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Abstract

Purpose of Review: The first aim of this review is to summarize the major evidence-based psychotherapies for Borderline Personality Disorder (BPD) and the research supporting their use. The second aim is to explore the evidence for the differential effectiveness of these treatments.

Recent Findings: Four types of specific psychotherapies are identified that show promising results in at least two randomized controlled trials. In addition, several adjunctive and minimal/pragmatic interventions are available that are supported by research evidence. Recent findings highlight the applicability of these treatments across settings and populations and have begun to show that modified versions of them are also beneficial.

Summary: There is solid evidence that various specific therapies are superior to treatment as usual in the community for Borderline Personality Disorder. There is no reliable evidence that any of these specific treatments is more effective than any other, however. In addition, existing treatments have many elements in common that may be responsible in part for their effects. Future research will be needed to uncover the influence of various study design factors, patient characteristics, and treatment parameters on psychotherapy outcome for BPD.

Introduction

Borderline Personality Disorder (BPD) is a relatively severe, impairing, and costly form of mental illness. [1–3] Studies estimate its prevalence at around 1-2% of the general adult population and 10-12% of psychiatric outpatients, and the disorder is notably common among individuals presenting for medical care in other settings. [4] BPD is also probably underdiagnosed, or misdiagnosed as other disorders, and there remains some degree of stigma towards individuals with the disorder and pessimism about the prospect of successful treatment among clinicians, although this situation may be improving. [5–9]

Nonetheless, abundant research now demonstrates the efficacy and effectiveness of several kinds of psychotherapies for BPD. A recent meta-analysis of randomized controlled trials suggested small to moderate effect sizes differentiating BPD-specific treatments from treatment as usual in terms of symptom reduction and amelioration of functioning. [10••] Both Dialectical Behavior Therapy and specialized psychodynamic psychotherapies were superior to control groups in this review. There remained a high degree of heterogeneity between the included studies' effect sizes, however, showing that the research picture is complicated by other differences among these trials. Nevertheless, there exists a remarkably diverse array of evidence-based psychotherapies for BPD as compared with many other forms of psychopathology. These treatments vary in several respects: they come from different theoretical backgrounds and follow different assumptions as to the core nature of BPD itself; they target different symptoms and use different techniques; and they are designed with different structures and sometimes for different settings. Thus, an array of different empirically-supported treatment options is available for this disorder, despite lingering therapeutic pessimism.

The purpose of this review is to summarize the available evidence-based psychotherapies for BPD and to highlight major research findings that might serve as guidance for clinicians who are considering training in one of these modalities or considering referring patients with BPD for specialty care. I will also emphasize commonalities and differences among the various treatments. Finally, I will address whether the type of treatment makes a difference in terms of outcome for the average patient.

Stand-Alone, Specialty Treatments for BPD

The most prominent and widespread evidence-based treatments for BPD were developed specifically to treat individuals with the disorder. They were spurred by a recognition on the part of their developers that existing therapies were inadequate for patients with BPD, did not focus on core symptoms, or used techniques that were unhelpful for this population. Four major stand-alone, specialty treatments have been developed that have shown positive results in at least two randomized controlled trials (RCT's).

Dialectical Behavior Therapy (DBT). Originally developed by Marsha Linehan, DBT is based on her "biosocial" account of the development of BPD, which holds that the disorder stems from a combination of a biological tendency to emotional extremes and an invalidating early environment, producing maladaptive emotion regulation strategies, such as deliberate self-harm. [11] The treatment itself makes use of a broad suite of cognitive, behavioral, and problem-solving interventions, including skills training and in-session coaching, chain analysis, contingency management, and exposure. These interventions are paired with mindfulness and other practices from Zen Buddhism, with the ultimate aim of decoupling extreme emotional experiences from maladaptive behavioral responses. [12] DBT also attends closely to client motivation as a way to foster engagement in treatment and prevent dropout. The "dialectic" in

the treatment is the back-and-forth between validation – an acceptance of the individual's struggles as genuine and understandable – and the need for change; the therapist's focus on this dialectic is meant to enhance the patient's engagement in treatment and prevent dropout. Traditional DBT includes both individual sessions and group-based skills training modules focused on mindfulness, interpersonal effectiveness, distress tolerance, and emotion regulation. [13]

