

Borderline Personality Disorder: a narrative review on effective psychotherapies

Marina Neri^{1#}, Antonino Reitano^{1#}, Lavinia Rinnone¹, Antonio Bruno^{1*}, Fabrizio Turiaco¹, Felicia Matilde Ferreri¹, Carmela Mento¹, Maria Rosaria Anna Muscatello¹, Fiammetta Iannuzzo¹

¹ University of Messina, Department of Biomedical and Dental Sciences and Morphofunctional Imaging, Messina, Italy

These authors contributed equally to this work

ABSTRACT



Borderline personality disorder (BPD) is a severe mental disorder characterized by pervasive patterns of relational instability, chronic feelings of emptiness, sense of abandonment, self-injurious and anticonservative attempts. Pharmacological treatment has been found useful only for the management of severe symptoms and management of comorbidities, while psychotherapy is the main treatment for BPD. Although the disorder has long been considered resistant to any treatment, in recent years research has not only shown that BPD can be treated but also provided several manualized and empirically validated psychotherapeutic treatments. This paper set out to examine the most effective current psychotherapies for the treatment of BPD. All articles published in the last five years on the new psychotherapeutic treatments for BPD were included. Articles not relevant to this topic, as well as case reports and articles on animal models, were excluded. EBs forms of psychotherapy directed at symptom control and comorbidities occurring in BPD and forms termed generalist, were analyzed. Overall, the study found that there is no single form of psychotherapy that can fully treat BPD. The most effective forms of psychotherapy in controlling impulsive and self-injurious symptoms and in managing comorbidities remain Dialectical Behaviour Therapy and Schema Therapy.

Category: Review

Received: April 9, 2024

Accepted: June 14, 2024

Published: October 30, 2024

Keywords:

Borderline Disorder, Psychotherapy, Cognitive behaviour therapy, Evidence Based Psychotherapy, Guidelines

***Corresponding author:**

Antonio Bruno,

University of Messina, Department of Biomedical and Dental Sciences and Morphofunctional Imaging, Via Consolare Valeria 1, Contesse, Messina 98125, Italy

E-mail: antonio.bruno@unime.it

Introduction

Borderline Personality Disorder (BPD) is characterized by a pervasive pattern of instability in interpersonal relationships, affects, identity, and marked impulsivity that begins in early adulthood and is expressed in various contexts. It typically arises during adolescence (after age 12) and is often preceded and/or characterized by symptoms of internalizing disorders such as depression and anxiety and externalizing disorders such as conduct problems, hyperactivity, and substance use or both [1].

Prevalence of BPD seems to be around 1.6% among the general population and around 20% among the clinical population [2], up to 10% among ambulatory patients and 25% among hospitalized patients [3]. Individuals with BPD often experience crises with self-harm or suicide attempts, thus showing intensive use of health services and high costs [4-6].

BPD is associated with various negative outcomes, including low employment and educational attainment, lack of long-term relationships, increased conflict between partners, risky sexual behavior, low levels of social support, low life satisfaction, and increased use of health services.

Psychotherapy is the main treatment for BPD; pharmacological treatment is indicated only for comorbid conditions requiring medication or during a crisis if psychosocial interventions are insufficient. Awareness of BPD by non-specialists, as well as specialists, is critical for appropriate early intervention [1]. Diagnosis is made through the diagnostic criteria proposed by the DSM-5-TR [7].

Research has provided important findings on the course of BPD: impulsivity-related symptoms, such as self-harm and suicidality, resolve more quickly. Instead, affective symptoms reflecting chronic dysphoria, such as loneliness and emptiness, are more stable [8]. On the one hand, high

remission rates have been found after several years, where patients no longer meet the full spectrum of criteria for BPD. However, severe impairments in social functioning and quality of life usually persist [9,10]. BPD has long been considered resistant to any treatment, a bias that has contributed to widespread treatment pessimism. However, research in recent years has not only shown that BPD can be treated but has also provided several manualized and empirically validated psychotherapeutic treatments [11,12], while no psychopharmacological treatment has been shown to be more than moderately effective [13]. In addition, longitudinal observational studies have clarified those patients with BPD, even without intensive treatment, experience high remission rates over ten years [9,14]. With the availability of validated and proven therapies, the issue of BPD treatment may seem resolved, but, unfortunately, access to appropriate care remains a problem, as most therapies (EBs) are highly specialized and require intensive training and many resources. If implemented effectively, EB treatments compared with the generic psychiatric treatments currently provided would reduce the direct and indirect health care costs of BPD, which is one of the most resource-intensive psychiatric disorders [15]. Unfortunately, despite the range of treatment options that exist, demand for treatment far exceeds supply [16].

Discussions

Aims

This work set out to examine the most effective current psychotherapies for the treatment of BPD, evaluating several forms of psychotherapy (Dialectical Behaviour Therapy, Schema Therapy, Mentalization-Based Treatment, Transference Focused Therapy), forms of psychotherapy that could be effective in the symptomatic treatment of BPD (Eye Movement Desensitization and Reprocessing, Acceptance and Commitment Therapy, Behavioural activation, Metacognitive Interpersonal Therapy, Mindfulness-based cognitive therapy), and generalist approaches (Stepped care, General Psychiatric Management and Structured Clinical Management), trying to compare some of the most effective ones and observing their advantages and limitations.

Methods

Search strategy

All articles published in the last five years on the new psychotherapeutic treatments for Borderline personality disorder were analyzed.

Studies have been identified through research carried out in PubMed, Scopus, and Google Scholar using the following keywords: "Borderline", "Personality Disorder", "Psychotherapy", "Evidence Based", "Guideline", "Emotional Dysregulation", "Cognitive Behavioural", linked by the Boolean operator "AND".

Eligibility criteria

Articles were included in the review according to the following inclusion criteria: articles written in English language and containing quantitative and qualitative information on Borderline personality disorder, evidence-based treatment, and cognitive behavioral therapy. References from the selected articles were also checked.

Exclusion criteria

Articles were excluded if irrelevant to the examined topic. Case reports and articles on animal models were also excluded.

