Appendix 16: Characteristics Table for The Clinical Question: Psychological treatments

Comparisons Included in this Clinical Question

CAT vs TAU (manualised good clinical practice) CHANEN 2008	**CBT (non-comparative)** HENGEVELD1996	**CBT+TAU vs TAU** DAVIDSON2006	**Cognitive analytic therapy (non-comparative)** RYLE2000
Cognitive therapy (non-comparative) BROWN2004	**Cognitive therapy vs Rogerian supportive therapy**	**day treatment followed by outpatient group psychotherapy vs day treatment only** WILBERG1998	**DBT** HARLEY2007
DBT (non comparative) ALPER2001 BARLEY1993 CUNNINGHAM2004 LANIUS2003 MCQUILLAN2005 PRENDERGAST2007	**DBT vs CCT (control)** TURNER2000	**DBT vs CTBE** LINEHAN2006	**DBT vs CVT+12 step** LINEHAN2002
DBT vs TAU KOONS2001 LINEHAN1991 LINEHAN1999 VANDENBOSCH2002	**DBT vs TFP vs SPT**	**DBT vs Waitlist** BOHUS2004 CARTER unpub	**IGP vs IDP** MUNROEBLUM1995
intensive inpatient treatment (non-comparative) GABBARD2000	**IPT (non-comparative)** MARKOWITZ2006	**IPT vs CBT**	**MACT + TAU vs TAU** WEINBERG2006
MACT vs TAU TYRER2003	**MBT (noncomparative)** ANDREAunpub	**Partial hospitalisation vs standard psychiatric care** BATEMAN1999	**psychoanalytically-oriented psychotherapy (non-comparative)** LOFFLERSTASTKA2003 STEVENSON2005
Psychoanalytic-interactional therapy (non-comparative) LEICHSENRING2007	**Schema therapy (non-comparative)** NORDAHL2005	**SFT vs TFP** GIESENBLOO2006	**Social Problem Solving + brief psychoeducation vs Waitlist control**
SSRIs plus IPT BELLINO2005	**STEPPS (non-comparative)** BLUM2002	**STEPPS + TAU vs TAU** BLUM2008	**TFP vs DBT vs SPT** CLARKIN2004

Therapeutic community
CHIESA2000
CHIESA2004
CHIESA2007
DAVIES1999
DOLAN1992
DOLAN1997
WARREN2004

transference-focused psychotherapy (non-comparative)
CLARKIN2001
LOPEZ2004

Characteristics of Included Studies

Methods	Participants	Outcomes	Interventions	Notes
ALPER2001 Study Type: case series Study Description: Retrospective study, reports outcomes after 4 weeks of DBT. Also qualitative data reported from interviews with nurses to describe their view of DBT. Blindness: No mention Duration (days): Mean 120 Setting: COUNTRY: US; inpatients. Info on Screening Process: 65 medical records screened, Inclusion criteria: diagnosis of BPD; on DBT unit for 4wks consecutively; reports of self-injurous behaviour.	n= 15 Age: Range 22-42 Sex: all females Diagnosis: 100% BPD by Not reported Notes: ETHNICITY: 93% White 7% Black Baseline: incidents of self harm 15/week	**Data Used** Self-harm	**Group 1 N= 15** DBT - Patients treated with DBT in regional treatment center, no details of DBT reported.	
ANDREAunpub Study Type: cohort study Blindness: Duration (days): Followup: 18 months Setting: NETHERLANDS; partial hospitalisation	n= 33 Age: Sex: Diagnosis: 100% BPD Baseline: Mean Quality of life (EQ) 0.46 Symptom distress (OQ) 60.9 SCL-90 1.73 BDI 26.6 IIP 3.02 Interpersonal relations (OQ) 23.8 Dissatisfaction in social role (OQ) 17.8 Borderline symptomatology (BPDSI) 28.6 Selfcontrol (SIPP) 3.84 Identity integration (SIPP) 3.04 Responsibility (SIPP) 3.79 Relational functioning (SIPP) 3.54 Social concordance (SIPP) 5.18	**Data Used** SIPP BPD Severity Index IIP BDI SCL-90 OQ EQ Quality of Life	**Group 1 N= 33** MBT - psychoanalytically oriented partial hospitalisation programme	
BARLEY1993 Study Type: cohort study Study Description: longitudinal data comparing parasuicide rates in unit intorducing DBT & general psychiatric unit with consistent non DBT treatment	n= 130 Age: Range 16-57 Sex: 27 males 103 females Diagnosis: 100% BPD by Not reported	**Data Used** Parasuicidal behaviour	**Group 1 N= 130** DBT - DBT was introduced to unit - skills training group, nursing staff familiarized with DBT strategies, 'homework' groups focused on application of what patients learn in skills training group.	

Blindness: No mention Duration (days): Mean 1290 Setting: COUNTRY: UK; inpatients Info on Screening Process: not reported	Exclusions: none mentioned Notes: ETHNICITY: not reported; 130 participants is number of patients that were discharged from unit introducing DBT; no data provided for patients in general psychiatric unit. Baseline: unit introducing DBT — unit without DBT parasuicide rate (mean/month) 0.236 — 0.378			
BATEMAN1999 Study Type: RCT Study Description: 18-month trial with 3 and 8 year follow-up (continuation treatment for MBT group up to 36 months) Type of Analysis: completers Blindness: No mention Duration (days): Mean 504 Followup: 8 years Setting: COUNTRY:UK Partial hospitalisation Notes: RANDOMISATION: procedure not described. No details regarding blinding. Info on Screening Process: Ppts recruited from general psychiatric unit. 60 ppts met inclusion criteria, 10 refused randomisation, 6 admitted to partial hospitalisation & excluded from study, 4 declined further treatment. 6 refused to participate in regular self-assessment.	n= 44 Age: Mean 32 Sex: 16 males 22 females Diagnosis: 100% BPD by SCID-I Exclusions: - DSM-III schizophrenia - bipolar disorder - substance misuse - mental impairement - evidence of organic brain disorder Notes: DIB also used to determine diagnosis of BPD ETHNICITY: no data Baseline: Partial hospitalisation — Control GSI 2.50 (0.58) — 2.30 (0.71) PSTS 74.1(14.5) — 72.3 (15.2) BDI 36.0 (7.6) — 34.9 (7.4) State anxiety 68.4 (7.0) — 63.2 (6.8) Trait Anxiety 66.5 (6.1) — 62.0 (9.9)	**Data Used** Suicide attempts Self-harm BDI GSI No. on medication at endpoint Leaving treatment early for any reason Stait anxiety **Data Not Used** Positive Symptom Total Score - data not extractable IIP - data not extractable Social Adjustment Scale (modified) - data not extractable SCL-90-R - data not reported Trait anxiety Notes: SCL-90-R administered every 6 months. Self-rated questionnaires administered every 3 months. Outcomes extracted at 18 and 24 month	**Group 1 N= 19** Partial hospitalisation - Once wkly individual psychoanalytic psychotherapy; thrice wkly grp analytic psychotherapy (1hr each). Once wkly expressive therapy (1hr). Wkly community meeting (1hr). 1hr meeting monthly with case manager plus medication review. Treatment not manualised **Group 2 N= 19** Standard care (control) - Regular psychiatric review with senior psychiatrist when necessary. Inpatient admission as appropriate then discharge to non-psychoanalytic psychiatric partial hospitalisation focusing on problem solving. No formal psychotherapy offered.	Study quality 1+ Funding unclear
Results from this paper: Internal validity: 1.1 Well covered — 1.6 Adequately addressed 1.2 Not reported — 1.7 Adequately addressed 1.3 Not reported — 1.8 Partial hospitalisation = 12% Placebo = 12% 1.4 Not addressed — 1.9 Not addressed 1.5 Adequately addressed — 1.10 Adequately addressed				
BELLINO2005 Study Type: non-randomised comparative Study Description: Compared efficacy of combined therapy (SSRIs & IPT) in 2 groups of patients: major depressive disorder & BPD vs major depressive disorder & other PD. Type of Analysis: completers Blindness: Open Duration (days): Mean 180 Setting: ITALY; outpatients	n= 56 Age: Mean 27 Sex: 16 males 32 females Diagnosis: 100% Major Depressive Disorder by SCID-I and II (DSM-IV) 35% BPD by SCID-I and II (DSM-IV) 65% PD other than BPD by SCID-I and II (DSM-IV) Exclusions: 8 patients dropped out for non compliance in 1st	**Data Used** SAT-P Mean IIP-64 HAM-D-17 HAM-A CGI	**Group 1 N= 21** IPT - 1 session per week Citalopram. Mean dose 20-40mg/day **Group 2 N= 14** IPT - 1 session per week Sertraline. Mean dose 50-100mg/day **Group 3 N= 13** Fluoxetine. Mean dose 20-40mg/day	

	4 weeks			
BLUM2002 Study Type: cohort study Study Description: preliminary efficacy data for STEPPS Type of Analysis: completers Blindness: Open Duration (days): Mean 140 Setting: US; outpatients	n= 52 Age: Mean 33 Range 18-51 Sex: 3 males 49 females Diagnosis: 100% BPD by DSM-IV	**Data Used** BDI PANAS BEST	**Group 1 N= 52** STEPPS - 20 manual based 2-hr weekly group meetings with 2 facilitators & 1 2-hr session for family and significant others	
BLUM2008 Study Type: RCT Blindness: Single blind Duration (days): Mean 140 Followup: 1 year Setting: Outpatients; US Notes: RANDOMISATION: by coin toss; unclear if raters blind Info on Screening Process: 172 assessed (92 from inpatient/outpatient psychiatric services, 35 from clinicians/mental health centres, 29 adverts, 8 word of mouth, 8 unspecified).	n= 165 Age: Mean 32 Sex: 134 females Diagnosis: 100% BPD by DSM-IV Exclusions: Non-English speaking; had a psychotic or primary neurological disorder; were cognitively imparied; had current (past month) substance abuse or dependence; participated in STEPPS before. Notes: Only those receiving allocated treatment included in data analysis (n=124), so N females estimated from demographic data given. Baseline: BDI: 29 (6.5); ZAN-BPD: 18 (6.9) - all average of groups	**Data Used** A&E attendance Hospital admissions Self-harm - Full data not given Suicide attempts - Full data not given GAS GSI Barratt Impulsiveness Scale (BIS) BDI Mean ZAN-BPD **Data Not Used** CGI - Not extracting - weak measure Notes: Taken at endpoint (20 weeks) and 1-year follow-up; GSI has been scaled by multiplying by 10 to facilitate the reporting of significant digits; dichotomous data are N participants with >=1 event	**Group 1 N= 93** STEPPS - Systems training for emotional predictability & problem solving; manualised 20 2-hr wkly group-based sessions; cognitive-behavioural elements + skills training; designated mental health pro + family member/friend educated in BPD & how to interact with pt TAU - Participants continued psychotropic medication, psychotherapy and case management **Group 2 N= 72** TAU - Participants continued psychotropic medication, psychotherapy and case management	SIGN 1+ ; participants designate mental health professional + friend/relative who could be reached in a crisis; friend/relative participated in systems component of the treatment
Results from this paper: Leaving study early for any reason: N = 69 Internal validity: 1.1 Well covered 1.6 Well covered 1.2 Poor addressed 1.7 Adequately addressed 1.3 Poorly addressed 1.8 STEPPS 52%; TAU 29% 1.4 Adequately addressed 1.9 Poorly addressed 1.5 Adequately addressed 1.10 Not applicable				
BOHUS2004 Study Type: non-randomised controlled trial Type of Analysis: completers and ITT Blindness: No mention Duration (days): Mean 112 Setting: COUNTRY: Germany Inpatient Notes: RANDOMISATION: process not	n= 60 Age: Mean 29 Range 18-44 Sex: all females Diagnosis: BPD by SCID-II Exclusions: - lifetime diagnosis of schizophrenia - bipolar I disorder - current substance abuse	**Data Used** GAF STAI HARS GSI Leaving treatment early for any reason STAXI - Anger **Data Not Used** IIP	**Group 1 N= 40** DBT - Treatment part manualised (Linehan 1993).. Individual therapy (2hr/wk), grp skills training (2hr/wk) grp psychoeducation (1hr/wk) per grp meetings (2hr/wk) mindfulness grp (1hr/wk), individual body-oriented therapy (1.5hr/wk) therapist team consultations.	Study quality 1+ Study funded by German Research Foundation & Borderline Personality Disorder Research Foundation, New York

described. No description of blinding and no other info given. Info on Screening Process: Ppts recruited from BPD research unit at a university hospital. 80 ppts met inclusion criteria, 20 refused to participate due to uncertainty about returning for post-assessement	- mental retardation - living further than 250 miles away from inpatient unit - current ongoing outpatient DBT or subsequent DBT after discharge also excluded Notes: DIB-R also used to determine diagnoses Baseline: DBT Waitlist DES 26.1 (14.6) 32.1 (14.4) GAF 48.5 (8.4) 48.1 (11.1) HARS 24.0 (8.6) 25.2 (9.0) STAI 73.1 (5.6) 74.4 (8.0) BDI 31.3 (9.4) N/R IIP 7.61(1.43) 6.61 (1.87) STAXI 6.43 (2.6) 7.11 (2.2) SCL-90 1.74 (0.48) 1.92 (0.68)	DES - scale excluded HRSD-24 (Hamilton 1960) - data not extractable BDI - data not reported for control grp LPC - data not reported Notes: Initial assessment at interview for WL group & at inpatient admittance for DBT group. Post-testing conducted 4 months after initial assessment (i.e. 4 wks after discharge for DBT group). Outcomes extracted at 4 months	**Group 2 N= 20** Waitlist control - During 4 mth wait period everyone had some form of professional mental health care. 12 of 19 were hospitalised in a non-DBT psychiatric unit at least once. Average 44 inpatient treatment days. 14 of 19 had outpatient care av 6.1 sessions.	
Results from this paper: Internal validity: 1.1 Well covered 1.6 Adeqautely addressed 1.2 Not addressed 1.7 Adequately addressed 1.3 Not addressed 1.8 DBT = 22.5% Placebo = 5% 1.4 Not addressed 1.9 Adequately addressed 1.5 Adequately addressed 1.10 Not applicable				
BROWN2004 Study Type: cohort study Study Description: uncontrolled cohort study Type of Analysis: ITT & completers Blindness: Open Duration (days): Mean 276 Range 14-393 Followup: 18 months Setting: US; outpatients Notes: Patients allowed to use psychotropic medications, but those who started a new type or switched medications were excluded. Info on Screening Process: 212 incl criteria: suicide ideation/self harm behav in last 2 months & met BPD criteria. Excl criteria: schizophrenic, Delusional, Schizophreniform, Schizoaffective, Psychotic Disorders or mental retardation; receiving counselling/psychotherapy,	n= 32 Age: Mean 29 Range 20-55 Sex: 4 males 28 females Diagnosis: 100% BPD by SCID-II 78% Major Depressive Disorder by SCID-I 41% Eating disorder by SCID-I 34% Panic disorder by SCID-I 31% Social Phobia by SCID-I 31% Post traumatic stress disorder by SCID-I 19% General Anxiety Disorder by SCID-I 19% Specific Phobia by SCID-I 13% Substance abuse by SCID-I 9% Alcohol misuse by SCID-I 9% Dysthymia by SCID-I 6% Bipolar II disorder by SCID-I 72% PD other than BPD by SCID-II Exclusions: 3 participants dropped out before termination interview (12months after baseline assessment), another 5	**Data Used** Personality Belief Quaire PHI BPD DSM criteria BHS HRSD-17 (Hamilton 1960) BDI Mean Scale for Suicide Ideators	**Group 1 N= 32** Cognitive therapy - Treatment consisted of 50 minute weekly sessions for 50 weeks with up to 12 additional treatment sessions to be used as needed during year treatment period. Therapists trained using detailed treatment manual & received supervision. Mean no sessions = 34.	

	patients dropped out before 18 month follow-up Notes: 72% Caucasian, 19% African American, 9% Hispanic, Asian or other Baseline: Mean (SD) SSI 8.2 (7.9) BDI 38.4 (9.7) BHS 14.1 (5.6) HRDS 26.0 (10.7) No. BPD criteria 6.4 (1.4)			
CARTER unpub Study Type: RCT Type of Analysis: ITT/per protocol analysis for self-rated outcomes Blindness: Single blind Duration (days): Mean 182 Setting: Australia; outpatients Notes: RANDOMISATION: by sealed opaque envelopes Info on Screening Process: 84 people referred, 79 were eligible, 3 did not complete baseline assessment	n= 76 Age: Mean 25 Sex: all females Diagnosis: 100% BPD by DSM-IV 100% Self-harm by Self-reported Exclusions: No history of multiple episodes of self-harm; < 3 self-reported episodes of self-harm in last 12 months; no other specific exclusion criteria; assessing psychiatrist determined whether pts suitable for inclusion in the therapy and study Notes: 76 randomised: 1 died and 2 withdrew consent before treatment started; unclear to which grps allocated so deceased not included and other 2 divided between grps	**Data Used** Length of admission (self-harm) (mean days) Length of admission (any psychiatric) (mean days) Admission for self-harm (N) Admission for self-harm (mean) Admission for any psychiatric reasons (N) Admission for any psychiatric reasons (mean) Leaving treatment early for any reason **Data Not Used** WHOQOL - Not reported PHI - Not reported Notes: Taken at 6 months before WLC started treatment; self-harm defined as any intentional self-injury or deliberate ingestion of > prescribed amount of therapeutic substances, or deliberate ingestion of substances never intended for human consumption	**Group 1 N= 39** DBT - Modified DBT (modification unclear); team-based approach; individual therapy, skills training groups, telephone access to an individual therapist & therapist supervision groups following Linehan model; 12 mths but outcomes taken at 6 months **Group 2 N= 36** Waitlist control - Six-month waiting list for DBT whilst receiving treatment as usual (no details)	Study quality 1++ Study funding not given
Results from this paper: Internal validity: 1.1 Well covered 1.6 Adequately addressed 1.2 Adequately addressed 1.7 Adequately addressed 1.3 Adequately addressed 1.8 DBT = 49% WLC = 14% 1.4 Adequately addressed 1.9 Adequately addressed 1.5 Adequately addressed 1.10 Not applicable				
CHANEN2008 Study Type: RCT Study Description: Includes a non-randomised control arm (not included) Type of Analysis: ITT (average across 10 multiply-imputed datasets) Blindness: Single blind Duration (days): Mean 168 Followup: 12 and 24 months Setting: COUNTRY: Australia; outpatient Notes: RANDOMISATION: computer-generated by administrator, stratified by number of BPD criteria (>= 5) Info on Screening Process: 106 assessed with	n= 78 Age: Mean 16 Sex: 19 males 59 females Diagnosis: 100% Traits of BPD by DSM-IV 40% Anxiety disorder by DSM-IV 4% Eating disorder by DSM-IV 33% Substance abuse by DSM-IV	**Data Used** Parasuicidal behaviour SCID-II BPD dimensional score **Data Not Used** Social & Occupational Functioning Assessment Scale Youth Self-Report/Young Adult Self-Report q'aires - Not being extracted	**Group 1 N= 41** Cognitive analytic therapy - Max 24 wkly sessions (median sessions 13 (8-23)). Therapists CBT-trained clinical psychologists with 9 months' CAT training; + usual care: assertive case management, psychiatrist appointments, activity groups, crisis team & inpatient care, pharmacotherapy	Study quality 1++ Study funded by National Health and Medical Council Canberra Australian

20 excluded	63% Mood disorder by DSM-IV 26% Disruptive behaviour disorder by DSM-IV Exclusions: Mental retardation; psychiatric disorder due to medical condition; pervasive developmental disorder; severe primary axis I disorder that should be principal focus of treatment; sustained psychosis; received >9 sessions of specialist mental health treatment in previous year Notes: 86 randomised but those not receiving baseline assessment not included in author analyses; 32 in non-randomised control group; diagnosis - >=2 BPD criteria (NB too young for BPD diagnosis); mean 3 current axis I diagnoses; mean 1.5 axis II diagnoses Baseline: SCID-II BPD criteria mean number 4.5 (range 2-8)	Notes: SCID-II items scored 1 to 3;Youth/Young Adult self-report = internalising/exerternalising psychopathology score; SOFAS = global function;parasuic =suicide attempts+self-harm; all 6,12,24 mths; means are averages across 10 multiply-imputed datasets	**Group 2 N= 37** TAU - Manualised good clinical practice, median sessions received 11 (4.5-23), developed for study; team-based care; problem-solving model with modules for comorbid disorders; supervision for therapists (therapists & usual care as for CAT)	
Results from this paper: Internal validity: 1.1 Well covered 1.6 Adequately addressed 1.2 Adequately addressed 1.7 Adequately addressed 1.3 Adequately addressed 1.8 CAT = 45% TAU = 41% 1.4 Adequately addressed 1.9 Adequately addressed 1.5 Adequately addressed 1.10 Not applicable				
CHIESA2000 Study Type: cohort study Study Description: Prospective study comparing short-hospital stay + follow-up with long-stay Blindness: Duration (days): Setting: UK Notes: Allocation to treatment based on geographic region: those living in Greater London allocated to 2-step; others to 1-step Info on Screening Process: 135 consecutive admissions to the Cassel Hospital between 1993 and 1997	n= 90 Age: Mean 32 Sex: 19 males 71 females Diagnosis: 56% Cluster A by DSM-IIIR 77% Cluster B by DSM-IIIR 87% Cluster C by DSM-IIIR 48% Panic disorder by DSM-IIIR 20% Eating disorder by DSM-IIIR 17% Drug/alcohol abuse/dependence by DSM-IIIR 45% Phobic disorders by DSM-IIIR 37% Other anxiety disorders by DSM-IIIR Exclusions: Age < 18 or > 55; non-English speaking; IQ < 90; no Axis II diagnosis; previous diagnosis of schizophrenia or delusional disorder; previous continuous stay in hospital for 2 yrs or more; organic brain damage; involvement in criminal proceedings for violent crimes Notes: 70% BPD	**Data Used** Admission for any psychiatric reasons (N) Attempted suicide Self-harm GAS GSI Notes: GSI & GAS at 6 & 12 months; self-harm, suicide attempts & admission 24 months	**Group 1 N= 46** One-stage group - Hospital stay of 11-16 months; post-discharge responsibility for setting up further treatment or seeking additional support is left to the patient **Group 2 N= 44** Two-stage group - Hospital stay of 6 months followed by 12-18 months of outpatient group pscyhotherapy and 6 months' concurrent community outreach nursing, both provided by Cassel hospital staff	SIGN 2+
Results from this paper: Internal validity: 1.1 Well covered 1.6 Not addressed 1.10 Well covered				

