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 Mentalisation based therapy (MBT) when compared to any other treatment in improved patient outcomes?

Clarification of question using PICO structure

Patients: In adults with a diagnosis of Borderline Personality Disorder
Intervention: Mentalisation based therapy (MBT or originally psychoanalytically orientated partial hospitalisation)
Comparator: Any other treatment
Outcome: Improved patient outcomes

Clinical and research implications

The available evidence suggests that mentalisation based therapy/ psychoanalytically orientated partial hospitalisation can offer improvements in suicidal and self-harm behaviours and self-reported anxiety, depression and functional outcomes for patients with borderline personality disorder, when compared with standard psychiatric care. These improvements appear to be sustained over the longer term. However, it should be noted that these conclusions are based on the results of two, relatively small, trials, which both appear to have been conducted by the originators of the intervention. Therefore, as noted by the authors, further large, independent studies are needed to confirm their findings.

What does the evidence say?

Number of included studies/reviews (number of participants)
We identified four articles, reporting results from two RCTs[1,4] and two follow-up studies[2,3] from the first RCT, which met the PICO criteria for this question. A total of 178 participants were included in these studies and both trials compared MBT with standard care for borderline personality disorder; the earlier trial compared psychoanalytically orientated partial hospitalisation with standard care,[1] and the 2009 trial assessed the effectiveness of an outpatient-based MBT program compared with outpatient-based structured clinical management (SCM based on usual non-specialist UK practice.[4]

Main Findings

Both trials reported suicidal and self-harm behaviours and resource use (e.g. hospitalisation) as their primary outcome measures. The first trial reported decreases in suicidal and self-harm behaviour, over the 18 month treatment period, for the psychoanalytically orientated partial hospitalisation treatment group with no change for the control group, and increased hospitalisations for the control group with no change for the treatment group.[1] The second trial found decreases in suicidal behaviour, self-harm and hospital admissions for both treatment groups over the 18 month treatment period; treatment effects were greater for the MBT group after 6 months (suicidal behaviour and self-harm) and throughout the treatment period (hospitalisation).[4]

Secondary, self-reported outcomes were included in both trials. The first trial reported that State Trait Anxiety score, Beck's Depression Inventory score, and global symptom severity score (SCL-90-R) were decreased in the psychoanalytically orientated partial hospitalisation treatment group, but not in the control group, and the Social Adjustment scale was lower in the psychoanalytically orientated partial hospitalisation treatment group than in the control group at the end of the study.[1] The second study reported reductions in Global Assessment of Functioning (GAF) scale and self reported symptom severity, depression, interpersonal functioning, and social adjustment for both treatments (MBT and SCM), with effect size being greater for MBT in all cases.

The two follow-up studies reported maintenance of all clinical effects at 18 months follow-up[2] and five years post-discharge[3] from the Bateman 1999 study.[1] The 18-month follow-up study also suggested that interpersonal and social skills may continue to improve after the end of treatment.[2]

Authors Conclusions

Both trails concluded that psychoanalytically oriented partial hospitalisation/mentalisation-based treatment is superior to standard psychiatric care for patients with borderline personality Disorder and both recommended further research to confirm their findings. The two follow-up studies concluded that the effects of this treatment are maintained in the longer term.

Reliability of conclusions/Strength of evidence

The studies were generally well conducted and reported and the data presented support the authors' conclusions. However, it should be noted that all conclusions are based on the results of two, relatively small, trials, which both appear to have been conducted by the originators of psychoanalytically oriented partial hospitalisation/mentalisation-based treatment therapies. Therefore, as noted by the authors, further large, independent studies are needed to confirm their findings.

What do guidelines say?

NICE Clinical Guideline 78. Borderline Personality Disorder: Treatment and Management. January 2009 http://www.nice.org.uk/nicemedia/live/12125/43045/43045.pdf does not include any specific guidance for the use of psychoanalytically oriented partial hospitalisation/mentalisation-based treatment.