Results

Evidence-based therapies for BPD

- *Dialectical behavior therapy (DBT)*

DBT is the best known and most available EB therapy. It has been initially developed by Marsha Linehan [17] for highly suicidal patients who did not respond to standard cognitive-behavioral interventions. DBT treatment includes individual psychotherapy interventions, psychoeducational group interventions for "skills training," and the possibility of 24-hour telephone coaching. DBT requires major organizational changes, such as weekly team meetings, "skills training," and a high level of team involvement [16]; coordination of these functions is crucial to ensure its successful adoption as forms of psychotherapy.

- *Schema Therapy (ST)*

Schema Therapy (ST) was developed on the basis of cognitive therapy and offers treatment for pervasive and enduring psychological disorders in which cognitive therapy has been less successful [18]. It focuses on generating structural changes in the patient's personality [19]. ST format includes cognitive therapy enhanced by techniques from object relations theories, attachment, and Gestalt therapy. In ST, the focus is on childhood traumatic experiences and empathic and protective therapy. Experiential techniques have been integrated into this model [20]. In individual therapy sessions, the clinician uses a variety of behavioral, cognitive, and experiential techniques that focus on the therapeutic relationship, daily life outside of therapy, and past traumatic experiences. Unlike the more neutral positions of other therapies, ST encourages an attachment between therapist and patient, a process described as "limited re-parenting." Therapy focuses on 4 pattern modes of BPD: detached protector, punitive parent, abandoned/abused child, and angry/impulsive child. The mechanism of change occurs through modifying the negative patterns of thinking, feeling and behavior and developing healthier alternatives to replace them so that these dysfunctional patterns no longer control the patient's life [19].

- *Mentalization-Based Therapy (MBT)*

MBT is a dynamic approach developed by Bateman and Fonagy that aims to stabilize a person's "mentalization" skills in stressful situations, which represents the ability that humans have to develop and imagine thoughts and feelings in their own and others' minds in order to understand interpersonal interactions. This is where its mechanism of change lies. The MBT proposes that BPD symptoms arise when a patient stops mentalizing, which leads patients to operate based on a pathological certainty about others' motives, disconnection from the influence of reality and a desperate need to demonstrate their feelings through action. Attachment interactions become hyperactive, fueling distress and difficulty coping, rather than providing safety and security, making the therapeutic process with BPD difficult. MBT aims to stabilize BPD problems by strengthening the patient's ability to mentalize under the stress of attachment activation [21]. MBT focuses on the development of mindfulness skills and does not involve homework. The basic training lasts three days and is reinforced by ongoing supervision. The empirically tested version of MBT includes both group therapy and a mentalization group. MBT therapists adopt a position of curiosity and "not knowing" to encourage patients to evaluate their emotional and interpersonal situation through a more grounded, flexible, and benevolent lens. Prioritizing the maintenance of mentalization, MBT therapists support patients to think for themselves through hyperactive states, rather than providing pre-packaged or intellectualized explanations, insights, or skills. Outpatient MBT involves 50 minutes of weekly individual therapy, 75 minutes of group therapy, and a reflective group meeting that serves to support clinical group members in their mentalization during the treatment process [22].

- *Transference-focused psychotherapy (TFP)*

TFP is a psychoanalytic treatment based on Kernberg's conception of borderline personality organization (1960s). The characteristics, resulting from adverse temperamental and environmental factors, are: diffuse identity, confused internal relationship operating models, unstable reality tests, variable empathy, hetero- and self-directed aggression, and the use of primitive defense mechanisms. Treatment consists of two weekly sessions without group therapy, and the patient's relational patterns are analyzed. TFP has been shown to be useful in reducing aggression and improving mentalization [23,24]. TFP seems to be more suitable for clinicians with psychodynamic training experience [16]. Unfortunately, no studies were found on the implementation of TFP [25].

Additional effective interventions for the BPD symptomatology

- *Eye Movement Desensitization and Reprocessing (EMDR)*

People diagnosed with post-traumatic stress disorder (PTSD) face emotional, cognitive, behavioral, and

physiological symptoms [7]. In addition to trauma-focused cognitive-behavioral therapy (CBT), EMDR [26], a protocolled intervention that aims to reduce distress associated with traumatic memories, has been shown to be effective in treating this debilitating and often chronic condition [27]. EMDR has therefore been included in the treatment guidelines of the International Society for Traumatic Stress Studies (ISTSS) as a first-choice treatment for PTSD [28]. BPD has substantial comorbidity with several other disorders, including PTSD [29]. A review studying comorbidity in BPD estimated that 33%-79% also have symptoms that meet PTSD criteria [30]. Compared with peers with only BPD, patients with BPD and PTSD in comorbidity tend to have more severe symptoms and suicidal tendencies, as well as lower quality of life [31]. Despite the high prevalence of PTSD in populations with BPD, treatment guidelines for PTSD are not usually followed when individuals are diagnosed with both conditions. This is because clinicians assume that patients with BPD are less able to cope with the intrapsychic dynamics of trauma-focused therapies, which, they fear, could result in serious adverse events. However, no conclusive evidence has yet been provided to support this assumption [32].

- *Acceptance and Commitment Therapy (ACT)*

ACT is a cognitive-behavioral therapy based on functional contextualism and relational frame theory. It holds that the following psychopathological processes are central to mental disorders: cognitive fusion; avoidance of experience; attachment to a verbally conceptualized self and a verbally conceptualized past; lack of values or confusion between goals and values; and absence of committed behavior that moves in the direction of chosen values. Treatment involves psychoeducation on key mechanisms, mindfulness exercises and cognitive defusion. The patient's value orientation is elicited and discussed, and patients are supported in values-driven behavior as opposed to the behavior driven by emotional or experiential avoidance [33].

- *Behavioural activation*

Behavioural activation is a type of third-wave cognitive-behavioural therapy for the treatment of depression and other mental disorders. Behavioral activation is a stand-alone component that shows similar or greater efficacy than cognitive therapy [34-36]. Behavioral activation has evolved from a longstanding behaviorist tradition that seeks to increase positive reinforcement by programming appropriate patient behaviors and thereby achieving an antidepressant effect. Important changes from earlier versions are the shift from "pleasurable" activities to value-oriented activities, a change strongly influenced by ACT and the adoption of the concept of "opposite action" from DBT [37]. The goal is to put the patient in touch with diverse, stable, and valued sources of positive

reinforcement. Behavioral activation includes psychoeducation, activity monitoring, antidepressant activity programming, and problem solving.