Among the major treatments for BPD, DBT is undoubtedly the therapy with the broadest evidence base. Since the pioneering randomized controlled trial by Linehan, [14] several prominent RCT's of standard outpatient DBT have accumulated. [13,15,16] Adaptations for inpatient and partial-hospital settings and college counseling centers have also been developed. [17–20] More recently, a randomized trial investigated whether the major treatment components of DBT – individual DBT and group-based DBT skills training – are any less effective on their own than the full DBT package. Results did not support the notion that the combination of individual DBT and group skills training is necessary. [13] The finding that skills group is effective on its own is consistent with prior research suggesting that increased skills use can mediate many of the most important reductions in symptoms that DBT produces, and trials of DBT skills groups without individual therapy have also resulted in encouraging outcomes. [21–24] Likewise, the symptom reduction in the individual-only DBT group in this trial is consistent with a small study showing no differences between individual DBT and individual DBT plus skills training. [25]

Mentalization-Based Treatment (MBT). MBT is premised on a developmental model of BPD that is focused on mentalization – the process of understanding one's own, and others', actions in terms of mental states (such as beliefs and intentions). [26] The capacity to mentalize

is thought to develop within the attachment system and to be impaired in individuals with BPD, resulting in dysfunctional relatedness, self-harm, impulsivity, and the other hallmarks of the disorder. [27] Accordingly, MBT therapists seek to enhance a patient's capacity to mentalize, as well as to identify their affective experience and connect this with how these affects are represented mentally. The ultimate goal of the treatment is to move the patient toward secure attachment, thereby enabling effective relationships and better affect and behavior regulation.[28]

Evidence for the efficacy of MBT comes from several RCT's. The first of these showed the superiority of 18 months of MBT delivered in a partial-hospital setting to treatment as usual, with very large between-group effects. [29] Notably, these gains were maintained at 18-month and 5-year follow-up, although patients were still underemployed and functioning at a relatively low level at the last assessment. [30,31] The second of these investigated an outpatient version of this treatment, with similarly promising results relative to community treatment. [32] A third RCT suggested that MBT produced similar gains in clinical outcomes to DBT. [33] Tests of MBT's effectiveness in ordinary practice settings are also positive. [34,35] Nevertheless, other results have been somewhat less encouraging; a randomized, partly controlled study of MBT compared with supportive psychotherapy showed similar outcomes between treatments on all but one primary outcome measure, [36] and another recent RCT suggested no difference in outcome between MBT and "specialist treatment as usual." [37] Differences in treatment intensity between day-hospital MBT and outpatient MBT may not account for any discrepancies in efficacy – a recent RCT suggested that these two forms of the treatment produce similar outcomes. [38] Further research will be needed to clarify what factors influence the success of MBT, as well as to explicate its mechanisms of action.

Schema Therapy (ST). Originally known as Schema-Focused Therapy, this treatment was developed by Jeffrey Young as a form of cognitive therapy. ST sees BPD as stemming from a characteristic set of stereotypical "schema modes," or patterns of thinking, feeling, and behaving with early developmental roots. BPD is thought to involve four or five of these modes, including the Angry and Impulsive Child, the Abused and Abandoned Child, the Detached Protector, the Punitive Parent, and (sometimes) the Healthy Adult. [39–41] The patient shifts abruptly among these different schemas, leading to the chaotic clinical picture. ST therapist's aim is to facilitate the substitution of these maladaptive schemas with healthier ones, between which the individual can shift gradually based on the realistic demands of his or her environment. To this end, ST utilizes cognitive, experiential, and behavioral interventions and focuses heavily on the provision of a strong, quasi-parental relationship between patient and therapist. [39]

ST has shown efficacy in one RCT comparing three years of ST to three years of Transference-Focused Psychotherapy (TFP; see below). The ST group had less dropout and better clinical outcomes than the TFP group. [42] Other randomized trials have examined group-based ST in comparison to treatment as usual and have suggested that therapist after-hours telephone availability is not necessary for improvement in ST. [43,44] More recently, outcome studies have examined combinations of individual and group ST [45] and community implementations of ST. [46]

