Best Evidence Summaries of Topics in Mental Healthcare

BEST *in* MH *clinical question-answering service*

Question

"In adults with a diagnosis of Borderline Personality Disorder, how effective is Dialectical Behaviour Therapy (DBT) when compared to any other treatment in improved patient outcomes?"

Clarification of question using PICO structure (PICTRO for diagnostic questions)

Patients: Adults with a diagnosis of Borderline Personality Disorder
Intervention: Dialectical Behaviour Therapy
Comparator: Any other treatment
Outcome: Improved patient outcomes

Clinical and research implications

One SR stated that some of the problems frequently encountered by people with borderline personality disorder may be amenable to talking/behaviour treatments, and that these treatments have considerable positive effects (Binks et al. 2009). Another SR reported that the overall efficacy of psychological therapies is promising, but the authors did not report any specific clinical implications (Brazier et al. 2006). There is consensus that more long-term studies that use validated outcomes are needed. The SR by Brazier et al. (2006) provides a long list of detailed methodological recommendations for further research.

What does the evidence say?

Number of included studies/reviews (number of participants)

We identified two relevant systematic reviews (SRs) and one randomised controlled trial (RCT) (n=73) that met the inclusion criteria. The SR by Binks et al. (2009) included 7 RCTs, of which 6 (n=230) evaluated dialectical behaviour therapy (DBT). The same 6 trials were included in an earlier SR by Brazier et al. (2006).

Main findings

Both SRs included trials that compared DBT with treatment as usual (TAU), comprehensive validation therapy plus 12-step, or client centred therapy (CCT). The results appeared to vary depending on the type of scale used, whether or not the data were analysed as continuous or categorical data, and by time period. There were, however, significant differences in favour of DBT vs. TAU for the following outcomes: number of people undertaking self harm or parasuicide at 6 to 12 months, hopelessness, anxiety, depression, and suicidal ideation at 6 months. In one study that compared DBT-oriented treatment vs. CCT the following significant differences were observed in favour of DBT: parasuicidal behaviour, depression, general psychiatric severity, suicidal ideation, and anxiety. No significant differences were observed in those studies that compared DBT-substance abuse vs. TAU, or DBT-substance abuse vs. comprehensive validation therapy plus 12-step.

The RCT compared DBT with treatment as usual plus waiting list for DBT in 73 women with borderline personality disorder (Carter et al. 2010). They found no significant differences between groups for self-reported DSH episodes, general hospital-treated DSH, psychiatric hospitalisation or length of stay in general hospital or psychiatric hospital, although there was a significant improvement in both groups over time. DBT showed significant benefits for days spent in bed and some quality of life scores.

Authors conclusions

The authors of one SR (Binks et al. 2009) concluded that some problems frequently encountered by people with borderline personality disorder may be amenable to talking/behavioural treatments but all therapies remain experimental and the studies are too few and small to inspire full confidence in their results. The authors of another SR (Brazier et al. 2006) concluded that the overall efficacy of psychological therapies is promising, but that the evidence is inconclusive.

The authors of the RCT concluded that DBT showed significant benefits for the secondary outcomes of improved disability (days spent in bed) and quality of life scores when compared to treatment as usual plus waiting list (Carter et al. 2010)

Reliability of conclusions/Strength of evidence
Both of the SRs were judged to be at low risk of bias, although the RCTs included in both of them (the same studies) had small sample sizes and were considered to be of moderate quality by the SR authors (Binks et al. 2009; Brazier et al. 2006). The RCT was also well-conducted and was judged to have a low risk of bias.

What do guidelines say?

NICE guidance provides the following recommendations for psychological treatment of BPD:

When considering a psychological treatment for a person with borderline personality disorder, take into account:
● the choice and preference of the service user
● the degree of impairment and severity of the disorder
● the person's willingness to engage with therapy and their motivation to change
● the person's ability to remain within the boundaries of a therapeutic relationship
● the availability of personal and professional support.

Before offering a psychological treatment for a person with borderline personality disorder or for a comorbid condition, provide the person with written material about the psychological treatment being considered. For people who have reading difficulties, alternative means of presenting the information should be considered, such as video or DVD. So that the person can make an informed choice, there should be an opportunity for them to discuss not only this information but also the evidence for the effectiveness of different types of psychological treatment for borderline personality disorder and any comorbid conditions.