- *Metacognitive Interpersonal Therapy (MIT)*

The term "metacognition" refers to a comprehensive mind-reading ability and the ability to understand and reflect on mental states to manage life tasks and regulate internal mental processes and interpersonal relationships. Specifically, metacognitive abilities include three broad functional domains [38]: (1) self-reflection, the ability to form a complex idea of self and to recognize that personal idea usually does not reflect reality, (2) understanding others' minds (UOM), the ability to be aware that others may have a worldview/situations/ relationships different from our own, and (3) mastery, the ability to solve relational problems and psychological distress based on awareness of mental states and using adaptive strategies that feed on mentalistic knowledge [39]. Important to notice that many studies [40-45] have investigated metacognitive functioning in patients with BPD and other personality disorders, reporting, however, heterogeneous results, ranging from selective deficits in specific metacognitive subdomains (e.g., the ability to process coherent descriptions of one's mental states and the ability to use adaptive strategies to solve relational problems) to no alterations in others (e.g., the ability to identify and label emotions and personal thoughts).

- *Mindfulness-based cognitive therapy (MBCT)*

MBCT grew out of the experience of applying Buddhist meditation techniques in medicine [46]. It was developed specifically to reduce the number of relapses in patients with major depression. MBCT uses psychoeducation and encourages patients to practice mindfulness meditation. A key goal is to develop metacognitive awareness which is the ability to experience cognitions and emotions as mental events that pass through the mind and may or may not be related to external reality. The goal is not to change "dysfunctional" thoughts, but to learn to experience them as internal events separate from the self [47].

Generalist intervention models for BPD

- *Stepped care*

The review by Paris [48] describes the use of Stepped Care as an alternative to the use of routine extended therapy. Paris starts from the observation that although BPD is a chronic disorder, there is no evidence that it benefits more from long-term interventions. Patients with BPD, indeed, show improvement even after short interventions within Stepped Care model [49,50] and closer to the resources actually available, considering also that duration is one of the barriers to treatment availability. Stepped Care is a treatment model for somatic and psychiatric disorders that vary in intensity and prognosis, ranging from minimal to very intensive support, depending

on need and level of severity. It doesn't aim for complete recovery, but for recovery that allows the patient to self-manage and be monitored as needed. This modality allows patients to contact services and get support tailored to the needs of the moment. An example of an algorithm [48,51] illustrating the possible steps proposed by Stepped Care was compiled in the article by Choi-Kain et al. [16]. In the "preclinical" stage, characterized by risk factors for BPD and some symptoms of the disorder that do not reach the threshold for diagnosis, the elective interventions, from a Stepped Care perspective, are psychoeducation (for the family and the patient) psychological support and problem-solving interventions. In the early stage, with symptoms of the disorder reaching the threshold for diagnosis and presence of self-harm, suggested interventions are case management, General Psychiatric Management (GPM) and DBT/ST. In the later stages, with presence of self-harm and suicidality, however, GPM with pharmacological management, DBT, ST or EB treatment (MBT, DBT, TFP). In the most severe stage characterized by potentially fatal suicide attempts, GPM with pharmacological management interventions, a higher level of care (residential treatment) or another EB therapy or integration of EB therapies are required. Finally, in the case of a chronic level and unresponsive to previous treatment, GPM and supportive therapy is proposed. An example of early intervention calibrated to the patient is the Helping Young People Early (HYPE) model, studied in an RCT [52] that found good user adherence because it was applied specifically on adolescents. The difficulties encountered in implementation, like those of other treatments, were also studied for Stepped Care [53]. Once again, they were divided into two levels: individual and organizational. In the former, attitudes toward personality disorders and the opportunity to participate in trainings are crucial factors, while organizational aspects particularly relevant to implementation were supportive leadership and organizational experience in change management.

- *General Psychiatric Management (GPM)*

GPM [54] is a manualized treatment that Paul Link converted from John Gunderson's clinical guidance in a study comparing treatment with DBT [55]. This study showed that GPM, a less intensive and nonspecialized intervention, had an efficacy equal to that of DBT even at one- and two-year follow-up [56] with a lower dropout rate of patients who had a higher degree of comorbidity in Axis 1 (suffering from clinical disorders and other conditions other than personality disorders-axis 2) [57,58]. This is not a psychotherapy model *stricto sensu*, but a "good" psychiatric case management implemented by a clinician who has the basic knowledge of BPD and the vulnerabilities of patients with this diagnosis. Weekly psychotherapy is offered only to those who benefit from it and those who show effective changes. Another important

aspect of the GPM is psychoeducation. GPM focuses on interpersonal sensitivity and aims to manage symptoms and comorbidities by optimizing the patient's functioning in relational dynamics. The central goal is to improve quality of life. The GPM training requires a one-day workshop and about 2,5 hours per week per patient [16]. From a Stepped Care perspective, the effectiveness of 10 GPM sessions as a brief intervention has been studied [49]. Psychoeducation restores meaning to life events as a source of corrective experiences and growth rather than failure. At the beginning of the intervention, motivation and participation are promoted, and in subsequent sessions, the criteria that make up the diagnosis and any co-occurring disorders are addressed. Throughout treatment, attention is maintained on the interpersonal hypersensitivity model, attributing meaning to the patient's life events and relationships. In the last sessions, the clinical process and understanding of the patient's difficulties are summarized by involving other clinicians and family members. From here, short-term goals can be formulated and, if necessary, a "step forward" or "step back" of the treatment underway at that time can be made. Generalist treatments such as GPM are not intended as an alternative to EB treatments, which remain the treatments of choice, but not in the early stages of intervention.