Transference-Focused Psychotherapy (TFP). TFP is based on the modified psychoanalytic treatment framework by Otto Kernberg, which in turn is based on Kernberg's seminal description of borderline personality.[47] Like ST, TFP is organized around the theory that the core deficit in BPD is the individual's disordered and incoherent mental representations of self and others. These representations are thought to be "split," or organized into all-positive

and all-negative parts, which makes it difficult for the patient to regulate their emotions and behaviors effectively, especially in an interpersonal context. [48] A TFP therapist intervenes to modify these representations, chiefly by using events in the therapeutic relationship to observe and explore them, to point out conflicting elements of the patient's views of self or others, and to suggest alternative, more realistic views. Thus, unlike classical psychoanalysis, TFP restricts attention to the "here-and-now," and the therapist takes a very active stance. Like DBT, TFP proceeds within a strong treatment frame, with a clear delineation of patient and therapist responsibilities; patients are required to pursue meaningful activity (e.g., employment), to maintain sobriety, and to participate fully in treatment sessions. This frame is meant not only to create a secure context for the patient to engage in the difficult process of change, but also allows the therapist to interpret deviations from this contract on the patient's part through the lens of the therapeutic relationship.

TFP has shown evidence of efficacy in two RCT's. In one, TFP was compared to DBT and to supportive psychotherapy, showing effects on several outcome domains that were similar (or perhaps superior) to these control treatments. [49] In a second RCT, patients receiving TFP showed better outcomes on most BPD-relevant variables than patients receiving psychotherapy in the community. [50] However, in a third RCT comparing three years of TFP to three years to Schema Therapy (described above), the TFP group did not fare as well as the ST group, in part because of higher rates of dropout in TFP. [42] Nevertheless, the low therapist competence ratings in the TFP arm raise questions as to how faithfully TFP was delivered in this trial – an noteworthy limitation, as conformity to TFP technique is an important predictor of outcome. [51] More recent studies have explored mechanisms of change within TFP and identified neural correlates of the symptom changes brought about by the treatment. [52,53]

Adjunctive Treatments

In addition to the stand-alone, specialty treatments above, several interventions have been designed as adjuncts to other treatments. Systems Training for Emotional Predictability and Problem Solving (STEPPS) is one such intervention. [54] Like DBT, STEPPS is based in cognitive-behavioral principles, considers extreme emotional experience to be a core characteristic of BPD, and utilizes group-based skills training. Unlike DBT, however, STEPPS also focuses heavily on family systems and psychoeducation, two types of interventions that are only incidental to DBT. STEPPS plus treatment-as-usual has shown promising evidence of efficacy in comparison to treatment-as-usual in randomized controlled trials, [55,56] and there is also promising evidence that STEPPS can be implemented effectively in traditional treatment settings. [57] Recent evidence suggests, however, that DBT may be somewhat better than STEPPS when it comes to treating overall borderline symptoms. [58]

A second adjunctive intervention that shows promise in the treatment of BPD is the motive-oriented therapeutic relationship (MOTR). This is not a treatment in its own right but instead a structured method for managing how the patient's pathology manifests within the relationship with the therapist. Use of the MOTR is intended to obviate the patient's need to enact problematic interpersonal behaviors by identifying and meeting the needs these behaviors serve. [59] A randomized trial comparing brief Good Psychiatric Management (GPM; see below) with GPM plus MOTR suggested that MOTR yielded additional gains in interpersonal outcomes and biased thinking, although reduction in borderline symptoms was similar for both groups. [60–62]

Pragmatic and Psychoeducative Treatments

In addition to the adjunctive treatment options above, there exist a number of pragmatic interventions designed to be used by trainees (e.g., psychiatry residents), case managers, and other support specialists. The most prominent of these pragmatic interventions was once called "General Psychiatric Management" and is now called Good Psychiatric Management (GPM). GPM is a case-management approach based on psychiatric practice guidelines, focusing on psychoeducation but also including supportive-psychodynamic and cognitive-behavioral psychotherapeutic elements. [63,64] The treatment was developed by John Gunderson and manualized [63] to serve as the control treatment for DBT in a randomized trial. [16] Notably, this trial is the largest RCT attempted to date, and the authors found no outcome differences between DBT and GPM, nor have any emerged at follow-up. [65] Since these early developments, GPM has continued to be used as a comparison group for more specific BPD treatments, and the encouraging results have prompted calls for GPM to be used as a first-line generalist treatment for the disorder. [66,67]