When providing psychological treatment for people with borderline personality disorder, especially those with multiple comorbidities and/or severe impairment, the following service characteristics should be in place:
● an explicit and integrated theoretical approach used by both the treatment team and the therapist, which is shared with the service user
● structured care in accordance with this guideline
● provision for therapist supervision.
Although the frequency of psychotherapy sessions should be adapted to the person's needs and context of living, twice-weekly sessions may be considered.

Do not use brief psychological interventions (of less than 3 months' duration) specifically for borderline personality disorder or for the individual symptoms of the disorder, outside a service that has the characteristics outlined above.

For women with borderline personality disorder for whom reducing recurrent self-harm is a priority, consider a comprehensive **dialectical behaviour therapy** programme.

When providing psychological treatment to people with borderline personality disorder as a specific intervention in their overall treatment and care, use the CPA to clarify the roles of different services, professionals providing psychological treatment and other healthcare professionals.

When providing psychological treatment to people with borderline personality disorder, monitor the effect of treatment on a broad range of outcomes, including personal functioning, drug and alcohol use, self-harm, depression and the symptoms of borderline personality disorder.

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Date searches conducted: 06/02/2012
Date answer completed: 06/03/2012

References

Systematic Reviews

Binks C, Fenton M, McCarthy L, Lee T, Adams C E, Duggan C. Psychological therapies for people with borderline personality disorder. Cochrane Database of Systematic Reviews 2006, Issue 1. Art. No.: CD005652. DOI: 10.1002/14651858.CD005652.

Brazier J, Tumur I, Holmes M, Ferriter M, Parry G, Dent-Brown K, *et al*. Psychological therapies including dialectical behaviour therapy for borderline personality disorder: a systematic review and preliminary economic evaluation. *Health Technol Assess* 2006;10(35).

Randomised Controlled Trials

Carter G L, Willcox C H, Lewin T J, Conrad A M, Bendit N. Hunter DBT project: randomized controlled trial of dialectical behaviour therapy in women with borderline personality disorder. *Australian and New Zealand Journal of Psychiatry* 2010; 44:162–173.

Guidelines

National Institute for Health and Clinical Excellence (2009) National Clinical Practice Guideline Number 78. Borderline Personality Disorder: Treatment And Management.
http://www.nice.org.uk/nicemedia/live/12125/43045/43045.pdf

Results

Systematic Reviews

Author (year)	Search Date	Inclusion criteria	Number of included studies	Summary of results	Risk of bias
Binks et al. (2009)	October 2002	*Patients:* Adults with a diagnosis of borderline personality disorder however diagnosed. *Intervention:* 6 broad categories were used to classify treatment interventions: Cognitive Behavioural Therapy (CBT), Behavioural Therapy, Psycho-Dynamic Therapy, Group Therapy, Miscellaneous Therapy and Standard Care. *Comparator:* not specified *Outcome:* A large number of outcomes are specified under the broader headings: Death, Global state, Behaviour, Mental state, Engagement with services, Adverse events, Prison and Service Outcomes, Satisfaction with treatment, Acceptance of treatment, Leaving the	7 RCTs (n=262)	**Dialectical behaviour therapy (DBT) vs. treatment as usual** A significant difference in favour of DBT was observed for: 1) number of people undertaking self harm or parasuicide at 6-12 months (n=63, 1 RCT, RR 0.81 (95% CI 0.66 to 0.98)) 2) hopelessness using the BHS (n=28, 1 RCT) RR 0.53 (95% CI 0.29 to 0.99)) 3) anxiety scores at 6 moths using HARS (n=20, 1 RCT)(MD -13.10 (95% CI -22.08 to -4.12)) 4) depression using the HAM-D (n=20, 1 RCT)(MD -7.20 (95% CI -13.19 to -1.21)) 5) suicidal ideation at 6 months (n=20, 1 RCT)(MD -15.30 (95% CI -25.46 to -5.14)) No difference between groups were observed for the following outcomes: 1) still meeting SCID-II criteria for the diagnosis of BPD by six months (n=28, 1 RCT) 2) admission to hospital in previous three months (n=28, 1 RCT) 3) number of people undertaking self harm or parasuicide by 6 months (n=28, 1 RCT) 4) displaying self mutilating behaviour in the previous 6 months (n=64, 1 RCT)	**Low**