- *Structured clinical management (SCM)*

SCM was developed in the United Kingdom and reflects the "best general psychiatric treatment" that can be used by "generalist mental health clinicians" with minimal additional training [59]. It was developed based on "expert consensus" on which general practices work best for the treatment of BPD and was tested primarily in the context of RCTs that evaluated the effectiveness of MBT [22]. Compared with patients who received MBT, those who received SCM showed substantial improvements in several clinical outcomes. Patients who received MBT improved somewhat faster and continued to show greater benefit than SCM at 18-month follow-up. However, patients who received SCM were as well off at 6 months as those in the MBT group and showed a more rapid reduction in self-injury. Like GPM, SCM provides a structured framework for approaching BPD treatment. This framework is guided by a set of generalist principles and aims to make treatment understandable and predictable for patients. Emphasis is placed on sharing the borderline diagnosis with patients, psychoeducation, building an alliance based on both contractual factors (e.g., agreement on goals) and relational factors (e.g., trust, trustworthiness and sympathy), encouraging family involvement, limited use of psychopharmacological intervention, some guidance for management of co-morbid conditions, and explicit safety planning, management of co-morbid conditions and explicit safety planning. Both the GPM and the SCM recommend intersessional contact sparingly. However, the

SCM takes a more cautious approach, recommending "vigorously advocating for the patient over the phone if necessary" [59], vehement pursuit of clients who did not show up for treatment, and a willingness to meet with them at home or elsewhere when safety risk safety risk. This may have more to do with differences in the legal climate of the United Kingdom versus the United States, rather than beliefs about the usefulness of intersessional contact.

In addition, SCM includes specifically articulated weekly group therapy. Group therapy is open on a rotating basis for patients and includes psychoeducation and a structure focused on problem solving. SCM bears considerable similarity to GPM in terms of training requirements, structure, and general principles. However, descriptions of the therapeutic techniques employed therapeutic techniques used in SCM suggest that, in some respects, it may appear more like MBT than GPM in practice. GPM is less psychotherapeutic than other evidence-based treatments for BPD [16]. These include authenticity and openness, adopting a "no-knowledge" stance, paying attention to misunderstandings in the relationship, and generating curiosity about beliefs and intentions [19].

Interpretations

There is evidence that no definitive and unequivocal therapy for treating BPD is available, even though several psychotherapeutic treatments, even if not curative but symptomatic, has proven to be more effective than pharmacotherapy.

It may be useful to considerate the statistically significant effectiveness of some psychotherapeutic orientations, compared to other ones. Specifically, among the available psychotherapies, analyzed studies showed the predominant role of DBT and ST over other approaches. The success of DBT lies in the robust empirical support and a large number of rigorously conducted studies comparing it to "treatment as usual" (TAU) [55,60].

Recent studies [61-63] have shown the efficacy of "skills training" (one of the core components of DBT) practiced alone, compared to standard DBT, as well as the positive results in the management of co-occurring disorders such as substance abuse in patients with BPD [64].

The DBT approach teaches patients functional skills to accept and regulate their emotions. Therefore, we hypothesize that DBT will lead to improvements with respect to emotion regulation difficulties. TS is a transdiagnostic approach that could lead to better reductions in psychiatric comorbidities and greater increases in overall quality of life. The two methods may also have different results for subgroups of BPD patients (different effects based on comorbid disorders or history of childhood abuse). For example, according to analyzed studies, patients who have high levels of self-injury and suicidality, as well as high impulsivity, will benefit most

from DBT, while patients with avoidant personality disorder and who exhibit more "hidden" behaviour problems in comorbidity will benefit most from ST. Patients with high childhood traumatization and/or comorbidity with PTSD will benefit more from ST because it directly addresses the trauma. A study comparing ST and DBT for the first time [11], showed the hypothesis that the two psychotherapeutic methods differed significantly in reducing the severity of BPD. In addition, studies investigating the clinical efficacy of either method are not comparable because they have different outcome variables (DBT studies mainly focused on suicidality, self-injury, and impulsive behaviour, while ST studies focused on all nine BPD criteria).

Considering these differences, there is considerable uncertainty about which treatment is superior in reducing overall BPD severity. DBT reduces suicidal and self-injurious behaviours better and faster than ST; in any case, both DBT and ST are promising for the treatment of BPD [65]. Numerous RCTs have also been conducted comparing the effectiveness of ST with other forms of psychotherapy: one RCT comparing ST with TFP for example showed better cost-effectiveness of TS [66]; another RCT that included 32 patients with borderline personality disorder compared the ST group with TAU [67] showed that ST remission rates were clearly higher; finally, a RCT compared ST with and without telephone crisis support and found high remission rates but no additional benefit of crisis support [68]. EMDR is a psychotherapeutic approach that appears extremely promising with regard to specific application for patients with BPD. A systematic review and meta-analysis of fourteen studies [69] showed how various types of trauma-focused treatments were administered to patients diagnosed with PTSD and personality disorder, mainly BPD. The interventions were found to be safe and effective in reducing PTSD symptoms and symptoms in comorbidities such as anxiety, depression, and borderline pathology. Two studies of this review and meta-analysis evaluated EMDR; one of these was a pilot study [70], in which the intervention was added to TAU in 47 adults with personality disorders. The results showed that PTSD symptoms, along with the severity of dissociation and insomnia, were significantly reduced after EMDR treatment; however, a causal relationship with EMDR could not be established due to the open-ended and uncontrolled nature of the study. The second study also presented the results of an uncontrolled pilot study with an intensive inpatient treatment program for BPD-PTSD that included EMDR, prolonged exposure, psychoeducation, and physical activity [71]. According to this second study, both BPD and PTSD symptoms had significantly decreased upon discontinuation of treatment, with no adverse events occurring.

In a recently published RCT, EMDR addressing adverse childhood memories (in the absence of a formal diagnosis

of PTSD) led to a reduction in psychological symptoms and improvement in personality functioning in patients with various personality disorders, 25.5% of whom met the diagnostic criteria for BPD [72]. Although promising, evidence on trauma-focused therapies for patients with comorbid personality disorder is still limited, especially about EMDR. Adding EMDR for PTSD to therapy for BPD at the beginning of treatment appears to be feasible, safe, and effective. It not only reduces PTSD symptoms, but also reduces general psychopathology and decreases their effects on daily activities and social functioning. Future research should test the efficacy, safety, and long-term effects of EMDR in an RCT and in larger samples of BPD-PTSD [73].