Finally, Mary Zanarini and colleagues have shown, in two separate trials, that mere psychoeducation about BPD (i.e., its clinical characteristics, course, and etiology and available treatment options) is better than a no-treatment control, at least on some outcomes. [68,69] The superiority of this minimal intervention – in the second trial, delivered via the Internet – may speak to the degree to which ignoring the BPD diagnosis, or not sharing it with patients to whom it applies, can be harmful, or at least a missed opportunity. Nevertheless, these studies do not compare psychoeducation to active treatment comparison conditions, and so it remains to be seen whether a well-delivered therapy would be preferable to psychoeducation.

Does the Kind of Treatment Make a Difference?

Given the plurality, and the diversity, of evidence-based psychotherapeutic treatment options for BPD, it is scientifically and clinically important to consider the question of whether these different psychotherapies work equally well. This is indeed a complex question. Randomized controlled trials are undoubtedly the most straightforward way to resolve it, and yet there have not been enough head-to-head comparisons of these treatments to provide a definitive answer. The extant controlled studies are also extremely varied in terms of treatment dose, setting, choice of control group, and other design and sample characteristics, which may contribute to the large heterogeneity in effect size among these trials identified by a recent meta-analysis. [10••] Nonetheless, there is little doubt that the specialized treatments for BPD outlined above are more effective, on average, than treatment-as-usual or generic psychological or psychiatric care, which on its own shows only small effects. [70•] These *bona fide* therapies should be considered the preferred treatments for BPD based on the available evidence.

Taken together, head-to-head trials (see Table) do not generally suggest superiority of any of the available specialized treatments for BPD relative to one another, despite the results of some individual studies suggesting otherwise. In addition, although these treatments operate on different theories of BPD and focus on different symptoms of the disorder, none of them is uniquely effective in bringing about improvement on the outcome domains they target. Specific treatment effects are the exception and not the rule. For instance, TFP improves attachment and mentalization, despite the fact that it does not explicitly work to do this, unlike MBT. [71,72] Similarly, DBT, not just TFP, shows favorable outcomes for self-concept coherence and defensive functioning. [33,73,74] Even though some studies show differences between treatments in rates of improvement for different symptoms, these effects are inconsistent from trial to trial and sometimes from one measurement to another. For instance, a recent non-

randomized trial found that DBT led to faster reductions in self-harm than MBT, but by the end of the study both treatments had achieved the same degree of reduction in this symptom. [33]

As others have pointed out, the specialized, evidence-based psychotherapies for BPD named above – DBT, MBT, ST, and TFP – also have several elements in common. [63,75–77] First, they all explicate a coherent model of the disorder within the therapy (despite the lack of agreement among treatments about these models themselves). Second, they work within a strong treatment frame, which may be necessary to enable the patient to do the difficult work of changing his or her behavior. Third, nearly all the treatments are long-term, lasting at least 6 months. This characteristic may not be strictly necessary, as shorter treatments can also be effective, especially at reducing acute symptoms. Randomized trials contrasting long-term and short-term versions of both DBT and MBT are also underway. [78,79] Fourth, these treatments have a strong focus on the here-and-now rather than on past relationships. Indeed, many treatments (such as SFT, TFP, and MBT) use the therapeutic relationship itself to help the patient develop more adaptive patterns of relating to others. Finally, each *bona fide* treatment for BPD offers interpersonal continuity in the form of a stable, reliable relationship with a therapist, treatment team, and/or therapeutic milieu. The importance of continuity of care for BPD outcome should not be overlooked; a fascinating study by Bales and colleagues suggests that organizational disruptions may affect the outcome of MBT, for instance. [80•] In sum, it is clear that certain specialized psychotherapies for BPD offer an advantage over general community treatment. In that respect, the type of treatment *does* make a difference. There is little compelling and consistent evidence, however, that any of these dedicated therapies is superior to any of the others, even in treating the specific outcome domains that they attempt to address, and there are many possibly important common factors among these treatments.