		study early, Quality of life, Recidivism, Substance Abuse, Changes in employment status, Economic Outcomes. *Study design*: Randomised controlled trials.		5) anger using STAXI (n=28, 1 RCT) 6) depression using BDI (n=28, 1 RCT) 7) dissociation using the DES (n=28, 1 RCT) 8) suicidal ideation using the BSSI (n=28, 1 RCT) 9) leaving the study early (n=155, 3 RCTs) 10) substance abuse (n=64, 1 RCT) **Dialectical behaviour therapy – substance abuse vs. treatment as usual** No difference between groups were observed for the following outcomes: 1) death (n=28, 1 RCT) 2) leaving the study early (n=28, 1 RCT) 3) interviewer assessed alcohol free days (n=28, 1 RCT) (no significant differences were observed, although some data were skewed) **Dialectical behaviour therapy – substance abuse vs. comprehensive validation therapy plus 12-step** No difference between groups were observed for the following outcomes: 1) number of nights in prison (n=23, 1 RCT) 2) leaving the study early (n=23, 1 RCT) (no significant differences were observed) **Dialectical behaviour therapy – oriented treatment vs. client centred therapy** A significant difference in favour of DBT oriented therapy group was observed for:	

				1) indicator of parasuicidal behaviour (n=24, 1 RCT, RR 0.13 (95% CI 0.02 to 0.85)) 2) depression using the BDI >/=10 (n=24, 1 RCT, RR 0.50 (95% CI 0.28 to 0.88)) 3) general psychiatric severity (n=24, 1 RCT, RR 0.58 (95% CI 0.36 to 0.94)) 4) suicidal ideation (n=24, 1 RCT, RR 0.13 (95% CI 0.02 to 0.85)) 5) anxiety using BAI (n=24, 1 RCT, RR -4.50 (95% CI -8.80 to -0.20)) and depression n=24, 1 RCT, RR -6.6 (95% CI -11.95 to -1.39)) using continuous results 6) general psychiatric severity using BPRS at 6 months (n=24, 1 RCT, MD -7.41 (95% CI -13.72 to -1.10)) and 6-12 months (n=24, 1 RCT, MD –7.16 (95% CI -12.15 to -2.17)) No difference between groups were observed for the following outcomes: 1) admission to hospital (n=24, 1 RCT) 1) anxiety using BAI >/=10 and depression using HDRS >/=10 (n=24, 1 RCT) 2) leaving the study early (n=24, 1 RCT)	
Brazier et al. (2006)	March 2005	*Patients:* adults with BPD (diagnosed according to DSM-III/DSM-III-R, DSM-IV or ICD-10 criteria for BPD), with or without co-morbidity; studies on people with any personality disorder and	10 (9 RCTs and 1 non-RCT) (n=760)	**Dialectical behaviour therapy (DBT) vs. treatment as usual** Of four studies (n=121 analysed), three reported significantly greater improvements of borderline symptoms such as parasuicide and/or suicide attempts and drug use. One study did not find significant differences between DBT and TAU groups. Two studies found no difference between groups in terms of hospital admission.	**Low**

		DSH were also included, where subgroup analysis of BPD was available *Intervention:* psychological therapies, including DBT *Comparators:* any psychiatric or psychological treatment, or no treatment *Outcomes:* self-harm, suicide, interpersonal and social functioning, crisis presentations to mental health services, quality of life, patient preference, satisfaction, acceptability of treatment and cost *Study design:* published papers were assessed according to the accepted hierarchy of evidence, whereby systematic reviews of RCTs are taken to be the most authoritative forms of evidence, with uncontrolled observational studies the least authoritative Exclusion criteria: papers on		**Dialectical behaviour therapy – oriented treatment vs. client centred therapy** One RCT (n=24) reported that the suicide/self-harm behaviour was significantly improved in the DBT group compared to CCT group at 6 months and 12 months. Patients who had DBT-oriented therapy had significantly lower scores on impulsiveness, anger and depression at 12 months. There were no significant differences between groups for the number of days of psychiatric hospitalisation. **Dialectical behaviour therapy – substance abuse vs. comprehensive validation therapy plus 12-step** One RCT (n=23) reported no significant differences between groups for BSI scores, parasuicide behaviour, or the incidence of psychiatric and drug-related visits to emergency rooms and inpatient units.	

		personality disorder and DSH without separate BPD subgroup analyses.			