Extremely interesting appears to be the application of the area of metacognitive therapy for BPD. A recent review [74] set out to investigate the link between psychotherapy, metacognitive abilities, and BPD symptomatology, and in its conclusion the results supported the hypothesis of a selective and specific metacognitive impairment in BPD patients, which might improve during treatment along with symptomatology. These findings could have several clinical implications that would make the treatment of patients with BPD more effective and facilitate the prediction of treatment outcomes [42]. Indeed, by tailoring interventions to the more common metacognitive difficulties of BPD, seems to be possible to avoid other treatments that might worsen metacognitive abilities [75]. These findings leave room for the hypothesis, yet to be demonstrated, that forms of metacognitive therapy (MIT) may reveal their usefulness when applied specifically to patients with BPD disorder.

In addition, a very recent study [76] set out to test whether MIT might be a promising approach for BPD; to do so, the authors decided to compare the clinical effects of MIT on emotional dysregulation, other characteristic aspects of BPD, and other personality dimensions, with standard treatments. They also planned to correlate these effects with those found at the neurobiological level by measuring changes in amygdala activity. At the conclusion of the study, the authors state that MIT can be a valid psychotherapeutic treatment for BPD, through the promotion of increased metacognitive skills, reduction of emotional dysregulation, impulsivity and depressive symptoms, status psychopathology and psychopathological dimensions of personality. The further confirmation of this study, together with the previous ones analyzed, highlights the solid theoretical architecture of MIT, according to which psychopathology is the outcome of dysfunction in metacognitive abilities [77]. Finally, regarding other psychotherapeutic approaches, there are several randomized controlled trials (RCTs) to test the effectiveness of ACT in heterogeneous clinical conditions but none of them appear specific to BPD [78-82].

Conclusions

Borderline personality disorder is characterized by a chronic pattern of unstable relationships and self-image, combined with significant emotional dysregulation. This can manifest as difficulty controlling anger, marked impulsivity, and a high incidence of risk behaviors, including repeated risks of suicide or self-harm. Consequently, BPD is considered a serious psychiatric disorder with significant challenges for clinical management. While psychopharmacological treatments play a fundamental role in managing severe symptoms and co-occurring conditions, psychotherapy is widely regarded as the gold standard for long-term treatment. Evidence analyzed in this article indicates a wide range of effective psychotherapeutic approaches; however, it is important to note that not all therapies are equally effective, since each has unique characteristics and methods. Therefore, clinicians working with patients diagnosed with BPD must assess the individual circumstances and features of each patient to determine the most appropriate evidence-based therapy, guiding them towards that specific type of psychotherapy.

Compliance with ethical standards

Any aspect of the work covered in this manuscript has been conducted with the ethical approval of all relevant bodies and that such approvals are acknowledged within the manuscript. Informed consent was obtained from all subjects involved in the study.

Conflict of interest disclosure

There are no known conflicts of interest in the publication of this article. The manuscript was read and approved by all authors.

References

- Bohus M, Stoffers-Winterling J, Sharp C, Krause-Utz A, Schmahl C, Lieb K. Borderline personality disorder. *Lancet*. 2021;398(10310):1528-1540. doi:10.1016/S0140-6736(21)00476-1
- Ellison WD, Rosenstein LK, Morgan TA, Zimmerman M. Community and Clinical Epidemiology of Borderline Personality Disorder. *Psychiatr Clin North Am*. 2018;41(4):561-573. doi:10.1016/j.psc.2018.07.008
- Gunderson JG. Borderline personality disorder: ontogeny of a diagnosis. *Am J Psychiatry*. 2009;166(5):530-539. doi:10.1176/appi.ajp.2009.08121825
- Bode K, Vogel R, Walker J, Kröger C. Health care costs of borderline personality disorder and matched controls with major depressive disorder: a comparative study based on anonymized claims data. *Eur J Health Econ*. 2017;18(9):1125-1135. doi:10.1007/s10198-016-0858-2
- Hörz S, Zanarini MC, Frankenburg FR, Reich DB, Fitzmaurice G. Ten-year use of mental health services by patients with borderline personality disorder and with other axis II disorders. *Psychiatr Serv*. 2010;61(6):612-616. doi:10.1176/ps.2010.61.6.612
- Ten Have M, Verheul R, Kaasenbrood A, et al. Prevalence rates of borderline personality disorder symptoms: a study based on the Netherlands Mental Health Survey and Incidence Study-2. *BMC Psychiatry*. 2016;16:249. doi:10.1186/s12888-016-0939-x
- American Psychiatric Association. (2022). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR). American Psychiatric Association Publishing. <https://doi/book/10.1176/appi.books.9780890425787>
- Zanarini MC, Frankenburg FR, Reich DB, Silk KR, Hudson JI, McSweeney LB. The subsyndromal phenomenology of borderline personality disorder: a 10-year follow-up study. *Am J Psychiatry*. 2007;164(6):929-935. doi:10.1176/ajp.2007.164.6.929
- Gunderson JG, Stout RL, McGlashan TH, et al. Ten-year course of borderline personality disorder: psychopathology and function from the Collaborative Longitudinal Personality Disorders study. *Arch Gen Psychiatry*. 2011;68(8):827-837. doi:10.1001/archgenpsychiatry.2011.37
- Zanarini MC, Frankenburg FR, Reich DB, Fitzmaurice G. The 10-year course of psychosocial functioning among patients with borderline personality disorder and axis II comparison subjects. *Acta Psychiatr Scand*. 2010;122(2):103-109. doi:10.1111/j.1600-0447.2010.01543.x
- Fassbinder E, Assmann N, Schaich A, et al. PRO*BPD: effectiveness of outpatient treatment programs for borderline personality disorder: a comparison of Schema therapy and dialectical behavior therapy: study protocol for a randomized trial. *BMC Psychiatry*. 2018;18(1):341. Published 2018 Oct 19. doi:10.1186/s12888-018-1905-6
- Stoffers JM, Völlm BA, Rucker G, Timmer A, Huband N, Lieb K. Psychological therapies for people with borderline personality disorder. *Cochrane Database Syst Rev*. 2012;2012(8):CD005652. Published 2012 Aug 15. doi:10.1002/14651858.CD005652.pub2
- Skodol, A. E. (2015). Borderline personality disorder and mood disorders: Longitudinal course and interactions. In L. W. Choi-Kain & J. G. Gunderson (Eds.), *Borderline personality and mood disorders: Comorbidity and controversy* (pp. 175–187). Springer Science + Business Media. doi:10.1007/978-1-4939-1314-5_10
- Zanarini MC, Frankenburg FR, Reich DB, Fitzmaurice G. Time to attainment of recovery from borderline personality disorder and stability of recovery: A 10-year prospective follow-up study. *Am J Psychiatry*. 2010;167(6):663-667. doi:10.1176/appi.ajp.2009.09081130
- Meuldijk D, McCarthy A, Bourke ME, Grenyer BF. The value of psychological treatment for borderline personality disorder: Systematic review and cost offset analysis of economic evaluations. *PLoS One*. 2017;12(3):e0171592. doi:10.1371/journal.pone.0171592
- Choi-Kain LW, Albert EB, Gunderson JG. Evidence-Based Treatments for Borderline Personality Disorder: Implementation, Integration, and Stepped Care. *Harv Rev Psychiatry*. 2016;24(5):342-356. doi:10.1097/HRP.0000000000000113
- Linehan MM. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. Guilford Publications. ISBN: 9780898621839
- McGinn LK, Young JE. (1996). *Schema-focused therapy*. In P. Salkovskis (Ed.), *Frontiers of cognitive therapy*. New York: Guilford
- Choi-Kain LW, Finch EF, Masland SR, Jenkins JA, Unruh BT. What Works in the Treatment of Borderline Personality Disorder. *Curr Behav Neurosci Rep*. 2017;4(1):21-30. doi:10.1007/s40473-017-0103-z
- Young JE. (1994). *Cognitive therapy for personality disorders: A schema-focused approach* (Rev. ed.). Professional Resource Press/Professional Resource Exchange. <https://psycnet.apa.org/record/1994-98188-000>

