm behavior at 1-month post treatment than TAU group. DBT patients improved significantly more than TAU group on	Effect sizes (d) for pre-post ranged from from .12 (STAXI) to 1.21 (GAF) in the DBT group and from .00 (IIP) to .15 (STAI) in the comparison group For DBT groups: DES, *d* = .53 GAF, *d* = 1.21 HAMA, *d* = .52 STAI, *d* = 1.02 BDI, *d* = .90 IIP, *d* = ,60 STAXI, *d* = .12 SCL-90-R, *d* = .84 Effect sizes (f^2) for amount of variance due to group membership varied between .07 (IIP) and .26 (BDI) BDI, f^2 = .26 DES, f^2 = .04 GAF, f^2 = .12 HAMA, f^2 = .09 HAMD, f^2 = .13 IIP, f^2 = .07 SCL-GSI, f^2 = .15 STAI, f^2 = .25 STAXI, f^2 = --

						depression, global functioning, anxiety, and interpersonal problems 13 patients in DBT group met criteria for clinically relevant improvement. No patients in the TAU group met these criteria.	
32	Psychiatric hospital Unit Freiburg, Germany	24 women (*Mean* age = 28.3 years, *Range* = 17.4-44.4 years)	None	Treatment Duration: 3 months Specific components of treatments not reported Treatment delivered in 3 phases: *Phase 1:* Analysis of target behaviors (beginning with behavior that got them hospitalized) and develop a treatment target *Phase 2:* Theoretical training of patients, acquisition of specific skills, contingency management *Phase 3:* Discharge planning and establishment of contact with the therapist that	BDI DES HAMA HAMD LPC SCL-90-R STAI STAXI Assessed at pretreatment and 1 month post discharge	Significant post treatment reductions in dissociation, depression, anxiety, frequency of self-injury and several symptoms on the SCL-90-R (e.g., somatization, depression, aggression, psychoticism, total stress)	Mean effect size (ES) of therapy with regard to reduction in symptoms ranges from .69 (STAI) to 1.4 (Compulsiveness) Dissociation, ES = 1.04 BDI, ES = 1.30 STAI, ES =.69 Somatization, ES = 1.14 Compulsive, ES = 1.4 Soc Insec, ES = .97 Depression, ES = .91 Anxiety, ES = 1.08 Aggression, ES = .72 PhobicThought, ES=1.03 Paranoia, ES = .82 Tot Psychoticism, ES = 1.02 Total Stress, ES = 1.08 Intensity, ES = 1.13 Symptoms, ES = 1.01 Fq Self Injury, ES = .25 STAXI, ES = .10 HAMA-Tot, ES = .15 HAMD, ES = .17

				will continue treatment.			
33	General child and adolescent unit Manitoba, Winnipeg, Canada	32 adolescents at admission 26 adolescents at follow up (Total sample at admission (n = 62) *Mean* age = 15.4, *Range* = 14-17, 52 girls) No demographic differences between DBT and Comparison groups at admission	30 adolescents at admission 27 adolescents at follow up TAU = Daily psychodynamic group, weekly individual psychodynamic therapy provided by psychiatrist, and psychodynamic milieu. Medication management as needed.	Treatment Duration: 2 weeks Individual Therapy: 2 times per week; reviewed diary cards and conducted behavioral and solution analyses Group Skills Training: 45-75 minute sessions daily; adapted DBT curriculum for daily use Consultation: Available on DBT milieu Therapist Consultation Group: For DBT therapists and nurses; frequency not reported Additional Components: *Ancillary treatment:* As needed	BDI (13) LPC SIQ Adherence to follow up recommendations Behavioral incidents on unit ER visits Hospitalizations Assessed at pre-treatment, discharge, and 1 year post discharge	DBT group demonstrated a greater reduction in behavioral incidents during admission than TAU group Significant reductions in parasuicidal behavior, depressive symptoms, and suicidal ideation at 1 year for both groups; no significant between group differences	BDI-13 DBT, ES = 1.67 TAU, ES = 1.05 SIQ DBT, ES = 2.12 TAU, ES = 1.36 KHS DBT, ES = .73 TAU, ES = .33 LPC DBT, ES = .63 TAU, ES = .73
42	Psychiatric hospital unit Manitoba, Winnipeg, Canada	Case study: One girl (Age = 16)	None	Treatment Duration*:* Not reported Individual Therapy: 2 times per week; reviewed diary cards and conducted behavioral and solution analyses Group Skills Training: 45-75 minute sessions daily; adapted DBT curriculum for daily use	BDI (13) Parasuicide Count RSIQ-J Assessed at pre-treatment, and 1 year post discharge	13-item BDI score dropped from 28 at admission to 5 at 1-year follow-up Suicidal Ideation dropped from 82 at admission to 17 at 1-year follow-up.	Not given