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Date answer completed: 20/02/2012

References

RCTs

1. Bateman AW, Fonagy P. Effectiveness of Partial Hospitalization in the Treatment of Borderline Personality Disorder: A Randomized Controlled Trial. American Journal of Psychiatry 1999; 156:10.

2. Bateman AW, Fonagy P. Treatment of Borderline Personality Disorder With Psychoanalytically Orientated Partial Hospitalization: An 18-Month Follow-up. American Journal of Psychiatry 2001; 158:36-42

3. Bateman AW, Fonagy P. 8-Year Follow-Up of Patients Treated for Borderline Personality Disorder: Mentalization-Based Treatment Versus Treatment as Usual. American Journal of Psychiatry 2008; 165:631–638

4. Bateman AW, Fonagy P. Randomized Controlled Trial of Outpatient Mentalization-Based Treatment Versus Structured Clinical Management for Borderline Personality Disorder. American Journal of Psychiatry 2009; 166:1355–1364

Guidelines

5. NICE Clinical Guideline 78. Borderline Personality Disorder: Treatment and Management. January 2009 http://www.nice.org.uk/nicemedia/live/12125/43045/43045.pdf

Results

RCTs/DTAs

Author (year)	Inclusion criteria	Number of participants	Summary of results	Risk of bias
Bateman (1999)	All patients referred during 1993 and 1994 were assessed by using standardized criteria for borderline personality disorder, namely, the Structured Clinical Interview for DSM-III-R (SCID) and the Diagnostic Interview for Borderline Patients. A cut off score of 7 or more was used to determine a formal diagnosis of borderline personality disorder. If patients met both sets of criteria for borderline personality disorder, they were selected for random assignment either to treatment by means of partial hospitalization or to standard outpatient psychiatric treatment. Patients were excluded from the study if they also met DSM-III-R criteria (based on the SCID) for schizophrenia, bipolar disorder, substance misuse, or mental impairment or had evidence of organic brain disorder.	N=44	This study compared the effectiveness of psychoanalytically oriented partial hospitalization with standard psychiatric care for patients with borderline personality disorder. Treatment for the partially hospitalized group consisted of: weekly individual psychoanalytic psychotherapy; thrice weekly group analytic psychotherapy (1 hour per session); weekly expressive therapy oriented toward psychodrama techniques (1 hour per session); a weekly community meeting (1 hour. Patients also had a monthly meeting with the case administrator and medication review. Medication consisted of antidepressant and antipsychotic drugs, as appropriate. The mean length of stay was 1.45 years, and attendance of psychotherapy sessions was 62%. The control group received standard treatment. This consisted of: regular psychiatric review with a senior psychiatrist as needed (average, twice per month); inpatient admission as appropriate (admission rate=90%, average stay=11.6 days), with discharge to non-psychoanalytic psychiatric partial hospitalization focusing on problem solving (72% were partially hospitalized, with an average length of stay of 6 months); outpatient and community follow-up (100%, every-2-week visits by a community psychiatric nurse) . There were no significant differences between the treatment and control groups at baseline in any of the demographic or clinical variables, or in the types and dosage of medication.	The nature of the intervention precludes blinding of participants and personnel. Some of the outcome measures reported could potentially have been assessed independently by staff who were blind to treatment allocation, however, it was not clear from the article whether this was the case.

			Acts of self-harm and clinical outcome measures: The treatment group showed a significant decrease in the number of incidents of self-mutilating behaviour (measured over 6 months); the median incidence decreased from 9 to 1. There was no significant change in the control group. The number of individuals no-longer self-mutilating was significantly greater in the treatment than in the control group by 18 months. Interview coding for the presence of absence of suicide attempts showed a highly significant reduction in reported suicide attempts for the treatment group (94.7% mean 1.68 on admission, to 5.3% mean 0.16 at 18 months). There was no significant change in the control group. The number of patients who were no longer para-suicidal was significantly greater in the treatment group than in the control group by 12 months. The mean length of hospitalisation increased during the last six months of the study in the control group and remained constant in the treatment group. The need for medication was significantly decreased in both groups, but the reduction was significantly greater in the treatment group (38% still taking medication) than in the control group (78%). Self-reported measures: Both self-reported state and trait anxiety scores (Spielberger State-Trait Anxiety Inventory) decreased significantly in the treatment group, but not in the control group. State: treatment group admission mean 68.4 ±7.0, 18 month adjusted mean 51.3; Trait treatment group admission mean 66.5±6.1, 18 month adjusted mean 55.2. Group differences emerged from 9 months. Beck Depression Inventory scores also significantly decreased	Three patients in the control group crossed over to the treatment group after serious suicide attempts leading to inpatient medical and psychiatric Treatment, and three patients in the treatment group dropped out of treatment within 6 months. The authors state that these patients were excluded from the analyses, however, they also report that re-analysis (including these patients) did