21. Bateman, Anthony, and Peter Fonagy, *Mentalization-based Treatment for Borderline Personality Disorder: A Practical Guide*, International Perspectives in Philosophy & Psychiatry 2006; Oxford Academic, 1 Feb. 2013), <https://doi.org/10.1093/med/9780198570905.001.0001>, accessed 5 Sept. 2024
22. 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):1355-1364. doi:10.1176/appi.ajp.2009.09040539
23. Clarkin JF, Levy KN, Lenzenweger MF, Kernberg OF. Evaluating three treatments for borderline personality disorder: a multiwave study. *Am J Psychiatry*. 2007;164(6):922-928. doi:10.1176/ajp.2007.164.6.922
24. Levy KN, Meehan KB, Kelly KM, et al. Change in attachment patterns and reflective function in a randomized control trial of transference-focused psychotherapy for borderline personality disorder. *J Consult Clin Psychol*. 2006;74(6):1027-1040. doi:10.1037/0022-006X.74.6.1027
25. Sanza M, Campa J, Menchetti M. The implementation of evidence-based therapies for borderline personality disorder in Mental Health Services. *Evidence-Based Psychiatric Care*. 2022;(8):193-201. doi:10.36180/2421-4469-2022-17
26. Shapiro F. Eye movement desensitization: a new treatment for post-traumatic stress disorder. *J Behav Ther Exp Psychiatry*. 1989;20(3):211-217. doi:10.1016/0005-7916(89)90025-6
27. de Jongh A, Amann BL, Hofmann A, Farrell D, Lee CW. The Status of EMDR Therapy in the Treatment of Posttraumatic Stress Disorder 30 Years After Its Introduction. *Journal of EMDR Practice and Research*. 2019;13(4):261-269. doi:10.1891/1933-3196.13.4.261
28. Bisson JI, Berliner L, Cloitre M, et al. The International Society for Traumatic Stress Studies New Guidelines for the Prevention and Treatment of Posttraumatic Stress Disorder: Methodology and Development Process. *J Trauma Stress*. 2019;32(4):475-483. doi:10.1002/jts.22421
29. Brown S, Shapiro F. EMDR in the treatment of borderline personality disorder. *Clinical Case Studies*. 2006;5(5):403-420. doi:10.1177/1534650104271773
30. Frías Á, Palma C. Comorbidity between post-traumatic stress disorder and borderline personality disorder: a review. *Psychopathology*. 2015;48(1):1-10. doi:10.1159/000363145
31. Pagura J, Stein MB, Bolton JM, Cox BJ, Grant B, Sareen J. Comorbidity of borderline personality disorder and posttraumatic stress disorder in the U.S. population. *J Psychiatr Res*. 2010;44(16):1190-1198. doi:10.1016/j.jpsychires.2010.04.016
32. van Minnen A, Hamed MS, Zoellner L, Mills K. Examining potential contraindications for prolonged exposure therapy for PTSD. *Eur J Psychotraumatol*. 2012;3:10.3402/ejpt.v3i0.18805. doi:10.3402/ejpt.v3i0.18805
33. Hayes SC (2012). *Acceptance and commitment therapy*. Washington: American Psychological Association. <https://www.apa.org/pubs/books/4317286>
34. Dimidjian S, Hollon SD, Dobson KS, et al. Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. *J Consult Clin Psychol*. 2006;74(4):658-670. doi:10.1037/0022-006X.74.4.658
35. Dobson KS, Hollon SD, Dimidjian S, et al. Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the prevention of relapse and recurrence in major depression. *J Consult Clin Psychol*. 2008;76(3):468-477. doi:10.1037/0022-006X.76.3.468
36. Jacobson NS, Dobson KS, Truax PA, et al. A component analysis of cognitive-behavioral treatment for depression. *J Consult Clin Psychol*. 1996;64(2):295-304. doi:10.1037//0022-006X.64.2.295
37. Martell CR, Dimidjian S, H.-D. R. (2010). *Behavioral activation for depression*. Guilford.
38. Semerari A, Carcione A, Dimaggio G, Nicolò G, Procacci M. Understanding minds: Different functions and different disorders? The contribution of psychotherapy research. *Psychotherapy Research* 2007;17(1):106-119. doi:10.1080/10503300500536953
39. Lysaker PH, Dimaggio G. Metacognitive capacities for reflection in schizophrenia: implications for developing treatments. *Schizophr Bull*. 2014;40(3):487-491. doi:10.1093/schbul/sbu038
40. Carcione A, Nicolò G, Pedone R, et al. Metacognitive mastery dysfunctions in personality disorder psychotherapy. *Psychiatry Res*. 2011;190(1):60-71. doi:10.1016/j.psychres.2010.12.032
41. Dimaggio G, Carcione A, Nicolò G, et al. Impaired decentration in personality disorder: a series of single cases analysed with the Metacognition Assessment Scale. *Clin Psychol Psychother*. 2009;16(5):450-462. doi:10.1002/cpp.619
42. Outcalt J, Dimaggio G, Popolo R, et al. Metacognition moderates the relationship of disturbances in attachment with severity of borderline personality disorder among persons in treatment of substance use disorders. *Compr Psychiatry*. 2016;64:22-28. doi:10.1016/j.comppsy.2015.10.002
43. Semerari A, Carcione A, Dimaggio G, Nicolò G, Pedone R, Procacci M. Metarepresentative functions in borderline personality disorder. *J Pers Disord*. 2005;19(6):690-710. doi:10.1521/pedi.2005.19.6.690
44. Semerari A, Colle L, Pellecchia G, et al. Metacognitive dysfunctions in personality disorders: correlations with disorder severity and personality styles. *J Pers Disord*. 2014;28(6):751-766. doi:10.1521/pedi_2014_28_137
45. Semerari A, Colle L, Pellecchia G, et al. Personality Disorders and Mindreading: Specific Impairments in Patients With Borderline Personality Disorder Compared to Other PDs. *J Nerv Ment Dis*. 2015;203(8):626-631. doi:10.1097/NMD.0000000000000339
46. Ludwig DS, Kabat-Zinn J. Mindfulness in medicine. *JAMA*. 2008;300(11):1350-1352. doi:10.1001/jama.300.11.1350
47. Segal Z, Williams M, Teasdale J. (2002). *Mindfulness-based cognitive therapy for depression*. Guilford.
48. Paris J. Stepped care: an alternative to routine extended treatment for patients with borderline personality disorder. *Psychiatr Serv*. 2013;64(10):1035-1037. doi:10.1176/appi.ps.201200451
49. Kramer U, Kolly S, Charbon P, et al. Brief psychiatric treatment for borderline personality disorder as a first step of care: Adapting general psychiatric management to a 10-session intervention. *Personal Disord*. 2022;13(5):516-526. doi:10.1037/per0000511
50. Zanarini MC. Psychotherapy of borderline personality disorder. *Acta Psychiatr Scand*. 2009;120(5):373-377. doi:10.1111/j.1600-0447.2009.01448.x
51. Chanen AM, Thompson K. (2015). *Borderline Personality and Mood Disorders: Risk Factors, Precursors, and Early Signs in Childhood and Youth*. In: Choi-Kain, L., Gunderson, J. (eds) *Borderline Personality and Mood Disorders*. Springer, New York, NY. doi:10.1007/978-1-4939-1314-5_9
52. Chanen AM, Betts JK, Jackson H, et al. Effect of 3 Forms of Early Intervention for Young People With Borderline Personality Disorder: The MOBY Randomized Clinical Trial. *JAMA Psychiatry*. 2022;79(2):109-119. doi:10.1001/jamapsychiatry.2021.3637

