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PERSONALITY DISORDERS (K BERTSCH, SECTION EDITOR)

Mentalization-Based Treatment for Personality Disorders: Efficacy, Effectiveness, and New Developments

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Abstract

Purpose of the Review This review aims to outline the most recent evidence on the efficacy and effectiveness of mentalization-based treatment (MBT) for personality disorders (PD) from 2015 to 2018 and to describe new treatment developments.

Recent Findings Since 2015, 14 new—primarily effectiveness—MBT trials have been published. The main body of studies investigated adult populations ($n = 11$), patients with a borderline personality disorder (BPD) diagnosis ($n = 8$), and compared MBT with another psychotherapeutic treatment ($n = 6$). The majority of studies suggest that MBT has the potential to improve the clinical outcomes for adolescents and adults with a PD diagnosis, particularly BPD, and also with comorbid diagnoses and there are indications for changes in mentalizing being a specific mechanism of change promoted by MBT.

Summary Despite promising findings, there is an urgent need for methodological sound and sufficiently powered studies to investigate both the efficacy and effectiveness of MBT, especially beyond BPD.

Keywords Mentalizing · Personality disorders · Clinical trials · Review

Introduction

Several systematic reviews on the efficacy of psychological therapies for personality disorders (PDs) have been published, most of which have focused on treatments for borderline PD (BPD) [1–6]. The Cochrane review [6] listed mentalization-based treatment (MBT) among other therapies as 'probably effective' in treating BPD and called for further studies investigating more than one psychological treatment. Recent meta-analyses on randomized controlled trials (RCTs) investigating psychotherapy efficacy in reducing suicidal attempts, non-suicidal self-injury (NSSI) [7], and BPD symptoms [3] have pointed out superiority of MBT and dialectical behavior therapy (DBT) compared to other interventions. While so far, most of the studies included in meta-analyses have investigated DBT, theoretical orientation of treatment did not moderate reduction of BPD symptoms. Leichsenring et al. [5] and the Cochrane review [6] criticize the general low study quality in BPD trials due to researcher allegiance, attention bias, and small samples and recommend to conduct confirmatory trials with high study quality and sufficient sample sizes.

This review aims to outline the most recent evidence on the efficacy of MBT for PDs since 2015 and also to describe new developments. While MBT has originally been developed for the treatment of BPD, and most studies have been conducted on this disorder, this review will largely focus on BPD, but also include other PDs and comorbidities, where evidence is available meanwhile.

The review will give an introduction to MBT and its clinical concept before describing and focusing on the discussion of the current evidence base and outlining new MBT developments. The paper will close with summarizing the findings and providing recommendations for future studies.

This article is part of the Topical Collection on *Personality Disorders*

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Mentalization-Based Treatment for PD

Individuals with personality disorders (PDs) show significant impairments in self (identity or self-direction) and interpersonal (empathy or intimacy) personality functioning. Moreover, they present pathological personality traits characterized by

stability over time and consistency across different contexts [8].

In a recent meta-analysis with $n = 113{,}998$ included individuals from community samples of 10 studies in Western countries, the prevalence rate was 12.16% for any PD [9]. Among individuals receiving psychiatric or psychotherapeutic treatment, BPD was found to be the most frequent PD (10% of outpatients, 15–25% of inpatients) [10].

Individuals with PD are at high risk for alcohol and drug abuse [11, 12], as well as for self-harming or suicidal ideation and behavior [13, 14]. Accordingly, mortality in PD is high [5, 14, 15]. Lower levels of education as well as interpersonal conflicts are also characteristic for individuals with PD [12]. Interpersonal difficulties in particular can increase the risk for chronicity, as they can negatively impact the course of treatment, which might be associated with worse treatment outcomes [16]. Yet, as treatment of PD patients is emotionally and professionally challenging for therapists, few therapists offer treatment with this patient group and only 3% of therapists treating these patients have a BPD specific qualification, although 50% agree that such a qualification would be helpful [17]. Thus, there is a high need of training therapists in therapeutic approaches specifically developed for the treatment of PDs.

Mentalization-based treatment (MBT) is a manualized treatment developed by Anthony Bateman and Peter Fonagy [18], originally designed for patients with BPD. The treatment aims at improving patients' mentalizing ability, which can be described as one's imaginative ability to interpret human behavior in terms of mental states [19]. In MBT, mentalizing is indirectly targeted through empathic validation of the experience of patients within the therapeutic relationship as well as through techniques that directly aim to stabilize or enhance mentalizing [18]. Up to date, it has been shown that a number of PDs (BPD, ASPD) as well as other axis-I disorders (e.g., psychosis, eating disorders, depression) show impairments in mentalizing, possibly contributing to core problems of the disorders [20].

According to the clinical concept of MBT, effective mentalizing can be described as being genuinely curious about mental states, which may underlie behavior, flexibly interpreting oneself and others as well being aware that mentalizing may be inaccurate. Healthy mentalizing is characterized by the ability to actively shift between mentalizing poles, i.e., self and other, cognition and affect, implicit and explicit, external and internal mentalizing. For example, patients with BPD are often overwhelmed by their emotions (affective pole), make too quick assumptions (implicit pole), and focus on external cues displayed by others perceived as indicating abandonment and rejection [21]. Furthermore, three forms of inadequate mentalizing can be described from a clinical point of view: teleological mode, psychic equivalence, and pseudo-mentalizing. In the teleological mode, individuals tend to only regard behavior as evidence for internal states. In psychic equivalence, individuals generalize their internal experience onto the external world. In pseudomentalizing, individuals create mental theories lacking a connection between internal and external experience.

Change Theory The proposed mechanism of change in MBT is to stabilize mentalizing in certain focus areas to create a psychic buffer between affect and behavior to foster affect regulation, reduce impulsivity, and promote functional supportive relationships. This is reached by employing "contrary moves" to create more flexibility in using the different poles of mentalizing. If the patient is stuck in thinking about the self, the therapist will try to shift towards thinking about others, if the patient is too certain about quickly made assumptions the therapist will try to slow down and question the first assumption, etc. By sharing or disclosing the therapist's interpersonal experience with the patient from the beginning and throughout the process, the patient can find him/herself in the mind of the therapist and reflect on how the therapist is represented in the mind of the patient. Using constant empathic validation of the patient's affects and working slowly on current experiences with the therapist and other important others; the patient reestablishes social learning (epistemic trust) and is able to generalize helpful mentalizing experiences with the therapist to other relationships outside of therapy. Furthermore, by working on fostering mentalizing, the patient is thought to establish more agency and responsibility for his/her behavior with regard to core symptoms, e.g., self-harm, drug abuse.