			in the partially hospitalized group, but not in the control group; the change was significant after 9 months. Treatment group admission mean BDI 36.0±7.6, 18 month adjusted mean 20.3. The severity of symptoms reported on the global severity index scale of the SCL-90-R decreased in the treatment group. The total Social Adjustment Scale (self-report score) was significantly lower for the treatment group (mean=2.8) than for the control group (mean=3.3) at the end of the study (18 months) when adjusted for baseline values.	not change their results.
Bateman (2001)	This study was a follow up to the Bateman 1999 paper. The same inclusion criteria apply	N=44	This study assessed whether the treatment effects observed during the Bateman 1999 study (above) were maintained over an 18 month post-treatment follow-up period. Follow-up was at 24, 30 and 36 months from the start of the treatment study. Outcomes were assessed using the same measures/instruments as during the treatment phase of the study. Acts of self-harm and clinical outcome measures: There were significantly fewer incidences of self-mutilation in the treatment group, during the 18 month follow-up period, (mean 0.6±1.6) than in the control group (mean 10.9±11.8). Similarly, fewer suicide attempts were made, during the 18 month follow-up period, by patients from the treatment group (n=4) than by patients from the control group (n=28). The mean number of inpatient days and outpatient psychiatric consultations were significantly fewer for the treatment group than for the control group, at all follow-up points. Community centre visits were significantly fewer for the treatment group	As for Bateman 1999, the nature of the intervention precludes blinding of participants and personnel. Outcome assessments were not blind, however, the authors stated that all outcomes were based on objective clinical

			after the second follow-up point (30 months). Significantly fewer patients from the treatment group (27.3%) than from the control group (73.7%) were still taking medication at the end of the 18 month follow-up period. Self-reported measures: Patients from the treatment group had significantly lower state and trait anxiety scores (Spielberger State-Trait Anxiety Inventory) than those from the control group, throughout the 18 month follow-up; pair-wise comparisons showed significant differences between treatment and control at the end of the treatment period and at the end of follow-up. Patients from the treatment group had significantly lower BDI scores than those from the control group; pair-wise comparisons showed significant differences at all assessment points from the end of treatment to the end or follow-up. Patients from the treatment group had significantly lower global severity index (SCL-90-R) and mean positive symptom scores than those from the control group; pair-wise comparisons showed no significant difference at the end off treatment, but significantly lower scores for the treatment group throughout follow-up. The mean scores for both the Interpersonal Problems and Social Adjustment scales were significantly lower for patients from the treatment group than for those from the control group at the end of treatment and differences increased throughout follow-up.	records confirmed by independent evaluation, or were self-report measures. All patients from the original study (Bateman 1999), including dropouts and crossovers, were included in this follow-up study; the authors state that dropouts and crossovers were included in the analyses, but this does not appear to be supported by the numbers of patients reported in the outcomes

				tables. No patients in the treatment group were lost to follow-up, but some refused continued assessment. Three patients in the control group refused continued participation. However, complete medical records were available for all patients.
Bateman (2008)	This study was a follow up to the Bateman 1999 paper. The same inclusion criteria apply	N=44	This study evaluated the effect of mentalization-based treatment by partial hospitalization compared to standard treatment 8 years after entry into a randomised, controlled trial (Bateman 1999) and 5 years after all mentalization-based treatment was complete (5 years after the end of Bateman 2001). The primary outcome measure was the number of suicide attempts over the while 5-year post-discharge follow-up.; service use measures were also assessed. Self-harm was not reported as it could nor be independently corroborated from medical records and patient recall was considered unreliable. Secondary outcomes measures were symptom status at	As for Bateman 1999, the nature of the intervention precludes blinding of participants and personnel. Outcome assessment