				Consultation: available from nurse Therapist Consultation Group: biweekly for DBT therapists Additional Components: *Family meetings* at admission and discharge.		Parasuicide count dropped from 143 in the year prior to admission to 113 in the year following discharge. No re-hospitalization s in the year post-discharge. (Statistical significance not reported)	
39	Long-term follow-up to 13	31 completers from 13	None	See: Bohus et al. 2004	See: Bohus, et al. 2004 Assessed at 1, 8, and 20 months post-discharge	Improvements in Global Severity Index were maintained throughout follow-up period. At 1 month follow up 45% of completers showed clinically significant improvement and were characterized as functional. 47% of completers were characterized as functional at 8 month	T1: GSI, d = 1.0 BDI, d = 0.9 GAF, d = 0.59 STAI, d = 0.85 IIP, d = 0.6 DES, d = 0.95 HAMA, d = 0.65 HAMD, d = 0.6 STAXI, d = 0.15 T2: GSI, d = 1.0 BDI, d = 1.0 GAF, d = 0.59 STAI, d = 0.65 IIP, d = 0.35 DES, d = 0.79 HAMA, d = 0.45 HAMD, d = 0.7 STAXI, d = 0.35 T3: GSI, d = 1.7 BDI, d = 1.3

						follow-up and 50% of completers were characterized as functional at 20 month follow-up. Low levels of psychopathology and symptoms improvement at 1-month follow-up were maintained at the 8 and 20 month follow-up points. Rates of self-injury for the 4 weeks preceding each measurement points differed (74% before admission, 35% before 1 month point, 57% before 8 month point, and 23% before 20 month point) Significant reductions in suicide attempts were also maintained across the follow-up	GAF, *d* = 0.7 STAI, *d* = 0.95 IIP, *d* = 0.7 DES, *d* = 0.9 HAMA, *d* = 0.8 HAMD, *d* = 0.9 STAXI, *d* = 0.3

						period.	
37	University hospital general psychiatric unit Lubeck, Germany	50 patients at admission 37 patients at follow-up (*Mean* age = 30.5 years, 88% female)	None	Treatment Duration: 3 months Individual Therapy:1 hour per week; followed standard DBT protocol Group Skills Training: 3 100-minute sessions per week; followed standard DBT manual, but added self-management module Consultation: Not included Therapist Consultation Group: Not included Additional Components: *Outpatient therapy:* 29 out of 37 patients received non-DBT outpatient therapy after discharge during the 15-month follow-up period	BDI GAF SCID SCID-for Personality Disorders Assessed at pre-treatment, discharge, and at fifteen month follow-up	A significant reduction in comorbid Axis I disorders was found at follow-up. A significant increase in comorbid personality disorders was observed at follow-up. Significant improvements in depression and global functioning observed at follow-up	GSI Pre-Post, ES = .68 Pre-follow up, ES = .44 BDI Pre-Post, ES = .59 Pre-follow up, ES = .60 GAF Pre-Post, ES = 1.33 Pre-follow up, ES = 1.85
34	Long-term adolescent psychiatric unit Tacoma, WA, USA	106 adolescent from time period of years 2000-2005 (*Mean* age = 15.45 years, *Range* = 12-17 years, 58% female)	104 adolescents, historical controls from hospital database (years 1995-1999) Received family and individual therapies as	Developmental Modifications of DBT based on symptom severity, determined by clinical judgment. 3 Intensity Levels: *Milieu Only:* Milieu DBT *Group DBT:* Milieu	Length of hospitalization (months) Discharge placement Change in medications CGAS	A significant increase in global functioning from admission to discharge was found for the DBT group (not reported for the control group).	Not given

			necessary. Not reported more specifically. (*Mean* age = 15.3 years, *Range* = 12-15 years)	and group DBT *Full DBT:* Milieu, skills training group, and individual DBT Treatment Duration: Not reported Individual Therapy: Frequency not reported; followed standard DBT protocol Group Skills Training: Frequency not reported; followed standard DBT manual Consultation: Available on the milieu Therapist Consultation Group: Regular meetings for DBT therapists; frequency not reported Additional Components: None	Frequency of locked seclusions Frequency of non-suicidal self-injurious behavior (NSIB) Assessed at admission and discharge	A significant reduction in number of prescribed medications from admission to discharge was found for the DBT group (not reported for the control group). For the DBT group, self-injurious behavior decreased more so than for the control group, over time spent in hospital. DBT group with most severe history of self-injury had lower rates of self-injury over 12 months of hospitalization than control group.	
41	Psychiatric hospital unit Freiburg, Germany	20 women (*Mean* age = 27.7 years)	20 female (waitlisted) treatment as usual controls TAU = outpatient	Treatment Duration: 3 months Individual Therapy: 1 hour per week; followed standard DBT protocol	BSES ESES MSES SCCS	Significant improvements in elements of self-esteem, including self concept clarity, self regard,	SCC, d = -2.21 BSE, d = -3.77 ESE, d = .32 MSES: Global SE, d = -2.61 Self regard, d = -2.72 Soc. skills, d = -2.08