Setting Originally, MBT was developed for inpatient settings with a duration of 18 months but soon evolved to an intensive outpatient program commonly limited to 12 months. MBT starts with a diagnostic phase, integrating the assessment of problems in mentalizing and interpersonal triggers associated with the core problem behavior into the standard diagnostic assessment. In a case formulation which is shared with the patient, the clinician writes down his current understanding of the patient's vulnerabilities and mentalizing problems placing it in the context of current relationships and behavior. The case formulation is revised quarterly and helps therapist and patient explicitly to agree on the treatment focus. Additionally, clinician and patient work out a crisis plan, which contains information on thoughts, activities, contacts, etc. the patient finds helpful or hindering during a crisis. Subsequently, the patient participates in a psycho-education group that provides information on core elements of MBT including an understanding of their diagnosis. After 12 psycho-education sessions, the group changes to MBT-group therapy focusing on elaborating perspectives from each group member. Parallel to the weekly group sessions, patients also have weekly individual sessions.

Stance The MBT stance is one of being genuinely curious and enthusiastic for mental states, being authentic, empathic, and validating. Most importantly, the MBT therapist stance is not-knowing, resulting from the acknowledgement that the mind of the other is ultimately opaque and one can never know for certain what the others' motives, thoughts, and feelings are. This creates a non-hierarchical relationship between therapist and patient paying tribute to the fact that the expert for the patient's mind is the patient rather than the therapist. In line, the therapist takes an inquisitive stance to explore together with the patient what kind of thinking is helpful or not helpful to have good relationships with others. Another focus of the MBT stance is related to the normality and benefit of misunderstanding each other. Misunderstanding is perceived as an opportunity to learn about perceptions, interpretations, and subjective experience. The therapist actively structures the session by focusing on topics related to the case formulation, management of arousal, and monitoring of the level of mentalizing.

Key Interventions Interventions start from the surface and work towards relational mentalizing of the therapeutic relationship if the current arousal and level of mentalizing allows. During times of high arousal, it is recommended to intervene supportively by empathically validating the patient's subjective experience and addressing non-mentalizing by exploring affects, certainties, quick assumptions, and by challenging pseudo-mentalizing. The techniques are called "stop and stand" or "stop, rewind and explore" that slow down the processing of current experiences. Lower levels of arousal allow to start basic mentalizing around the focus of treatment such as triggers of strong affects and effect on behavior and others as well as linking different experiences to patterns of experience. Finally, exploring the current affect during the session (affect focus) and the relationship between therapist and patient are seen as crucial change mechanisms as this allows an understanding of interpersonal processes in the here-and-now. MBT deviates from classic psychoanalytic interpretations as this is regarded aversive for BPD patients. Thus, within the MBT framework, it is recommended to contextualize affects and patterns of behavior in the here-and-now that should not be interpreted as a mere repetition of past relationships and experiences.

Empirical Evidence Base for MBT

The first RCTs investigating the efficacy of MBT provided evidence of MBT being superior to TAU/clinical management in reducing non-suicidal self-injury (NSSI), suicide attempts, psychiatric symptoms, and hospitalization [22–24] as well as core BPD symptoms [22, 25]. In an independent RCT, positive effects of MBT in comparison to supportive therapy were found for general functioning and BPD symptoms, suggesting that MBT addresses core problems in BPD beyond NSSI and suicidality [26]. MBT superiority in comparison with TAU was also demonstrated even 5 years after the end of treatment on BPD symptoms, suicidality, service use, levels of employment [27].

MBT Studies 2015 to 2018

In the following, we present study characteristics and summarize the main findings of these primarily efficacy and effectiveness studies conducted between 2015 and 2018 and subsequently introduce further developments and discuss methodological limitations.

Since 2015, 14 new MBT trials [28, 29••, 30•, 31•, 32–34], with most of these being effectiveness studies [35–37, 38••, 39–43], have been published (see Table 1). The main body of studies ($n = 11$) investigated adult clinical populations, and three trials investigated adolescent samples [37, 39, 40]. The majority of trials have also focused on BPD or subthreshold BPD, two studies included patients with BPD and comorbid substance use disorders, one study investigated patients with both ASPD and BPD diagnosis [29••], one study adolescents with any PD [40], one study investigated adults with eating disorders and comorbid BPD symptoms [34], and Bateman and Fonagy [28] tested MBT for family members of patients with BPD. The majority of trials have investigated MBT in outpatient or day hospital settings, one study was conducted in an inpatient setting [38••], and one trial investigated a combined in- and outpatient setting. Studies have primarily compared original MBT (combined individual and group intervention) with other types of treatment, e.g., traditional psychodynamic treatment [41, 42], structured clinical management [29••, 34], or other forms of psychotherapeutic treatment or treatment-as-usual [31–33, 35, 39], while three studies had no comparison group [37, 40, 43]. One trial investigated group-based MBT only [37] and one study compared MBT + DBT with standard DBT [38••]. The feasibility study by Falconer et al. [30•] compared conventional MBT with avatar-MBT. Treatment length varied greatly across studies, between 6 weeks [38••] and 3 years [41, 42], whereby in most studies, treatment protocols reported a duration of 18 months [29–33, 35].

Results of Studies with Adult BPD Samples

Main findings of the studies are presented in Table 1. The study by Bales et al. [35] reported that psychiatric symptoms in BPD patients decreased in both groups (total $N = 204$) after 18-month follow-up, with bigger effect sizes in favor of the MBT arm compared to a very heterogeneous comparison

Table 1 Characteristics, findings, and adherence of mentalization-based treatment studies for personality disorders 2015 to 2018