53. Pigot M, Miller CE, Brockman R, Grenyer BFS. Barriers and facilitators to the implementation of a stepped care intervention for personality disorder in mental health services. *Personal Ment Health*. 2019;13(4):230-238. doi:10.1002/pmh.1467
54. Gunderson JG, Links P. (Collaborator). (2014). Handbook of good psychiatric management for borderline personality disorder. American Psychiatric Publishing, Inc.
55. McMain SF, Links PS, Gnam WH, et al. A randomized trial of dialectical behavior therapy versus general psychiatric management for borderline personality disorder. *Am J Psychiatry*. 2009; 166(12): 1365-1374. doi:10.1176/appi.ajp.2009.09010039
56. McMain SF, Guimond T, Streiner DL, Cardish RJ, Links PS. Dialectical behavior therapy compared with general psychiatric management for borderline personality disorder: clinical outcomes and functioning over a 2-year follow-up. *Am J Psychiatry*. 2012; 169(6):650-661. doi:10.1176/appi.ajp.2012.11091416
57. American Psychiatric Association (2000). Diagnostic and Statistical Manual of Mental Disorders Fourth Edition Text Revision (DSM-IV-TR). Washington DC: American Psychiatric Association. doi:10.1176/appi.books.9780890423349
58. Wnuk S, McMain S, Links PS, Habinski L, Murray J, Guimond T. Factors related to dropout from treatment in two outpatient treatments for borderline personality disorder. *J Pers Disord*. 2013;27(6):716-726. doi:10.1521/pedi_2013_27_106
59. Bateman AW, Krawitz R. (2013). Borderline Personality Disorder: An Evidence-Based Guide For Generalist Mental Health Professionals. Oxford University Press, Usa; Illustrated edition (14 Jun. 2013). doi:10.1176/appi.books.9780890420249.dsm-iv-tr
60. van den Bosch LM, Koeter MW, Stijnen T, Verheul R, van den Brink W. Sustained efficacy of dialectical behaviour therapy for borderline personality disorder. *Behav Res Ther*. 2005;43(9):1231-1241. doi:10.1016/j.brat.2004.09.008
61. Heerebrand SL, Bray J, Ulbrich C, Roberts RM, Edwards S. Effectiveness of dialectical behavior therapy skills training group for adults with borderline personality disorder. *J Clin Psychol*. 2021; 77(7):1573-1590. doi:10.1002/jclp.23134
62. Kells M, Joyce M, Flynn D, Spillane A, Hayes A. Dialectical behaviour therapy skills reconsidered: applying skills training to emotionally dysregulated individuals who do not engage in suicidal and self-harming behaviours. *Borderline Personal Disord Emot Dysregul*. 2020;7:3. doi:10.1186/s40479-020-0119-y
63. McMain SF, Guimond T, Barnhart R, Habinski L, Streiner DL. A randomized trial of brief dialectical behaviour therapy skills training in suicidal patients suffering from borderline disorder. *Acta Psychiatr Scand*. 2017;135(2):138-148. doi:10.1111/acps.12664
64. Flynn D, Joyce M, Spillane A, et al. Does an adapted Dialectical Behaviour Therapy skills training programme result in positive outcomes for participants with a dual diagnosis? A mixed methods study. *Addict Sci Clin Pract*. 2019;14(1):28. Published 2019 Aug 15. doi:10.1186/s13722-019-0156-2
65. Kliem S, Kröger C, Kosfelder J. Dialectical behavior therapy for borderline personality disorder: a meta-analysis using mixed-effects modeling. *J Consult Clin Psychol*. 2010;78(6):936-951. doi: 10.1037/a0021015
66. van Asselt AD, Dirksen CD, Arntz A, et al. Out-patient psychotherapy for borderline personality disorder: cost-effectiveness of schema-focused therapy v. transference-focused psychotherapy. *Br J Psychiatry*. 2008;192(6):450-457. doi:10.1192/bjp.bp.106.033597
67. Farrell JM, Shaw IA, Webber MA. A schema-focused approach to group psychotherapy for outpatients with borderline personality disorder: a randomized controlled trial. *J Behav Ther Exp Psychiatry*. 2009;40(2):317-328. doi:10.1016/j.jbtep.2009.01.002