			follow-up interview (Zanarini rating scale for DSM-IV borderline personality disorder) and global functioning (Global Assessment of Functioning scale (GAF)). There was a significant difference in the total number of suicide attempts over the follow-up period between patients from the treatment group (mean 0.05±0.9, 23% attempted suicide) and patients from the control group (mean 0.52±0.48, 74% attempted suicide); significant differences were apparent during treatment and at all post-discharge time points. The mean number of emergency room visits and hospital days over the 5 year post-discharge period was lower for patients from the treatment group (0.77±1.10 and 0.27±0.71) than for those from the control group (6.4±5.7 and 6.2±5.6). Similarly, the control group received significantly more psychiatric outpatient treatment (3.6 years) and assertive community support (2.7 years) than did the treatment group (2 years and 5 months). At the end of the follow-up period, 13%of patients from the treatment group met the diagnostic criteria for borderline personality disorder, compared 87% of patients from the control group. There was a >6-point difference in the GAF scores between the two groups, at the end of the follow-up period; effect size 0.8 (95% CI: –1.9 to 3.4).	was by research psychologists blind to original group allocation and structured review of medical records. This study included 41 of the 44 patients from the original study (dropouts from the treatment study appear to have been excluded. In addition: One patient in the control group had committed suicide; five patients (three in the control group

				and two in treatment group) refused a personal Interview, the two treatment group patients accepted a telephone interview.
Bateman (2009)	Patients (N=168) were recruited from consecutive referrals for personality disorder treatment from clinical services between January 2003 and February 2006. All participants were assessed using the Structured Clinical Interview for DSM-IV (SCID-I and SCID-II). Inclusion criteria were 1) diagnosis of borderline personality disorder, 2) suicide attempt or episode of life-threatening self-harm within last 6 months, and 3) age 18–65. Patients were excluded if they: were in long-term psychotherapeutic treatment; met DSM-IV criteria for psychotic disorder or bipolar I disorder; had opiate	N=134	This study compared the effectiveness of an 18-month mentalization-based treatment (MBT) approach in an outpatient context with a structured clinical management (SCM) outpatient approach for treatment of borderline personality disorder. MBT treatment consisted of 18 months of weekly combined individual and group psychotherapy provided by two different therapists. The SCM treatment protocol was developed by the authors to reflect best generic practice for borderline personality disorder offered by non-specialist practitioners within U.K. psychiatric services. Regular individual and group sessions were offered with appointments every 3 months for psychiatric review. Therapy was based on a counselling model closest to a supportive approach with case management, advocacy support, and problem-oriented psychotherapeutic interventions. Medication was prescribed by a member of the treatment team (MBT) or the consultant psychiatrist (SCM) and patients were offered medication reviews every three months.	The nature of the intervention precludes blinding of participants and personnel. Some of the outcome measures reported could potentially have been assessed independently by staff who were blind to treatment allocation,