No	Author, year	Design	Sample: age in years (M; SD), % females (f)	Intervention	Follow-up	Outcome measures	Main findings	Adherence
Adult BPD samples								
1	Bales et al. 2015	Uncontrolled pre-post	• BPD • MBT: *N* = 29, age = 30 (6.17), 69% f • OPT: *N* = 175 age = 30 (7.76), 82% f	• Max. 1 months MBT-DH, + max. 18 months maintenance MBT group • Other specialized psychotherapy treatments (OPT)	• 18 months	• GSI, SIPP-118	• In both groups, improvement on all outcome variables at follow-up • Superiority of MBT in improvement on GSI and SIPP-118 with regard to effect sizes (ps < .05) except for domain: relational functioning	• Adherence quarterly rated "good to excellent" by Bateman in 2-years supervision
2	Bales et al. 2017	Retrospective cohort study	• BPD • PRE-REORG, *N* = 30, age = 29.8 (6.3) 70% f • REORG, *N* = 16, age = 27.9 (5.7) 81% f	• Max. 18-month day hospital MBT + max. 18-month maintenance MBT group	• 18 months • 36 months	• BSI, SCL-90-R, GSI, SIPP-118	• Psychiatric symptoms decreased (BSI, SCL-90-R) and improvements in personality functioning at 18-month follow-up in both groups (ps < 0.05). • Outcomes decreased by half in the REORG group (18 months, PRE-REORG d = 0.81–1.22 vs. d = 0.03–0.71 REORG), and these differences were significant post-treatment and at 18-month follow-up	• Participants' ratings on adherence at organizational, team and therapist level: "very good" at PRE-REORG, "poor" at REORG
3	Edel et al. 2016	Uncontrolled pre-post	• BPD, 100% f • Standard DBT, *N* = 38, age = 26.3 (8.1) • DBT + MBT, *N* = 35, age = 28.3 (8.0)	6 weeks treatment: • 2 weeks focused on facilitating readiness for change and treatment commitment; • 4 weeks of either/or • Standard DBT • DBT + MBT	No follow-up	• BSL-23 • Novel cartoon based mentalization task, RQ	• Both treatments effective as indicated by improvements on the BSL-23 (borderline symptoms and subjective health; self-harm was only reduced in the DBT + MBT group: *p* = .008, vs. Standard DBT: *p* = .216) • DBT + MBT superior to Standard DBT in reducing fearful attachment (F = 3.8, *p* = .058) and improving affective mentalizing (F = 6.6, *p* = .013)	No measure
4	Kvarstein et al. 2015	Retrospective cohort	• BPD • PDT: *N* = 281, age = 30 (7) 83% f • MBT: *N* = 64 M age = 26 (6) 84% f	• 12 sessions MBT-I, individual and Group MBT with decreasing intensity across 3 years • Psychodynamic treatment (PDT)	• 1–3 months • 4–6 months • 7–12 months • following 6-month period	• No. of months in treatment, BSI, CIP, GAF • Sociodemographic questionnaire: Incidents of self-harm and suicide attempts previous year, hospital admissions previous year, medication previous year, present employment/disability status, present close relationship,	• Improvements of symptom distress, interpersonal, global and occupational functioning significantly greater in the MBT compared to the PDT group (three-year effect sizes: BSI, MBT 1.79 vs. PDT 0.88; CIP: MBT 1.41 vs. PDT 0.91; GAF: MBT 4.60; PDT 2.97), and Drop-out rates (MBT 2% vs. PDT 15%) • Large reductions in suicidal/self-harming acts, hospital admissions, and use of	• MBT-ACS: M adherence level = 4.7; M competence level = 4.4

Table 1 (continued)

No	Author, year	Design	Sample: age in years (M; SD), % females (f)	Intervention	Follow-up	Outcome measures	Main findings	Adherence
							medication over the course of both treatments	
5	Kvarstein et al. 2018	Retrospective cohort	• Same as Kvarstein et al. 2015	• Same as Kvarstein et al., 2015	• Repeatedly assessed over 3 years	• Same as Kvarstein et al., 2015	• In PDT, greater clinical severity was associated with poorer improvement rates. Clinical severity was not associated with significant differences in outcomes for patients in MBT. Differences in outcomes for patients in MBT and PDT increased significantly with higher severity of disorder. • Difference in clinical benefits of MBT vs. PDT increased with increasing PD severity, PD severity has little impact on clinical improvement for patients in MBT, but effects of PDT decreased with increasing PD severity	• Same as Kvarstein et al., 2015
6	Laurenssen et al. 2018	RCT	• BPD • MBT-DH: $N = 54$, age = 34.0 (9.38), 78% f • S-TAU: $N = 41$, age = 34.0 (10.62), 81% f	• max. 18-months MBT-DH (Bateman & Fonagy 2004) • S-TAU (Van Oenen et al. 2007)	• Not reported	• BPDSI • GSI, BSI, IIP-64, PAI-BOR, EuroQol EQ-5D, SSHI	• Reductions in the BPDSI, with large within effect sizes for both groups (d = 1.33 for MBT and d = 1.28 for TAU) • Improvements in all psychiatric outcomes post-treatment for both groups (GSI, BSI, IIP-64, EuroQol, SSHI), no significant group differences • Significantly fewer drop-outs in MBT-DH 9% vs. S-TAU 34%	• Not measured (due to the variety of treatments offered)
7	Thomsen et al. 2017	Uncontrolled pre-post	• BPD, $N = 18$, age = 30.2 (7.7), 100% f • Nonpsychiatric controls: $N = 28$, age = 30.6 (8.8), 100% f	• During 6 months: • individual MBT (22 weekly sessions) Group MBT (22 weekly sessions). • 12 psychoeducation group sessions • patients with children were offered four additional group therapy sessions	• After 6 months	• ZAN-BPD, HAM-D, GAF, WAIS-IV, CANTAB, HVLT	• After treatment, BPD patients had improved in ZAN-BPD relational disturbance ($p < .01$) and HAM-D ($p < .05$) • BPD patients showed significantly greater increases in sustained attention ($p = .004$) and perceptual reasoning ($p = .04$) than controls, with initial deficits in sustained attention amongst patients resolving after treatment.	• Therapists were rated on their adherence to MBT according to a standardized scale. • Mean adherence rating was 4.2, Mean quality rating was 4.4 (scale 1 to 7)
Adult samples with BPD plus a comorbid diagnosis								
8	Bateman and Fonagy2016	RCT	• ASPD + BPD	• 18-months weekly combined individual and group MBT	• Not reported	• GAF, SCL-90-R, BDI, SAS, IIP-C, SCID-II	• MBT > SCM in reducing anger (SCID-II) (18 months comparison: t = 2.05, $p < .05$),	No measure

Table 1 (continued)