			treatment. Not assessed more specifically. (*Mean* age = 32.5 years)	Group Skills Training: 3 hours per week; followed the standard DBT manual Consultation: Not included Therapist Consultation Group: 2 hours per week Additional Components: *Mindfulness groups:* 2 hours per week *Group psychoeducation:* 1 hour per week *Peer group meetings:* 2 hours per week *Individual body oriented therapy:* 1.5 hours per week	BDI SCL-90-R SCID II Assessed at admission and 10 weeks into treatment	social skills, and social confidence for DBT group observed 10 weeks into treatment. Such improvements were not observed in the control group. Significant improvement in global functioning and depression for DBT group observed at 10 weeks into treatment. Such improvements were not observed in the control group.	Soc. confid., d = -2.66 Perform. SE, d = -1.87 Phys. appear, d = -1.81 Phys. abilities, d = -1.05
40	University hospital general psychiatric unit Freiburg, Germany	60 women See 13 Completers: participants who completed 12 week therapy program (n = 41) vs. Non-completers: participants who left of therapy before the end of the	None	See: Bohus et al. 2004	AAQ PSQ SCL-90-R (general psychopathology and anger-hostility) STAI Assessed at pretreatment and 1 month post	Higher experiential avoidance and fewer suicide attempts predicted drop-out from inpatient DBT	Not provided in article – calculated by first author Effect sizes for difference between completers and non-completers on outcomes measures. PSQ, d = .45 AAQ, d = .74 General Psychopathology, d = .14 Anger-Hostility, d = .55 STAI, d = .72

		11th week (n = 19) (No demographic differences between groups)			discharge		Suicide attempts, $d = .81$ Hospitalizations, $d = .08$
38	University hospital general psychiatric unit Ann Arbor, MI, USA	16 inpatients participating in daily Creative Coping, a DBT skills training group (Total sample: *Mean* age = 31.4 years, 68% female)	15 inpatients participating in daily Wellness and Lifestyles, a non-therapeutic, non-DBT discussion oriented group (Demographics not reported for each group separately)	Treatment Duration: Minimum 10 weekdays Individual Therapy: Not included Group Skills Training: 45 minutes per day; Creative Coping (CC): group therapy adapted from Linehan's DBT. Psychoeducational group, led/co-led by nurses; included 5 sessions on emotion regulation, 4 on interpersonal effectiveness, and 1 on distress tolerance. Consultation: Not included Therapist Consultation Group: Not included Additional Components: Written home work assignments	ASIQ BDI CCQ HS IELCS STAXI Frequency of acting out behavior on unit Assessed at pre-treatment and discharge	Both groups demonstrated improvement on measures of depression, hopelessness, and suicidal ideation from pre-treatment to post-treatment No group differences on anger expression or knowledge of coping skills DBT subjects became more externally oriented, while control group subjects became more internally oriented More DBT subjects engaged in acting out behavior during hospitalization	Not given

						than control group subjects.	
Measures Included in Table: **AAQ**: Acceptance and Action Questionnaire, **ASIQ**: Adult Suicidal Ideation Questionnaire, **BDHI-D:** Buss-Durkee Hostility Inventory, **BDI**: Beck Depression Inventory, **BDI (13)**: 13 item Beck Depression Inventory, **BHS**: Beck Hopelessness Scale, **BSES**: Basic self esteem scale, **BSSI:** Beck Scale for Suicide Ideation, **CGAS**: Child-Global Assessment Scale, **CCQ**: Creative Coping Questionnaire, **DES**: Dissociative Experiences Scale, **ESES**: Earning self esteem scale, **GAF**: Global Assessment of Functioning Scale, **GSI**: **symptom severity index scale score, HAMA**: Hamilton Anxiety Scale, **HAMD**: Hamilton Depression Scale, **HS**: Hopelessness Scale, **IDAS:** Irritability, Depression and Anxiety Scale, **IELCS**: Internal-External Locus of Control Scale, **IIP**: Inventory of Interpersonal Problems, **IS:** Impulsiveness Scale, **LPC**: Lifetime Parasuicide Count, **MSES**: Multidimensional self esteem scale (self regard, social skills, social confidence, performance SE, physical appearance, physical abilities and a global SE index), **NAS:** Novaco Anger Scale, **PSQ**: Link's Perceived Stigma Questionnaire, **RLF:** Reasons for Living Scale, **RSIQ-J**: Reynold's Suicidal Ideation Questionnaire Jr., **SCCS**: Self Concept clarity scale, **SCID:** Structured Clinical Interview for DSM-IV, **SCL-90-R**: Symptom Checklist (SCL-90-R), **SIQ**: Suicidal Ideation Questionnaire, **STAI**: State-Trait Anxiety Index, **STAXI**: State-Trait Anger Expression Inventory							