1.2 Well covered 1.3 Well covered 1.4 Not applicable 1.5 34% not followed-up	1.7 Well covered 1.8 Not applicable 1.9 Not applicable	1.11 Not addressed 1.12 Not addressed 1.13 Adequately addressed		
CHIESA2004 Study Type: cohort study Type of Analysis: ITT Blindness: Duration (days): Followup: 2 years Setting: UK; Cassel Hospital Notes: Recalled dropouts for assessment Info on Screening Process: All consecutive admissions between 1993 and 1997	n= 143 Age: Mean 32 Sex: 38 males 105 females Diagnosis: 47% Paranoid PD by DSM-IIIR 69% BPD by DSM-IIIR 6% ASPD by DSM-IIIR 50% Obsessive by DSM-IIIR 39% Depression by DSM-IIIR 11% Dysthymia by DSM-IIIR 11% Bulimia Nervosa by DSM-IIIR 26% Social Phobia by DSM-IIIR 18% Drug/alcohol abuse/dependence by DSM-IIIR 50% Not otherwise specified by DSM-IIIR Exclusions: Aged < 18 or > 55; IQ below 80; not meeting diagnosis for >=1 PD; schizophrenia; paranoid psychosis; drug/alcohol addiction, mental impairment; evidence of organic brain disorder		**Group 1 N= 49** One-stage group - aka inpatient program: expected 12-month admission with no planned outpatient follow-up **Group 2 N= 45** Two-stage group - aka step-down program: expected 6-month admission followed by 12-18 month outpatient group analytic psychotherapy and 6-9 month concurrent outreach nursing **Group 3 N= 49** TAU - aka community comparison group - standard general psychiatric care (psychotropic medication; supportive outpatient and community contact with 1 or moe care workers on average every 2-4 weeks; hospital admission if needed; clinical review monthly	SIGN 2+
Results from this paper: Internal validity: 1.1 Well covered 1.2 Well covered 1.3 Well covered 1.4 Not applicable 1.5 44% not followed-up	1.6 Adequately addressed 1.7 Well covered 1.8 Not applicable 1.9 Not applicable	1.10 Well covered 1.11 Not addressed 1.12 Not addressed 1.13 Adequately addressed		
CHIESA2007 Study Type: cohort study Study Description: Analysis of predictor variables Blindness: Duration (days): Followup: 2 years Setting: UK; Cassel Hospital Info on Screening Process: 137 consecutive	n= 73 Age: Mean 30 Sex: 18 males 55 females Diagnosis: 100% Cluster B by DSM-IIIR 69% Depression by DSM-IIIR			SIGN 2+

admissions to the Cassel Hospital for psychosocial treatment over a 4-yr period; 3% did not meet study criteria (axis II diagnosis); 11% refused consent; 15% dropped out.	33% Bulimia Nervosa by DSM-IIIR 31% Panic disorder by DSM-IIIR 29% Obsessive compulsive disorder by DSM-IIIR 51% Paranoid PD by DSM-IIIR 18% Schizotypal by DSM-IIIR 49% Avoidant PD by DSM-IIIR 34% Dependent by DSM-IIIR 21% Passive-aggressive by DSM-IIIR 49% Self-defeating by DSM-IIIR 30% Social Phobia by DSM-IIIR Exclusions: Not meeting criteria for axis II disorder			

Results from this paper:

Internal validity:

1.1 Well covered	1.6 Not addressed	1.10 Well covered
1.2 Well covered	1.7 Well covered	1.11 Not addressed
1.3 Well covered	1.8 Not applicable	1.12 Not addressed
1.4 Not applicable	1.9 Not applicable	1.13 Adequately addressed
1.5 47% not followed-up		

CLARKIN2001 Study Type: cohort study Study Description: Pre & post changed observed in 1 year outpatient treatment of BPD with TFP Type of Analysis: ITT & competer Blindness: Open Duration (days): Mean 365 Setting: US; outpatients Info on Screening Process: incl criteria: female, 18-50 years, 5+ DSM IV BPD criteria, >=2 incidents of suicidal/self injurious behav in last 5 years, absence of schizophrenia, bipolar disorder, organic pathology or mental retardation, no other indiv psychotherapy	n= 23 Age: Mean 33 Range 19-48 Sex: all females Diagnosis: 100% BPD by SCID-II 47% Major Depressive Disorder by DSM-IV 24% Dysthymia by DSM-IV 18% Eating disorder by DSM-IV 82% Narcisisstic PD by DSM-IV 76% Paranoid PD by DSM-IV 71% OCPD by DSM-IV 65% Avoidant PD by DSM-IV Exclusions: 2 patients dropped out at around 4 months and another 2 at around 8 months, another 2 patients were	**Data Used** Hospitalisation days Hospital admissions Physical condition relating to parasuicide Medical risk of parasuicide Mean number of Self harm/suicide attempts GAF	**Group 1 N= 23** Transference Focused Therapy - Transference-focused psychotherapy was delivered 3 times a week for 12 months according to the TFP manual	

	administratively discharged due to protocol violations Notes: 13 patients Caucasian, 4 Hispanic Baseline: Mean (SD) Parasuicide: no. incidents 4.39 (6.34) medical risk 2.06 (1.17) physical condition 2.10 (1.24) Services: hospitalizations 1.48 (1.59) days hospitalized 55.33 (84.32)			
CLARKIN2004 Study Type: RCT Study Description: Treatment defined as: 50 weeks of treatment exposure that could take place over a time period of upto 13.5 months Type of Analysis: Completers analysis Blindness: No mention Duration (days): Mean 365 Setting: COUNTRY:US Mixed sample recruited from range of settings Notes: RANDOMISATION: Simple randomisation carried out by an independent researcher who had no knowledge about study hypotheses. No details about blinding. Info on Screening Process: Ppts self referred or by GP, clinics & family members. 336 ppts referred &interviewed; 109 of these eligible for randomization. Exclusions due to absence of 5 criteria for BPD (N = 34) and age (N=30), 9 had substance dependence; 8 schizophrenia/disorder.	n= 90 Age: Mean 31 Sex: 6 males 84 females Diagnosis: 100% BPD by SCID-I 77% Mood disorder 48% Anxiety disorder 33% Eating disorder 38% Drug/alcohol abuse/dependence Exclusions: - comorbid schizophrenia - schizoaffective disorder - bipolar disorder - delusional disorder - delerium - dementia - amnestic and other cognitive disorders - those who lived more than 50miles from the study site - current substance dependence - IQ lower than 80 - Scheduling conflict Notes: ETHNICIY: 62% Caucasian, 10% African American, 9% Hispanic, 5% Asian, 8% Other Baseline: TFP DBT SPT Reflective function 2.86 (1.16) 3.31 (0.95) 2.80 (0.80) Coherance 2.93 (1.34) 3.00 (1.64) 3.25 (1.33) Resolution of loss 2.39 (2.62) 2.63 (2.80) 1.52 (1.98) Resolution of trauma 2.09 (2.22) 2.44 (2.54) 1.61 (2.29) GAF score of 50 for all three treatment groups.	**Data Used** AIA-Q GAF **Data Not Used** OAS-M (suicidality) Barratt Impulsiveness Scale (BIS) BDI Mean BSI (self report) Notes: Outcomes at 12 mths; mean endpoint data supplied by authors as estimated means calculated from ordinary least squares regressior based on the origin & slope of each participant assuming 12 months' treatment. Primary outcome of study was rate of change.	**Group 1 N= 31** Transference Focused Therapy - Highly structured, individual twice wkly treatment for 45 mins/session. Focuses on containment of acting out (parasuicidal) behv & identification of dominant relational patterns. Unclear if treatment manualised. **Group 2 N= 29** DBT - DBT- manualised CBT with 2 components, a) individual therapy once a week for 60mins b) group skills training, weekly for 2.5hrs. Emergency telephone contact and individual sessions scheduled as needed. Individual therapy - Focuses on heirachy of target behvrs, ppt tracks these on a daily basis with diary cards. Suicidal & self mutilating behvs at the top of heirachy & are examined in each session. Alternative strategies for coping explored as result of behvral analyses Group skills training - Used to help ppts develop less self-destructive and more adaptive means of coping with intolerable affects. Training sessions consist of teaching new skills to ppts and practising these through specific assignments between sessions e.g. emotion regulation **Group 3 N= 30** Supportive Psychotherapy - Delivered once weekly for 45 mins/session (more if needed). Primary aim: achieving change through devpt of healthy collaborative r'ship with therapist & replace self-destructive enactments with verbal expression of conflict.	Study quality 1+ Study funded by grants from Borderline Personality Disorder Research Foundation

Results from this paper:

Internal validity:

1.1 Well covered
1.2 Adequately addressed
1.3 Well covered
1.4 Adequately addressed
1.5 Adequately addressed
1.6 Adequately addressed
1.7 Adequately addressed
1.8 TFP = 29%, DBT = 48%, SPT = 23%
1.9 Not addressed
1.10 Not applicable

Note caveat about outcome data supplied by authors - not raw endpoint scores and study therefore analysed separately

CUNNINGHAM2004

Study Type: case series

Study Description: Qualitative study in which 14 BPD patients were interviewed. Open-ended semi-structured questions were asked and patients' views of DBT are reported.

Blindness: No mention

Duration (days):

Setting: COUNTRY: US; outpatients

Info on Screening Process: Not reported.

n= 14

Age: Mean 39 Range 23-61

Sex: all females

Diagnosis:
100% BPD by DSM-IV

Exclusions: None

Notes: ETHNICITY: No information

Baseline:

	prior to DBT
No. in vocational activity	0
hrs/wk vocational activity	0
	2years prior to DBT
no. clients hospitalised	11
no. days/year in hosp	30

Data Used

Vocational activity (hrs/week & no.clients)

Hospitalisation days

Hospital admissions

Group 1 N= 14

DBT - Petients received 6 months - 3 years of DBT involving individual therapy, skills training and telephone skills coaching.

DAVIDSON2006

Study Type: RCT

Type of Analysis: Completers analysis

Blindness: Single blind

Duration (days): Mean 365

Followup: 24 month

Setting: COUNTRY: UK
Mixed sample recuited from range of settings

Notes: RANDOMISATION: stratified by centre using permuted blocks of size 4. Randomisation schedule generated by centre & kept securely by trial coordinator.

Info on Screening Process: Ppts identified by clinicians via new & existing pts referred to CMHTS, clinical psych. & liaison psychiatry services.125 referred to study, 15 did not meet entry criteria. 2 refused randomisation, & 2 others could not be contacted after initial assmt.

n= 106

Age: Mean 32

Sex: 17 males 89 females

Diagnosis:
100% BPD by SCID-II

Exclusions: - currently receiving in-patient treatment for mental state disorder
- currently receiving systematic psychological therapy or specialist service particularly psychodynamic psychotherapy
- Insufficient knowledge of English to enable them to be assessed adequately and to understand the treatment approach
- Temporary resident in the area
- Existence of an organic illness, mental impairment, alcohol or drug dependence, schizophrenia, or bipolar affective disorder - defined by SCID I
- Under age 18 or over age 65
- Meeting less than 5 criteria for BPD SCID-II
- No episode of deliberate self-harm in previous 12 months
- Unable to provide informed consent

Notes: ETHNICITY: White 100%

Baseline:

	CBT+TAU	TAU
BDI	42.6 (10.1)	42.5 (12.3)
BSI/GSI	2.6 (0.6)	2.4 (0.9)
IIP-32	72.4 (16.0)	65.9 (17.4)
State Anxiety	53.6 (12.2)	51.4 (12.0)
Trait Anxiety	65.8 (7.8)	64.0 (8.6)
Young SQ	4.13 (0.66)	3.78 (0.70)
SFQ	14.9 (4.9)	14.3 (4.1)
EuroQol Ther	42.0 (21.1)	48.4 (23.9)
EuroQol WHSV	0.49 (0.37)	0.52 (0.36)

Data Used

Leaving treatment early for any reason

BDI

SFQ

EuroQol Total

GSI

Stait anxiety

Suicide attempts

In patient psychiatric hospitalisation

A&E attendance

Data Not Used

Acts of self mutilation - data not extractable per person

Brief Symptom Positive Symptom Distress Index

YSQ

Suicidal acts

Notes: Outcomes extracted at 12 and 24 months

Group 1 N= 54

CBT plus TAU - CBT focuses on ppts beliefs & behaviours that impair their social & adaptive functioning. 30 sessions over 1 yr lasting upto 1 hr. They work on long-standing problems & develop new ways of thinking & behaving.

Group 2 N= 52

TAU - Ppts received standard treatment that they would have been given if the trial had not been in place, such as A&E services for self harm, CBT within the NHS other psychological help from CMHTs to manage a crisis.

Study quality 1+
Study funded by grant from Wellcome Trust

Results from this paper:

Internal validity:

1.1 Adequately addressed 1.6 Adequately addressed
1.2 Well covered 1.7 Adequately addressed
1.3 Well covered 1.8 CBT+TAU = 13% TAU = 17%
1.4 Well covered 1.9 Not addressed

1.5 Adequately addressed 1.10 Adequately addressed

DAVIES1999

Study Type: cohort study

Blindness:

Duration (days):

Followup: Up to 3 years

Info on Screening Process: Admissions between Jan 1993 and Dec 1995

n= 52

Age: Mean 27 Range 19-45

Sex: 22 males 30 females

Diagnosis:
87% Emotionally unstable PD by ICD-10

4% Paranoid PD by ICD-10

4% Dependent by ICD-10

2% Anakastic by ICD-10

25% Eating disorder by ICD-10

13% Mood disorder by ICD-10

40% Drug/alcohol abuse/dependence by ICD-10

Data Used
Hospitalisation days - Comparison not useful

Notes: Gives mean bed days before hospitalisation (3 yrs) and post hospitalisation (3 yrs)

Group 1 N= 52
Therapeutic community

DOLAN1992

Study Type: cohort study

Study Description: Prospective follow-up study of people admitted to the Henderson (no control group)

Blindness:

Duration (days):

Followup: 6 months post discharge

Setting: UK

Info on Screening Process: Everyone admitted between Jan 1985 and Dec 1988 were included (n=95) with 62 followed-up

n= 62

Age: Mean 25 Range 17-44

Sex:

Diagnosis:
100% Axis II PD by Not reported

Exclusions: None

Notes: Diagnosis not reported but intro quotes a recent study which showed 87% of people admitted to the Henderson have BPD diagnosis.

Data Used
GSI

Group 1 N= 62
Therapeutic community - Average stay 30 weeks (range 4 to 55)

SIGN: 2+

Results from this paper:

Internal validity:

1.1 Well covered 1.6 Not applicable 1.10 Not addressed
1.2 Well covered 1.7 Well covered 1.11 Not addressed
1.3 Adequately addressed 1.8 Not applicable 1.12 Not addressed
1.4 Not applicable 1.9 Not addressed 1.13 Not addressed
1.5 147/194 76% and 51/170 30%completed psychological typing tests

DOLAN1997

Study Type: cohort study

Blindness:

Duration (days):

Followup: 1 year

Info on Screening Process: All referrals between Sept 1990 and Nov 1994 (n=598); 380 completed baseline assessment; 159 returned

n= 137

Age:

Sex:

Diagnosis:
72% Dependent by DSM-IIIR

64% Histrionic PD by DSM-IIIR

Data Used
BSI (self report)

Notes: BSI scores are mean change from referral to follow-up

Group 1 N= 70
Therapeutic community

Group 2 N= 67
Not admitted

SIGN 2+

completed follow-up assessments (54,4% of admitted group and 53.2% of non-admitted group).	80% Paranoid PD by DSM-IIIR 63% Avoidant PD by DSM-IIIR 63% Schizoaffective disorder by DSM-IIIR 67% Passive-aggressive by DSM-IIIR 55% Narcisisstic PD by DSM-IIIR 81% BPD by DSM-IIIR 52% ASPD by DSM-IIIR 63% Schizotypal by DSM-IIIR 64% Obsessive by DSM-IIIR Exclusions: None Notes: 70 admitted; 67 not admitted; 3 had 1 PD and 8 met criteria for 11. Demographics not given.			

Results from this paper:

Internal validity:

1.1 Well covered	1.6 Not applicable	1.10 Well covered
1.2 Well covered	1.7 Well covered	1.11 Not addressed
1.3 Well covered	1.8 Not applicable	1.12 Not addressed
1.4 Well covered	1.9 Not addressed	1.13 Not addressed
1.5 58% did not complete follow-up asssment		

GABBARD2000 Study Type: cohort study Study Description: PD patients monitored at 2 private US hospitals from admission to discharge plus 1 year follow up Type of Analysis: completers Blindness: Open Duration (days): Mean 137 Range 10-1014 Followup: 1 year Setting: US; inpatients Info on Screening Process: 617, excluded patients under 18, with IQ<70, without PD, those who dropped out at follow-up, & those with organic brain disorders or psychotic disorders	n= 216 Age: Mean 38 Range 18-79 Sex: 72 males 144 females Diagnosis: 46% PD NOS by DSM-IIIR 35% BPD by DSM-IIIR 4% Dependent PD by DSM-IIIR 4% Histrionic PD by DSM-IIIR 3% Narcisisstic PD by DSM-IIIR 2% Avoidant PD by DSM-IIIR 2% OCPD by DSM-IIIR 2% Schizotypal by DSM-IIIR 1% Passive-aggressive by DSM-IIIR	**Data Used** Bellaks ego function scales Risk Scales GAS BPRS	**Group 1 N= 216** Intensive inpatient treatment - Mean length of stay = 137 days, median = 58 days, range 10-1014	

	0% ASPD by DSM-IIIR 0% Schizoid PD by DSM-IIIR 0% Paranoid PD by DSM-IIIR 0% Self-defeating by DSM-IIIR Baseline: Mean (SD) GAS 39.66 (6.6) Suicide risk 3.82 (0.9) Substance abuse 3.90 (1.1)			
GIESENBLOO2006 Study Type: RCT Type of Analysis: ITT Blindness: Single blind Duration (days): Mean 1095 Followup: 12, 24 and 36 month Setting: COUNTRY: Netherlands Outpatients (4 general CMHTs). Notes: RANDOMISATION: stratified across 4 treatment centers. Adaptive biased urn procedure used. Assessments made by independent researchers. Info on Screening Process: Ppts with BPD referred by therapists at secondary and tertiary CMHTs. No details on numbers screened, but power analysis required 45 ppts/grp.	n= 88 Age: Mean 31 Sex: 8 males 80 females Diagnosis: 100% BPD by SCID-I Exclusions: - Under age of 18, over age of 60 - Psychotic disorders - bipolar disorder - dissociative identity disorder - antisocial personality disorder - attention-deficit/hyperactivity disorder - addicition to substance requiring detoxification - mental retardation and other psychiatric disorders - BPDSI-IV score less than 20 - Dutch illiteracy Notes: BPDSI-IV cut off score of 20 also used to discriminate BPD from other PD Baseline: SFT TFP BPDSI-IV 33.53 (1.23) 34.37 (1.23) EuroQol Ther 50.00 (3.29) 55.00 (2.72) WHOQOL 10.33 (0.19) 10.42 (0.09) Psycho&Per 0.36 (0.06) 0.64 (0.13)	**Data Used** Leaving treatment early for any reason WHOQOL **Data Not Used** Psychopathological & personality factor score Defense Style Questionnaire Miskimins Self Goal Discrepancy Scale Rosenberg Self Esteem Scale YSQ EuroQol thermometer BPD Severity Index-IV Notes: Both treatments 50 min sessions twice weekly. Treatment integrity monitored by means of supervision. Randomly selected audiotapes of each quarter used for evaluation. Outcomes extracted at 12, 24, 32 months.	**Group 1 N= 45** Schema Focused Therapy - Treatment manualised (Young, 1994). Focused on therapeutic r'ship, daily life outside therapy, past (traumatic) experiences. Recovery achieved when dysfuntional schemas no longer control or rule ppts life **Group 2 N= 43** Transference Focused Therapy - Change achieved frm analysing & interpreting transference r'ship, focusing on the here &now context. Exploration, confrontation & interpretation used. Recovery achieved when good &bad rep of self & others are integrated & fixed object r'tions are resolved	Study Quality 1+ Study funded by research grant from the Dutch Health Care Insurance Board. The Dutch National Fund of Mental Health supported central training of therapists.
Results from this paper: Internal validity: 1.1 Well covered 1.6 Adequately addressed 1.2 Well covered 1.7 Adequately addressed 1.3 Well covered 1.8 SFT= 27% TFP= 51% 1.4 Adequately addressed 1.9 Adequately addressed 1.5 Adequately addressed 1.10 Not applicable				
HARLEY2007 Study Type: cohort study Study Description: Naturalistic study, all patients received DBT skills training, some also received individual DBT therapy, rest received non-DBT individual therapy. Type of Analysis: completers	n= 49 Age: Mean 40 Sex: 4 males 45 females Diagnosis: 100% BPD by SCID-II	**Data Used** PAI	**Group 1 N= 10** DBT skills training - Skill groups met once and week and were modelled closely on Linehans DBT skills training manual. In system DBT - Individual DBT was given to patients by therapists located in same hospital as skills DBT group - these patients received full DBT package.	

Blindness: No mention Duration (days): Mean 210 Setting: COUNTRY: US; outpatients Info on Screening Process: 67 patients completed intake procedure. Excluded if did not have BPD diagnosis; were against enrolling in program or had already completed DBT skills training.	61% Depression by SCID-I 27% Bipolar II disorder by SCID-I 22% Eating disorder by SCID-I 39% Post traumatic stress disorder by SCID-I 41% Anxiety disorder by SCID-I 12% Substance use disorder by SCID-I Exclusions: 25 participants dropped out - either chose to discontinue or were no longer eligible due to poor attendance. Notes: ETHNICITY: 96% Caucasian Baseline: PAI BOR-A 74 (7.9) PAI BOR-1 72 (8.5) PAI BOR-N 76 (8.5) PAI BOR-S 66 (10.9)	Notes: PAI scales used: Depression, Anxiety, Suicide, Nagative Impression Management, Schwartz Outcome, Borderline including Affective instability, Identity diffusion, Nagative relationships and Self-harm.	**Group 2 N= 16** DBT skills training - Skill groups met once and week and were modelled closely on Linehans DBT skills training manual. In system non DBT - Non-DBTindividual therapy was given to patients by therapists located in same hospital as skills DBT group . **Group 3 N= 23** DBT skills training - Skill groups met once and week and were modelled closely on Linehans DBT skills training manual. Out of system non DBT - Non-DBTindividual therapy was given to patients by therapists located outside the hospital that provided skills DBTgroup .	
HENGEVELD1996 Study Type: case series Study Description: Effectiveness of short term group CBT for recurrent suicide attempters Type of Analysis: ITT Blindness: Open Duration (days): Mean 140 Followup: 10 months Setting: NETHERLANDS; outpatients Info on Screening Process: 23, inclusion criteria: female, over 18, multiple presentations to hospital following self-harm, at least 1 prior suicide attempt, no current inpatient treatment, no ongoing alcohol abuse	n= 9 Age: Mean 31 Range 21-43 Sex: all females Diagnosis: 44% Adjustment disorder by DSM-IIIR 11% Impulse control disorder by DSM-IIIR 11% Schizoaffective disorder by DSM-IIIR 11% Dysthymia by DSM-IIIR 11% Major Depressive Disorder by DSM-IIIR 44% BPD by DSM-IIIR 11% Histrionic PD by DSM-IIIR 22% PD NOS by DSM-IIIR Exclusions: 4 pateints dropped out, 1 was referred for indiv treatment following another suicide attempt, 1 missed several sessions, 2 withdrew from course because they felt they no longer needed it. Baseline: Mean BDI 22.9 SCL-90 231.3	**Data Used** BDI SCL-90	**Group 1 N= 9** CBT - high frequency group CBT consisting of 8 weekly sessions & 2 booster sessions. Treatment organised as a training course in addition to outpatient treatment.	
KOONS2001 Study Type: RCT Type of Analysis: Completers	n= 28 Age: Mean 35 Range 21-46 Sex: all females	**Data Used** BPD DSM criteria STAXI -Anger In	**Group 1 N= 10** DBT - Treatment manualised Individual therapy & group skills training 190 mins	Ppts paid $20 for each of the three assessment: baseline, 3 months and 6 months

Blindness: No mention

Duration (days): Mean 168

Setting: COUNTRY: US
Primary Care

Notes: RANDOMISATION: procedure not described. No details on blinding.

Info on Screening Process: Ppts recruited through VA primary care clinic, VA counseling centres & other VA medical centres. 56 ppts referred, 17 excluded, 5 unwilling to participate, 4 lacked access to dependable transportation resources. 2 did not meet BPD criteria.28 randomised.