No	Author, year	Design	Sample: age in years (M; SD), % females (f)	Intervention	Follow-up	Outcome measures	Main findings	Adherence
			• MBT: *N* = 21 age = 31.5 (8.2), 25% f • SCM: *N* = 19 age = 30.0 (7.1), 38% f	• SCM = structured clinical management			self-rated hostility (18 months comparison: t = 3.53, $p < .001$), paranoia (SCL-90, 18 months comparison: t = 3.06, $p < .01$), paranoid ideation (SCID-II, 18 months comparison: t = 2.5, $p < .01$) • No. of patients free of suicide attempts, self-harm and hospital admission significantly higher in MBT group (62% vs. 21% in SCM, $chi^2 = 6.81$, $p < .01$)	
9	Philips et al. 2018	RCT	• BPD + SUD, age = 36.7 (9.6), 80.4% f • MBT: *N* = 24 • TAU: *N* = 22	• Individual and group MBT therapy for 18 months • Other psychotherapy, incl. CBT, MI, PDT, mindfulness group, supportive therapy	• Not reported	• BPDSI, TLFB, DSHI-9, SCL-90-R, IIP, RFS • No. of adverse events, suicide attempts, days in inpatent care	• no significant group difference between on any outcome variable • majority of therapists did not show sufficient MBT adherence and quality	• Judged for treatment integrity on the MBT adherence scale (version 4) during video-taped training treatments, approved by MBT supervisors
10	Robinson et al. 2016	RCT	• BPD symptoms and eating disorders • MBT-ED: *N* = 34, age = 31.2 (9.8), 94.1% f • SSCM-ED *N* = 34, age = 30.8 (10.0), 91.2% f	• MBT-ED: 12-month weekly individual and group sessions • SSCM-ED: 12-months biweekly sessions	• 18 months	• EDE, GAF, EQ-5D, DASS-21, BFI, ZAN, BPD	• No significant difference in the primary outcome (EDE) nor for BPD symptoms (ZAN-BPD) between interventions (EDE global: $d = -0.23$ (−1.30–0.85 95%CI; ZAN-BPD global: $d = -.043$(−1.51–0.67 95%CI)) • MBT-ED was associated with greater reduction in shape and weight concern (EDE) compared to SSCM-ED • ED and BPD symptoms declined in both groups	• 7 randomly selected MBT-ED and SSCM-ED sessions each were assessed with MBT-ACS with satisfactory ratings
Adolescent samples								
11	Bo et al. 2016	Uncontrolled pre-post	• BPD • MBT: *N* = 25 (completers, age = 16.4 (0.9), 100% f • No control condition	Preliminary results: • 12-month MBT group: 7 sessions of MBT-P67 and 2 sessions of MBT-I68 *Target:* • *1-year MBT-Group: 3-week MBT-I, 37 weekly sessions MBT-Group, 6-session MBT-Parents* • *TAU: supportive techniques including*	Not reported *Target: 12 months*	• BPFS-C • YSR, RFQ-Y, IPPA-R, RTSHI-A, BDI-Y •	• Significant reduction in BPFS-C (from 84.5 to 64.6, $p < .001$) • Significant improvements in YSR-Total (t = 3.16, $p = .004$) and YSR-Internalizing (t = 3.93, $p < .001$), RFQ-Y (t = − 8.51, $p < .001$), IPPA-R subscales (ps < .001), RTSHI-A Self harm (t = 3.13, $p = .005$), and BDI-Y (t = 6.13, $p < .001$) • No significant improvements on YSR-externalizing and	No measure

Table 1 (continued)

No	Author, year	Design	Sample: age in years (M; SD), % females (f)	Intervention	Follow-up	Outcome measures	Main findings	Adherence
							RTSHI-A-Total and RTSHI-A Risk Taking (ps > .188)	
12	Hauber et al. 2017	Uncontrolled pre-post	• PDs, $N = 62$ (final number), age between 16 and 23 • No control condition	• Intensive MBT group psychotherapy with partial hospitalization • 3 groups: less than 234 days (N = 8); 235–364 days (N = 22); more than 365 days ($N = 32$)	• Not reported	• VKP, SCID-II, SCL-90	• Significant reductions in personality disorder traits (t = 8.36, $p = .000$) and SCL-90 symptoms (t = 5.95, $p = .000$) • Pre-treatment, 91.8% ($n = 56$) of the patients had one or more PDs, compared to 35.4% ($n = 22$) at post-treatment.	No measure
New developments								
13	Falconer et al., 2017	Mixed-method feasibility study	• BPD: $N = 15$, age = 31.2 (range 20–43), 80% f	• 18-month outpatient MBT program • weekly group, weekly/ fortnightly individual sessions • Avatar-MBT in group	• No follow-up	• DASS, MZQ	• finding of five themes on the usefulness of avatar-MBT: facilitating perspective taking, expression, emotional distancing, the big picture and group participation • no deterioration in DASS, no changes on the MZQ	No measure
14	Griffiths et al. 2017	Retrospective cohort study	• Variety of mental disorders (e.g., depression, eating disorders, psychosis) • AMBIT: $N = 302$, age (Med) = 16 (11–22 years), 64% f • No control condition	• AMBIT-trained general acute unit care	• Not reported	• QoL, BYI, BDI, PANSS	• Improvement over the course of interventions in QoL physical (chi^2 (1) = 6.6, $p = .01$), QoL psychological (chi^2 (1) = 11.66, p < .001, QoL environmental (chi^2 (1) = 6.6, $p = .01$), BYI-self concept (chi^2 (1) = 4.91, $p = .027$), BYI anxiety (chi^2 (1) = 5.53, $p = .019$), BYI depression (chi^2 (1) = 5.31, $p = .021$), PANSS positive symptoms (chi^2 (1) = 29.45, $p < .001$), PANSS negative symptoms (chi^2 (1) = 17.78, $p < .001$), PANSS general psychopathology (chi^2 (1) = 10.42, $p < .001$) • Attendance rate was high (80%)	No measure
15	Bateman and Fonagy 2018	RCT	• Families of BPD patients • MBT-FACTS: $N = 29$, age = 49 (SD not reported), 52% f • Delayed MBT-FACTS: $N = 27$, Age = 53 (SD not reported), 55% f	• MBT- FACTS: 5 evening sessions	• 12 weeks	• Daily incident diaries • BDI, STAI, BAS, WEMWBS, SCORE-15, FES	• Significantly greater reduction in reported adverse incidents within the family in the immediate intervention group compared to the delayed intervention group (comparison pre vs. post treatment: $d = 1.71$, group comparison at follow-up; $d = 1.9$) • Both groups improved in FES, STAI, BDI, BAS and SCORE-15	• Adherence was assessed by interviews with the family trainer each week using a checklist

Table 1 (continued)