RCTs

Author (year)	Inclusion criteria	Number of participants	Summary of results	Risk of bias
Carter et al. (2010)	*Patients:* Women, aged 18-65 years, with borderline personality disorder, and having multiple episodes of deliberate self-harm (DSH); at least three self-reporting in the previous 12 months. Exclusion criteria were presence of a disabling organic condition, schizophrenia, bipolar affective disorder, psychotic depression, florid antisocial behaviour, or developmental disability. *Intervention:* Dialectical	N=73	There were no significant differences between groups for self-reported DSH episodes, general hospital-treated DSH, psychiatric hospitalisation or length of stay in general hospital or psychiatric hospital, although there was a significant improvement in both groups over time. DBT showed significant benefits for improved disability and quality of life scores. Disability and quality of life were secondary outcomes and were evaluated using per-protocol analysis. There was no significant difference between groups for one measure of overall disability (days out of role), however, there was a significant benefit for ‘days spent in bed’, with an absolute difference of 4 days per month per person. There was a significant beneficial effect for time (linear) and group × time (linear), in favour of DBT, for three of the four domains of quality of life: Physical, Psychological and Environmental. Similarly there was a significant effect for time ($p< 0.01$) and group ($p< 0.05$) for Physical Domain; time ($p<0.001$) and group × time ($p< 0.05$) for Psychological Domain; but only for time ($p<0.01$) for Environmental Domain in the confirmatory analyses. There was a significant	**Low**

	behaviour therapy (DBT) plus treatment as usual *Comparator:* Treatment as usual plus waiting list for DBT *Outcome:* deliberate self-harm; general hospital admission for DSH; any psychiatric admission; length of hospital stay; disability; quality of life *Duration:* 6 months		beneficial effect for time (linear) in the Social Domain but no significant effect for group. Similarly, there was a significant effect only for time ($p < 0.001$) for the Social Domain in the confirmatory mixed-effects analyses.	

Risk of Bias:

SRs

Author (year)	Risk of Bias				
	Inclusion criteria	Searches	Review Process	Quality assessment	Synthesis
Binks et al. (2009)	☺	☺	☺	☺	☺
Brazier et al. (2006)	☺	☺	☺	☺	☺

RCTs

Study	RISK OF BIAS					
	Random allocation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective Reporting
Carter et al. (2010)	?	☺	?	☺	☺	?

? Unclear Risk

Search Details

Source	Search Strategy	Number of hits	Relevant evidence identified
SRs and Guidelines			
NICE	(DBT OR Dialectical*) AND (borderline OR BPD)	9	1
DARE	#1 MeSH DESCRIPTOR Borderline Personality Disorder EXPLODE ALL TREES #2 (DBT) OR (dialectical*) #3 (psychotherap*) #4 (borderline OR BPD) #5 (therap*) IN DARE #6 2 OR 3 OR 5 #7 4 AND 6 #8 1 OR 7	28	2
Primary studies			
CENTRAL	#1 (BPD) or "borderline personality disorder" in Trials 509 edit delete #2 MeSH descriptor Borderline Personality Disorder explode all trees 197 edit delete #3 (#1 OR #2), from 2009 to 2012 64 edit delete #4 (DBT) or "dialectical behaviour therapy" or "dialectical behavior therapy" in Trials 87 edit delete	8	3 from all databases