Diagnosis:
100% BPD by DSM-IIIR

25% Substance abuse

Exclusions: - Schizophrenia
- Bipolar Disorder
- Substance dependence
- Antisocial Personality Disorder
- Male

Notes: ETHNICITY: 75% Caucasian, 25% African American

Baseline:

	DBT	TAU
Parasuicide	5.1 (13.2)	0.7 (1.3)
Suicide ideation	36.2 (13.5)	44.6 (11.4)
Hopelessness	11.9 (6.7)	13.6 (6.8)
HDRS	29.7 (13.7)	32.6 (9.7)
BDI	22.8 (11.1)	34.7 (14.6)
HARS	18.4 (7.3)	27.7 (9.3)
Anger In	22.9 (5.7)	20.5 (4.7)
Anger Out	18.2 (5.7)	17.2 (5.8)
DES	22.3 (15.2)	41.0 (22.4)
BPD criteria	6..8 (1.1)	6.7 (0.8)

HARS
HRSD-24 (Hamilton 1960)
BDI
BHS
Beck Scale for Suicide Ideation
Parasuicidal behaviour

Data Not Used
DES

Notes: DBT therapists met regularly with consultants for support. TAU clinicians did not meet regularly. All ppts offered pharmacotherapy Outcomes extracted at 6 months; parasuicidal behaviour from PHI (N over previous 3 months)

per/wk & a therapists' consultation meeting attended wkly. Individual therapists are available btwn sessions for telephone coaching in use of skills to reduce target behvs.

Individual therapy - Hierarchy of target behvs monitored on diary card & discussed in each session acc to priority.Behvrl & solution analysis used to replace maladaptive behvs.

Group skills training - Aims to teach skills for identifying & regulating emotions, tolerating distress, interacting with others more effectively and living more mindfully

Group 2 N= 10

TAU - Ppts offered 60 mins of weekly individual therapy with a clinician. Ppts also offered one or more of several supportive & psychoeducational grps. Type of treatment offered was at the therapist's discretion.

Study Quality 1+
Study funded by grant from VA Research Advisory Group

Results from this paper:

Internal validity:

1.1 Well covered
1.2 Adequately addressed
1.3 Not addressed
1.4 Not addressed
1.5 Adequately addressed
1.6 Adequately addressed
1.7 Adequately addressed
1.8 DBT N= 3 TAU N = 2 (plus 3 others not by group)
1.9 Not addressed
1.10 Adequately addressed

LANIUS2003

Study Type: cohort study

Study Description: descriptive data from women who fulfilled BPD and PTSD criteria and completed 1 year of DBT

Blindness: No mention

Duration (days): Mean 365

Setting: COUNRTY: Canada; mostly out-patient based

Info on Screening Process: none

n= 18

Age: Mean 35

Sex: all females

Diagnosis:
100% BPD & PTSD by DSM-IV

61% Dysthymia by Not reported

56% Major Depressive Disorder by Not reported

50% Dissociative disorder NOS by Not reported

33% Eating disorder by Not reported

22% Substance abuse by Not reported

11% Panic disorder by Not reported

6% Bipolar II disorder by Not reported

6% Schizoaffective disorder by Not reported

Exclusions: none

Notes: ETHNICITY: not reported

Data Used
Employment/schooling
Outpatient visits
A&E attendance
In patient psychiatric hospitalisation

Group 1 N= 18

DBT - no details of DBT given

	no. days inpatient stay 1083 no.emergency room visits 85 no. outpatient visits 656 no. patients employed/at school 1			
LEICHSENRING2007 Study Type: cohort study Study Description: naturalistic study assessing the effectiveness of psychoanalytic-interactional therapy Blindness: Open Duration (days): Setting: GERMANY	n= 132 Age: Mean 30 Sex: 18 males 114 females Diagnosis: 100% BPD	**Data Used** GAS IIP SCL-90	**Group 1 N= 132** Psychoanalytic-interactional therapy	
LINEHAN1991 Study Type: RCT Type of Analysis: Completers Blindness: Single blind Duration (days): Mean 365 Setting: COUNTRY: US Outpatients Notes: RANDOMISATION:Ppts matched on no. of lifetime parasuicide & psych hospitalizations, age & good vs poor clinical prognosis then randomly assigned. Info on Screening Process: Ppts were clinically referred. No details on numbers screened.	n= 63 Age: Mean 27 Range 18-45 Sex: all females Diagnosis: 100% BPD by DSM-IIIR Exclusions: - Score of less than 7 on DIB - Less than 2 incidents of parasuicide in last 5 years - schizophrenia - bipolar disorder - substance dependence - mental retardation - less than 18 years old or more than 45 years of age - unwilling to terminate other individual psychotherapy if assigned to DBT - Notes: DIB also used to determin BPD diagnosis ETHNICITY: no data Baseline: DBT TAU No of parasuicidal acts (Median) 3.50 (7.88) 15.91 (25.02)	**Data Used** Self Harm - parasuicidal acts Leaving treatment early for any reason GAS STAI - Anger Psychiatric Inpatient admission Scale for Suicide Ideators **Data Not Used** Maintenance in Therapy Survival and Coping Scale - data not reported The Reason for Living Inventory - data not reported BHS - data not reported BDI - data not reported The Treatment History Interview PHI Notes: Outcomes extracted at 18 and 24 months	**Group 1 N= 32** DBT - Treatment manualised (Linehan 1984). Weekly individual and group therapy over 1 year. Individual therapy - Directive, problem-oriented techniques incl. behvrl skill training, contingency management, cognitive modification & exposure to emotional cues - all balanced with supportive techniques such as reflection, empathy & acceptance Group skills training - Weekly session for 2.5 hrs. Taught interpersonal skills, distress/reality acceptance and emotion regulation skills. Group therapists did not accept telephone calls from ppts, any crisis referred to individual therapist, **Group 2 N= 31** TAU - All ppts received alternative therapy referrals from which they could choose any treatment available in the community	Study quality 1+ Study supported by grant from the National Institute of Mental Health, Bethesda
Results from this paper: Internal validity: 1.1 Adequately addressed 1.6 Well covered 1.2 Adequately addressed 1.7 Adequately addressed 1.3 Not addressed 1.8 DBT = 31% TAU = 29% 1.4 Adequately addressed 1.9 Not addressed 1.5 Well covered 1.10 Not applicable				
LINEHAN1999 Study Type: RCT Type of Analysis: ITT Blindness: Single blind Duration (days): Mean 365 Followup: 16 month Setting: COUNTRY: US Outpatients Notes: RANDOMISATION:Minimization	n= 28 Age: Mean 30 Range 18-45 Sex: all females Diagnosis: 100% BPD by SCID-I 74% Substance use disorder by SCID-I	**Data Used** Leaving treatment early for any reason % of days drug/alcohol free GAS % of urinanalysis clean **Data Not Used** Parasuicidal behaviour - Not extractable GSA - not a validated measure Social History Interview	**Group 1 N= 12** DBT - Modified for use with substance abusing pop i.e.replacing drug use with behavioural skills. 4mths drug maintenance, 4mths drug tapering (for skills acquisition) & 4mths no drug replacement (for skills generalisation). Opiates replaced with methadone.	Study quality 1+ Study supported by grant from National Institute of Drug Abuse, Bethesda

randomisation procedure used - ppts matched on age, severity of drug dependence, readiness to change & global adjustment. Info on Screening Process: Ppts referred by clinicians. No details on numbers screened.	58% Cocaine abuse/dependence by SCID-I 52% Alcohol dependence by SCID-I 50% Major Depressive Disorder by SCID-I 38% Post traumatic stress disorder by SCID-I 12% ASPD by SCID-I 46% Dysthymia by SCID-I 36% Panic disorder by SCID-I 9% Agoraphobia without panic by SCID-I 22% Social Phobia by SCID-I 20% Specific Phobia by SCID-I 28% Obsessive compulsive disorder by SCID-I 24% General Anxiety Disorder by SCID-I 9% Anorexia Nervosa by SCID-I 10% Bulimia Nervosa by ICD-9 20% Binge-eating Disorder by SCID-I Exclusions: - Schizophrenia - Any psychotic disorder - Bipolar disorder - mental retardation Notes: International Personality Disorders Exam also used to determin BPD diagnosis ETHNICITY: European 78%, African American 7%, Latin 4%, other 11% Baseline: none reported	The Treatment History Interview Notes: Outcomes extracted at 12 and 16 months; parasuicidal behaviour collected with PHI	Individual therapy - Sessions based on clearly prioritized targets and focus on enhancing motivation (e.g. to quit using drugs and to continue therapy) and foci of specific sessions determined by ppts behv since previous session. Group skills training - Teaches mindfulness, distress tolerance, emotion regulation, interpersonal effectiveness and self-management skills. STEPPS - Follows Linehan's 1993 treatment manual. Weekly individual psychotherapy (1 hour) group training skills (2 hours + 15 min window). Skills coaching phone calls with therapist provided when needed **Group 2 N= 16** TAU - Resembles standard care that ppts would receive in the community. Ppts either referred to alternative substance abuse or mental health consellors & programs in the community or allowed to continue with their psychotherapist at time of pretreatment STEPPS - Ppts also allowed to meet with case managers when needed.	
Results from this paper: Internal validity: 1.1 Well covered 1.2 Adequately addressed 1.3 Not addressed 1.4 Adequately addressed 1.5 Adequately addressed 1.6 Adequately addressed 1.7 Adequately addressed 1.8 DBT = 41.6% TAU = 16% 1.9 Adequately addressed 1.10 Not applicable				
LINEHAN2002 Study Type: RCT Type of Analysis: ITT Blindness: Single blind Duration (days): Mean 365 Followup: 16 month Setting: COUNTRY: US	n= 23 Age: Mean 36 Sex: all females Diagnosis: 100% BPD by SCID-II	**Data Used** Leaving treatment early for any reason Mean % clean urinanlyses Abstinence: Self report mean days of heroin **Data Not Used** Parasuicidal behaviour - No data by treatment group	**Group 1 N= 11** DBT - Treatment manualised (Linehan 1993) & adapted for substance abusers.	Study Quality 1+ Study supported by grant from National Institute of Drug Abuse, National Institute of Health. Roxane Laboratories, Inc. donated Methadone and ORLAAM.

Outpatients Notes: RANDOMISATION:Minimization random assignment - ppts matched on severity of drug dependence, cocaine dep, ASPD & global adjustment. Info on Screening Process: Ppts recruited from mental health clinics, needle exchange programs, substance abuse and methadone maintenance clinics & non-profit HIV/AIDS prevention programs. 64 ppts underwent screening interview, 24 accepted into study.	52% Cocaine abuse/dependence 13% Sedative dependence 26% Alcohol dependence 9% Cannabis dependence 39% Major Depressive Disorder 18% Eating disorder 52% Anxiety disorder 44% ASPD Exclusions: - not meeting criteria of BPD - bipolar mood disorder - pregnant - not completing pre-treatment/medical evaluation Notes: Personality Disorders Exam also used to determine diagnosis of BPD ETHNICITY: Caucasian 66%, African American 26%, Mixed ethinicity 4%. Baseline: Average GAF score for both groups 43.2 (8.36).	Notes: Urine samples collected 3 times weekly prior to each treatment session and/or when ppts received LAAM.	Individual therapy - Targetted dsyfunctional behvs in hierarchical order (suicidal, therapy-interfering, substance use and QofL interfering behvs) & replacing those behvs with skillful behvs learnt in psychoeducational skills group. Group skills training - Teaches mindfulness, interpersonal effectiveness, distress tolerance and emotion regulation. Opiate Replacement medication - All ppts received Levomethadyl acetate hydrochloride (LAAM) oral solution 40mg. During the first 2 weeks dose increased in 5-10mg increments per dose every 48hrs until reaching a maintenance dose (modal dose 90/90/130mg). Dose adjusted if necessary. **Group 2 N= 12** CVT - Treatment inc all DBT acceptance-based strategies, inc validation, reciprocal communication & case management when requested. Therapists are non directive, agenda determined by ppt. Prob solving limited to reducing suicide risk & ensuring med adherance. 12 step - Validates the ppt experience in a warm & supportive atmosphere that encourages devt of confidence. Ppts attend 120min women's Narcotics Anonymous meeting.	
Results from this paper: Internal validity: 1.1 Well covered 1.2 Adequately addressed 1.3 Not reported 1.4 Adequately addressed 1.5 Adequately addressed 1.6 Adequately addressed 1.7 Adequately addressed 1.8 DBT = 36% CVT+12 step = 0% 1.9 Well covered 1.10 Not applicable				
LINEHAN2006 Study Type: RCT Blindness: Single blind Duration (days): Mean 365 Followup: 12 months Setting: COUNTRY: US University outpatient and community practice Notes: RANDOMISATION:Computerised adaptive minimization randomisation procedure - ppts matched to treatment condition. Investigator blinded. Info on Screening Process: Ppts were women clinically referred for treatment. 186 women assessed for eligibility, 75 excluded (53 did not meet inclusion criteria, 22 refused to participate). 111 randomised.	n= 101 Age: Mean 29 Sex: all females Diagnosis: 100% BPD by DSM-IV 72% Major Depressive Disorder by DSM-IV 41% Panic disorder by DSM-IV 50% Post traumatic stress disorder by DSM-IV 78% Anxiety disorder by DSM-IV 30% Substance use disorder by DSM-IV 24% Eating disorder by DSM-IV	**Data Used** Admissions for suicidal ideation Leaving treatment early for any reason Non suicidal injuries Unambivalent suicide attempts Psychiatric Inpatient admission A&E attendance HRSD-17 **Data Not Used** The Reasons for Living Inventory survival & coping The Reasons for Living Inventory mean total Suicide Ideation Highest Medical Risk Notes: Outcomes extracted at 12 and 24 months	**Group 1 N= 60** DBT - Treatment manualised (Linehan's 1993). Individual psychotherapy 1hr per/wk. Grp skills training 2.5hrs/wk.Telephone consultation (as needed within therapists limits to ensure generalisation. **Group 2 N= 51** CTBE - Community treatment by experts developed especially for this study. Similar to TAU, treatment provided uncontrolled by research team. Therapists asked to provide dose & type of therapy that they felt most suitable for ppt. Min schedule of 1 session/wk.	Study Quality 1+ Study supported by 2 grants from the National Institute of Mental Health

	8% Depression by DSM-IV 11% ASPD by DSM-IV 11% Cluster B by DSM-IV Exclusions: - less than 2 suicidal attempts or self-injuries in past 5 yrs - lifetime diagnosis of Schizophrenia - schizoaffective disorder - bipolar disorder - psychotic disorder - mental retardation - seizure disorder requiring medication - mandate to treatment - need for primary treatment for another debilitating condition Notes: International Personality Disorder Examination also used to screen ppts with BPD. ETHNICITY: 4% African American, 2% Asian American, 1% Native American/Alaskan, 5% 'other' 88% White Baseline: DBT CTBE Suicide ideation 51.7 (20.3) 59.9 (21.6) Reasons for living Inventory Mean 2.8 (0.7) 2.7 (0.9) Survival & Coping 2.7 (0.9) 2.7 (1.0) HDRS-17 20.2 (5.9) 21.7 (7.3) Highest medical risk 7.1 (4.9) 8.8 (4.9)			
Results from this paper: Internal validity: 1.1 Well covered 1.6 Adequately addressed 1.2 Adequately addressed 1.7 Adequately addressed 1.3 Not addressed 1.8 DBT = 11.5% CTBE = 28.6% 1.4 Not addressed 1.9 Not addressed 1.5 Adequately addressed 1.10 Not applicable				
LOFFLERSTASTKA2003 Study Type: case control Study Description: All patients received 6 wk inpatient treatment, following this 9 patients who engaged in further outpatient treatment were compared to 11 who did not Blindness: Open Duration (days): Mean 42 Followup: 1 year Setting: Inpatient/outpatient Info on Screening Process: 57 people screened, excl criteria: operational psychodynamic diagnostics rating of high/nonexisting treatment requirements or high/moderate integrated structural level; or substance abuse, or other comorbid disorder	n= 20 Age: Mean 38 Sex: 10 males 10 females Diagnosis: 100% BPD by DSM-IV Exclusions: 20 patients received 6 wk inpatient therapy, 11 (8 male, 3 female) did not engage in further outpatient treatment	**Data Used** Quaire for competence & control convictions Quaire for assessing aggression factors IIP STAXI	**Group 1 N= 11** Psychoanalytically-oriented therapy inpatient - 6 wks inpatient therapy with aim of clarifying, planning & preparing patients for outpatient therapy **Group 2 N= 5** Psychoanalytically-oriented therapy inpatient - 6 wks inpatient therapy with aim of clarifying, planning & preparing patients for outpatient therapy Psychoanalytically-oriented therapy outpatient - engaged in outpatient therapy for 1 year **Group 3 N= 4** Psychoanalytically-oriented therapy inpatient - 6 wks inpatient therapy with aim of clarifying, planning & preparing patients for outpatient therapy Systemic family therapy - enaged in outpatient therapy for 1 year	
LOPEZ2004				

Study Type: non-comparative Study Description: BPD patients were given 48 sessions of manual based transference-focused psychotherapy by inexperienced therapists who were supervised by experts Type of Analysis: completers Blindness: Open Duration (days): Mean 168 Setting: MEXICO; outpatients Info on Screening Process: Inclusion criteria: 18-40 years, diagnosis of BPD, graduated from high school, no diagnosis of schizophrenia, bipolar disorder, delusional disorder, severe substance abuse, mental organic disorder or antisocial disorder.	n= 14 Age: Mean 25 Sex: all females Diagnosis: 100% BPD by SCID-I and II (DSM-IV) Exclusions: 4 participants dropped out due to severe conflicts with parents Baseline: Mean (SD) SCL-90 2.14 (1.0) GAF 37.1 (18.9)	**Data Used** GAF SCL-90	**Group 1 N= 14** Transference Focused Therapy - 48 sessions of transference-focused psychotherapy based on a manual were delivered in two weekly individual sessions by 7 inexperienced therapists supervised by experts.	
MARKOWITZ2006 Study Type: case series Study Description: very preliminary outcomes of IPT developed for BPD Type of Analysis: completers Blindness: Open Duration (days): Mean 240 Setting: US	n= 8 Age: Sex: Diagnosis: 100% BPD by Diagnostic Interview for PD Exclusions: 2 dropped out due to substance abuse/dependence, 1 was withdrawn due to suicidality	**Data Used** SCL-90 HRSD-17 (Hamilton 1960)	**Group 1 N= 8** IPT - IPT adapted for BPD, 18 sessions of IPT in 16-wks plus 16 weekly continuation sessions	
MCQUILLAN2005 Study Type: cohort study Study Description: Reports symtom scores before and after 3 week intensive DBT program. Type of Analysis: completers Blindness: No mention Duration (days): Mean 21 Setting: COUNTRY: Switzerland; outpatient unit/crisis centre - patients can voluntarily spend max of 2 nights at centre. Info on Screening Process: 127 people referred to program by physician, participants excluded if principal problem was psychotic, bipolar, developmental, substance dependence, or eating disorder. Most suicidal patients were preferentially offered admission.	n= 127 Age: Mean 31 Range 18-52 Sex: 24 males 103 females Diagnosis: 100% Personality Disorder by International PD Examination Screening Qu'aire 92% BPD by International PD Examination Screening Qu'aire Exclusions: Of 87 patients admitted to program, 16 dropped out - 5 due to hospitalization, reasons for others not reported. Notes: ETHNICITY: not reported; Participant details reported for 127 patients referred to program, after assessment 87 of these were admitted to the program and 71 completed the program. Baseline: BDI 29.1 (11.3) BHS 10.4 (4.9) SASS 32.1 (8.6)	**Data Used** SASS BHS BDI Mean	**Group 1 N= 87** DBT - Intensive 3 week DBT - 13hrs group therapy per week plus individual sessions and telephone contact with therapists.	There are disparities between numbers of patients reported in the methods and those reported in the results - 6 patients are unaccounted for in the results.
MUNROEBLUM1995 Study Type: RCT Type of Analysis: Completers analysis Blindness: No mention Duration (days): Mean 365 Followup: 12 and 24 month	n= 110 Age: Range 18-52 Sex: 21 males 89 females Diagnosis: 100% BPD by DIB	**Data Used** Leaving treatment early for any reason **Data Not Used** HSCL-90 - Only between group statistics giver BDI - Only between group statistics given	**Group 1 N= 38** Interpersonal group therapy (IGP) - Manual guided 30 sessions of treatment (25 weekly sessions followed by 5 biweekly sessions leading to termination). Each session 1.5-2hrs. Addresses conflicted unstable & poorly defined self-	Study quality 1+ Study supported by grants from the Ontario Mental Health Foundation and the National Health Research and Development Programme

Setting: COUNRTY: Canada Outpatients and inpatients Notes: RANDOMISATION: procedure not described. No details on blinding. Info on Screening Process: 110 eligible ppts recuited from the in and out patient units of teaching hospitals, 79 accepted treatment assignment	Exclusions: - Learning difficulty - neurological impairment - mental retardation - primary diagnosis of alcohol or drug addiction - physical disorders of known psychiatric consequence Notes: ETHNICITY: No data Baseline: none reported	Social Adjustment Scale - Only between group statistics given Objective Behaviours Index - Scale developed for study Notes: Outcomes taken as baseline, 6, 12, 18 and 24 month follow up.	system dependent on here & now interpersonal transactions **Group 2 N= 41** Individual dynamic psychotherapy (IDP) - Consisted of open-ended individual dynamic psychotherapy based on model by Kernberg 1975. Individual sessions took place one or twice weekly. All sessions audiotaped. Therapists used strategies of interpretation, confrontation and exploration.	

