

Lorenzini, N; Fonagy, P; (2013) Attachment and Personality Disorders: A Short Review. **FOCUS: The Journal of Lifelong Learning in Psychiatry** , 11 (2) 155 - 166. [10.1176/appi.focus.11.2.155](https://doi.org/10.1176/appi.focus.11.2.155).

RESEARCH ARTICLE

Attachment and personality disorders: a short review

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ABSTRACT

Attachment theory is a biopsychosocial model referring to a person's characteristic ways of relating in close relationships, such as with parents, children, and romantic partners. These ways of relating are learned during early infancy and mold subsequent intimate relationships. An adult who is securely attached has internalized a reliable relationship to his/her caregivers in infancy, and thus is capable of adapting to different social contexts and, more importantly, of maintaining an adequate equilibrium between self-regulation and interpersonal regulation of stress. Insecure adult attachment styles are divided into 1) anxious/preoccupied (individuals are hypersensitive to rejection and show compulsive care- and attention-seeking behavior); 2) Avoidant/dismissing (individuals are hyposensitive to social interactions, and are socially isolated); and 3) unresolved/disorganized (individuals are unable to cope under stress, thus suffering pervasive affective dysregulation). This review discusses the theoretical, psychological, neuroscientific, and developmental aspects of attachment from an evidence-based perspective. It provides an updated account of the science regarding attachment and its relevance to the etiology, diagnosis, and treatment of mental illness. It examines the privileged relation between attachment and personality disorders (PDs) from multiple angles in order to introduce the most recent psychotherapeutic advances, based on attachment research, for the treatment of PDs, particularly borderline PD. Three effective,

evidence-based psychotherapeutic interventions are described: Mentalization-Based Treatment, Transference-Focused Psychotherapy and Schema-Focused Therapy.

Introduction: Attachment and its relevance to personality disorders

Attachment theory, conceived by John Bowlby (1), refers to a person's characteristic ways of relating in intimate relationships to "attachment figures", often one's parents, children, and romantic partners (2, 3). From birth, the interactions of an infant with his/her primary caregivers will establish a base for personality development and will mold subsequent close relationships, expectations of social acceptance, and attitudes to rejection. A secure base is formed when the attachment figure (usually the mother) provides stability and safety in moments of stress, which allows the infant to explore his/her surroundings. Thus, the child creates a set of mental models of him/herself and others in social interactions ("internal working models"), based on repeated interactions with significant others (4). These early attachment relations are crucial for the acquisition of capacities for affect and stress regulation, attentional control, mentalization, and for the infant's sense of self-agency (5).

The attachment literature has been dominated by operationalized assessments of characteristic patterns of relating. Most influential were observations of individual differences in infants' attachment security assessed by the Strange Situation procedure (6). When briefly separated from their caregivers and left with a stranger in an unfamiliar setting, infants show certain behavioral patterns. Three distinct attachment patterns have been identified from the application of this procedure: secure (63% of

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children tested), anxious/resistant or ambivalent (16%), and avoidant (21%). In adults, attachment style is respectively classified as secure/autonomous (58% of the nonclinical population), avoidant/dismissing (23%), and anxious/preoccupied (19%) (7, 8); these

classifications stem from the Adult Attachment Interview (AAI) (9, 10), which elicits attachment narratives from the subject's childhood. Further work has revealed a fourth pattern of disorganized attachment, which is often termed unresolved/disorganized for adults and disoriented/disorganized for infants (2). Adults showing this pattern are also classified within one of the three primary categories (5).

During the Strange Situation, a securely attached infant readily explores his/her new surroundings in the primary caregiver's presence, shows anxiety in the stranger's presence, is distressed by the caregiver's brief absence, rapidly seeks contact with the caregiver upon reunion, and is reassured by renewed contact, rapidly resuming exploration. Likewise, an adult categorized as secure/autonomous during the AAI coherently integrates attachment memories into a meaningful narrative and shows appreciation for attachment relationships.

An avoidant infant is less anxious at separation, may not seek contact with the caregiver on his/her return, and may not prefer the caregiver to the stranger. In adults, avoidant/dismissing AAI narratives will lack coherence; patients will be unable to recall specific memories in support of general arguments and will idealize or devalue their early relationships (5). These behaviors appear as the result of a "hyper-deactivation" of the attachment system. This hyper-deactivation is characterized by the inhibition of proximity-seeking behaviors and the determination to handle stress alone. This implies a clear attempt to inhibit negative emotions through a noninterpersonal way of regulating them (11).

An anxious/resistant infant shows limited exploration and play, seems highly distressed by the separation, and does not easily settle after reunion. Correspondingly, an anxious/preoccupied adult's AAI narratives will lack coherence, and will show confusion, anger, or fear in relation to early attachment figures (5). This corresponds to the hyperactivation of proximity-seeking and protection-seeking strategies, to a (chronic)

hypersensitivity to signs of possible rejection of abandonment, and to an intensification of undesirable emotions (11).

A disoriented/disorganized infant will show undirected or bizarre behavior such as freezing, hand clapping or head banging. The infant may try to escape the situation. Comparably, an unresolved/disorganized adult's narratives about bereavements or childhood traumas will contain semantic and/or syntactic confusions. This corresponds to the breakdown of strategies to cope with stress, leading to partial or even pervasive emotion dysregulation.