	dependence requiring specialist treatment; had mental impairment or evidence of organic brain disorder.		There were no significant differences between the MBT and SCM treatment groups at baseline in any of the demographic or clinical variables, with the exception that rape was significantly more common in the MBT group. Primary outcomes: Six-month periods free of suicidal behaviours, severe self-injurious behaviours, and hospitalization improved from 0% to 43% in the SCM group and to 73% in the MBT group over the treatment period; relative risk (RR) 1.7 (95% CI: 1.23 to 2.35). Improvement in suicidal behaviour was significantly greater in the MBT group than in the SCM group; in the last 6 months of treatment 2 patients in the MBT group compared with 16 in the SCM group made a suicide attempt, RR 0.11 (95% CI: 0.02 to 0.46), however, differences between groups only became significant in the last 6 months of treatment. Similarly, during the last 6 months of treatment, fewer patients in the MBT group than in the SCM group severely self-harmed (24% versus 43%); RR 0.55 (95% CI: 0.33 to 0.92). However, during the first 6 months of treatment more patients in the MBT group than in the SCM group self-harmed. The number of hospitalisations was significantly lower for the MBT group than for the SCM group over the whole study period, RR 0.14 (95% CI: 0.3 to 0.64), with the difference between the groups increasing over time. Secondary outcomes: GAF ratings increased substantially for both groups over the study period, with a significantly greater increase associated with the MBT group. There was improvement in all self rated measures (symptom severity, depression, interpersonal functioning, and social adjustment) for both treatment groups, with the rate of improvement and size of effect at the	however, it was not clear from the article whether this was the case. Analyses appear to have been conducted on a intention-to-treat basis.

			end of treatment being greater for the MBT group on all four measures. Medication use was reduced in both groups at the end of treatment.	

RCTs

Study	RISK OF BIAS					
	Random allocation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective Reporting
Study 1	☺	?	☹	?	☺	☺
Study 2	☺	?	☹	☹	☹	☺
Study 3	☺	?	☹	☺	☹	☺
Study 4	☺	☺	☹	?	☺	☺

DTA Studies

☺ Low Risk ☹ High Risk ? Unclear Risk

Search Details

Source	Search Strategy	Number of hits	Relevant evidence identified
SRs and Guidelines			
NICE	(mentali* OR MBT) AND (borderline OR BPD)	4	1
DARE	#1 MeSH DESCRIPTOR Borderline Personality Disorder EXPLODE ALL TREES #2 (MBT) OR (Mentali$*) #3 (psychotherap*) #4 (borderline OR BPD) #5 (therap*) IN DARE #6 2 OR 3 OR 5 #7 4 AND 6 #8 1 OR 7	25	0
Primary studies			
CENTRAL	#1 "borderline personality disorder" or (BPD) in Trials 509 edit delete #2 MeSH descriptor Borderline Personality Disorder explode all trees 197 edit delete #3 (#1 OR #2) 509 edit delete #4 (mentalis*) or (mentaliz*) in Trials 15 edit delete #5 (mentalization) or (mentalisation) in Trials 6 edit delete #6 (mentalising) or (mentalizing) in Trials 7 edit delete #7 (#4 OR #5 OR #6 OR #9) 15 edit delete	4	4

	#8 (#3 AND #7) 4 edit delete #9 psychoanalytic AND orientated AND partial AND hospitali$ation		
PsycINFO	1. PsycINFO; "borderline personality disorder".ti,ab; 5020 results. 2. PsycINFO; BORDERLINE PERSONALITY DISORDER/; 3047 results. 3. PsycINFO; BPD.ti,ab; 2917 results. 4. PsycINFO; 1 OR 2 OR 3; 6216 results. 5. PsycINFO; mentalisation.ti,ab; 78 results. 6. PsycINFO; mentalization.ti,ab; 545 results. 7. PsycINFO; MBT.ti,ab; 58 results. 8. PsycINFO; (mentalising OR mentalizing).ti,ab; 517 results. 9. PsycINFO; 5 OR 6 OR 7 OR 8 OR 22; 1067 results. 10. PsycINFO; 4 AND 9; 117 results. 11. PsycINFO; CLINICAL TRIALS/; 5750 results. 12. PsycINFO; random*.ti,ab; 105611 results. 13. PsycINFO; groups*.ti,ab; 317479 results. 14. PsycINFO; (doubl* adj3 blind*).ti,ab; 15889 results. 15. PsycINFO; (singl* adj3 blind*).ti,ab; 1292 results. 16. PsycINFO; EXPERIMENTAL DESIGN/; 8127 results. 17. PsycINFO; controlled.ti,ab; 66080 results. 18. PsycINFO; (clinical adj3 study).ti,ab; 6608 results. 19. PsycINFO; trial.ti,ab; 55598 results. 20. PsycINFO; "treatment outcome clinical trial".md; 20956 results. 21. PsycINFO; 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20; 486376 results. 22. PsycINFO; 10 AND 21; 17 results. 23. PsycINFO; psychoanalytic AND orientated AND partial AND hospitali$ation	17	
MEDLINE	1. MEDLINE; "borderline personality disorder".ti,ab;	12	