Results from this paper:

Internal validity:

1.1 Adequately addressed
1.2 Adequately addressed
1.3 Not addressed
1.4 Not addressed
1.5 Adequately addressed
1.6 Adequately addressed
1.7 Poorly addressed
1.8 IDP = 36.5% IGP = 57.8%
1.9 Adquately addressed
1.10 Not applicable

NORDAHL2005 Study Type: case series Study Description: case series assessing effectiveness of schema therapy in 6 BPD wome Type of Analysis: completers Blindness: Open Duration (days): Range 540-1080 Followup: 1 year Setting: NORWAY; outpatients	n= 6 Age: Mean 26 Range 19-42 Sex: all females Diagnosis: 100% BPD by DSM-IV 67% Major Depressive Disorder by DSM-IV 33% Dysthymia by DSM-IV 33% Bulimia Nervosa by DSM-IV 50% Anxiety disorder by DSM-IV 17% Alcohol misuse by DSM-IV 33% Somatoform disorder by DSM-IV 33% Avoidant PD by DSM-IV 17% Dependent PD by DSM-IV 17% Histrionic PD by DSM-IV	**Data Used** YSQ IIP BAI BDI SCL-90-R	**Group 1 N= 6** Schema therapy - 1hr weekly session for mean of 22 months (range 18-36), treatment was faded at least 6 months by the end of therapy.	
PRENDERGAST2007 Study Type: cohort study Study Description: 6 month DBT treatment outcomes described for 11 women with BPD Type of Analysis: completers Blindness: Open Duration (days): Mean 180 Setting: COUNTRY: Australia; community	n= 11 Age: Mean 36 Range 23-47 Sex: all females Diagnosis: 100% BPD by DSM-IV	**Data Used** Service Contact Parasuicidal behaviour Coping Scale for Adults GAF STAXI Hospitalisation days Hospital admissions	**Group 1 N= 16** DBT - Treatment involved 24 weekly 60-90min sessions of individual psychotherapy & 24 weekly 150min sessions of group therapy, also telephone support outside clinic hours.	

setting Info on Screening Process: Ppts recruited from alternative community services and GPs. Ppts excluded if they did not have BPD diagnosis, <18 years, male, experiencing current psychotic episode or could not abstain from alcohol or drugs 24hrs prior to therapy sessions.	45% Dysthymia by DSM-IV 18% Major Depressive Disorder by DSM-IV 9% Post traumatic stress disorder by DSM-IV Exclusions: 5 women did not complete study, 1 due to psychotic symptoms; 2 due to environmental stressors & long term hospitalisation; 2 excluded due to failure to comply in program. Notes: ETHNICITY: not reported; 16 women were accepted onto DBT program but only details of 11 completing participants were given. Baseline: BDI 36.18 (10.72)	BDI Notes: Subscale scores for STAXI and Coping Scale for Adults provided. Frequency, severity and intent information provided for Parasuicidal behaviour. Number, duration and type of contact given for Service Contact measure.		
RYLE2000 Study Type: cohort study Study Description: 24-sessions CAT & 4 follow-up sessions over 1 year. Assessed 6 months after therapy & divided into improved & unimproved groups, followed-up 18m later Type of Analysis: completers Blindness: Open Duration (days): Mean 365 Followup: 18 months Setting: UK; outpatients	n= 27 Age: Mean 34 Sex: 11 males 16 females Diagnosis: 100% BPD by Personality Assessment Schedule Exclusions: 2 removed from sample after therapy when retrospective diagnositc assessment failed to confirm diagnosis, 3 referred for treatment of substance abuse, 1 admitted for inpatient care, 2 moved away, & 4 dropped out before completion of therapy. 27 patients left attended 6month follow-up and 18 attended 18 month follow-up Baseline: Mean (SD) BDI 29.7 (12.14) IIP 2.16 (0.56) SCL-90-R 1.92 (0.79) SQ 33.22 (18.29)	**Data Used** Social Questionnaire SCL-90-R IIP BDI Mean	**Group 1 N= 39** Cognitive analytic therapy - All patients recived 24 sessions of CAT plus 4 follow up sessions over approx 1 year, 6m after therapy divided into improved (14) & unimproved (13) & these sets of patients compared on no. different factors	
STEVENSON2005 Study Type: non-comparative Study Description: Cohort study using 'control' group devised from hypothetical natural history of BPD constructed from DSM scores of 150 patients Blindness: Open Duration (days): Mean 365 Followup: 5 years Setting: Outpatients; Australia Info on Screening Process: From consecutive referrals 48 people met entry criteria and accepted treatment; 40 completed treatment; 7 continued treatment past 1 year; 3 couldn't be contacted for 24-month follow-up	n= 30 Age: Mean 30 Sex: 11 males 19 females Diagnosis: 100% BPD by DSM-III Exclusions: Difficulty with English; uncontrollable violent behaviour; bordeline intellectual retardation		**Group 1 N= 30** Psychotherapy - 1 year's treatment based on Conversational Model of Hobson - 1 hour, twice per week; most patients on medication at beginning of trial but most able to withdraw gradually	
TURNER2000 Study Type: RCT Type of Analysis: ITT	n= 24 Age: Mean 22 Range 18-27 Sex: 5 males 19 females	**Data Used** Leaving treatment early for any reason In patient psychiatric hospitalisation	**Group 1 N= 12** DBT - Based on Linehan's 1993 treatment manual. Psychodynamic techniques incorporated to conceptualize	19 ppts taking psycotropic medication at the beginning of the study Study Quality 1+

Blindness: Single blind Duration (days): Mean 365 Setting: COUNTRY:US Outpatients Notes: RANDOMISATION: procedure not described. Assessments conducted by independent researcher unaware of ppts treatment condition but aware of study purpose Info on Screening Process: 64ppts referred & evaluated. 33 ppts met criteria for BPD. 9 ppts withdrew or had to be withdrawn during the intake process. 4 dropped out during pre-test, 3 required inpatient drug & alcohol treatment. 2 withdrew after treatment assignment.	Diagnosis: 100% BPD by DIB 71% General Anxiety Disorder 12% Major Depressive Disorder 12% Dysthymia 75% Alcohol abuse 83% Substance abuse 8% ASPD 4% Obsessive compulsive disorder 25% Histrionic PD 12% SPD Exclusions: - Schizophrenia - schizoaffective disorder - bipolar disorder - organic mental disorders - mental retardation Notes: International Personality Disorders Examination also used to determine BPD diagnosis ETHNICITY: 76.2% Caucasian, 17% African American, 4% Asian American Baseline: CCT DBT Rating of parasuicide 7.25 (0.75) 7.17 (0.83) BSIS 23.53 (3.34) 24.08 (3.73) No.of suicide attempts 13.58 (3.34) 14.08 (3.73) Rating of Impulsiveness 7.58 (0.51) 7.42 (0.51) Rating of Anger 7.08 (0.90) 7.33 (0.65) BDI 27.75 (6.11) 27.58 (5.30) HRSD 17.42 (4.46) 20.75 (4.33) BAI 20.42 (3.45) 19.25 (3.55) BPRS 30.83 (6.00) 30.33 (6.56) Hospitalization days 10.00 (8.11) 10.20 (3.37)	BAI HRSD-24 (Hamilton 1960) BDI Suicide/self harm attempts Beck Scale for Suicide Ideation **Data Not Used** Hospitalisation days BPRS Rating of Anger Rating of impulsiveness Rating of parasuicide - not clearly defined Notes: NB: number of suicide attempts/self harm attempts are self-report and no formal definition provided. Outcomes extracted at 12 months	ppts behvrl, emotional, & cognitive r'ship schema. Skills training given in indvl therapy & not via separate workshop. **Group 2 N= 12** Client Centred therapy - 2 X wk. Emphasizes empathic understanding of ppts sense of aloneness & providing a supportive atmosphere for individuation & relapse prevention in a safe therapeutic envt. Therapist aided ppts to use self control & reflection to reduce stress.	Funding unclear

Results from this paper:

Internal validity:

1.1 Adequately addressed
1.2 Adequately addressed
1.3 Not addressed
1.4 Adequately addressed
1.5 Adequately addressed
1.6 Adequately addressed
1.7 Well covered
1.8 DBT= 33% CCT = 50%
1.9 Well covered
1.10 Not applicable

TYRER2003 Study Type: RCT Blindness: Duration (days): Setting: A&E following self-harm episode; UK Notes: RANDOMISATION: used independent	n= 70 Age: Sex: Diagnosis: 100% BPD by Not reported	**Data Used** HADS anxiety scale GAF MADRS Parasuicidal behaviour **Data Not Used**	**Group 1 N= 34** MACT - Up to 5 sessions in 3 months from index self-harm episode + 2 optional booster sessions within 6 months: evaluation of self-harm attempt, crisis skills, problem solving, basic cognitive techniques to manage emotions & -ve	SIGN 1++

telephone randomising system, stratified by hospital and parasuicide risk status	Exclusions: Insufficient English, temporary residence in the area concerned, ICD-10 diagnosis code organic F.0, alchool and drug dependence F1x.2, schizophrenia F.2, bipolar F31, and psychiatric hospitalisation following index episode. Did not have >=1 previous self-harm episode Notes: Only data from those with BPD are used (provided on request from authors)	HADS depression scale - Reports other depression measure	thinking, relapse prevention **Group 2 N= 36** TAU - Initial psychiatric assessment followed by psychiatric outpatient care, occasional day-patient care or referral back to GP depending on the arrangements of the hospital; patients already in psychiatric care continued with treatment	
VANDENBOSCH2002 Study Type: RCT Type of Analysis: ITT Blindness: No mention Duration (days): Mean 365 Setting: COUNTRY: Netherlands Outpatients Notes: RANDOMISATION: Minimisation randomisation used to ensure comparability of two grps by age, alcohol & social problems. No description of blinding. Info on Screening Process: Ppts recruited from both substance abuse treatment centers and psychiatric services. 92 ppts referred, 28 exluded, 64 eligible and randomised	n= 64 Age: Mean 35 Range 18-70 Sex: all females Diagnosis: 100% BPD by SCID-II Exclusions: - Bipolar disorder - (chronic) psychotic disorder - insufficient command of Dutch language - severe cognitive impairements - living outside of the 40km circle centred on Amsterdam Notes: Personality Diagnostic questionnaire also used to determine diagnosis of BPD. ETHNICITY: no data. 97% Dutch Nationality Baseline: DBT TAU No of BPD criteria 7.3 (1.3) 7.3 (1.3) ASI suicide attempts 19 22 LPC self-mutilation 25 29 Lifetime self-mutilation acts, median 13.1 14.4 Addictive problems 16 16	**Data Used** Leaving treatment early for any reason **Data Not Used** Self Harm - parasuicidal acts - data not extractable LPC - data not extractable BPD Severity Index - rating scale excluded Notes: NB: LPC does not provide a count of the number of episodes/acts of parasuicide or self mutilation. Outcomes extracted at 12 months	**Group 1 N= 31** DBT - Treatment manualised (Linehan's 1993). 1) weekly individual cognitive-behavioural psychotherapy sessions; 2) weekly skills training for 2-2.5hrs per session; 3) weekly supervision and consultation meetings for the therapist; 4) phone consultation Individual therapy - Focus primarily on motivational issues, including motivation to stay alive and to stay in treatment. Group skills training - Teaches self-regulation and change skills, and self and other acceptance skills. **Group 2 N= 27** TAU - Clinical management from original referral source (addiction treatment centres & psychiatric services. Ppts generally received no more than 2 sessions/month with a psychologist, a psychiatrist or a social worker.	Study Quality 1+ Study supported by ZAO Health Insurance Company, Amsterdam
Results from this paper: Internal validity: 1.1 Well covered 1.6 Adequately addressed 1.2 Adequately addressed 1.7 Well covered 1.3 Not addressed 1.8 DBT = 37% TAU = 77% 1.4 Not addressed 1.9 Well covered 1.5 Adequately addressed 1.10 Not applicable				
WARREN2004 Study Type: cohort study Study Description: Prospective, naturalistic study of referrals to Henderson Hospital following up those admitted and those not admitted Blindness: Duration (days): Followup: 1 year after discharge Setting: UK Info on Screening Process: 585 referrals were approached; 384 completed baseline assessment; 104 could not complete follow-up assessment (5 died, 87 uncontactable, 12 re-referred); 145 failed to complete f-u assessment	n= 135 Age: Mean 28 Sex: 66 males 69 females Diagnosis: 58% Dependent by DSM-IIIR 60% Histrionic PD by DSM-IIIR 72% Paranoid PD by DSM-IIIR 66% Avoidant PD by DSM-IIIR 46% Schizoaffective disorder by DSM-IIIR	**Data Used** Multiple-Impulsivity Scale EAT-26	**Group 1 N= 134** Therapeutic community **Group 2 N= 74** Not admitted	SIGN 2+

	40% Narcissistic by DSM-IIIR 43% Obsessive by DSM-IIIR 41% Passive-aggressive by DSM-IIIR 69% Schizotypal by DSM-IIIR 62% ASPD by DSM-IIIR 84% BPD by DSM-IIIR Exclusions: None Notes: Of those completing f-u assessment 75 admitted, 60 not admitted; 95% > 1 PD diagnosis			

Results from this paper:

Internal validity:

1.1 Well covered	1.6 Not addressed	1.10 Well covered
1.2 Well covered	1.7 Well covered	1.11 Not addressed
1.3 Well covered	1.8 Not applicable	1.12 Not addressed
1.4 Not applicable	1.9 Not applicable	1.13 Adequately addressed

1.5 64% did not complete follow-up assessment

WEINBERG2006 Study Type: RCT Type of Analysis: Completer Blindness: Single blind Duration (days): Mean 56 Followup: 6 months Setting: Community and outpatients; US Notes: RANDOMISATION: no details Info on Screening Process: 60 referrals from local press adverts, clinical services of local hospital and from sample used in separate study; screened by phone; 37 invited for further assessment	n= 30 Age: Range 18-40 Sex: all females Diagnosis: 100% BPD by DSM-IV Exclusions: Comorbid psychotic disorders, bipolar I disorder, substance dependence, elevated suicide risk Baseline: Frequency of self-harm: MACT 9.33 (+-14.78) TAU 8.2 (+-10.46)	**Data Used** Suicide Ideation Self-harm Notes: Taken posttreatment & 6 mo f-u; self-harm measured with PHI, data given frequency of self-harm (measurement period unclear); self-harm severity also measured bt not extracted; suicidal ideation measured on Suicidal Behavior Q'aire	**Group 1 N= 15** MACT - Manual-assisted cognitive treatment for self-harm; 6 sessions incorporating DBT, CBT and bibliotherapy: functional analysis of parasuicide, emotion regulation, problem-solving, management of -ve thinking & substance use, relapse prevention TAU - No details **Group 2 N= 15** TAU - No details	SIGN: 1+
WILBERG1998 Study Type: cohort study Study Description: Compared treatment at day unit followed by outpatient group psychotherapy with patients treated at day unit but without subsequent outpatient therapy Type of Analysis: completes Blindness: Open Duration (days): Mean 365 Setting: NORWAY; inpatient followed by outpatient Info on Screening Process: 179, 62 patients had BPD, exclusion criteria: comorb schizotypal PD, day unit stay <3wks	n= 43 Age: Mean 31 Sex: 10 males 33 females Diagnosis: 100% BPD by DSM-III Exclusions: 6 patients lost at follow up, 2 were dead, 4 refused to participate. Baseline: HSRS GSI Outpatient treatment group 36.9 (5.1) 1.67 (0.48) no outpatient treatment group 39.2 (5.1) 1.92 (0.56)	**Data Used** Remission from substance use disorder Suicide attempts Hospital admissions GSI HSRS	**Group 1 N= 12** Group Psychotherapy - Group therapy conducted in accordance with group analytic principles, run on co-therapy basis, 1.5hr once a week, received outpatient therapy for average 12 months (range 1-33) **Group 2 N= 31** TAU - did not have any outpatient therapy following treatment at day unit	

Characteristics of Excluded Studies

Reference ID	Reason for Exclusion
ABBASS2008	Only 44% BPD diagnosis (total N = 27) data for BPD group supplied by authors, but too few to include (6 in each arm), study described narratively (intenstive short-term dynamic psychotherapy vs control)
BALL2007	57% BPD, no data reported for BPD subgroup.
BUDMAN1996	uncontrolled pre-post study with a mixed PD group, high drop out and BPD is not reported separately
CHIESA2004A	Does not focus on efficacy outcomes (therapeutic communities)
COPAS1984	Diagnosis unclear and seems likely not to be borderline personality disorder (therapeutic community: Henderson)
GARA1989	Retrospective data collection (therapeutic communities)
GERAGHTY2003	Retrospective analysis of ethnicity data, no efficacy outcomes (therapeutic communities)
GREGORY2008	Participants were alcohol dependent which is outside the guideline scope (psychodynamic psychotherapy vs TAU)
HUBAND2007	Not 100% BPD (mixed PD population) (problem-solving vs waitlist)
ISOHANNI1990	Not relevant (therapeutic communities)
ISOHANNI1990A	focus is not on post-discharge outcomes (therapeutic communities)
ISOHANNI1992	focus is not on post-discharge outcomes (therapeutic communities)
JEFFREY1985	not a primary research study (therapeutic communities)
JOYCE2007	Not 100% BPD population; data for BPD subgroup requested from authors but not obtained (CBT vs IPT)
KOSTER1988	Dutch study (therapeutic communities)
LYNCH2007	Not 100% BPD
MIZEN1984	description only (therapeutic communities)
RATHUS2002	(DBT vs TAU) Non RCT
SPRINGER1996	29.5% BPD (total N = 44) (short-term cognitive-behavioural group therapy vs control discussion group)
WEERTMAN2007	Not BPD

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Appendix 16: Characteristics Table for The Clinical Question: Pharmacological treatments

Comparisons Included in this Clinical Question

Amitriptyline vs Haloperidol vs Placebo
SOLOFF1989

Aripiprazole vs Placebo
NICKEL2006

Carbamazepine vs Placebo
DE LA FUENTE1994

Divalproex vs Placebo
FRANKENBURG2002
HOLLANDER2001
HOLLANDER2003

E-EPA (Omega 3) vs Placebo
HALLAHAN2007
ZANARINI2003

Fluoxetine plus DBT vs Placebo plus DBT
SIMPSON2004

Fluoxetine plus IPT vs Fluoxetine plus CT
BELLINO2007

Fluoxetine vs Fluoxetine plus IPT
BELLINO2006B

Fluoxetine vs Olanzapine vs Combined Fluoxetine plus Olanzapine
ZANARINI2004

Fluvoxamine vs Placebo
RINNE2002

Haloperidol vs Phenelzine vs Placebo
SOLOFF1993

Lamotrigine vs Placebo
TRITT2003

Loxapine vs Chlorpromazine
LEONE1982

Olanzapine + DBT vs Placebo + DBT
SOLER2005

Olanzapine vs Placebo
BOGENSCHUTZ2004
ELILILLY#6253
SCHULTZ2008
ZANARINI2001

Topiramate vs Placebo
LOEW2006
NICKEL2004
NICKEL2005

Ziprasidone vs Placebo
PASCUAL2008

Characteristics of Included Studies

Methods	Participants	Outcomes	Interventions	Notes
BELLINO2006B Study Type: RCT Type of Analysis: Completers Blindness: Single blind Duration (days): Mean 168 Setting: COUNTRY: Italy Outpatients Notes: RANDOMISATION: procedure not described. Investigator blinded to treatment allocation. Info on Screening Process: Ppts selected from those attending an outpatient service at University of Turin for personality disorder. No info given on numbers screened. 39 ppts enrolled none excluded	n= 39 Age: Mean 26 Sex: 12 males 20 females Diagnosis: 100% BPD by DSM-IV-TR 100% Major depressive episode by DSM-IV Exclusions: - life time diagnosis of delirium, dementia, amnestic or other cognitive disorder - schizophrenia or other psychotic disorder - those whose major depressive episode was an expression of bipolar disorder - current substance abuse disorder - those treated with psychotropic drugs or psychotherapy during 2 months prior to study - inadequate use of birth control by women of child bearing age Notes: Number of males and females reflects those who completed the study (N = 32, 12 Male, 20 female). ETHNICITY: no data Baseline:	**Data Used** SAT-P Mean IIP-64 HARS HRSD-24 (Hamilton 1959) **Data Not Used** CGI - Not extracting this Notes: OUTCOMES: Taken at baseline, week 12 & week 24 Remission defined by decreased HRSD score (more than or equal to 40%), with final score of less than or equal to 8, and a score of 1 or 2 on the improvement item of the CGI	**Group 1 N= 19** Fluoxetine. Mean dose 20mg - DOSE: Initial dose 20mg daily, at beginning wk 2 opportunity to increase dose to 40mg daily if needed.Ppts each had 4 appointments, first 2 fortnightly & last 4 mnthly Psychiatrist provided pharmacotherapy & clinical management (not described) **Group 2 N= 20** Fluoxetine. Mean dose 20mg - DOSE: Initial dose 20mg daily. Max dose 40mg. IPT. Mean dose 1hr/weekly - IPT consisted weekly sessions lasting 1 hour and followed Klerman et al (1989) manual. Psychotherapist with min 5yrs experience delivered sessions of IPT.	Study Quality 1+ Article reports that this study received no funding and no support

	Fluoxetine Fluoxetine + IPT CGI Severity 4.1 (0.8) 4.6 (0.5) HRSD 19.6 (4.6) 18.6 (1.8) HARS 17.7 (4.1) 16.0 (3.1)			

Results from this paper:

Leaving study early for any reason: N = 7

Internal validity:

1.1 Well covered
1.2 Not addressed
1.3 Not reported
1.4 Poorly addressed
1.5 Well covered
1.6 Well covered
1.7 Adequately addressed
1.8 Fluoxetine 10%; Combined treatment 8%
1.9 Not reported
1.10 Not applicable

Unpublished data: Correction - The number of drop-outs in the two treatment groups was exchanged, due to a printing mistake. We had 3 drop-outs in the group that received fluoxetine and 4 drop-outs in the group that received combined therapy.

BELLINO2007 Study Type: RCT Study Description: Participants were treated with fluoxetine for 24wks and were also given 1hr/wk of either IPT or CT. Type of Analysis: completers Blindness: Single blind Duration (days): Mean 168 Setting: COUNTRY: Italy; Outpatients Notes: RANDOMISATION: used Research Randomizer v3.0 program Info on Screening Process: No people screened not reported, exclusions inc cognitive disorders, psychotic disorders, substance abuse, treatment with psychotropic drugs or psychotherapy during 2 months prior to study. Females not using contraceptive.	n= 32 Age: Mean 31 Sex: 7 males 19 females Diagnosis: 100% BPD by DSM-IV-TR 100% Major depressive episode by DSM-IV-TR Exclusions: 6 participants discontinued during 1st 3 wks due to noncompliance. Notes: ETHNICITY: Not reported. Age and Sex data is only reported for completers. Baseline: Fluox & IPT Fluox & CT GSI 3.5 (0.5) 3.3 (0.5) HDRS 19.7 (3.4) 19.7 (3.4) HARS 18.1 (0.8) 18.0 (1.1) BDI-II 22.0 (2.6) 21.0 (0.9) SOFTAS 51.7 (5.9) 54.0 (7.1) SAT-P & IIP-64 subscales also reported	**Data Used** IIP-64 SAT-P Mean Social & Occupational Functioning Assessment Scale BDI HARS HADS depression scale CGI	**Group 1 N= 14** Fluoxetine. Mean dose 32.86mg/day - 20mg/day for 1st 2 wks, then dose could be increased to up to 40mg/day. IPT - 1hr/week conducted referring to IPT of depression manual by psychotherapist with at least 5 years experience of IPT. **Group 2 N= 12** Cognitive therapy - 1hr/week conducted referring to CT of depression manual by psychotherapist with at least 5 years experience of CT. Fluoxetine. Mean dose 30.00mg/day - 20mg/day for 1st 2 wks, then dose could be increased to up to 40mg/day.	
BOGENSCHUTZ2004 Study Type: RCT Study Description: Type of analysis: last observation carried forward but only for those with 2 post-baseline assessments with 2 weeks of treatment Type of Analysis: Last observation carried forward Blindness: Double blind Duration (days): Mean 84 Setting: COUNTRY: New Mexico Outpatients (community and outpatient clinics) Notes: RANDOMISATION: assignment in equal numbers. No description of blinding and no other info given. Info on Screening Process: Pts recruited from	n= 40 Age: Mean 33 Range 18-54 Sex: 15 males 25 females Diagnosis: 100% BPD by SCID-II Exclusions: - Schizophrenia - schizoaffective disorder - bipolar affective disorder - current major depressive disorder - psychotic disorder due to substance or a general medical condition - substance dependence that's not in full or partial remission - active suicidal thoughts - current suicidal intent or definite plans - pregnancy	**Data Used** Weight Change - data not extracted yet **Data Not Used** ASI - data not extractable SCL-90 - data not extractable AIA-Q - data not extractable HARS - data not extractable HRSD-24 (Hamilton 1960) - data not extractable OAS-M - data not extractable CGI-BPD - Scale not validated	**Group 1 N= 16** Olanzapine. Mean dose 6.9mg - DOSE: Initial dose 2.5mg/day, increased by 2.5 to 5mg increments/week upto 10mg/day. After 8 wk therapy additional dose increase if necessary by 2.5-5mg increments/wk to max dose of 20mg/day. If side effects present reduce dose by 2.5-5mg/week. **Group 2 N= 19** Placebo. Mean dose 10.2mg - DOSE: Ppts receive pseudo dose of 10.2mg	Study Quality 1+ Study supported by grant from Eli Lilly & Co, Indianapolis

community and outpatient clinics at a university psychiatric hospital No info on numbers screened 40 ppts with BPD enrolled and randomised to either treatment group.	- neurological impairment Notes: Informed consent obtained. Patients had to be free of of mood stabilisers, antipsychotics, benzos,& antidepressants for 2 wks prior to treatment. ETHNICITY: 57.5% White, 25% Hispanic, 7.5% Asian/Pacific Islander, 4% unknown Baseline: None reported	Notes: OUTCOMES TAKEN: Prior to initiation of treatment with Olanzapine (0 weeks) and after 2,4,8 and 12 weeks of treatment with study medication		

Results from this paper:

Leaving treatment early due to adverse events: Olanzepine N = 2, Placebo N= 0
Leaving treatment early due to any other reason: Olanzepine N = 8, Placebo N = 7

Olanzapine (patients left study early due to these side effects) None left placebo group due to side effects
Side effects: Weight gain N = 2 (10%)
Sedation N = 2 (10%)

Internal validity:

1.1 Well covered 1.6 Well covered
1.2 Not reported 1.7 Adequately addressed
1.3 Not addressed 1.8 Olanzapine = 50% Placebo = 35%
1.4 Not reported 1.9 Not addressed
1.5 Well covered 1.10 Not applicable

Unpublished data: endpoint means and SD for global CGI, AIAQ, SCL-90 scores, plus a copy of the CGI-BPD scale.