68. Nadort M, Arntz A, Smit JH, et al. Implementation of outpatient schema therapy for borderline personality disorder with versus without crisis support by the therapist outside office hours: A randomized trial. *Behav Res Ther*. 2009;47(11):961-973. doi: 10.1016/j.brat.2009.07.013
69. Slotema CW, Wilhelmus B, Arends LR, Franken IHA. Psychotherapy for posttraumatic stress disorder in patients with borderline personality disorder: a systematic review and meta-analysis of its efficacy and safety. *Eur J Psychotraumatol*. 2020;11(1):1796188. Published 2020 Sep 16. doi:10.1080/20008198.2020.1796188
70. Slotema CW, van den Berg DPG, Driessen A, Wilhelmus B, Franken IHA. Feasibility of EMDR for posttraumatic stress disorder in patients with personality disorders: a pilot study. *Eur J Psychotraumatol*. 2019;10(1):1614822. doi:10.1080/20008198.2019.1614822
71. De Jongh A, Groenland GN, Sanches S, Bongaerts H, Voorendonk EM, Van Minnen A. The impact of brief intensive trauma-focused treatment for PTSD on symptoms of borderline personality disorder. *Eur J Psychotraumatol*. 2020;11(1):1721142. Published 2020 Feb 14. doi:10.1080/20008198.2020.1721142
72. Hafkemeijer L, de Jongh A, van der Palen J, Starrenburg A. Eye movement desensitization and reprocessing (EMDR) in patients with a personality disorder. *Eur J Psychotraumatol*. 2020;11(1):1838777. Published 2020 Nov 19. doi:10.1080/20008198.2020.1838777
73. Wilhelmus B, Marissen MAE, van den Berg D, Driessen A, Deen ML, Slotema K. Adding EMDR for PTSD at the onset of treatment of borderline personality disorder: A pilot study. *J Behav Ther Exp Psychiatry*. 2023;79:101834. doi:10.1016/j.jbtep.2023.101834
74. D'Abate L, Delvecchio G, Ciappolino V, Ferro A, Brambilla P. Borderline personality disorder, metacognition and psychotherapy. *J Affect Disord*. 2020;276:1095-1101. doi:10.1016/j.jad.2020.07.117
75. Prunetti E, Framba R, Barone L, et al. Attachment disorganization and borderline patients' metacognitive responses to therapists' expressed understanding of their states of mind: A pilot study. *Psychother Res*. 2008;18(1):28-36. doi:10.1080/10503300701320645
76. Rossi R, Corbo D, Magni LR, et al. Metacognitive interpersonal therapy in borderline personality disorder: Clinical and neuroimaging outcomes from the CLIMAMITHE study-A randomized clinical trial. *Personal Disord*. 2023;14(4):452-466. doi:10.1037/per0000621
77. Nicolò G, Azzara C, Cantelmi V, et al. (2023). Sintesi delle evidenze scientifiche e delle linee guida per il trattamento psicologico dei Disturbi Borderline e Antisociale di Personalità. *Quaderni di Psicoterapia Cognitiva*. 2023;52:15-49. doi:10.3280/qpc52-2023oa16173
78. Bohlmeijer ET, Fledderus M, Rokx TA, Pieterse ME. Efficacy of an early intervention based on acceptance and commitment therapy for adults with depressive symptomatology: Evaluation in a randomized controlled trial. *Behav Res Ther*. 2011;49(1):62-67. doi: 10.1016/j.brat.2010.10.003
79. Gifford EV, Kohlenberg BS, Hayes SC, et al. Does acceptance and relationship focused behavior therapy contribute to bupropion outcomes? A randomized controlled trial of functional analytic psychotherapy and acceptance and commitment therapy for smoking cessation. *Behav Ther*. 2011;42(4):700-715. doi:10.1016/j.beth.2011.03.002
80. Luoma JB, Kohlenberg BS, Hayes SC, Fletcher L. Slow and steady wins the race: a randomized clinical trial of acceptance and

- commitment therapy targeting shame in substance use disorders. *J Consult Clin Psychol.* 2012;80(1):43-53. doi:10.1037/a0026070
81. Twohig MP, Hayes SC, Plumb JC, et al. A randomized clinical trial of acceptance and commitment therapy versus progressive relaxation training for obsessive-compulsive disorder. *J Consult Clin Psychol.* 2010;78(5):705-716. doi:10.1037/a0020508
82. Wetherell JL, Afari N, Rutledge T, et al. A randomized, controlled trial of acceptance and commitment therapy and cognitive-behavioral therapy for chronic pain. *Pain.* 2011;152(9):2098-2107. doi:10.1016/j.pain.2011.05.016