No	Author, year	Design	Sample: age in years (M; SD), % females (f)	Intervention	Follow-up	Outcome measures	Main findings	Adherence
Other studies: adherence and competence/change process								
16	Möller et al. 2017	RCT	• BPD + SUD • MBT: *N* = 15, age = 37.9 (10.5), 93.3% f • No control condition	• 1-weekly individual and group MBT session for 18 months	• Not reported	• RFS	• MBT adherence and competence predicted higher session RF (β = .58–.75), even while controlling for pre-treatment RF. • Therapist interventions directed towards exploring mental states predicted higher RF of subsequent patient responses (β = .11–.12).	• Judged for treatment integrity on the MBT adherence scale (version 4) during video-taped training treatments, all approved by MBT supervisors

AMBIT Adolescent Mentalization-Based Integrative Therapy, *ASPD* antisocial personality disorder, *BAS* Burden Assessment Scale, *BDI* Beck's Depression Inventory, *BDI-Y* Beck's Depression Inventory for Youth, *BPD* borderline personality disorder, *BPDSI* Borderline Personality Disorder Severity Index, *BPFS-C* Borderline Personality Features Scale for Children, *BPFS-P* Parents' Version of the Borderline Personality Features Scale for Children, *BSI* Brief Symptom Inventory, *BSL-23* Borderline Symptom List, *BYI* Beck Youth Inventory, *CAMHS* Child and Adolescent Mental Health Services, *CANTAB* Cambridge Neuropsychological Test Automated Battery, *CBCL* Child Behavior Checklist, *CBT* cognitive behavior therapy, *CC* control condition, *C-GAS* Children's Global Assessment Scale, *CIP* Circumplex of Interpersonal Problems, *DASS* 21-item Depression, Anxiety and Stress Scales, *DBT* dialectical behavior therapy, *DERS* Difficulties in Emotion Regulation Scale, *DSHI-9* Deliberate Self-Harm Inventory, *DSM* diagnostic and statistical manual of mental disorders, *ECR* Experiences of Close Relationships Inventory, *ECRS-RC* experiences in core relationships–Revised Child Version, *EDE* eating disorder examination, *EuroQol EQ-5D* Standardized Assessment of health-related Quality of Life, *FES* Family Empowerment Scale, *GAF* Global Assessment of Functioning, *GSI* Global Severity Index, *HAM-D* Hamilton Depression Rating Scale, *HVLT* Hopkins Verbal Learning Test, *IC* inclusion criteria, *IIP-64* Inventory of Interpersonal Problems, *IIP-C* Inventory of Interpersonal Problems–circumplex version, *IPPA-R* Inventory of Parent and Peer Attachment-Revised, *ISM* interpersonal sensitivity measure, *MBT* mentalization-based treatment, *MBT-ACS* MBT Adherence and Competence Scale, *MBT-Ai* MBT for Adolescents–Group format, *MBT-DH* Day Hospital MBT, *MBT-FACTS* MBT Family and Carers Training Support, *MI* motivational interviewing, *MZQ* Mentalization Questionnaire, *NHS* National health Service, *OPT* other specialized psychotherapeutic treatments, *PAI-BOR* Personality Assessment Inventory-Borderline, *PANSS* Positive and Negative Syndrome Scale, *PRE-REORG* pre-reorganization cohort, *QoL* quality of life, *RCADS* Revised Child Anxiety and Depression Scale, *REORG* reorganization cohort, *RFQ-Y* Reflective Functioning Questionnaire for Youth, *RCT* randomized controlled trial, *RFS* Reflective Functioning Scale, *RQ* Relationship Questionnaire, *RTSHI* Risk-Taking and Self-Harm Inventory, *RTSHIA* Risk-Taking and Self-Harm Inventory for adolescents, *SAS* Social Adjustment Scale, *SCID-II* Structured Clinical Interview for DSM IV–Axis II Disorders, *SCORE-15* index of family function and change, *SIPP-118* Severity Indices of Personality Problems, *SSCM-ED* Specialist Supportive Clinical Management for Eating Disorders, *SSHI* Suicide and Self-Harm Inventory, *STAI* State Trait Anxiety Inventory, *S-TAU* specialist treatment as usual, *PDT* psychodynamic treatment, *SCID* structured clinical interview for DSM, *SCL-90-R* Symptom Checklist-90-Revised, *SCM* structured clinical management, *SD* substance dependence, *SUD* substance use disorder, *TAU* treatment as usual, *TLFB* timeline follow back, *VKP* Vragenlijst voor Kenmerken van de Persoonlijkheid, *WAIS-IV* Wechsler Adult Intelligence Scale–Fourth Edition, *WEMWBS* Warwick-Edinburgh Mental Well-Being Scale, *YSR* youth self-report, *ZAN-BPD* Zanarini Rating Scale for Borderline Personality Disorder

group (other psychological treatments). A retrospective cohort study by Kvarstein et al. [42] reports that both groups (MBT: $n = 64$; psychodynamic treatment: $n = 281$) showed significant improvements across different clinical variables but that improvements were superior in the MBT group compared to psychodynamic psychotherapy. In a further data analysis of the same study, Kvarstein et al. [41] report that clinical improvements are associated with increasing PD severity in the MBT group compared to the control group: while PD severity was virtually not associated with clinical benefits in the MBT group, the effects in the psychodynamic group decreased with increasing severity.

The study by Thomsen, Ruocco, Uliaszek, Mathiesen, and Simonsen [43] was the first to test neurocognitive functioning before and after MBT. They report improvements in BPD-related symptoms for patients in the MBT group ($n = 18$) compared to a non-psychiatric control group ($n = 28$) matched on parental education.

Bales et al. retrospective cohort study [36] reported on the effectiveness of MBT before and after a large institutional reorganization process. They found a reduction in psychiatric symptoms and improved personality functioning at 18-month follow-up for both groups ($N = 46$). Laurenssen et al. [31•] investigated the efficacy of an intensive day hospital MBT treatment compared to TAU (manualized integrative psychiatric and systemic treatment approach) in patients with a BPD diagnosis ($N = 95$) and found no significant differences between the groups in any of the outcome variables. However, they report significantly fewer drop-outs in the MBT compared to the control group (9% vs. 34%).

The study by Edel et al. [38••] is the only one so far directly comparing components of two evidence-based, disorder-specific treatments for BPD, namely DBT vs. DBT plus MBT in a female sample of patients with BPD ($N = 73$). Both groups showed improvements in borderline symptoms, while DBT + MBT was superior to DBT in reducing fearful attachment, improving affective mentalizing and the only treatment to reduce self-harm.