DE LA FUENTE1994				
Study Type: RCT Type of Analysis: Not reported Blindness: Double blind Duration (days): Mean 31 Setting: COUNTRY: Belgium Inpatient Notes: RANDOMISATION: Ppts randomised to either group. No other info given. Both ppts and investigator kept blind to treatment allocation Info on Screening Process: No info on numbers screened. Ppts recruited from inpatient setting. 20 inpatients fullfilling DSM-IIIR criteria for BPD and with score of at least 7 on DIB included in study. No patients excluded.	n= 20 Age: Mean 32 Range 22-45 Sex: 6 males 14 females Diagnosis: 100% BPD by DSM-IIIR Exclusions: - Abnormal standard physical or neurological examinations - Irregular biological blood tests - Positive history of epilepsy - inability to stop alcohol or psychoactive drugs - Suspected poor treatment compliance - DSM-IIIR Major depression - DSM-IIIR Axis I disturbances - Antecedents of encephalitis or cranial trauma Notes: DESCRIPTION:Psychtropic drug washout period 10 days prior treatment for all ppts. 32 days of active CBZ treatment. ETHNICITY: no data Baseline: CBZ PLACEBO HRSD 28.00 (10.92) 30.70 (4.11) GAS 57.50 (13.52) 49.90 (12.24 BPRS 47.87 (11.18) 53.90 (8.22) SCL-90 117.42 (101.64) 141.66 (44.70)	**Data Used** BPRS GAS SCL-90 Depression SCL-90 Hostility HRSD-24 (no reference) **Data Not Used** Acting Out scale - Made up scale for study SCL-90 Other scales Notes: OUTCOMES TAKEN AT: Baseline, day 8 day 32	**Group 1 N= 10** Carbamazepine (CBZ). Mean dose 6.44ug-7.07ug - DOSE:single dose at 10pm each day. Plasma levels of CBZ and 10,11 epoxycarbamazepine determined on days 8,16, and 32 Atheoretical psychotherapy - Atheoretical psychotherapy provided by same clinician on all occassions (not described in further detail). **Group 2 N= 10** Placebo - DOSE: Placebo administered in single dose at 10pm each day. Atheoretical psychotherapy - Atheoretical psychotherapy provided by same clinician on all occassions (not described in further detail).	Study Quality 1+ Funding unclear

Results from this paper:

Leaving treatment early due to adverse events: two patients receiving CBZ due to increasing intensity of acting out e.g. wrist cutting and razor blade swallowing.
No placebo patients dropped out.

Internal validity:

1.1 Well covered 1.6 Well covered

1.2 Not reported 1.7 Adequately reported
1.3 Not addressed 1.8 CBZ = 20% Placebo = 0%
1.4 Well covered 1.9 Not addressed
1.5 Well covered 1.10 Not applicable

ELILILLY#6253

Study Type: RCT

Study Description: Study has both 12 week double blind period followed by 12 week open label phase. Only double blind phase reported here.

Type of Analysis: LOCF

Blindness: Double blind

Duration (days): Mean 84

Setting: Multicenter trial conducted in 9 countries

Info on Screening Process: 635 ppts screened, 174 failed screening procedure, 451 randomised to double blind phase.

n= 451

Age: Mean 33 Range 18-65

Sex: 119 males 332 females

Diagnosis:
100% BPD by DSM-IV-TR

Exclusions: - schizophrenia
- schizoaffective disorder
- schizophreniform disorder
- bipolar I or II disorder
- delusional disorder
- previous 3 month diagnosis of MDD
- substance dependence
- current diagnosis of PTSD
- panic disorder
- OCD
- Comorbid cluster A Axis II personality disorder (paranoid, schizotypal or schizoid)
- actively suicidal

Notes: ETHNICITY: Caucasian 65.4%, African descent 7.1%, East/SE Asian 1.6%, Western Asian 0.2%, Hispanic 24.6%, other origin 1.1%

Baseline:

	Olz 2.5mg	Olz 5-10mg	Placebo
ZAN-BPD (5.04)	17.01 (5.02)	17.42 (4.51)	17.07
OAS-M Aggression (77.69)	52.97 (79.16)	36.34 (52.66)	44.26
OAS-M Irritability (2.01)	5.66 (1.87)	5.59 (1.65)	5.46
OAS-M Suicidality (1.04)	0.66 (0.89)	0.68 (1.04)	0.58
Sheehan total (7.12)	18.57 (6.75)	18.42 (6.96)	18.09
GSI (0.70)	1.65 (0.76)	1.62 (0.68)	1.53
MADRS total (4.80)	11.71 (4.83)	11.98 (4.73)	11.52
GAF current functioning (9.65)	55.05 (9.37)	55.72 (8.85)	55.41
GAF Highes functioning (10.60)	60.04 (10.75)	61.45 (9.73)	59.71

Data Used
Weight Change
GSI
OAS-M (agression)
OAS-M (suicidality)
OAS-M irritability
Sheehan disability Scale Total
ZAN-BPD

Group 1 N= 150
Olanzapine. Mean dose 2.5mg - Participants received 2.5mg of olanzapine daily as oral capsules

Group 2 N= 148
Olanzapine. Mean dose 5-10mg - Participants in the moderate dose group received 5-10mg of olanzapine daily as oral capsules

Group 3 N= 153
Placebo - Placebo capsules given orally, once a day.

Results from this paper:
Internal validity:

1.1 Well covered 1.6 Adequately addressed
1.2 Not reported 1.7 Well covered
1.3 Not addressed 1.8 Olanzapine 2.5mg = 30.4%, Olanzapine 5-10mg 35.8%, Placebo = 38.6%
1.4 Not reported 1.9 Not reported
1.5 Well covered 1.10 Adequately addressed

FRANKENBURG2002

Study Type: RCT

Type of Analysis: Last observation carried forward

n= 30

Age: Mean 27 Range 18-40

Sex: all females

Data Used
SCL-90 Depression
MOAS

Group 1 N= 20
Divalproex Sodium. Mean dose 850mg/day - DOSE: Two 250mg

Study quality 1+
Study supported by grant from Abbott Laboratories, Chicago

Blindness: Double blind

Duration (days): Mean 168

Setting: COUNTRY: US
Outpatient - symptomatic volunteers

Notes: RANDOMISATION: Ppts randomly allocated to treatment grp. No other info given.

Info on Screening Process: Women aged between 18-40 recruited via media advertisement.
No details given on numbers screened before randomisation.

Diagnosis:
100% BPD by DIB-DSM-IV

100% Bipolar II disorder by DSM-IV

Exclusions: - Major depressive episode or hypomanic episodre
- Current or lifetime schizophrenia
- Current schizoaffective disorder
- Current psychotic disorder
- Current bipolar I disorder
- Acutely suicidal
- Not Divalproex naïve

Notes: No other psychotropic medication permitted during study.12 hr trough levels done at wk 1,1 mnth then every 2 mnths. Investigator met with ppts for 20-30mins & adjusted dose accordingly. ETHNICITY: White 67% African American 13% Hispanic 13%, Other 7%

Baseline:

	Divalproex	Placebo
SCL-90 sensitivity	2.3 (0.7)	2.6 (0.8)
SCL-90 anger	2.3 (0.9)	2.2 (0.9)
SCL-90 depression	2.4 (0.6)	3.0 (0.9)
MOAS Total	5.6 (3.8)	5.1 (3.4)

Weight Change

SCL-90 Hostility

Data Not Used

SF-36 Health Survey - Extractable but need to decided if useable

SCL-90 Other scales

Notes: OUTCOMES:ppts seen weekly for 1st month and then monthly.

tablets/day.

Group 2 N= 10

Placebo. Mean dose 2.6 tablets - DOSE: ppts received 2 tablets containing 250mg of inert substance (placebo).

Results from this paper:

Leaving treatment early due to any reason Divalproex (N= 12) Placebo (N= 3)
Leaving treatment early due to side effects Divalproex (N = 1) Placebo (N =3)

Adverse Events: 2 ppts receiving placebo developed a major depressive episode

Internal validity:

1.1 Well covered	1.6 Well covered
1.2 Not reported	1.7 Adequately addressed
1.3 Well covered	1.8 Divalproex= 65% Placebo = 60%
1.4 Well covered	1.9 Well covered
1.5 Well covered	1.10 Not applicable

HALLAHAN2007

Study Type: RCT

Type of Analysis: Completers (LOCF)

Blindness: Double blind

Duration (days): Mean 84

Setting: COUNTRY: Ireland
Outpatients

Info on Screening Process: 392 ppts assessed for eligibility, 343 excluded (325 did not meet inclusion criteria & 18 refused to participate), 49 randomised

n= 49

Age: Mean 30 Range 16-64

Sex: 17 males 32 females

Diagnosis:
71% BPD by DSM-IIIR

29% Paranoid PD by DSM-IIIR

Exclusions: - current history of addiction
- substance misuse
- psychosis
- eating disorder
- currently receiving psychotherapy
- history of dyslipidaemia
- any treatment, diet or illness known to interfer with omega-3
- more than 10% weight loss over previous 3 months
- taking supplements containing omega-3
- eating fish more than once per week
- changes to/intro of psychotropic medication during previous 3 weeks
- unwillingness to participate in study
- living outside the greater Dublin area

Data Used

OAS-M covaried mean

HRSD covaried mean

BDI covaried mean

Self-harm

Suicide Ideation

Data Not Used

Delayed Memory Task covaried mean - Available but not extracted yet

Immediate Memory Task covaried mean - Available but not extracted yet

Daily Hassles & Uplifts Scale covaried mean - Available but not extracted yet

Perceived Stress Scale covaried mean - Available but not extracted yet

Group 1 N= 22

E-EPA (omega 3). Mean dose 2128mg/day - Ppts prescribed 4 capsules of active agent, each pill containing 305 mg EPA and 227mg DHA. Pills to be taken in the morning.

Group 2 N= 27

Placebo. Mean dose 2128mg/day - Ppts in placebo group provided with 4 identical capsules as active treatment group to be taken in the morning. Placebo pills contained 99% corn oil and 1% EPA/DHA mixture.

Study Quality 1+
Funding: Salary support provided by Department of Psychiatry USA.
Pronova (now Epax) AS, Norway, provided the active preparation & placebo but authors state they were not otherwise involved in the study.

	Notes: ETHNICITY: no data 53% of sample were taking psychotropic medication at baseline Baseline: Omega-3 Placebo BDI 38.41 32.22			

Results from this paper:

Internal validity:

1.1 Well covered 1.6 Well covered
1.2 Well covered 1.7 Poorly addressed
1.3 Well covered 1.8 Omega-3= 14% Placebo = 26%
1.4 Well covered 1.9 Not reported
1.5 Adequately addressed 1.10 Not applicable

HOLLANDER2001				
Study Type: RCT Type of Analysis: Last observation carried forward Blindness: Double blind Duration (days): Mean 70 Setting: COUNTRY: US Mixed sample: outpatients community Notes: RANDOMISATION: ppts randomised in 3:1 ratio (Divalproex: placebo). Both ppts and investigators blinded to treatment allocation. No other info given. Info on Screening Process: No details on number screened 21 ppts provided consent to participate. Only 16 were randomly assigned. Ppts recruited by referral from private psychiatrists, mental health professionals in the community, self-help groups, outpatient clinics & media ads.	n= 16 Age: Mean 39 Range 18-62 Sex: 10 males 11 females Diagnosis: 100% BPD by SCID-I and II (DSM-IV) Exclusions: - Medical or neurological disease - Psychotic disorders - Current substance abuse - Type I or II Bipolar disorder - Current major depression - Current suicidal ideation - Pregnant Notes: Number of male and female ppts reflects those who gave consent to study not those randomised ETHNICITY: 67% White, 14% Black, 19% Hispanic Baseline: Divalproex Sodium Placebo AQ 80.7 (15.7) 79.8 (15.1) BDI 18.1 (12.2) 19.7 (8.5)	**Data Used** GAS AQ BDI Mean **Data Not Used** CGI - Dichotomous measure Notes: ASSESSMENT: Baseline, weekly for the next four weeks, and every 2 weeks thereafter	**Group 1 N= 12** Divalproex Sodium. Mean dose 250mg - DOSE: Initial dose 250mg at bedtime. This increased gradually to a dose sufficient to maintain blood valporate level at 80ug/mL or the highest tolerated dose. **Group 2 N= 4** Placebo - DOSE: placebo dose of 250mg equivalent to Divalproex administered daily at bedtime. No other details given	Study Quality 1+ Study supported by grants from NIMH, Abbott Laboratories, National Centre for Research Resources, National Institutes of Health, Rockville, Seaver Foundation and PBO Foundation

Results from this paper:

Leaving treatment early for any reason: 6 patients in Divalproex group (50%) and 4 patients in placebo group (100%)
No patient dropped out owing to side effects; all dropped out owing to lack of efficacy or impulsive decisions.

Internal validity:

1.1 Well covered 1.6 Well covered
1.2 Well covered 1.7 Well covered
1.3 Not addressed 1.8 Divaloproex = 50%; Placebo = 100%
1.4 Well covered 1.9 Well covered
1.5 Adequately addressed 1.10 Not applicable

HOLLANDER2003				
Study Type: RCT Study Description: This paper consists of 3 different samples, we only focus on Cluster B and Intermittent Explosive Disorder ppts here Type of Analysis: ITT Blindness: Double blind Duration (days): Mean 91 Setting: COUNTRY:US	n= 200 Age: Mean 37 Sex: 57 males 34 females Diagnosis: 39% Cluster B by DSM-IV 14% Post traumatic stress disorder by DSM-IV	**Data Used** OAS-M **Data Not Used** CGI - mean available	**Group 1 N= 43** Divalproex Sodium. Mean dose 1567mg/64.2ug/ml - DOSE: Initiated at 500mg/twice daily increased by 250mg every 3-7 days during 1st 3 wks of treatment. Dose adjusted according to clinical response and tolerance. Max dose 30mg/kg/day Mean valproate serum level 64.2ug/ml (range 0.0 -147ug/ml)	Study quality 1+ Study supported by grant from Abbott Laboratories

Outpatient Notes: RANDOMISATION: Ppts randomised in equal numbers. Both ppts and investigator blinded to treatment. No other info given Info on Screening Process: No details of screening process given	47% Intermittent explosive disorder by DSM-IV Exclusions: - lifetime Bipolar I or II disorder with hypomania in past year - major depressive disorder - history of schizophrenia or other psychotic disorder - symptoms of dementia - current serious homicidal or suicidal ideation - impulsive aggression - pregnant or lactating females - clinically significant abnormal laboratory data - unstable medical conditions - less than 2 episodes of physical or verbal aggressive outbreaks per/wk for at least one month prior to screening. Notes: Ppts allowed to continue SSRIs, tricyclic antidepressants & stimulants if taken for 2 months at a stable dose prior to study entry. Dose must remain constant throughout study. Dose reduced over 7 days after completion of 12wk treatment. Baseline: Divalproex Placebo OAS-M agression 54.9 (48.8) 54.8 (56.3)	Notes: OUTCOMES: taken at baseline,weekly thereafter with telephone visits at weeks 5 & 7. CGI taken at baseline, once a week excluding weeks 5 and 7. OAS-M outcome measure is an average score over past 4 weeks of treatment	**Group 2 N= 48** Placebo - DOSE: ppts received matched dose to the Divalproex group of inert placebo.	
Results from this paper: Internal validity: 1.1 Well covered 1.6 Adequately addressed 1.2 Adequately addressed 1.7 Adequately addressed 1.3 Not addressed 1.8 Divalproex = 47% Placebo = 45% 1.4 Adequately addressed 1.9 Adequately addressed 1.5 Adequately addressed 1.10 Adequately addressed				
LEONE1982 Study Type: RCT Type of Analysis: Completers Blindness: Double blind Duration (days): Mean 42 Setting: COUNTRY: US Outpatient Notes: RANDOMISATION: process not described. No details regarding blinding procedure. Info on Screening Process: Ppts were current BPD patients, no other info given. 80 patients screened, none excluded at screening.	n= 80 Age: Mean 31 Range 16-59 Sex: 32 males 48 females Diagnosis: 100% BPD by DIB Exclusions: - Known allergy/hypersensitivity to either loxapine or chloropromazine - moderate to severe brain syndrome or mental retardation - severe medical disease - use of sedatives or tranquilizers - treatment with use of psychotropic drugs within 48 hours of commencing trial Notes: Patients had to exhibit four + diagnostic criteria (low achievment, impulsivity, manipulative suicide, heightened affectivity, mild psychotic experiences, high socialization, disturbed close r'ships) 2 had to be rated as severe and 2 at least moderate. Baseline: None-reported	**Data Not Used** SNOOP - data not extractable CGI - data not extractable BPRS - data not extractable Notes: OUTCOMES TAKEN AT: day 2, weeks 1, 2, 4, 6 Night-time sedatives: fluorazepam and chloral hydrate if needed	**Group 1 N= 34** Loxapine. Mean dose 14.5mg - DOSE:Initial dose 5mg one/two capsules daily increase based on symptom severity& drug tolerance. Dose reduced after desired symptom control achieved. Max dose =12 capsules **Group 2 N= 35** Chlorpromazine. Mean dose 110mg - DOSE: Starting at 50mg one or two capsules daily, max dose = 12 capsules	Study Quality 1+ Study supported by grant from Lederle Laboratories
Results from this paper: Eleven patients not included in study, 8 (loxapine group N = 4; chlorpromzine, N= 4) did not follow study procedures Leaving treatment due to adverse events: 3 patients admitted to hospital within first 3 study days (loxapine, N = 2; chlorapromazine, N = 1). Internal validity: 1.1 Well covered 1.6 Well covered 1.2 Not reported 1.7 Well covered				

1.3 Well covered 1.8 Loxapin = 5%; Placebo = 2.5%
1.4 Not addressed 1.9 Not addressed
1.5 Well covered 1.10 Not applicable

LOEW2006

Study Type: RCT

Type of Analysis: ITT

Blindness: Double blind

Duration (days): Mean 70

Setting: COUNTRY: Germany
Outpatient - symptomatic volunteers

Notes: RANDOMISATION: carried out confidentially by clinic administration with a 1:1 assignement ratio.Both ppts and investigators blinded.

Info on Screening Process: Women aged between 18-35 recruited through media advertisements.
81 female ppts screened, 59 ppts eligible to participate, power calculations required 56 ppts who were then randomised to either treatment or placebo group.

n= 56

Age: Mean 25

Sex: all females

Diagnosis:
100% BPD by SCID-I and II (DSM-IV)

73% Depressive disorder

52% Anxiety disorder

13% Obsessive compulsive disorder

63% Somatoform disorder

Exclusions: - schizophrenia
- current use of topirmate/other psychotropic medication
- current psychotherapy
- pregnant
- not using adequate contraception
- planning to become pregnant
- currently suicidal
- currently absuing alcohol or drugs
- experiencing severe somatic illness

Notes: ETHNICITY: no data

Baseline:

	Topirimate	Placebo
GSI	71.6 (4.6)	72.9 (5.4)

Data Used
Weight Change
IIP-D
SCL-90-R
GSI

Data Not Used
SF-36 Health Survey - data not extracted

Notes: OUTCOMES: taken weekly for 10 weeks
SCL-90 -R transformed scores used in analysis

Group 1 N= 28

Topiramate. Mean dose 200mg - DOSE: Initial dose in first week 25mg daily, titrated to 200mg daily by 6th wk and remained constant thereon.
Non-structured questionnaire administered weekly to monitor side effects of Topiramate

Group 2 N= 28

Placebo - DOSE: ppts received doses of inert placebo identical to Topiramate. No other info given

Study quality 1++
Article reports no funding provided for study.

Results from this paper:

Leaving treatment early due to any reason: Topiramate N= 1 Placebo N=3. No serious side effects observed or psychotic symptoms

Internal validity:

1.1 Well covered 1.6 Well covered
1.2 Well covered 1.7 Well covered
1.3 Well covered 1.8 Topiramte 2.8% Placebo = 10.7%
1.4 Well covered 1.9 Well covered
1.5 Well covered 1.10 Not applicable

NICKEL2004

Study Type: RCT

Type of Analysis: Completers

Blindness: Double blind

Duration (days): Mean 56

Setting: COUNTRY: Finland
Outpatient - symptomatic volunteers

Notes: RANDOMISATION: conducted confidentially by clinic administration. 2:1 ratio sequence adopted. Both ppts and investigators blinded. No other info

Info on Screening Process: Women aged between 20-35 years recruited via

n= 29

Age: Mean 26 Range 20-35

Sex: all females

Diagnosis:
100% BPD by SCID-I and II (DSM-IV)

Exclusions: - Schizophrenia
- major depression
- bipolar disorder
- current use of topiramate or other psychotropic medicine
- current psychotherapy treatment
- preganant
- somatically ill
-actively suicidal

Data Used
Weight Change
STAXI- Trait Anger

Data Not Used
STAXI Other scales

Notes: OUTCOMES: STAXI completed on weekly basis for 8 weeks.

Group 1 N= 19

Topiramate. Mean dose 250mg - DOSE: Initial dose 50mg daily then titrated to 250mg in 6th week and stayed constant thereafter.

Group 2 N= 10

Placebo. Mean dose 50mg - DOSE: Initial dose 50mg matched Topiramate

Study quality 1+
Article states no financial support given for study

advertisements by GPs. No info on number screened. 74 women agreed to take part. Telephone screening to check they met DSM-IV criteria and general history taken too. 31 eligible, 29 randomised	- abusing drugs or alcohol Notes: STAXI filled in weekly and side-effects monitored on non-structured questionnaire. Physical examination at both beginning and end of study ETHNICITY: no data Baseline: Topiramate / Placebo State Anger 31.4 (2.5) / 31.3 (2.2) Trait Anger 30.9 (2.4) / 29.0 (1.6) Anger In 23.7 (1.3) / 24.3 (1.6) Anger Out 24.2 (1.5) / 23.8 (1.8) Anger Control 19.1 (1.4) / 18.7 (0.9)			
Results from this paper: Leaving treatment early for any reason: N = 2 (Topiramate) No serious side effects or psychotic symptoms observed. Internal validity: 1.1 Well covered 1.6 Adequately Addressed 1.2 Adequately Addressed 1.7 Adequately Addressed 1.3 Adequately Addressed 1.8 Topiramate N=2 (6%) Placebo = 0 1.4 Well covered 1.9 Not reported 1.5 Well covered 1.10 Not applicable				
NICKEL2005 Study Type: RCT Type of Analysis: completers Blindness: Double blind Duration (days): Mean 56 Followup: 18 months Setting: COUNTRY: Finland Outpatient - symptomatic volunteers Notes: RANDOMISATION: Conducted confidentially by clinic administration. 1:1 ratio chosen. Both ppts and investigators blinded. No other info Info on Screening Process: Men recruited through outpatient clinic staff & through advertisements in local & regional press. 59 men agreed to take part in study, 48 were eligible to take part. Power calculations meant 44 required for trial. No further details on selection of 44.	n= 44 Age: Mean 29 Sex: all males Diagnosis: 69% Mood disorder by DSM-IV 14% Somatoform disorder by DSM-IV 45% Anxiety disorder by DSM-IV 12% Eating disorder by DSM-IV 71% Alcohol misuse by DSM-IV 12% Amphetamine misuse by DSM-IV 19% Cannabis misuse by DSM-IV 100% BPD by SCID-I and II (DSM-IV) Exclusions: - acute psychosis - severe major depression - bipolar disorder - current use of Topiramate - use of psychotropic medication - participation in psychotherapy - somatically ill - actively suicidal - met criteria for an addictive illness Notes: ETHNICITY: no data Baseline: SA / TA / AI / AO / AC Topiramate 32(3.60) / 31.3(2.7) / 24.7(0.7) / 25.5(2.0) / 17.8(1.3) Placebo 33.6(3.4) / 30.7(2.5) / 25.6(0.5) / 25.5(2.0) / 17.9(1.9)	**Data Used** Weight Change STAXI- Trait Anger **Data Not Used** STAXI Other scales Notes: OUTCOMES: taken weekly	**Group 1 N= 22** Topiramate. Mean dose 250mg - DOSE: initial dose 50mg/daily titrated to 250mg/daily in 6th week and then remained constant. Side effects of Topiramate monitored weekly using non-structured questionnaires. **Group 2 N= 22** Placebo - DOSE: ppts received matched dose of Topiramate	Study quality 1+ Article reports that no funding provided for study

Results from this paper:
No serious side effects or psychotic symptoms observed

Internal validity:

1.1 Well covered
1.2 Not reported
1.3 Adequately addressed
1.4 Well covered
1.5 Adequately addressed
1.6 Adequately addressed
1.7 Adequately addressed
1.8 Topiramate = 0% Placebo = 4.5%
1.9 Not addressed
1.10 Not applicable

NICKEL2006

Study Type: RCT

Type of Analysis: ITT

Blindness: Double blind

Duration (days): Mean 56

Followup: 18 month

Setting: COUNTRY: Finland
Outpatient - symptomatic volunteers

Notes: RANDOMISATION: Conducted confidentially by clinic administration. 1:1 ratio chosen. Both ppts and investigators blinded. No other info.