Psychotherapeutic Treatment for BPD: What We Still Don't Know

Despite the overall evidence for the efficacy and effectiveness of existing psychotherapeutic treatment options for BPD, there is still much to be discovered. For example, it is not at all clear how to prescribe one of these treatments over another, when a choice is available. No matter how consistent the results of a given therapy are for the "average individual with BPD," some patients show little benefit at all, and it is unknown whether these non-responders would have benefited from an alternative treatment. Similarly, it is not clear whether responders to one treatment would have done still better in another. [81] Intriguing initial results on this score come from a recent re-analysis of the large RCT by McMain and colleagues comparing DBT and GPM. [16] A cross-validated (but within-sample) procedure to identify moderators of differential response to these treatments suggested that patients with higher severity and impulsivity benefited more from GPM, whereas those with more dependent personality traits, childhood emotional abuse, social maladjustment, and higher depression severity did better in DBT. [82••] If these results are validated independently, they may point to the potential to select optimal treatments for this extremely heterogeneous disorder.

We also have little idea how long treatment effects within any of these therapies last beyond the short term. The longest follow-up assessments to date were 5 years after the termination of therapy. [30] Given the often chronic course of BPD, with sustained impairment and low functioning the norm even after symptomatic improvement, [83] this lack of knowledge about long-term effects is particularly troublesome. Existing treatments for BPD may reliably lead to symptom remission, but far less is known about how to facilitate sustained adaptive work and relationship functioning. General functioning may improve, [18,32,36,43,49,50,84,85] but

many treated individuals are still underemployed and lack sufficient stable and meaningful romantic and friend relationships at the end of treatment or at follow-up. [30,86]

Conclusions

In sum, there is solid evidence that various specific therapies (including DBT, MBT, ST, and TFP) are superior to treatment as usual in the community for Borderline Personality Disorder. There are also several adjunctive and minimal/pragmatic treatment options available with research support. There is no reliable evidence that any of these treatments is more effective than any other, however. In addition, existing treatments have many elements in common that may be responsible in part for their effects. Future research will be needed to uncover how patient characteristics and treatment parameters affect the outcome of these therapies.

Human and Animal Rights

This article does not contain any studies with human or animal subjects performed by the author.

Conflict of Interest

The author has no conflicts of interest to disclose.

Table — Head to Head Comparisons between Evidence-Based Therapies for BPD			
First author	**Type**	**Treatment groups**	**Outcomes**
Barnicot [33]	naturalistic	DBT (*n* = 58) MBT (*n* = 32)	No differences in clinical outcomes at month 12
Feliu-Soler [87]	non-randomized	DBT mindfulness (*n* = 18) GPM (*n* = 17)	DBT-mindfulness group had better depression and symptom scores at posttest; no difference in emotional reactivity
McMain [16]	RCT	DBT (*n* = 90) GPM (*n* = 90)	No differences in outcomes; similarity persists at follow-up
Kramer [59]	RCT	GPM + MOTR (*n* = 11) GPM (*n* = 14)	MOTR group showed more improvement in interpersonal problems; no other clinical differences
Edel [88]	non-randomized	DBT skills + MBT (*n* = 29) DBT skills (*n* = 28)	No differences in BPD symptoms or attachment; mixed results on mentalizing
Kramer [60]	RCT	GPM + MOTR (*n* = 42) GPM (*n* = 43)	MOTR group showed more improvement in general symptoms, but not BPD symptoms or interpersonal problems
Clarkin [49]	RCT	TFP (*n* = 23) DBT (*n* = 17)	No differences in direct comparison, although treatments had varying effects on outcomes pre-post
Giesen-Bloo [42]	RCT	ST (*n* = 45) TFP (*n* = 43)	ST group showed more change in BPD symptoms and a composite measure of secondary outcomes; no differences in quality of life
Guillén Botella [58]	non-randomized	DBT (*n* = 45) STEPPS (*n* = 27)	DBT group showed more improvement in BPD behavioral symptoms and fear of suicide; no other differences

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