Results of Studies with Adult Samples with BPD Plus a Comorbid Diagnosis

Bateman and Fonagy [29••] conducted a RCT for patients with a diagnoses of both antisocial PD (ASPD) and BPD (MBT: $n = 21$, SCM: $n = 19$). They found medium to modest effect sizes in the reduction of suicide attempts, self-harming behavior, and depressive symptoms in the MBT group compared to structured clinical management (SCM). Robinson et al. [34] also compared MBT for eating disorders (MBT-ED: $n = 34$) with SCM for eating disorders (SCM-ED: $n = 34$) in a sample of patients with eating disorders and BPD symptoms and found no significant difference in eating disorder or BPD symptoms, although the MBT-ED group reported greater reduction in shape and weight concern compared to the SSCM-ED groups and ED and BPD symptoms declined in both groups. Philips et al. [33] compared the efficacy of MBT to TAU (diverse psychotherapeutic treatments) in a sample of patients with a combined diagnosis of BPD and substance misuse (total $N = 46$) and report no significant differences between groups in any of the clinical outcomes.

Overall, the majority of these studies suggests that MBT has the potential to improve the clinical outcomes for adults with a PD diagnosis, particularly BPD and also with comorbid diagnoses.

Results of Studies with Adolescent Samples

Bo et al. [37] report first results from an uncontrolled practice-based study with adolescents with BPD ($N = 25$) and showed that after a 1-year MBT group intervention, patients report significant reductions in general psychopathology, depressive symptoms, show improved mentalizing, and peer and parent attachment. Furthermore, Hauber et al. [40] examined BPD traits and symptoms in a sample of adolescents in MBT treatment ($N = 62$) and suggest significant positive changes in BPD traits and symptomatology post-treatment.

Overall, these studies offer first indications that evidence for the effectiveness of MBT-A to reduce self-harming behavior is promising. However, further studies are needed to replicate findings.

New Developments

Meanwhile, mentalization-based programs have been further differentiated and adapted. An innovative study by Falconer et al. [30•] tested the feasibility of an avatar MBT as an add-on to standard MBT in a sample of patients with BPD ($N = 15$) and report promising results on the usefulness for example with regard to facilitating perspective taking, emotional distancing, and group participation.

First data on another new promising approach is provided by Griffiths, Noble, Duffy, and Schwannauer [39], who report on the implementation of the Adolescent Mentalization-Based Integrative Therapy (AMBIT) approach. The study ($N = 302$) suggested high overall attendance rates and higher professional involvement with adolescents experiencing difficulties to engage in treatment. Furthermore, the results showed significant reductions in psychiatric symptoms between admission and discharge.

Another recent study by Bateman and Fonagy [28] investigated the effects of a brief mentalization-based Families and

Carers Training and Support program (MBT-FACTS) and found a significant reduction in reported adverse incidents in the family of a patient with BPD participating in MBT-FACTS ($n = 29$) compared to a waiting group ($n = 27$). Furthermore, both groups improved on various psychopathological outcome measures.

Moreover, trials are under way for parents with BPD [MBT-Lighthouse [44]], adolescents with Conduct Disorder (MBT-CD [45]), Antisocial Personality Disorder and also for other disorders and patients groups (e.g., eating disorders, adolescents, children, families, and hard to reach clients) [AMBIT, (46, for an overview, see 47). A recent systematic review by Malda-Castillo, Browne and Perez-Algorta [48••] gives an overview about completed MBT trials for depression, eating disorders, children and parental interventions.

Mentalizing as a Mechanism of Change

First findings support that changes in mentalizing are one important mechanism of change in the treatment of individuals with BPD: changes in mentalizing partially mediated effects of MBT treatment on outcome in adolescents with BPD symptoms [22]. More recently, changes in mentalizing were associated with better outcome in a study with 175 individuals with BPD, who received psychodynamic treatment [49]. The study by Möller et al. [32] investigated within an RCT patients with BPD and comorbid substance dependence ($N = 15$) and found that MBT adherence and competence predicted higher in-session mentalizing (when controlling for pre-treatment mentalizing scores). Specifically, therapist interventions that were directly focusing on exploring mental states predicted higher subsequent mentalizing in patient responses.

Taken together, MBT has demonstrated to be reliably effective in improving personality pathology and other psychiatric symptoms with hints towards changes in mentalizing being a specific mechanism of change promoted by MBT.

Methodological Concerns

Overall, studies suffer from a number of methodological shortcomings, which limit interpretability and generalizability of findings: studies have deployed small sample sizes [28, 36], used very heterogeneous comparison group with varying treatments, lengths, and settings [35], have no control group [32, 37, 40], or suffer from large drop-outs [34]. The study by Kvarstein et al. [41, 42] suffers from the limitation that the comparison and intervention group data was collected at different time periods. The study by Thomsen et al. [43] does not allow the attribution of improvements to MBT due to the non-controlled nature of the study. Similarly, Griffiths et al. [39] findings cannot be attributed to the implementation of AMBIT because the design did not control for natural fluctuations in self-reported distress. Furthermore, a number of studies lack an assessment of treatment adherence (e.g., 29••, 39, 40 or have not systematically used a standardized measure (e.g., 39) (see Table 1).

Conclusion

In summary, findings of recent MBT studies appear promising and suggest that MBT is an effective intervention in different controlled and standard clinical practice settings. The results also suggest that MBT is superior to TAU and SCM in most studies and that it is associated with improved outcomes for patients, primarily with BPD and also comorbid disorders. Furthermore, there is emerging empirical support for the effectiveness of MBT in adolescents to prevent the development of BPD pathology in adulthood. Moreover, first research indicates that MBT provides long-term improved outcomes, which are often not investigated in other psychotherapies.

Future research will need to further investigate both the efficacy and effectiveness of MBT, especially beyond BPD, for other personality and mental disorders. Moreover, there is a need to investigate mentalizing and other potential mechanisms of change in MBT and to shed light on potentially shared or common mechanisms of change across (B) PD specific treatments and to disentangle their treatment-specific mechanisms. For this, the comparison of combined evidence-based treatments or treatment modules (e.g., analoguous to [38••] could dismantle specific treatment mechanism and potentially enhance treatment effects. This could also lead to the possibility to make differential treatment indications. Furthermore, an advancement of the understanding of the basic dimensions underlying the development of personality psychopathology can inform treatment development. Overall, there is still a great need for future studies implementing high methodological quality, use sufficient sample sizes, and control for allegiance bias.