Info on Screening Process: Ppts recruited via media advertisements. 57 ppts aged 16 and over telephoned screened to determine if they met DSM-IV criteria for BPD. 5 ppts excluded. No futher info on numbers screened

n= 52

Age: Mean 22

Sex: 9 males 43 females

Diagnosis:
83% Depressive disorder

58% Anxiety disorder

12% Obsessive compulsive disorder

71% Somatoform disorder

100% BPD by SCID-I and II (DSM-IV)

Exclusions: - Schizophrenia
- current use of psychotropic medication incl aripiprazole
- current psychotherapy
- pregnancy (incl planned pregnancy or sexual activity without contraception
- current suicidal ideation
- current severe somatic illness

Notes: ETHNICITY: no data

Baseline:

	Aripiprazole	Placebo
HRDS	20.3 (4.4)	20.9 (3.9)
HARS	23.3 (4.1)	22.8 (5.3)
State Anger	32.1 (5.3)	31.9 (5.9)

Data Used
SCL-90 Hostility
STAXI- Trait Anger
HARS
HRSD-24 (Hamilton 1976)
SCL-90 Depression

Data Not Used
SCL-90 Other scales
STAXI Other scales

Notes: OUTCOMES: taken weekly

Group 1 N= 26

Aripiprazole. Mean dose 15mg - DOSE: 15mg daily this remained constant throughout trial. During follow-up period ppts continued to receive 15mg/daily.

Group 2 N= 26

Placebo. Mean dose 15mg - DOSE: participants received one matching tablet containing 15mg inert placebo. During follow up period blind was broken and placebo ppts then received Aripiprozole or another psychopharmica.

Study quality 1+
Article reports this study was not funded

Results from this paper:
Leaving treatment early due to any reason: N = 5

Internal validity:

1.1 Well covered
1.2 Adequately addressed
1.3 Well covered
1.4 Adequately addressed
1.5 Adequately addressed
1.6 Well covered
1.7 Adequately addressed
1.8 Total 9% (N=5)
1.9 Well covered
1.10 Not applicable

PASCUAL2008

Study Type: RCT

Study Description: 2 phases: Selection phase 2wk baseline period - 2 evaluation visits to determine baseline. Experimental phase 12wks of drug/placebo.

Type of Analysis: 'ITT'

n= 60

Age: Mean 29 Range 18-45

Sex: 49 males 11 females

Diagnosis:
100% BPD by DSM-IV

Data Used
GSI
HARS
Leaving treatment early for any reason
SCL-90-R
BDI

Group 1 N= 30

Ziprasidone. Mean dose 84.1mg/day - 40mg/day for 1st 2 wks, then flexible dosage, 40-200mg/day.

Study quality 1++
Funding: Ministry of Health, Spain; REM-TAP Network; Pfizer

Blindness: Double blind Duration (days): Mean 98 Setting: COUNTRY: Spain. Outpatients Notes: 'ITT' participants data included only if there was a baseline measure and at least 1 post baseline measure. Info on Screening Process: 127; inclu criteria: DSMIV BPD diagnosis; 18-45; CGI severity of illness score <=4; no comorb with schizoph, drug-induced psychosis, organic brain syndrome, alcohol/subs depend, bipolar, mental retardation, depressive episode; current contraceptive use.	Exclusions: 17/30 dropped out of ziprasidone group and 14/30 dropped out of placebo group. Reasons inc hospitalisation, adverse effects/patient decision, clinician decision/insufficient treatment effect Notes: ETHNICITY: no info Patients were allowed to continue treatment with benzodiazapines, antidepressants & mood stabililzers if they had been initiated prior to inclusion. Baseline: Ziprasidone Placebo GCI-BPD 4.78 (0.6) 4.90 (0.8) HAM-D-17 17.14 (4.5) 19.9 (4.2) HAM-A 19.04 (5.0) 20.33 (4.9) BPRS 13.76 (5.1) 15.43 (6.1) BIS 71.47 (18.9) 77.18 (10.7) BDI 46.0 (12.9) 49.0 (10.46) SCL-90-R 2.2 (0.8) 2.71 (0.5)	BIS BPRS HAM-A HAM-D-17 **Data Not Used** Leaving treatment early due to side-effects - Pbo group data not reported CGI - Not being extracted	Group Psychotherapy - participated in weekly 2hr nonspecific group psychotherapy sessions **Group 2 N= 30** Placebo - 40mg/day for 1st 2 weeks, then flexible, 40-200mg/day. Group Psychotherapy - participated in weekly 2hr nonspecific group psychotherapy sessions **Group 3 N=**	
RINNE2002 Study Type: RCT with cross over follow-up Study Description: * with structured covariance matrix Type of Analysis: unbalanced repeated measure model * Blindness: Double blind Duration (days): Mean 42 Followup: 24 weeks Setting: COUNTRY: Netherlands Mixed sample (community and outpatients) Notes: RANDOMISATION: process not described. Info on Screening Process: Women aged between 18-50 recruited by psychiatric outpatient clinics, community mental health centres & internet/media ads.125 ppts returned screening instrument 78 ppts invited for further diagnostic interviews. Final study group comprised 38 ppts	n= 38 Age: Mean 29 Range 18-50 Sex: all females Diagnosis: 29% Depression by Composite International Diagnostic Interview (CIDI 21% Dysthymia by Composite International Diagnostic Interview (CIDI 8% General Anxiety Disorder by Composite International Diagnostic Interview (CIDI 32% Post traumatic stress disorder by Composite International Diagnostic Interview (CIDI 100% BPD by DSM-IV Exclusions: - score of less than 110 on assessment of DSM-IV PD. - meeting less than 5 of the criteria of SCID - score less than 20 on structured interview BPD Severity index - schizophrenia - bipolar disorder Notes: Dutch version of SCID used. Ppts had to stop taking all psychactive medications after signing informed consent form and all had to be medication free for atleast 2 wks before trial started ETHNICITY: no data Baseline: Fluvoxamine Placebo Rapid mood shifts 7.35 (1.62) 7.51 (1.82) Anger 3.45 (1.94) 4.09 (1.92) Impulsivity 1.39 (0.90) 1.15 (0.86)	**Data Used** BPD Severity Index impulsivity BPD Severity Index Anger Weight Change **Data Not Used** BPD Severity Index rapid mood shifts Notes: OUTCOMES: taken at baseline, week 6 Weeks 12 and 24 comprise results of half cross over trial. Adverse events recorded every 2 weeks.	**Group 1 N= 20** Fluvoxamine. Mean dose 150mg - DOSE: Initial dose of 150mg/day given for first 6 weeks **Group 2 N= 18** Placebo - No details given	Study quality 1+ Study supported by the De Geestgronden Institute of Mental Health, by the National Fund for Mental Health grant and by Solvay Pharma

Results from this paper:

Internal validity:

1.1 Well covered
1.2 Not reported
1.6 Adequately addressed
1.7 Well covered

1.3 Not addressed 1.8 Fluvoxamine 5% Placebo = 11%
1.4 Not reported 1.9 Adequately addressed
1.5 Well covered 1.10 Not applicable

SCHULTZ2008

Study Type: RCT

Study Description: multicentre 12wk trial comparing olanzapine with placebo.

Type of Analysis: 'ITT'

Blindness: Double blind

Duration (days): Mean 84

Setting: COUNTRY: 52 sites across Europe & US; Outpatients

Notes: RANDOMISATION: 1:1 ratio

Info on Screening Process: 385; excluded if met criteria for schizophrenia, schizoaffective, schizophreniform, bipolar, delusional disorders, MDD, panic disorder, OCD, sub dep, PTSD, actively suicidal, BMI <17, cluster A PD.

n= 314

Age: Mean 32

Sex: 91 males 223 females

Diagnosis:
100% BPD by DSM-IV-TR

Exclusions: - Schizophrenia
- Schizo-affective disorder
- Schizophreniform disorder
- Bipolar I & II
- Delusional disorder
- Current PTSD, panic disorder, OCD, comorbid Cluster A Axis II disorder
- Previous episode of MDD lasting 3 months
- Substance dependence
- Actively suicidal

Notes: Concomitant use of benzodiazepines/hypnotics allowed during study, episodic use of anticholinergics permitted to treat extrapyramidal symptoms, but not as prophylaxis. Patients permitted to enter study if they had been receiving psychotherapy for >3 m.

Baseline:

	Olanzapine	Placebo
ZAN BPD	17.0 (5.2)	17.7 (5.2)
SCL 90R	1.66 (0.8)	1.79 (0.7)
MADRS	12.5 (4.9)	13.2 (4.5)
GAF	54.0 (10.0)	53.5 (10.3)
OASM aggression	41.2 (57.1)	51.0 (100.8)
OASM irritability	5.6 (1.6)	5.6 (1.8)
OASM suicidality	1.1 (1.4)	1.2 (1.2)
Sheehan	19.0 (6.0)	20.0 (6.4)

Data Used
Self-harm
GSI
OAS-M (agression)
Leaving treatment early due to side-effects
Leaving treatment early for any reason
Weight Change
SCL-90 Hostility
ZAN BPD suicidal/self harm item - no variablility measure
ZAN BPD intense anger item

Data Not Used
Sheehan famil life - Not being extracted
OAS-M irritability - Not used

Group 1 N= 155
Olanzapine. Mean dose 7.09mg/day - 2.5 or 5mg/day according to investigators judgement, after 1wk dose could be increased/decreased up to 20mg/day

Group 2 N= 159
Placebo

Study quality 1+
Funding Eli Lilly (originally supplied as unpublished material Eli Lilly #6257 - slight differences in outcome data)

Results from this paper:

Internal validity:

1.1 Well covered 1.6 Adequately addressed
1.2 Not reported 1.7 Adequately addressed
1.3 Not addressed 1.8 Olanzapine = 48.4% Placebo = 38.4%
1.4 Not reported 1.9 Adequately addressed
1.5 Well covered 1.10 Adequately addressed

SIMPSON2004

Study Type: RCT

Type of Analysis: Completers

Blindness: Double blind

Duration (days): Mean 91

Setting: COUNTRY: US
Partial hospitalisation program

Notes: RANDOMISATION: Block assignement to treatment group aimed at minimizing possible confound of comorbid Axis 1 presentations. No other info.

Info on Screening Process: Women recruited

n= 25

Age: Mean 35

Sex: all females

Diagnosis:
60% Major Depressive Disorder by SCID-I

44% Post traumatic stress disorder by SCID-I

100% BPD by SCID-II

Exclusions: - Primary diagnosis of substance dependence
- seizure disorder

Data Used
GAF
OAS-M (suicidality)
OAS-M (self-injury)
OAS-M (agression)
STAXI total
BDI

Data Not Used
STAI - data not extractable
DES - not extracting this

Group 1 N= 9
Fluoxetine - DOSE: Week 1 20mg/day upto 40mg/day at wk 3.
DBT - 12 one hr sessions of individual DBTprovided in line with Linehan 1993

Group 2 N= 11
Placebo - DOSE: Placebo equivalent dose to Fluoxetine.
DBT - 12 one hr sessions of individual DBTprovided in line with Linehan 1993

Study quality 1+
Study supported by Department of Psychiatry and Human Behaviour at Brown Medical School and Eli Lilly

from admissions to a 5-day DBT-based partial hospital programme. No info on numbers screened.	- unstable medical conditions - lifetime history of schizophrenia/bipolar - monoamine oxidase inhibitor treatment 2 wks prior - previous adequate trial of fluoxetine - pregnant or lactating women - unwilling to use adequate birth control Notes: All ppts received 12 one hr sessions of individual DBTand participated in weekly 2 hour skills group for 13 weeks. Tarazodone 50-100mg allowed for insomnia. ETHNICITY: 20% African American, 72% White, 8% Native American Baseline: Fluoxetine / Placebo BDI 32.11 (10.93) / 32.09 (11.76) STAI 119.22 (13.56) / 121.82 (10.02) STAXI 25.78 (16.00) / 33.73 (14.09) DES 18.89 (16.78) / 20.67 (9.18) GAF 49.39 (9.10) / 46.58 (5.90) OAS-M aggression 12.56 (22.88) / 11.18 (12.44) OAS-M self-injury 11.33 (34.00) / 21.00 (62.76) OAS-M suicidality 2.63 (3.78) / 2.09 (1.04)	Notes: Medical management meetings held wk 3,5,7,9,11		
Results from this paper: Leaving study early due to any reason: Fluoxetine N = 3 due to negative experience of wash out period Placebo N = 1 due to needing hospitalisation outside of study and the other due to lack of improvement in condition Internal validity: 1.1 Well covered 1.6 Well covered 1.2 Adequately addressed 1.7 Well covered 1.3 Not addressed 1.8 Fluoxetine = 12% Placebo = 8% 1.4 Adequately addressed 1.9 Not addressed 1.5 Adequately addressed 1.10 Not applicable				
SOLER2005 Study Type: RCT Type of Analysis: Last observation carried forward Blindness: Double blind Duration (days): Mean 72 Setting: COUNTRY: Spain unclear setting Notes: RANDOMISATION: ppts randomised on 1:1 ratio basis. Blinding procedure not described. No other info provided. Info on Screening Process: 125 ppts referred from clinical services 65 met inclusion criteria 5 dropped out during selection phase During 4 wk selection phase ppts had 3 evaluation visits to establish pre-intervention baseline.	n= 60 Age: Mean 27 Sex: 8 males 52 females Diagnosis: 100% BPD by DSM-IV Exclusions: - not meeting DSM-IV criteria for BPD - under age 18, over age 45 - comorbid, unstable axis 1 disorder - score less than 4 on GSI - currently receiving psychotherapy - not using medically accepted contraception Notes: ETHNICITY: no data Baseline: DBT+ olanzapine / DBT+ placebo 17 items HRDS 22.5 (3.51) / 20.67 (3.19) HARS 26.83 (3.98) / 24.36 (3.85) GSI 5.33 (0.88) / 4.95 (0.69)	**Data Used** CGI HARS HRSD-17 (Hamilton 1960) Weight Change - data not extracted yet Visits to emergency psychiatric services Mean number of Self harm/suicide attempts **Data Not Used** impulsivity/aggressive behaviour - data not extracted yet Notes: OUTCOMES: Ppts evaluated every 2 weeks by experienced psychiatrist Biweekly reports of dysfunctional behaviours Safety evaluated by assessing adverse events and side effects	**Group 1 N= 30** Olanzapine. Mean dose 8.83mg - DOSE: Olanzapine dose flexible and ranged btwn 5-20mg/daily. DBT - DBTadapted from standard version, 2 interventions applied: skills training and phone calls. Group Psychotherapy - Ppts took part in weelky 150-minute group psychotherapy **Group 2 N= 30** Placebo - DOSE: no description given. DBT - DBTadapted from standard version, 2 interventions applied: skills training and phone calls. Group Psychotherapy - Ppts seen weekly for 150 minute group psychotherapy.	Study quality 1+ Study supported by grants from the Ministry of Health, Spain and from Eli Lilly & Co Madrid.
Results from this paper: Leaving treatment early due to any reason: Olanzapine N= 8; Placebo N = 10 (No reasons given). Internal validity: 1.1 Well covered 1.6 Poorly addressed				

1.2 Adequately addressed 1.7 Well covered
1.3 Not addressed 1.8 Olanzapine= 27% Placebo = 33%
1.4 Not addressed 1.9 Well covered
1.5 Adquately addressed 1.10 Not applicable

SOLOFF1989

Study Type: RCT

Type of Analysis: Completers

Blindness: Double blind

Duration (days): Mean 42

Setting:
COUNTRY:US

Inpatient (hospital)

Notes: RANDOMISATION: Process not described. Raters blind to medication assignment but not to subtype diagnoses or DIB scores. No other info.

Info on Screening Process: Ppts referred from both inpatient & outpatient divisions of psychiatric institute
No info on number screened
90 consecutively admitted patients meeting DIB criteria were begun in protocol.

n= 90

Age: Mean 25

Sex: 22 males 68 females

Diagnosis:
39% Unstable BPD by DSM-IIIR

4% SPD by DSM-IIIR

57% Mixed BPD&SPD by DSM-IIIR

Exclusions: - schizophrenia
- schizoactive disorder
- manic disorder
- bipolar disorder with mania
- hypomania

Notes: BPD also defined by DIB with cut off score of 7>
7-day washout period from all medications then rated for syptom severity before random assignment of medications.
Plasma obtained wkly
ETHNICITY: no data

Baseline:

	Amitriptyline	Haloperidol	Placebo
GAS	43.07 (5.36)	41.23 (5.48)	42.17 (5.27)
SCL-90	1.64 (0.68)	1.91 (0.70)	1.84 (0.68)
HAM-D 17	17.04 (4.66)	18.04 (4.66)	17.67 (4.93)
HAM-D 24	24.79 (7.00)	25.52 (6.00)	24.95 (7.11)
BDI	30.21 (9.76)	35.04 (9.30)	30.17 (12.17)

Data Used
IMPS
SCL-90 Hostility
BDI
HRSD-24 (Hamilton 1960)
Barratt Impulsiveness Scale (BIS)

Data Not Used
GAS - data not extracted yet
Schizotypal Symptom Inventory (SSI) - data not extracted yet
Self-report test of impluse control (STIC) - data not extracted yet
Buss-Durkee Hostility Inventory (BDHI) - data not extracted yet
Ward Scale of Impulse Action Reactions - developed for study

Notes: OUTCOMES:Outcomes taken weekly

Group 1 N= 29
Amitriptyline. Mean dose 149.1mg - DOSE: 25mg given twice daily & increased by 2 tablets on alternate days max of 6 tablets max dose = 150mg

Group 2 N= 28
Haloperidol. Mean dose 4.8mg - DOSE:2mg given twice daily & increased by 2 tablets on alternate days to max of 6 tablets max dose = 12mg

Group 3 N= 28
Placebo - DOSE: 2mg placebo tablet given twice daily & increased by 2 tablets on alternate days to max of 6 tablets max dose= 12mg placebo

Study quality 1+
Study supported by National Institute of Mental Health grant and Clinical Research Centre grant

Results from this paper:
Leaving treatment for any reason: N = 5 - data not provided per group

Internal validity:

1.1 Well covered 1.6 Well covered
1.2 Not reported 1.7 Well covered
1.3 Not addressed 1.8 Total number dropping out N= 5
1.4 Poorly reported 1.9 Adequately addressed
1.5 Adequately addressed 1.10 Not applicable

SOLOFF1993

Study Type: RCT

Type of Analysis: unclear

Blindness: Double blind

Duration (days): Mean 35

Followup: continuation phase 16 wks

Setting: COUNTRY: US
Inpatients then discharged after 2 weeks and followed up in community

Notes: RANDOMISATION: process not described and no details on blinding procedure.

Info on Screening Process: Ppts recruited from

n= 108

Age: Mean 27

Sex: 26 males 82 females

Diagnosis:
71% Major Depressive Disorder

47% Atypical Depressive Disorder

44% Hysteroid Dysphoria

Data Used
SCL-90 Hostility
HRSD-24 (Guy 1970)
BDI
SCL-90 Depression
IMPS
Atypical Depression Inventory total
GAS
GSI
Barratt Impulsiveness Scale (BIS)
Self-report test of impluse control (STIC)
Buss-Durkee Hostility Inventory (BDHI)

Group 1 N= 38
Phenelzine Sulfate. Mean dose 60.45mg - DOSE: Pts titrated to 60mg within week1. Adjustment and stabilisation of dose in 2nd wk. Max dose 90mg. CONTINUATION PHASE: Dose remained unchanged except in few cases where lowered to minimize side effects or increased to enhance efficacy.

Study quality 1+
Study supported by USPHS Grants and National Institute Mental Health Grant and Clinical Research Centre grant

inpatient services No info on numbers screened 108 consecutively admitted borderline patients randomly assigned to one of 3 conditions	0% SPD 39% BPD by DSM-IIIR 61% Mixed BPD&SPD by DSM-IIIR Exclusions: - drug/alcohol-related deficits/physical dependence - central nevous system disease - recent electroconvulsive therapy - formal diagnosis of seizure disorder - borderline mental retardation Notes: DIB scaled score >7 used to determine diagnosis of BPD 7 day washout period from all medication Ppts remained in hopspital for 2wks after beginning medication regimen.Continuation phase after 5 wks acute treatment trial lasted 16wks ETHNICITY: no data Baseline: Phenelzine / Haloperidol / Placebo Ham-D-24 24.35 (6.38) 25.83 (4.68) 25.79 (6.79) Ham-D-17 17.53 (4.38) 18.57 (3.48) 18.07 (4.36) BDI 31.55 (8.09) 37.23 (10.7) 34.07 (9.51) SCL-90 Dep. 2.63 (0.67 2.71 (0.77) 2.87 (0.35) ADI Total 7.38 (2.36) 6.20 (2.20) 6.79 (2.33)	**Data Not Used** Schizotypal Symptom Inventory (SSI) HRSD-17 SCL-90 Obsessive-compulsive Ward Scale of Impulse Action Reactions - developed for study BSI (self report) SCL-90 Other scales Notes: OUTCOMES:% of platelet MAO inhibition taken on wkly basis for 5 wks CONTINUATION PHASE: Wkly research ratings for 1st 4 weeks, bi-wkly ratings for remaining 12 weeks.Medication compliance assessed by counting pills & mnthly Haloperidol levels & MOA	**Group 2 N= 36** Haloperidol. Mean dose 3.93mg - DOSE: Pts titrated to 4mg within week 1. Adjustment and stabilisation of dose in 2nd wk Max dose 6mg. CONTINUATION PHASE: Dose remained unchanged except in few cases where lowered to minimize side effects or increased to enhance efficacy. **Group 3 N= 34** Placebo. Mean dose 4.31tablets - DOSE: Pts titrated to 4 tablets within week 1. Max dose 6 tablets. CONTINUATION PHASE: Dose remained unchanged except in few cases where lowered to minimize side effects or increased to enhance efficacy.	
Results from this paper: Leaving treatment for any reason N = 32 no other details given and data not broken down by groups Internal validity: 1.1 Well covered 1.6 Well covered 1.2 Not reported 1.7 Well covered 1.3 Not addressed 1.8 Overall 29.6% dropped out 1.4 Not reported 1.9 Not addressed 1.5 Adequately addressed 1.10 Not applicable				
TRITT2003 Study Type: RCT Type of Analysis: ITT Blindness: Double blind Duration (days): Mean 56 Setting: COUNTRY: Finland Outpatient - symptomatic volunteers Notes: RANDOMISATION: conducted confidentially in secrecy by clinic administration section and arranged in 2:1 ratio. Both ppts and investigators blinded. Info on Screening Process: Women aged between 20-40 yrs recruited via advertisements in GP practices GPs recommended 72 women of which 56 agreed to participate, 38 eligible to take part in study; power calculations required 27 ppts	n= 27 Age: Mean 29 Range 20-40 Sex: all females Diagnosis: 100% BPD by SCID-I and II (DSM-IV) Exclusions: - schizophrenia - major depression - bipolar disorder - current use of Lamotrigine - current use of other psychotropic medication - current psychotherapy - pregnant or planning pregnancy - not using contraception - somatically ill - actively suicidal - abusing alcohol or drugs Notes: Tablets were supplied in numbered boxes. Side effects monitored weekly via non-structured questionnaire. ETHNICITY: no data Baseline:	**Data Used** Weight Change STAXI- Trait Anger **Data Not Used** STAXI Other scales Notes: OUTCOMES: STAXI administed weekly.	**Group 1 N= 18** Lamotrigine. Mean dose Not reported - DOSE: Initial dose for first 2wks 50mg daily, titrated to 100mg in 3rd week then to 150mg in 4th and 5th week and to 200mg daily in the 6th, 7th and 8th week. **Group 2 N= 9** Placebo. Mean dose not reported - DOSE: Ppts received one blinded capsule medication (placebo) daily.	Study quality 1+ Funding unclear

	Lamotrigine	Placebo
State anger	32.2 (3.5)	31.7 (3.9)
Trait anger	30.7 (3.7)	29.4 (3.2)
Anger in	22.3 (3.5)	23.2 (3.3)
Anger out	25.3 (3.5)	24.8 (3.1)
Anger control	17.2 (2.9)	17.9 (2.3)

Results from this paper:

Leaving treatment early due to adverse events (febrile infection): Lamotrigine N = 1; Placebo N = 1
Leaving treatment due to any reason: Placebo N = 1.
No serious side effects observed

Internal validity:

1.1 Well covered
1.2 Adequately addressed
1.3 Well covered
1.4 Well covered
1.5 Well covered
1.6 Adequately addressed
1.7 Adequately addressed
1.8 Lamotrigine = 5.5% Placebo = 22%
1.9 Well covered
1.10 Not applicable

ZANARINI2001

Study Type: RCT

Type of Analysis: Completers analysis

Blindness: Double blind

Duration (days): Mean 168

Setting: COUNTRY: US
Outpatient - symptomatic volunteers

Notes: RANDOMISATION: ppts randomised according to a 2:1randomised sequence number. Both ppts and investigators blinded - no details on process provided.