	2998 results. 2. MEDLINE; BORDERLINE PERSONALITY DISORDER/; 4277 results. 3. MEDLINE; BPD.ti,ab; 4396 results. 4. MEDLINE; 1 OR 2 OR 3; 8021 results. 5. MEDLINE; (mentalis* OR mentaliz*).ti,ab; 799 results. 6. MEDLINE; MBT.ti,ab; 1174 results. 7. MEDLINE; 5 OR 6 OR 28; 1965 results. 8. MEDLINE; 4 AND 7; 47 results. 9. MEDLINE; "randomized controlled trial".pt; 319620 results. 10. MEDLINE; "controlled clinical trial".pt; 83492 results. 11. MEDLINE; randomi?ed.ab; 280806 results. 12. MEDLINE; placebo.ab; 132700 results. 13. MEDLINE; "drug therapy".fs; 1499565 results. 14. MEDLINE; randomly.ab; 172918 results. 15. MEDLINE; trial.ab; 247217 results. 16. MEDLINE; groups.ab; 1134532 results. 17. MEDLINE; 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16; 2870564 results. 18. MEDLINE; "randomized controlled trial".pt; 319620 results. 19. MEDLINE; "controlled clinical trial".pt; 83492 results. 20. MEDLINE; randomi?ed.ab; 280806 results. 21. MEDLINE; placebo.ab; 132700 results. 22. MEDLINE; "drug therapy".fs; 1499565 results. 23. MEDLINE; randomly.ab; 172918 results. 24. MEDLINE; trial.ab; 242775 results. 25. MEDLINE; groups.ab; 1134532 results. 26. MEDLINE; 18 OR 19 OR 20 OR 21 OR 22 OR 23 OR 24 OR 25; 2870564 results.		

	27. MEDLINE; 8 AND 26; 12 results. 28. MEDLINE; psychoanalytic AND orientated AND partial AND hospitali$ation		
EMBASE	1. EMBASE; "borderline personality disorder".ti,ab; 3764 results. 2. EMBASE; BORDERLINE PERSONALITY DISORDER/; 7317 results. 3. EMBASE; BPD.ti,ab; 5391 results. 4. EMBASE; 1 OR 2 OR 3; 11509 results. 5. EMBASE; (mentalis* OR mentaliz*).ti,ab; 1035 results. 6. EMBASE; MBT.ti,ab; 1418 results. 7. EMBASE; 5 OR 6 OR 24; 2442 results. 8. EMBASE; 4 AND 7; 75 results. 9. EMBASE; random*.tw; 680790 results. 10. EMBASE; factorial*.tw; 17787 results. 11. EMBASE; placebo*.tw; 164757 results. 12. EMBASE; (crossover* OR cross-over*).tw; 58009 results. 13. EMBASE; (doubl* adj3 blind*).tw; 121309 results. 14. EMBASE; (singl* adj3 blind*).tw; 13269 results. 15. EMBASE; assign*.tw; 190464 results. 16. EMBASE; allocat*.tw; 64086 results. 17. EMBASE; volunteer*.tw; 148617 results. 18. EMBASE; CROSSOVER PROCEDURE/; 31796 results. 19. EMBASE; DOUBLE-BLIND PROCEDURE/; 102866 results. 20. EMBASE; SINGLE-BLIND PROCEDURE/; 14775 results. 21. EMBASE; RANDOMIZED CONTROLLED TRIAL/;	16	

	296765 results. 22. EMBASE; 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21; 1128970 results. 23. EMBASE; 8 AND 22; 16 results. 24. EMBASE; psychoanalytic AND orientated AND partial AND hospitali$ation		
Summary	**NA**	**NA**	

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