Compliance with Ethical Standards

Conflict of Interest Jana Volkert, Sophie Hauschild, and Svenja Taubner declare no conflict of interest.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

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References

Papers of particular interest, published recently, have been highlighted as:
- • Of importance
- •• Of major importance

1. Barnicot K, Katsakou C, Marougka S, Priebe S. Treatment completion in psychotherapy for borderline personality disorder - a systematic review and meta-analysis. Acta Psychiatr Scand. 2011;123(5):327–38. **Available from:**. https://doi.org/10.1111/j.1600-0447.2010.01652.x.
2. 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):1–61.
3. Cristea IA, Gentili C, Cotet CD, Palomba D, Barbui C, Cuijpers P. Efficacy of psychotherapies for borderline personality disorder: a systematic review and meta-analysis. JAMA Psychiatry. 2017;74(4):319–28.
4. Juanmartí FB, Lizeretti NP. The efficacy of psychotherapy for borderline personality disorder: A review. Papeles del Psicólogo. 2017;38(2):148–56.
5. Leichsenring F, Leibing E, Kruse J, New AS, Leweke F. Borderline personality disorder. Lancet [Internet]. (2011 Jan 1) [cited 2018 Nov 1];377(9759):74–84. Available from: https://www.sciencedirect.com/science/article/pii/S0140673610614225
6. Stoffers J, Völlm B, Lieb K. AS14–02 - Common and distinct treatment elements in psychotherapies for borderline personality disorder. Eur Psychiatry [Internet]. (2012 Jan 1) [cited 2018 Nov 1];27:1. Available from: https://www.sciencedirect.com/science/article/pii/S0924933812739937
7. Calati R, Courtet P. Is psychotherapy effective for reducing suicide attempt and non-suicidal self-injury rates? Meta-analysis and meta-regression of literature data. J Psychiatr Res. 2016/04/30 ed. 2016;79:8–20.
8. American Psychiatric Association. APA DSM-5 [Internet]. Diagnostic and statistical manual of mental disorders. 2013. (DSM-5®). American Psychiatric Pub.
9. Volkert J, Gablonski T-C, Rabung S. Prevalence of personality disorders in the general adult population in Western countries: systematic review and meta-analysis. Br J Psychiatry [Internet]. (2018 Sep 28) [cited 2018 Nov 1];1–7. Available from: https://www.cambridge.org/core/product/identifier/S0007125018002027/type/journal_article.
10. Torgersen S. Epidemiology. In: Oldham J M, Skodol A E, Bender D S. (eds.) The American Psychiatric Publishing textbook of personality disorders. Arlington: American Psychiatric Publishing, Inc. 2005. p. 129–42.
11. Frankenburg FR, Zanarini MC. The association between borderline personality disorder and chronic medical illnesses, poor health-related lifestyle choices, and costly forms of health care utilization. J Clin Psychiatry. 2004;65(12):1660–5.
12. Moran P, Romaniuk H, Coffey C, Chanen A, Degenhardt L, Borschmann R, et al. The influence of personality disorder on the future mental health and social adjustment of young adults: a population-based, longitudinal cohort study. Lancet Psychiatry. 2016;3(7):636–45.
13. Hiroeh U, Appleby L, Mortensen PB, Dunn G. Death by homicide, suicide, and other unnatural causes in people with mental illness: a population-based study. Lancet. 2001;358(9299):2110–2.
14. Oldham JM. Treatment in psychiatry borderline personality disorder and suicidality. Am J Psychiatry. 2006;163(1):20–6.
15. Gunderson J, Weinberg I, Choi-Kain L. Borderline Personality Disorder. Vol. 11. FOCUS: The Journal of Lifelong Learning in Psychiatry; 2013. 249–260 p
16. Tyrer P, Reed GM, Crawford MJ. Classification, assessment, prevalence, and effect of personality disorder. Lancet. 2015;385:717–26.
17. Jobst A, Hörz S, Birkhofer A, Martius P, Rentrop M. Einstellung von psychotherapeuten gegenüber der behandlung von patienten mit borderline persönlichkeitsstörung. Psychother Psychosom Medizinische Psychol. 2010;60(3–4):126–31.
18. Bateman A, Fonagy P. Mentalization-based treatment for personality disorders: a practical guide. New York: Oxford University Press. 2016.
19. Fonagy P, Gergely G, Jurist E, Target M. Affect regulation, Mentalization, and the development of self. New York: Other Press; 2002.
20. Katznelson H. Reflective functioning: A review. Clin Psychol Rev. 2014;34:107–17.
21. Fonagy P, Luyten P. A developmental, mentalization-based approach to the understanding and treatment of borderline personality disorder. Dev Psychopathol [Internet]. (2009 Nov 14) [cited 2018 Nov 2];21(04):1355. Available from: http://www.journals.cambridge.org/abstract_S0954579409990198.
22. Rossouw TI, Fonagy P. mentalization-based treatment for self-harm in adolescents: A randomized controlled trial. J Am Acad Child Adolesc Psychiatry [Internet]. (2012);51(12):1304–13. Available from: trudie.rossouw@nelft.nhs.uk.
23. Bateman A, Fonagy P. Effectiveness of partial hospitalization in the treatment of borderline personality disorder: a randomized controlled trial. Am J Psychiatry. 1999;156(10):1563–9.
24. Bateman A, Fonagy P. Randomized controlled trial of outpatient mentalization-based treatment versus structured clinical management for borderline personality disorder. Am J Psychiatry. 2009;166(12):1355–64.
25. Bales D, van Beek N, Smits M, Willemsen S, Busschbach JJV, Verheul R, et al. Treatment outcome of 18-month, day hospital mentalization-based treatment (MBT) in patients with severe borderline personality disorder in the Netherlands. J Pers Disord. 2012;26(4):568–82.
26. Jorgensen CR, Freund C, Boye R, Jordet H, Andersen D, Kjolbye M. Outcome of mentalization-based and supportive psychotherapy in patients with borderline personality disorder: a randomized trial. Acta Psychiatr Scand. 2013 Apr;127(4):305–17.
27. Bateman A, Fonagy P. 8-year follow-up of patients treated for borderline personality disorder: mentalization-based treatment versus treatment as usual. Am J Psychiatry. 2008;165(5):631–8.
28. Bateman A, Fonagy P. Personality Disorders : Theory , Research , and Treatment A Randomized Controlled Trial of a Mentalization-Based Borderline Personality Disorder A Randomized Controlled Trial of a Mentalization-Based Intervention (MBT-FACTS) for Families of People With. 2019;10(1):70.
29. •• Bateman A, O'Connell J, Lorenzini N, Gardner T, Fonagy P. A randomised controlled trial of mentalization-based treatment versus structured clinical management for patients with comorbid borderline personality disorder and antisocial personality disorder. BMC Psychiatry. (2016);16:304. **This RCT found a reduction of suicide attempts, self-harming behaviour, and depressive symptoms with medium to moderate effect sizes in the MBT group compared to structured clinical management for patients with both Antisocial and Borderline PD.**
30. • Falconer CJ, Cutting P, Davies EB, Hollis C, Stallard P, Moran P. Adjunctive avatar therapy for mentalization-based treatment of borderline personality disorder: A mixed-methods feasibility study. Evid Based Ment Health. 2017;20(4):123–7 **This feasibility study reports promising results on the usefulness of avatar-MBT as an add-on to standard MBT with regard to facilitating**

perspective taking, emotional distancing and group participation in a sample of patients with BPD.