Info on Screening Process: Women aged between 18-40 recruited via ads in newspapers. 30 subjects completed pre-randomization assessments. 2 excluded from further study due to responding well to SSRI treatment. 28 entered into trial and randomised. No info on number screened

n= 28

Age: Mean 27

Sex: all females

Diagnosis:
100% BPD by DSM-IV

Exclusions: - Patients previously treated with Olanzapine
- medically ill
- had seizure disorder
- currently on psychotropic medication
- actively abusing alcohol or drugs
- acutely suicidal
- pregnant
- breastfeeding
- planning to become pregnant
- not using reliable forms of contraception

Notes: Face-to-face interview plus informed consent. At each visit patients filled in series of assessment forms.
ETHNICITY: White 67%, non-white 33%

Baseline:

SCL-90	Olanzapine	Placebo
Sensitivty	2.57 (0.64)	2.24 (0.75)
Anxiety	2.26 (0.82)	1.76 (0.41)
Depression	2.58 (1.03)	2.42 (0.37)
Anger	2.16 (0.71)	1.89 (0.85)
Paranoia	2.39 (0.78)	1.93 (0.92)

Data Used
Weight Change
Data Not Used
SCL-90 - not extractable
Notes: OUTCOMES TAKEN: Every week for the first month, then monthly for the next 5 months.

Group 1 N= 19

Olanzapine. Mean dose 5.33mg - DOSE: Initial dose 1/2 tablet (2.5mg) of Olanzepine. Dose adjusted according to perceived response&side effects

Group 2 N= 9

Placebo. Mean dose 1.2 tablets - DOSE: Participants received 1/2 a tablet of matching inert placebo to olazepine. Dose increased according to need: ppts received maximum of 1.2 tablets daily.

Study quality 1++
Study supported by grant from Eli Lilly

Results from this paper:

Leaving treatment early due to adverse events - Olanzepine N = (6) Placebo N = (2) and lost to follow up Olanzepine N = (5) Placebo N = (6).
Side effects: Minor sedation - Olanzapine N= 8/19 (42.1%) Placebo N = 3/9 (33.3%)
Constipation - Olanzapine N = 6/19 (31.6%) Placebo N = 0/9
Weight gain - Olanzapine N = 9/19 (47.4%) Placebo N = 0/9

Internal validity:

1.1 Well covered
1.2 Well covered
1.3 Well covered
1.4 Well covered
1.5 Well covered
1.6 Well covered
1.7 Well covered
1.8 Olanzepine = 57.89% Placebo = 88.88%
1.9 Adequately addressed
1.10 Not applicable

ZANARINI2003

Study Type: RCT

Type of Analysis: Completers

Blindness: Double blind

Duration (days): Mean 56

Setting: COUNRTY: US
Outpatient - symptomatic volunteers

Notes: RANDOMISATION: Ppts randomised in 2:1 ratio, no other info given. No description of blinding procedure.

Info on Screening Process: No info on numbers screened
Women aged between 18 and 40 recruited via adverstisements in local newspapers

n= 30

Age: Mean 26 Range 18-40

Sex: all females

Diagnosis:
100% BPD by DIB_R

Exclusions: - medically ill
- currently taking psychotropic medication
- taking E-EPA supplements
- eating more than 1-2 servings of fatty fish per week
-actively abusing alcohol or drugs
- acutely suicidal
- current or lifetime criteria for schizophrenia, schizoaffective disorder, or bipolar I or II disorder
- currently in midst of major depressive episode

Notes: SCID also administered to determine BPD diagnosis.
Side effects monitored via structured questionnaire at each visit.

Baseline:

	E-EPA	Placebo
MADRS	17.7 (8.4)	18.0 (3.1)
MOAS	22.7 (38.1)	27.6 (23.6)

Data Used
OAS-M mean score over 4 weeks
MADRS
Self-harm
Notes: OUTCOMES: weekly for first month and then biweekly for next month

Group 1 N= 20
E-EPA (omega 3). Mean dose 100mg - DOSE: 2 capsules per day (beginning the day after baseline assessment). Each capsule contained 500mg of 97% E-EPA.

Group 2 N= 10
Placebo. Mean dose 100mg - DOSE: 2 capsules identical to active treatment administered daily. Each capsule contained 500mg of mineral oil.

Study quality 1+
Study supported by Independent Investigator Award from the National Alliance for Research on Schizophrenia and Depression

Results from this paper:
Internal validity:

1.1 Well covered
1.2 Adequately addressed
1.3 Not reported
1.4 Not addressed
1.5 Well covered
1.6 Adequately addressed
1.7 Well covered
1.8 E-EPA 10% Placebo = 10%
1.9 Not addressed
1.10 Not applicable

ZANARINI2004

Study Type: RCT

Blindness: Double blind

Duration (days): Mean 56

Setting: COUNRTY:US
Outpatient - symptomatic volunteers

Notes: RANDOMISATION: equal numbers of ppts assigned to each group. Both ppts and investigators blinded to study assignment. No other info.

Info on Screening Process: Ppts recruited via media ads
No info on numbers screened. 45 ppts entered the trial, all randomised to one of three treatment groups

n= 45

Age: Mean 23

Sex: all females

Diagnosis:
93% Mood disorder

51% Substance use disorder

49% Anxiety disorder

44% Eating disorder

100% BPD by DIB_R

Exclusions: - Previously successfully treated with fluoxetine or olanzapine
- medically ill
- seizure disorder
- current use of psychotropic medication
- actively abusing alcohol or drugs
- acutely suicidal
- pregnant, breastfeeding or planning pregnancy
- not using reliable forms of contraception
- currrent major depressive disorder

Data Used
MADRS
OAS-M
Weight Change - data not extracted yet
Notes: OUTCOMES: taken at end point

Group 1 N= 14
Fluoxetine. Mean dose 15mg - DOSE: Initial dose 1 capsule fluoxetine containing 10mg, plus 1 capsule containing placebo. Mean dose at endpoint evaluation = 15.0mg (SD= 6.5mg) Range (10-30mg)

Group 2 N= 16
Olanzapine. Mean dose 3.3mg - DOSE: Initial dose one capsule containing 2.5mg Olanzapine plus one capsule of placebo. Mean dose at endpoint evaluation = 3.3mg (SD= 1.8mg) Range 2.5-7.5mg.

Group 3 N= 15
Fluoxetine Olanzapine combined. Mean dose 12.7mg + 3.2mg - DOSE: Initial dose one capsule 10mg Fluoxetine plus one capsule 2.5mg Olanzapine.
Mean dose at endpoint evaluation 12.7mg Fluoxetine and 3.2mg Olanzapine.

Study quality 1+
Study supported by grant from Eli Lilly, Indianapolis

	- lifetime schizophrenia - schizoaffective disorder - bipolar disorder Notes: DSM-IV also used to determine BPD diagnosis Dose adjusted by unblinded psychiatrist according to perceived response and side effects. Baseline: Fluoxetine Olanzepine OFC OAS-M 23.21 (19.69) 27.81 (22.89) 25.00 (19.42) MADRS 14.43 (4.47) 18.81 (7.19) 16.20 (6.32)			

Results from this paper:

% treatment early due to adverse events N = 2 (1 OFC group due to dizziness and headaches fand 1 in Fluoxetine group due to suicidal gesture).
Leaving treatment early due to any reason N = 1 (OFC ppt loss to follow up).

	Fluoxetine	Olanzapine	OFC
Side effects: Mild sedation	N = 3 (21.4%)	N= 12 (75%)	N= 7 (46.7%)
Mild akathisia	N = 5 (35.7%)	N = 4 (25 %)	N = 5 (33.3%)

Internal validity:

1.1 Well covered
1.2 Poorly addressed
1.3 Not reported
1.4 Well covered
1.5 Well covered
1.6 Well covered
1.7 Well covered
1.8 Fluoxetine = 7% OFC = 13.3%
1.9 Not reported
1.10 Not applicable

Characteristics of Excluded Studies

Reference ID	Reason for Exclusion
GOLDBERG1986	(Thiotixine vs placebo) Small BPD sample
LINKS1990	(Lithium therapy vs Desipramine vs Placebo) cross over trial
MONTGOMERY1983	(Mianserin vs Placebo)Primary inclusion criteria: admission for suicidal act plus 2 or more episodes of previous self harm.
PHILIPSEN2004A	(Naloxone vs Placebo) Naloxone can only be injected and therefore is not an acceptable option for BPD
SALZMAN1995	(Fluoxetine vs placebo) Too mild diagnosis of BPD
SERBAN1984	(Thiothixine vs Haloperidol) Small BPD sample

References of Included Studies

BELLINO2006B (Unpublished and Published Data)

Bellino, S., Zizza, M., Rinaldi, C., et al. (2006) Combined treatment of major depression in patients with borderline personality disorder: a comparison with pharmacotherapy. Canadian Journal of Psychiatry - Revue Canadienne de Psychiatrie, 51, 453-460.

BELLINO2007 (Published Data Only)

Bellino,S., Zizza,M., Rinaldi,C., et al. (2007) Combined therapy of major depression with concomitant borderline personality disorder: comparison of interpersonal and cognitive psychotherapy. Canadian Journal of Psychiatry - Revue Canadienne de Psychiatrie, 52, 718-725.

BOGENSCHUTZ2004 (Unpublished and Published Data)

Bogenschutz, M. P. & George, N. (2004) Olanzapine versus placebo in the treatment of borderline personality disorder. Journal of Clinical Psychiatry, 65, 104-109.

DE LA FUENTE1994 (Published Data Only)

De la Fuente, J.M. & Lotstra, F. (1994) A trial of carbamazepine in borderline personality disorder. European Neuropsychopharmacology, 4, 479-486.

ELILILLY#6253 (Published Data Only)

Efficacy and safety of olanzapine in patients with borderline personality disorder: a randomized double-blind comparison with placebo. Unpublished manuscript.

FRANKENBURG2002 (Published Data Only)

Frankenburg, F. R. & Zanarini, M. C. (2002) Divalproex sodium treatment of women with borderline personality disorder and bipolar II disorder: a double-blind placebo-controlled pilot study. Journal of Clinical Psychiatry, 63, 442-446.

HALLAHAN2007 (Published Data Only)

Hallahan, B., Hibbeln, JR., Davis, JM., et al. (2007) Omega-3 fatty acid supplementation in patients with recurrent self-harm. Single centre double-blind randomised controlled trial. British Journal of Psychiatry, 190, 118-122.

HOLLANDER2001 (Published Data Only)

Hollander, E., Allen, A., Lopez, R. P., et al. (2001) A preliminary double-blind, placebo-controlled trial of divalproex sodium in borderline personality disorder. Journal of Clinical Psychiatry, 62, 199-203.

HOLLANDER2003 (Published Data Only)

Hollander, E., Swann, A. C., Coccaro, E. F., et al. (2005) Impact of trait impulsivity and state aggression on divalproex versus placebo response in borderline personality disorder. American Journal of Psychiatry, 162, 621-624.

*Hollander, E., Tracy, K.A., Swann, A.C., et al. (2003) Divalproex in the treatment of impulsive aggression: efficacy in cluster B personality disorders. Neuropsychopharmacology, 28, 1186-1197.

LEONE1982 (Published Data Only)

Leone, N. F. (1982) Response of borderline patients to loxapine and chlorpromazine. Journal of Clinical Psychiatry, 43, 148-150.

LOEW2006 (Published Data Only)

Loew, T. H., Nickel, M. K., Muehlbacher, M., et al. (2006) Topiramate treatment for women with borderline personality disorder: a double-blind, placebo-controlled study. Journal of Clinical Psychopharmacology, 26, 61-66.

NICKEL2004 (Published Data Only)

Nickel, M. K., Nickel, C., Mitterlehner, F. O., et al. (2004) Topiramate treatment of aggression in female borderline personality disorder patients: a double-blind placebo-controlled study. Journal of Clinical Psychiatry, 65, 1515-1519.

NICKEL2005 (Published Data Only)

Nickel, M. K., Nickel, C., Kaplan, P., et al. (2005). Treatment of aggression with topiramate in male borderline patients: a double-blind, placebo-controlled study. Biological Psychiatry, 57, 495-499.

NICKEL2006 (Published Data Only)

Nickel, M. K., Muehlbacher, M., Nickel, C., et al. (2006) Aripiprazole in the treatment of patients with borderline personality disorder: a double-blind, placebo-controlled study. American Journal of Psychiatry, 163, 833-838.

PASCUAL2008 (Published Data Only)

Pascual,J.C.; Soler,J.; Puigdemont,D., et al. (2008) Ziprasidone in the treatment of borderline personality disorder: a double-blind placebo-controlled randomized study. Journal of Clinical Psychiatry, 69, 603-608.

RINNE2002 (Published Data Only)

Rinne, T., Van Den Brink, W., Wouters, L., et al. (2002) SSRI treatment of borderline personality disorder: a randomized, placebo-controlled clinical trial for female patients with borderline personality disorder.[see comment]. American Journal of Psychiatry, 159, 2048-2054.

SCHULTZ2008 (Unpublished and Published Data)

Schultz, S. C., Zanarini, M. C., Bateman, A., et al. (2008) Olanzapine for the treatment of borderline personality disorder: a variable-dose, 12-week, randomized, double-blind, placebo-controlled study. British Journal of Psychiatry, 193, 485-492.

SIMPSON2004 (Published Data Only)

Simpson, E. B., Yen, S., Costello, E., et al. (2004) Combined dialectical behavior therapy and fluoxetine in the treatment of borderline personality disorder. Journal of Clinical Psychiatry, 65, 379-385.

SOLER2005 (Published Data Only)

Soler, J., Pascual, J. C., Campins, J., et al. (2005) Double-blind, placebo-controlled study of dialectical behavior therapy plus olanzapine for borderline personality disorder. American Journal of Psychiatry, 162, 1221-1224.

SOLOFF1989 (Published Data Only)

Soloff, P. H., George, A., Nathan, S., et al. (1989) Amitriptyline versus haloperidol in borderlines: final outcomes and predictors of response. Journal of Clinical Psychopharmacology, 9, 238-246.

SOLOFF1993 (Published Data Only)
Soloff, P. H., Cornelius, J., George, A., et al. (1993) Efficacy of phenelzine and haloperidol in borderline personality disorder. Archives of General Psychiatry, 50, 377-385.

TRITT2003 (Published Data Only)
Tritt, K., Nickel, C., Lahmann, C., et al. (2003) Lamotrigine treatment of aggression in female borderline-patients: a randomized, double-blind, placebo-controlled study. Journal of Psychopharmacology, 19, 287-291.

ZANARINI2001 (Published Data Only)
Zanarini, M. C. & Frankenburg, F. R. (2001) Olanzapine treatment of female borderline personality disorder patients: a double-blind, placebo-controlled pilot study.[see comment]. Journal of Clinical Psychiatry, 62, 849-854.

ZANARINI2003 (Published Data Only)
Zanarini, M. C. & Frankenburg, F. R. (2003) Omega-3 fatty acid treatment of women with borderline personality disorder: a double-blind, placebo-controlled pilot study. American Journal of Psychiatry, 160, 167-169.

ZANARINI2004 (Published Data Only)
Zanarini,M.C., Frankenburg,F.R. & Parachini,E.A.(2004) A preliminary, randomized trial of fluoxetine, olanzapine and the olanzapine-fluoxetine combination in women with borderline personality disorder. Journal of Clinical Psychiatry, 65, 903-907

References of Excluded Studies

GOLDBERG1986 (Published Data Only)
Goldberg, S. C., Schulz, S. C., Resnick, R. J., et al. (1987) Differential prediction of response to thiothixene and placebo in borderline and schizotypal personality disorders. Psychopharmacology Bulletin, 23, 342-346.

LINKS1990 (Published Data Only)
Links, P.S., Steiner, M., Boiago, I., et al. (1990) Lithium therapy for borderline patients: preliminary findings. Journal of Personality Disorders, 4, 173-181

MONTGOMERY1983 (Published Data Only)
Montgomery, S. A., Roy, D. & Montgomery, D. B. (1983) The prevention of recurrent suicidal acts. British Journal of Clinical Pharmacology, 15 Suppl 2, 183S-188S.

PHILIPSEN2004A (Published Data Only)
Philipsen, A., Schmahl, C. & Lieb, K. (2004) Naloxone in the treatment of acute dissociative states in female patients with borderline personality disorder. Pharmacopsychiatry, 37, 196-199.

SALZMAN1995 (Published Data Only)
Salzman, C., Wolfson, A. N., Schatzberg, A., et al. (1995) Effect of fluoxetine on anger in symptomatic volunteers with borderline personality disorder. Journal of Clinical Psychopharmacology, 15, 23-29.

SERBAN1984 (Published Data Only)
Serban, G. & Siegel, S. (1984) Response of borderline and schizotypal patients to small doses of thiothixene and haloperidol. American Journal of Psychiatry, 141, 1455-1458.

Appendix 16: Characteristics Table for The Clinical Question: Role of inpatient services

Comparisons Included in this Clinical Question

inpatient care (non-comparative)
ANTIKAINEN1992
ANTIKAINEN1994
ANTIKAINEN1995

Characteristics of Included Studies

Methods	Participants	Outcomes	Interventions	Notes
ANTIKAINEN1992 Study Type: non-comparative Study Description: investigates the efficacy of hospital treatment for severe PDs, treatment programme includes dynamic psychotherapy & psychopharmacological treatments Type of Analysis: completers Blindness: Open Duration (days): Mean 88 Range 21-296 Setting: FINLAND; inpatients Info on Screening Process: >3 weeks on ward	n= 66 Age: Mean 32 Range 15-56 Sex: 38 males 28 females Diagnosis: 32% Personality Disorder by DSM-IIIR Baseline: Mean (SD) HDRS 19.6 (7.4) BDI 13.8 (7.6) SDQ 2.1 (0.8)	**Data Used** Sleep disturbance quaire HDRS (21 items) BDI	**Group 1 N= 66** Dynamic psychotherapy - 45 min twice a week, average total no. sessions was 25 during hospital stay, patients also participated in group therapy sessions twice a week.	
ANTIKAINEN1994 Study Type: non-comparative Study Description: aims to identify factors predicting outcome of psychiatric hospital treatment Type of Analysis: completers Blindness: Open Duration (days): Mean 88 Range 21-296 Setting: FINLAND; inpatients	n= 66 Age: Mean 32 Range 15-56 Sex: 37 males 29 females Diagnosis: 14% Dysthymia 29% Personality Disorder 39% Major Depressive Disorder 15% Adjustment disorder 3% Substance use disorder Notes: diagnoses are for end of treatment Baseline: Mean (SD) HDRS 19.6 (7.4) BDI 13.8 (7.6)	**Data Used** HDRS (21 items) BDI	**Group 1 N= 66** Hospitalisation - individual and group therapy sessions twice a week, ward meetings, committees & creative activities, psychotropic medication	
ANTIKAINEN1995 Study Type: non-comparative Study Description: follow-up Type of Analysis: completers Blindness: Duration (days): Mean 88 Range 21-296 Followup: 3 years	n= 62 Age: Mean 32 Sex: Diagnosis: 32% Personality Disorder by DSM-IIIR Exclusions: 20 patients lost to follow-up, 2 had died - 1	**Data Used** HDRS (21 items) BDI	**Group 1 N= 62** Hospitalisation - individual and group therapy sessions twice a week, ward meetings, committees & creative activities, psychotropic medication	

	suicide, 1 road traffic accident			

Characteristics of Excluded Studies

Reference ID	Reason for Exclusion
JAKUBCZYK2001	no data, discussion paper
JONES1989	no data, describes model & case study

References of Included Studies

ANTIKAINEN1992 (Published Data Only)

Antikainen,R., Lehtonen,J., Koponen, H.J., et al. (1992) The effect of hospital treatment on depression and anxiety in patients with borderline personality organization. Nordic Journal of Psychiatry, 46, 399-405.

ANTIKAINEN1994 (Published Data Only)

Antikainen,R., Koponen,H.J., Lehtonen,J., et al. (1994) Factors predicting outcome of psychiatric hospital treatment in patients with borderline personality organization. Nordic Journal of Psychiatry, 48, 177-185.

ANTIKAINEN1995 (Published Data Only)

Antikainen,R., Hintikka,J., Lehtonen,J., Koponen,H., et al. (1995) A prospective three-year follow-up study of borderline personality disorder inpatients. Acta Psychiatrica Scandinavica, 92, 327-335.

References of Excluded Studies

JAKUBCZYK2001 (Published Data Only)

Jakubczyk,A., Zechowski,C. & Namyslowska,I. (2001) Treatment of adolescent borderline patients in a psychiatric unit. Archives of Psychiatry and Psychotherapy, 3, 65-72.

JONES1989 (Published Data Only)

Jones,J.M., Pearson,G.T. & Dimpero,R. (1989) Long-term treatment of the hospitalized adolescent and his family: an integrated systems-theory approach. Adolescent Psychiatry, 16, 449-472.