	#5 (#3 AND #4), from 2009 to 2012 8 edit delete		
PsycINFO	1. PsycINFO; BPD.ti,ab; 2928 results. 2. PsycINFO; BORDERLINE PERSONALITY DISORDER/; 3061 results. 3. PsycINFO; "borderline personality disorder".ti,ab; 5038 results. 4. PsycINFO; 1 OR 2 OR 3; 6234 results. 5. PsycINFO; "dialectical behav* therapy".ti,ab; 797 results. 6. PsycINFO; DIALECTICAL BEHAVIOR THERAPY/; 377 results. 7. PsycINFO; dialectical.ti,ab; 3343 results. 8. PsycINFO; DBT.ti,ab; 594 results. 9. PsycINFO; 5 OR 6 OR 7 OR 8; 3430 results. 10. PsycINFO; 4 AND 9; 455 results. 11. PsycINFO; CLINICAL TRIALS/; 5796 results. 12. PsycINFO; random*.ti,ab; 105887 results. 13. PsycINFO; groups*.ti,ab; 317909 results. 14. PsycINFO; (doubl* adj3 blind*).ti,ab; 15939 results. 15. PsycINFO; (singl* adj3 blind*).ti,ab; 1295 results. 16. PsycINFO; EXPERIMENTAL DESIGN/; 8131 results. 17. PsycINFO; controlled.ti,ab; 66257 results. 18. PsycINFO; (clinical adj3 study).ti,ab; 6618 results. 19. PsycINFO; trial.ti,ab; 55745 results. 20. PsycINFO; "treatment outcome clinical trial".md; 21038 results. 21. PsycINFO; 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20; 487148 results. 22. PsycINFO; 10 AND 21; 130 results. 23. PsycINFO; 22 [Limit to: Publication Year 2009-Current]; 52 results.	52	
MEDLINE	1. MEDLINE; "borderline personality disorder".ti,ab; 2999 results. 2. MEDLINE; BORDERLINE PERSONALITY DISORDER/; 4277 results. 3. MEDLINE; BPD.ti,ab; 4396 results. 4. MEDLINE; 1 OR 2 OR 3; 8022 results. 5. MEDLINE; "dialectical behav* therapy".ti,ab; 250 results. 6. MEDLINE; dialectical.ti,ab; 697 results. 7. MEDLINE; DBT.ti,ab; 972 results.	20	

	8. MEDLINE; 5 OR 6 OR 7; 1531 results. 9. MEDLINE; 4 AND 8; 170 results. 10. MEDLINE; "randomized controlled trial".pt; 319622 results. 11. MEDLINE; "controlled clinical trial".pt; 83492 results. 12. MEDLINE; randomi?ed.ab; 281002 results. 13. MEDLINE; placebo.ab; 132762 results. 14. MEDLINE; "drug therapy".fs; 1499565 results. 15. MEDLINE; randomly.ab; 173010 results. 16. MEDLINE; trial.ab; 242933 results. 17. MEDLINE; groups.ab; 1135136 results. 18. MEDLINE; 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17; 2871392 results. 19. MEDLINE; 9 AND 18; 64 results. 20. MEDLINE; 19 [Limit to: Publication Year 2009-Current]; 20 results.		
EMBASE	1. EMBASE; "borderline personality disorder".ti,ab; 3770 results. 2. EMBASE; BORDERLINE PERSONALITY DISORDER/; 7328 results. 3. EMBASE; BPD.ti,ab; 5403 results. 4. EMBASE; 1 OR 2 OR 3; 11531 results. 5. EMBASE; "dialectical behav* therapy".ti,ab; 390 results. 6. EMBASE; DBT.ti,ab; 1296 results. 7. EMBASE; dialectical.ti,ab; 895 results. 8. EMBASE; 5 OR 6 OR 7; 1956 results. 9. EMBASE; 4 AND 8; 278 results. 10. EMBASE; random*.tw; 682343 results. 11. EMBASE; factorial*.tw; 17833 results. 12. EMBASE; placebo*.tw; 165020 results. 13. EMBASE; (crossover* OR cross-over*).tw; 58075 results. 14. EMBASE; (doubl* adj3 blind*).tw; 121482 results. 15. EMBASE; (singl* adj3 blind*).tw; 13289 results. 16. EMBASE; assign*.tw; 191006 results. 17. EMBASE; allocat*.tw; 64270 results.	22	

	18. EMBASE; volunteer*.tw; 148819 results. 19. EMBASE; CROSSOVER PROCEDURE/; 31837 results. 20. EMBASE; DOUBLE-BLIND PROCEDURE/; 102998 results. 21. EMBASE; SINGLE-BLIND PROCEDURE/; 14804 results. 22. EMBASE; RANDOMIZED CONTROLLED TRIAL/; 297225 results. 23. EMBASE; 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21 OR 22; 1131258 results. 24. EMBASE; 9 AND 23; 68 results. 25. EMBASE; 24 [Limit to: Publication Year 2009-Current]; 22 results.		
Summary	**NA**	**NA**	

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