31.• Laurenssen EMP, Luyten P, Kikkert MJ, Westra D, Peen J, Soons MBJ, et al. Day hospital mentalization-based treatment v. specialist treatment as usual in patients with borderline personality disorder: randomized controlled trial. Psychol Med. 2018;27:1–8 **This study reports significantly fewer drop-outs in the intensive day hospital MBT compared to TAU, but no significant differences between the groups in any of the outcome variables in patients with a BPD diagnosis.**

32. Möller C, Kalgren L, Sandell A, Falkenström F, Philips B. Mentalization-based therapy adherence and competence stimulates in-session mentalization in psychotherapy for borderline personality disorder with co-morbid substance dependence. Trials. 2016/07/14 ed. 2017;27(6):749–65.

33. Philips B, Wennberg P, Konradsson P, Franck J. Mentalization-Based Treatment for Concurrent Borderline Personality Disorder and Substance Use Disorder: A Randomized Controlled Feasibility Study. Eur Addict Res. 2018/02/07 ed. 2018;24(1):1–8.

34. Robinson P, Hellier J, Barrett B, Barzdaitiene D, Bateman A, Bogaardt A, et al. The NOURISHED randomised controlled trial comparing mentalisation-based treatment for eating disorders (MBT-ED) with specialist supportive clinical management (SSCM-ED) for patients with eating disorders and symptoms of borderline personality disorder. Trials. 2016/11/20 ed. 2016;17(1):549.

35. Bales DL, Timman R, Andrea H, Busschbach JJV, Verheul R, Kamphuis JH. Effectiveness of day hospital Mentalization-based treatment for patients with severe borderline personality disorder: a matched control study. Clin Psychol Psychother. 2015;22(5):409–17.

36. Bales DL, Timman R, Luyten P, Busschbach J, Verheul R, Hutsebaut J. Implementation of evidence-based treatments for borderline personality disorder: the impact of organizational changes on treatment outcome of mentalization-based treatment. Personal Ment Health. 2017;11(4):266–77.

37. Bo S, Sharp C, Beck E, Pedersen J, Gondan M, Simonsen E. First empirical evaluation of outcomes for Mentalization-based group therapy for adolescents with BPD. Personal Disord Theory Res Treat. 2017;8(4):396–401.

38.•• Edel MA, Raaff V, Dimaggio G, Buchheim A, Brüne M. Exploring the effectiveness of combined mentalization-based group therapy and dialectical behaviour therapy for inpatients with borderline personality disorder – A pilot study. Br J Clin Psychol. 2017;56(1):1–15 **This study found that DBT+MBT was superior to DBT in reducing fearful attachment, improving affective mentalizing and reducing self-harm in a female sample of patients with BPD.**

39. Griffiths H, Noble A, Duffy F, Schwannauer M. Innovations in practice: evaluating clinical outcome and service utilization in an AMBIT-trained tier 4 child and adolescent mental health service. Child Adolesc Ment Health. 2017;22(3):170–4.

40. Hauber K, Boon AE, Vermeiren R. Examining changes in personality disorder and symptomology in an adolescent sample receiving intensive mentalization based treatment: a pilot study. Child Adolesc Psychiatry Ment Health. 2017;1–7. Available from: https://doi.org/10.1186/s13034-017-0197-9.

41. Kvarstein EH, Pedersen G, Folmo E, Urnes Ø, Johansen MS, Hummelen B, et al. Mentalization-based treatment or psychodynamic treatment programmes for patients with borderline personality disorder - the impact of clinical severity. Psychol Psychother Theory Res Pract. 2018. 1-21.

42. Kvarstein EH, Pedersen G, Urnes Ø, Hummelen B, Wilberg T, Karterud S. Changing from a traditional psychodynamic treatment programme to mentalization-based treatment for patients with borderline personality disorder – does it make a difference? Psychol Psychother Theory, Res Pract. 2015;88(1):71–86.

43. Thomsen MS, Ruocco AC, Uliaszek AA, Mathiesen BB, Simonsen E. Changes in neurocognitive functioning after 6 months of Mentalization-based treatment for borderline personality disorder. J Pers Disord. 2017;31(3):306–24.

44. Byrne G, Lees G. When the bough breaks the lighthouse programme. In: Celebi M, editor. Weaving the cradle: facilitating groups to promote attunement and bonding between parents, their babies and toddlers. London: Singing Dragon; 2017. p. 144–54.

45. Taubner S, Gablonski T-C, Hauschild S, Schroeder-Pfeifer P, Kaess M, Wladika W, et al. Mentalization-based Treatment for adolescents with conduct disorder: feasibility and pilot study. (submitted).

46. Bevington D, Fuggle P, Cracknell L, Fonagy P. Adaptive Mentalization-based integrative Treatment: A guide for teams to develop Systems of Care [internet]. New York, NY; [cited 15 November 2018]. Available from: http://www.oxfordclinicalpsych.com/view/10.1093/med-psych/9780198718673.001.0001/med-9780198718673

47. Bateman AW, Fonagy P, editors. Handbook of mentalizing in mental health practice. Handbook of mentalizing in mental health practice. Arlington, VA, US: American Psychiatric Publishing, Inc.; 2012. xxiii, 593-xxiii, 593.

48.•• Malda-Castillo J, Browne C, Perez-Algorta G. Mentalization-based treatment and its evidence-base status: A systematic literature review. Psychol Psychother Theory Res Pract [Internet]. 2018. [cited 10 November 2018]. Available from: j.maldacastillo@lancaster.ac.uk, **This systematic literature review on the evidence-base status of MBT found that MBT is a potentially effictive method across a range of mental disorders, but concludes that future studies need to increase their methodological quality.**

49. De Meulemeester C, Vansteelandt K, Luyten P, Lowyck B. Mentalizing as a Mechanism of Change in the Treatment of Patients With Borderline Personality Disorder: A Parallel Process Growth Modeling Approach. Personal Disord Theory Res Treat. 2017;9(1):22–9.