Appendix 16: Characteristics Table for The Clinical Question: Risk factors for suicide in people with borderline personality disorder

Comparisons Included in this Clinical Question

Adolescent general psychiatric / non specific personality disorder
BRENT1993
RUNESON1991
STONE1992
YOUNG1995

Adolescent MDD compared with BPD
HORESH2003A
HORESH2003B

General psychiatric / non specific personality disorder populations
BARBER1998
YEN2004
YEN2005
ZISOOK1994

People with BPD
BRODSKY1997
FYER1988
LINKS2007
PARIS1989
SOLOFF1994

People with depression with & without comorbid BPD
CORBITT1996
SOLOFF2000

Suicidality in people with & without BPD
BERK2007

Characteristics of Included Studies

Methods	Participants	Outcomes	Interventions	Notes
BARBER1998 Study Type: non-comparative Study Description: Interviewed psychiatric inpatients concerning aborted suicide attempts. Type of Analysis: n/a Blindness: n/a Duration (days): Setting: US; inpatients Notes: Participants randomly selected on weekly basis from inpatient admissions. Info on Screening Process: 416; Inclusion criteria: <18 years, English speaking, able to consent & complete interview. Exclusion criteria: severe dementia, mental retardation, psychosis, severe agitation	n= 135 Age: Mean 38 Sex: 66 males 69 females Diagnosis: 40% Major Depressive Disorder 27% Schizophrenia 15% Bipolar II disorder 18% Drug/alcohol abuse/dependence 13% BPD Notes: ETHNICITY: 56% white, 20% black, 19% hispanic, 6% asian or other.	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 135** Not applicable in this study design	
BERK2007 Study Type: observational study Study Description: compared recent suicide attempters with & without BPD Type of Analysis: n/a Blindness: n/a Duration (days): Setting: US; indivs presenting to emergency dept of hosp having made suicide attempt Info on Screening Process: Exclusions: <16 years, unable to understand study procedures/give informed consent, signif medical condition that would limit participation, unable to provide at least 2 contacts to aid in	n= 180 Age: Mean 34 Range 18-64 Sex: 77 males 103 females Diagnosis: 36% BPD by DSM-IV Notes: ETHNICITY: 63% African-American, 228% White, 9% Latino, Asian American, Native American or unspecified	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 180** Not applicable in this study design	

follow-ups.				
BRENT1993 Study Type: observational study Study Description: suicide attempters (37) compared with never suicidal patients (29) Type of Analysis: completers Blindness: n/a Duration (days): Setting: US; inpatients Info on Screening Process: 98; suicide attempters must have made attempt within year of admission, all participants had to have 1 parent who was cooperative & available for interview; other exclusion criteria: IQ <70, delirium, psychosis, chronic medical illness, eating disorders	n= 66 Age: Mean 16 Range 13-19 Sex: 40 males 26 females Diagnosis: 21% BPD by DSM-IIIR 20% Narcisisstic PD by DSM-IIIR 12% Histrionic PD by DSM-IIIR 35% Passive-aggressive by DSM-IIIR 36% Avoidant PD by DSM-IIIR 20% OCPD by DSM-IIIR 61% Major Depressive Disorder by DSM-III 21% Bipolar spectrum disorder by DSM-III 19% Dysthymia by DSM-III 34% Substance abuse by DSM-III 63% Conduct Disorder by DSM-III 20% ADHD by DSM-III 32% Anxiety disorder by DSM-III 7% Schizoid PD by DSM-IIIR 6% Schizotypal by DSM-IIIR 20% Paranoid PD by DSM-IIIR Notes: ETHNICITY: 88% white	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 66** Not applicable in this study design	
BRODSKY1997 Study Type: observational study Study Description: tested hypothesis that impulsivity & childhood trauma would be associated with suicidal behav. Type of Analysis: n/a Blindness: n/a Duration (days): Setting: US; inpatients Info on Screening Process: exclusions: <18 or >60 years, diagnosis of organic brain syndrome, major depression with psychotic	n= 214 Age: Sex: Diagnosis: 100% BPD by DSM-IIIR	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 214** Not applicable in this study design	

features, schizophrenia, major medical illness, organic mental disorders, IQ >80.				
CORBITT1996 Study Type: observational study Study Description: investigated relationship between PDs & suicidal behaviour in patients with MDD Type of Analysis: n/a Blindness: na/ Duration (days): Setting: US; inpatients Info on Screening Process: inclusion criteria: 18-80 years, meet criteria for MDD; exclusion criteria: major medical illness, organic mental disorder, IQ <80	n= 102 Age: Mean 35 Range 18-64 Sex: 46 males 56 females Diagnosis: 34% Major depressive episode by DSM-IIIR 66% Major Depressive Disorder by DSM-IIIR 29% BPD by Personality Disorder Examination 17% Cluster B by Personality Disorder Examination Notes: ETHNICITY; 78% white, 21% african-american	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 102** Not applicable in this study design	
FYER1988 Study Type: observational study Study Description: compares rate of suicide attempts in BPD patients with affective disorders, aubstance use disorders & both. Type of Analysis: n/a Blindness: n/a Duration (days): Info on Screening Process: 234; inclusion criteria: met diagnosis for BPD by chart review	n= 180 Age: Mean 29 Range 18-45 Sex: 34 males 146 females Diagnosis: 100% BPD by DSM-III 70% Substance abuse by DSM-III 65% Affective disorder by DSM-III	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 180** Not applicable in this study design	
HORESH2003A Study Type: observational study Study Description: reports on suicidality in 20 MDD & 20 BPD adolescents referred to clinic compared to 20 non-psychiatric community controls with no suicide attempts Type of Analysis: n/a Blindness: n/a Duration (days): Setting: ISRAEL; outpatients Info on Screening Process: exclusions: lack of knowledge of Hebrew, mental retardation. BPD patients with comorbid depressive disorder also excluded	n= 60 Age: Mean 17 Sex: 27 males 33 females Diagnosis: 33% BPD by DSM-IV 33% Major Depressive Disorder by DSM-IV 15% Anxiety disorder by DSM-IV 15% Eating disorder by DSM-IV 3% Oppositional defiant disorder by DSM-IV	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 60** Not applicable in this study design	
HORESH2003B				

Study Type: observational study Study Description: compared adolescents with MDD to those with BPD, 50% MDD & 52% BPD made recent suicide attempt Type of Analysis: n/a Blindness: n/a Duration (days): Setting: ISRAEL; inpatients Info on Screening Process: exclusion criteria: substance abuse, mental retardation, lack of knowledge of Hebrew, refusal to participate	n= 65 Age: Mean 15 Range 13-18 Sex: 15 males 50 females Diagnosis: 51% BPD by DSM-IV 49% Major Depressive Disorder by DSM-IV	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 65** Not applicable in this study design	
LINKS2007 Study Type: prospective Study Description: investigated whether various elements of affective instability can predict suicide ideation in BPD patients Type of Analysis: n/a Blindness: n/a Duration (days): Mean 21 Setting: CANADA; outpatients Info on Screening Process: inclusion: 18-65 years, BPD, 2+ lifetime suicide attempts with 1 in last 2 years; exclusions: current maj dep episode, psychosis, substance dependence, cyclothymic disorder, or bipolar, low levels intell func, dementia, neurological or visual impairment.	n= 82 Age: Mean 34 Sex: 14 males 68 females Diagnosis: 100% BPD by SCID-II	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 82** Not applicable in this study design	
PARIS1989 Study Type: quasi-prospective Study Description: Followed-up BPD patients after 15 years and compared 14 who had committed suicide with 100 who had not. Type of Analysis: n/a Blindness: n/a Duration (days): Followup: 15 years	n= 322 Age: Sex: no information Diagnosis: 100% BPD by DIB 61% Major Depressive Disorder by DSM-III Exclusions: 157 could not be located at follow-up, 43 refused to be interviewed, 22 were dead, 14 of these committed suicide	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 322** Not applicable in this study design	
RUNESON1991 Study Type: retrospective Study Description: 58 consecutive suicides committed between 1984-1987 were investigated retrospectively through interviews with relatives & analyses of medical records Type of Analysis: n/a Blindness: n/a Duration (days): Setting: SWEDEN	n= 58 Age: Mean 23 Range 15-29 Sex: 15 males 43 females Diagnosis: 33% BPD by DSM-IIIR 47% Substance abuse by DSM-IIIR	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 58** Not applicable in this study design	

	22% Alcohol misuse by DSM-IIIR 41% Major Depressive Disorder by DSM-IIIR 16% ASPD by DSM-IIIR 14% Schizophrenia by DSM-IIIR 14% Adjustment disorder by DSM-IIIR			
SOLOFF1994 Study Type: observational study Study Description: BPD patients with histories of self-mutilation compared to those with no self-mutilation. Type of Analysis: n/a Blindness: n/a Duration (days): Setting: US; inpatients	n= 108 Age: Mean 27 Sex: 26 males 82 females Diagnosis: 100% BPD by DIB Notes: ETHNICITY: 83% caucasian	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 108** Not applicable in this study design	
SOLOFF2000 Study Type: observational study Study Description: compared suicidal behaviour in patients with BPD, MDD & BPD+MDD Type of Analysis: n/a Blindness: n/a Duration (days): Setting: US; inpatients Info on Screening Process: exclusion criteria: psychotic disorders, organic mood disorders, bipolar disorder.	n= 158 Age: Mean 32 Range 18-83 Sex: 56 males 102 females Diagnosis: 51% BPD by SCID (DSM-III-R) 49% Major depressive episode by SCID (DSM-III-R) Notes: ETHNICITY: 81% caucasian, 19% non-caucasian	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 158** Not applicable in this study design	
STONE1992 Study Type: observational study Study Description: followed-up inpatients, reports 9 adolescent suicides Type of Analysis: n/a Blindness: n/a Duration (days): Followup: 16.5 years (age) Setting: US; inpatients	n= 9 Age: Mean 17 Range 14-19 Sex: 4 males 5 females Diagnosis: 56% BPD by DSM-III 44% Psychotic disorder	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 9** Not applicable in this study design	
YEN2004 Study Type: prospective Study Description: Collaborative Longitudinal PD study, multisite, naturalistic, prospective study of 4 PDs inc BPD & comparison group with MDD. Type of Analysis: n/a	n= 621 Age: Range 18-45 Sex: Diagnosis:	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 621** Not applicable in this study design	

Blindness: n/a Duration (days): Followup: 2 years Info on Screening Process: inclusion criteria: diagnosis of PD or MDD				
YEN2005 Study Type: prospective Study Description: Collaborative Longitudinal PD study: multisite, naturalistic prospective study of 4 PDs inc BPD Type of Analysis: n/a Blindness: n/a Duration (days): Followup: 2 years Info on Screening Process: exclusion criteria: acute substance intoxication/withdrawal, active psychosis, cognitive impairment, history of schizophrenia, schizophreniform, schizoaffecive disorders	n= 489 Age: Range 18-45 Sex: Diagnosis:	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 489** Not applicable in this study design	
YOUNG1995 Study Type: observational study Study Description: interviewed families of adolescents admitted to treatment unit & compared 21 BPD with 34 non-BPD cases Type of Analysis: n/a Blindness: n/a Duration (days): Setting: US; inpatients Info on Screening Process: 71; 16 excluded due to transfer, mental incapacity or parents refusal to participate	n= 55 Age: Mean 16 Range 14-18 Sex: 26 males 29 females Diagnosis: 38% BPD by DSM-IIIR 9% Narcisisstic PD by DSM-IIIR 4% ASPD by DSM-IIIR 35% PD NOS by DSM-IIIR	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 55** Not applicable in this study design	
ZISOOK1994 Study Type: prospective Study Description: 1000 intakes to outpatient clinic screened for past suicide attempts & present suicide ideation & diagnosed. Type of Analysis: n/a Blindness: n/a Duration (days): Setting: US; outpatients Info on Screening Process: 1000	n= 100 Age: Mean 34 Sex: 480 males 520 females Diagnosis: 18% Major Depressive Disorder by DSM-IIIR 10% Dysthymia by DSM-IIIR 4% Bipolar II disorder by DSM-IIIR 15% Schizophrenia by DSM-IIIR 6% Drug/alcohol abuse/dependence by DSM-IIIR	**Data Used** Risk factors applicable to clinical question	**Group 1 N= 100** Not applicable in this study design	

	5% Anxiety disorder by DSM-IIIR 7% BPD by DSM-IIIR			

Characteristics of Excluded Studies

Reference ID	Reason for Exclusion
CHANCE2000	not relevant
CRUMLEY1981	did not look at specific risk factors
FRIEDMAN1987	did not look at specific risk factors, describes 2 case studies

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Berk,M.S., Jeglic,E., Brown,G.K., Henriques,G.R., et al. (2007) Characteristics of recent suicide attempters with and without borderline personality disorder. Archives of Suicide Research, 11, 91-104.

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Yen,S., Shea,M.T., Sanislow,C.A., et al. (2004) Borderline personality disorder criteria associated with prospectively observed suicdal behavior. American Journal of Psychiatry, 161, 1296-1298.

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Yen,S., Pagano,M.E., Shea,M.T., et al. (2005) Recent life events preceding suicide attempts in a personality disorder sample: findings from the collaborative longitudinal personality disorders study. Journal of Consulting and Clinical Psychology, 73, 99-105.

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FRIEDMAN1987 (Published Data Only)
Friedman,R.C. & Corn,R. (1987) Suicide and the borderline depressed adolescent and young adult. Journal of American Academy of Psychoanalysis, 15, 429-448.

Appendix 16: Characteristics Table for The Clinical Question: Stability of the diagnosis of BPD in young people NCCMH

Comparisons Included in this Clinical Question

Children with disruptive and/or emotional disorders followed-up.
FISCHER2002
HELGELAND2005
HELLGREN1994
RAMKLINT2003
REY1995

Prospective short follow-up studies of BPD.
CHANEN2004
GARNET1994
MEIJER1998

Quasi-prospective studies of developmental antecedents of BPD.
HELGELAND2004
LOFGREN1991
ZELKOWITZ2007

Characteristics of Included Studies

Methods	Participants	Outcomes	Interventions	Notes
CHANEN2004 Study Type: prospective Study Description: 2 year prospective study of young people with personality disorder Type of Analysis: n/a Blindness: n/a Duration (days): Followup: 2 years Setting: AUSTRALIA; outpatients Info on Screening Process: 147 invited to participate, 46 declined	n= 101 Age: Range 15-18 Sex: 37 males 64 females Diagnosis: 24% Mood disorder by DSM-IV 31% Anxiety disorder by DSM-IV 16% Substance abuse by Composite International Diagnostic Interview (CIDI 11% Disruptive behaviour disorder by DSM-IV 7% Eating disorder by DSM-IV 4% Somatoform disorder by DSM-IV 3% Paranoid PD by SCID-II 3% Schizoid PD by SCID-II 2% Schizotypal by SCID-II 6% ASPD by SCID-II 11% BPD by SCID-II 1% Histrionic PD by SCID-II 2% Narcissistic by SCID-II 10% Avoidant PD by SCID-II 4% OCPD by SCID-II 8% Passive-aggressive by SCID-II 10% Depressive PD by SCID-II	**Data Used** % meeting BPD diagnosis	**Group 1 N= 101** Not applicable in this study design	

	38% PD NOS by SCID-II Exclusions: 4 participants lost to follow-up, 1 could not be contacted, 1 refused to participate, 2 failed to attend interview			
FISCHER2002 Study Type: prospective Study Description: followed-up hyperactive childern & community controls & assessed PDs in adolecence/adulthood Type of Analysis: n/a Blindness: n/a Duration (days): Followup: 14 years (mean) Setting: US; community sample Info on Screening Process: at childhood entry to study participants had to have IQ>80, be free of gross sensory or motor abnormalities & be biological offspring of current parents/adopted shortly after birth.	n= 239 Age: Range 4-12 Sex: 217 males 22 females Diagnosis: 66% Hyperactive Exclusions: 19 participants lost at follow-up Notes: ETHNICITY: 94% white, 5% black, 1% hispanic	**Data Used** % meeting BPD diagnosis	**Group 1 N= 239** Not applicable in this study design	
GARNET1994 Study Type: prospective Study Description: inpatients with BPD followed up 2 years following discharge and symptoms reassessed. Type of Analysis: n/a Blindness: n/a Duration (days): Followup: 2 years Setting: US; inpatients	n= 21 Age: Mean 17 Range 15-19 Sex: 10 males 11 females Diagnosis: 100% BPD by Personality Disorder Examination 86% Major Depressive Disorder by DSM-IIIR 43% Dysthymia by DSM-IIIR 52% Conduct Disorder by DSM-IIIR	**Data Used** % meeting BPD diagnosis	**Group 1 N= 21** Not applicable in this study design	
HELGELAND2004 Study Type: quasi-prospective Study Description: baseline diagnoses determined on basis of medical records & follow-up interview after 28 years. Type of Analysis: n/a Blindness: n/a Duration (days): Followup: 28 years Setting: NORWAY; Info on Screening Process: 1018, exclusions: organic brain syndrome, no diagnosis given, people who were unavailable at follow-up or did not want to participate	n= 148 Age: Mean 15 Sex: 77 males 71 females Diagnosis: 19% BPD by DSM-IV Exclusions: 13 with diagnosis of schizophrenia at follow-up, 3 participants whos hospital records could not be traced Notes: Age at baseline for 132 included in final sample,	**Data Used** % meeting BPD diagnosis	**Group 1 N= 148** Not applicable in this study design	

HELGELAND2005 Study Type: quasi-prospective Study Description: followe-up adolescents who were admitted to adolescent unit with emotional/disruptive disorders. Baseline diagnoses made on basis of hospital records Type of Analysis: n/a Blindness: n/a Duration (days): Followup: 28 years Setting: NORWAY; inpatients Info on Screening Process: 1018, participants excluded if they could not be identified/located, did not agree to take part or did not attend interview	n= 148 Age: Mean 15 Sex: 77 males 71 females Diagnosis: 38% Anxiety disorder by DSM-IV 36% Major depression or dysthymia by DSM-IV 16% Eating disorder by DSM-IV 9% Somatoform disorder by DSM-IV 2% Elimination disorder by DSM-IV 82% Conduct Disorder by DSM-IV 7% Oppositional defiant disorder by DSM-IV 6% Psychoactive substance use disorder by DSM-IV 4% Adjustment disorder by DSM-IV 1% ADHD by DSM-IV Exclusions: 13 participants who received diagnosis of schizophrenia at follow up	**Data Used** % meeting BPD diagnosis	**Group 1 N= 148** Not applicable in this study design	
HELLGREN1994 Study Type: prospective Study Description: followed up children who had deficits in attention, motor control & perception Type of Analysis: n/a Blindness: n/a Duration (days): Followup: 9 years Setting: SWEDEN Info on Screening Process: 141, excluded if they did not have attention, motor control or perception or if they were diagnosed with mental retardation	n= 112 Age: Mean 7 Sex: 71 males 41 females Diagnosis: 38% Motor control/perception dysfunc + ADHD 6% Motor control/perception dysfunc 11% ADHD Exclusions: 11 failed to participate at follow-up either because they had moved away or because they declined participation in the study.	**Data Used** % meeting BPD diagnosis	**Group 1 N= 112** Not applicable in this study design	
LOFGREN1991 Study Type: quasi-prospective Study Description: followed-up children who had been diagnosed as borderline Type of Analysis: n/a Blindness: n/a Duration (days): Followup: 10-20 years	n= 19 Age: Range 6-10 Sex: 14 males 5 females Diagnosis: 100% BPD by Bemporad criteria	**Data Used** % meeting BPD diagnosis	**Group 1 N= 19** Not applicable in this study design	

Info on Screening Process: 32 children identified as borderline, excluded if they could not be located at follow up.				
MEIJER1998 Study Type: prospective Study Description: inpatients followed up 3 years later Type of Analysis: n/a Blindness: n/a Duration (days): Followup: 3 years Setting: NETHERLANDS; inpatients	n= 54 Age: Mean 15 Range 12-17 Sex: 27 males 27 females Diagnosis: 31% BPD by DIB 35% Major depression or dysthymia by DSM-IIIR 24% Conduct Disorder by DSM-IIIR 17% Psychotic disorder by DSM-IIIR 24% PD other than BPD by DSM-IIIR Exclusions: exlcusion criteria: severe psychotic or autistic symptomatology, follow-up interval <24months, >18 at baseline, unable to locate, unwilling to cooperate. 36 participants were follow-ed up. Notes: Ages are for 36 participants followed-up	**Data Used** % meeting BPD diagnosis	**Group 1 N= 54** Not applicable in this study design	
RAMKLINT2003 Study Type: quasi-prospective Study Description: followed up group of in child/adolescet inpatients. Baseline diagnoses obtained from medical records Type of Analysis: n/a Blindness: n/a Duration (days): Followup: 16 years (mean) Setting: SWEDEN Info on Screening Process: 378, participants who could not be contacted, did not respond, failed to complete quaire correctly were excluded	n= 158 Age: Mean 14 Sex: 63 males 95 females Diagnosis: 18% Major Depressive Disorder by DSM-IV 27% Drug/alcohol abuse/dependence by DSM-IV 48% Disruptive disorder by DSM-IV	**Data Used** % meeting BPD diagnosis	**Group 1 N= 158** Not applicable in this study design	
REY1995 Study Type: quasi-prospective Study Description: followed-up young adults who had been diagnosed with disruptive/emotional disorders in adolescence. Type of Analysis: n/a Blindness: n/a Duration (days): Followup: 14 years Setting: AUSTRALIA Info on Screening Process: 370, excluded if had diagnosis of major depression, or >1 diagnosis (ecxept ADHD & CD), also if could	n= 145 Age: Mean 14 Range 12-16 Sex: 81 males 64 females Diagnosis: 8% ADHD by DSM-III 13% Oppositional defiant disorder by DSM-III 17% Conduct Disorder by DSM-III 10% ADHD & CD by DSM-III	**Data Used** % meeting BPD diagnosis	**Group 1 N= 145** Not applicable in this study design	

not be located or did not attend interview	8% Adjustment disorder with distrubed conduct by DSM-III 14% Separation anxiety by DSM-III 8% Other anxiety disorders by DSM-III 12% Dysthymia by DSM-III 11% Adjustment disorder with mixed emotional features by DSM-III			
ZELKOWITZ2007 Study Type: quasi-prospective Study Description: followed-up children who had been treated in day hospital, baseline diagnosis established by reviewing medical charts Type of Analysis: n/a Blindness: n/a Duration (days): Followup: 5-7 years Setting: CANADA	n= 59 Age: Mean 16 Range 12-20 Sex: 48 males 11 females Diagnosis: 9% BPD by K-SADS-PL 23% Major Depressive Disorder by K-SADS-PL 36% ADHD by K-SADS-PL 12% Oppositional defiant disorder by K-SADS-PL 48% Conduct Disorder by K-SADS-PL 11% Hallucinations by K-SADS-PL 11% Delusions by K-SADS-PL Notes: Ages & diagnoses at follow-up.	**Data Used** % meeting BPD diagnosis	**Group 1 N= 59** Not applicable in this study design	

Characteristics of Excluded Studies

Reference ID	Reason for Exclusion
BAILLIE2006	no data, CIC study
BERNSTEIN1993	CIC study
BERNSTEIN1996	CIC study
BEZIRGANIAN1993	CIC study
BRIEGER2001	no BPD data (PD general only)
BURGE1997	no data for BPD (PD general only)
CHEN2004	CIC study
COHEN1996	CIC study
COHEN2005	CIC study
COHEN2007	CIC study
CRAWFORD2001A	CIC study
CRAWFORD2001B	CIC study
CRAWFORD2005	CIC study

DALEY1999	no useable data
DALEY2006	no BPD data (Cluster B only)
GOODWIN2005	CIC study
GRILO2001	no useable data
JAMES1996	not a prospective or quasi-prospective study
JOHNSON1999A	CIC study
JOHNSON1999B	CIC study
JOHNSON2000	CIC study
JOHNSON2000B	CIC study
JOHNSON2006B	CIC study
KASEN1999	CIC study
KORENBLUM1990	no BPD data (Cluster B only)
LENZENWEGER2005	no useable data
LEVY1999	no BPD data (PD general only)
LEWINSOHN1997	too few BPD participants - only 1.3%
MANZANO1994	no data for BPD (PD general only)
MARTON1987	no data for BPD (PD general only)
SEGAL-TRIVITZ2006	not a prospective or quasi-prospective study
THATCHER2005	no useable data
THOMSEN1990	no data for BPD (PD general only)

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Ramklint,M., von Knorring, A.L., von Knorring, L., et al. (2003) Child and adolescent psychiatric disorders predicting adult personality disorder: a follow-up study. Nordic Journal of Psychiarty, 57, 23-28.

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Rey,J.M., Morris-Yates,A., Singh,M., et al. (1995) Continuities between psychiatric disorders in adolescents and personality disorders in young adults. American Journal of Psychiatry, 152, 895-900.

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Zelkowitz,P., Paris,J., Guzder,J., et al. (2007) A five-year follow-up of patients with borderline pathology of childhood. Journal of Personality Disorders, 21, 664-674.

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