These styles remain relatively stable during life and do not show gender differences or variations with language or culture (8). There is a 68–75% correspondence between attachment classification in infancy and in adulthood (5). The most important predictor of style change during life is negative early life events, such as loss of a parent, parental divorce, life-threatening illness of parent or child, parental psychiatric disorder, physical maltreatment, or sexual abuse (12-14).

Although attachment processes are normative and necessary for human (and mammalian) survival, attachment theory is increasingly being used to investigate and intervene in personality disorders (PDs) (8, 15-17). PDs are enduring behaviors (18); their features include an intrapersonal component (dysregulation of arousal, impulse, and affect), an interpersonal component (dysfunctional relationship patterns), and a social component (which creates conflicts with others and with social institutions) (16). Attachment theory accounts for these four characteristics of PDs (19) and provides an ideal standpoint to understand these disorders, integrating psychological (20), psychiatric (21), genetic (22), developmental (23-25), neuroscientific (25-28), and clinical (2, 29-31) perspectives.

There is a large body of literature addressing the relation between PDs and attachment theory and research. This review approaches this relation from an evidence-based perspective, highlighting implications for the treatment of PDs.

Attachment classification and personality disorder diagnosis

Many of the features of insecure attachment in adulthood resemble the signs and symptoms of PD (16). There have been numerous studies of attachment patterns in people with PDs, particularly of the DSM-IV cluster B (32), which indicate that such individuals show higher rates of insecure attachment than the general population (33). Conversely, secure attachment is rarely associated with borderline PD (BPD) and avoidant PD (19, 34).

Adults presenting a preoccupied style are more sensitive to rejection and anxiety, and are prone to histrionic, avoidant, borderline, and dependent PDs. Conversely, the hypoactivation of attachment shown by dismissing individuals is associated with schizoid, narcissistic, antisocial, and paranoid PDs (8, 19, 35-38).

BPD is strongly associated with preoccupied attachment in the presence of unresolved trauma (6, 8, 15, 19, 36, 39)

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and with unresolved attachment patterns (19). Studies have found that 50–80% of BPD patients fit either or both of these attachment styles (11, 40). This makes sense in light of both the approach-avoidance social dynamics and sensitivity to rejection (preoccupied dimension), and the cognitive–linguistic slippage (incoherent/disorganized dimension),

evident in BPD patients (19). Misunderstanding of social causality and thought disturbances are distinctive features of BPD (41-43). In behavioral terms, BPD patients exhibit angry withdrawal and compulsive care-seeking. This implies a lack of the capacity to use and obtain relief from new attachment figures, which has important implications within a close helping relationship like the therapeutic exchange: BPD patients will be more attentive to the failures than the efforts of the therapist (15, 40, 44, 45). The same associations between attachment styles and pathological personality features are found in adolescents (19, 23, 46).

Most research assessing the relation between attachment and PDs does not control for comorbidity on either Axis I or II, which could result in diffuse patterns of association (11, 19). In the case of BPD, different Axis I comorbidities are associated with different attachment styles: BPD with comorbid anxiety or mood disorders tends to be associated with preoccupied attachment, while BPD with comorbid substance or alcohol abuse tends towards a dismissing style. In spite of these differences, the unresolved/disorganized attachment style seems to be common in BPD overall, which explains the pathognomonic emotional dysregulation of BPD patients (11). These research limitations accentuate the value of the new efforts toward dimensional rather than categorical diagnostic systems (21, 47), and for person-centered rather than symptom-centered ways of addressing mental disorders (11, 19, 21, 38, 48-50). Such ways of understanding and conceptualizing psychopathology (and particularly PDs) (38) are necessarily longitudinal, because only a developmental perspective can offer an insight into the processes underlying symptomatic manifestations and allow clinicians to assess a particular patient's risks and strengths, account for high rates of comorbidity, tailor interventions, and maintain a fruitful therapeutic relationship (11, 26, 44, 51, 52).

Relations between attachment history and development of personality disorder

It is likely that various developmental pathways lead to a given attachment style and its concomitant psychopathological risks, involving complex interactions between biological and psychosocial factors.

The stable nature of attachment styles accounts for the development of enduring strategies to regulate emotion and social contact. Securely attached individuals trust their attachment figures and perceive little environmental threat. As a result, they can defend themselves against environmental challenges and are able to process emotions in a fluid and nondefensive way; hence, they are the group least troubled by PDs. These individuals continue seeking effective attachment relations through their whole lifespan (53). Dismissing individuals, chronically lacking support from attachment figures, habitually deny or dismiss environmental threats (54). They may therefore have a higher threshold for experiencing negative emotions or perceiving attachment needs, exhibiting what Bowlby called “compulsive self-reliance” (55). Preoccupied individuals, who are wary following a history of inconsistent support from caregivers, are likely to have a lower threshold for perceiving environmental threat and, therefore, stress. This is likely to contribute to frequent activation of the attachment system, with the concomitant distress and anger such activation can cause. Hence, they are likely to manifest compulsive care-seeking and over-dependency. Unresolved/disorganized individuals – the adult analogue of disorganized/disoriented infants – frequently have parents who are themselves abusive or unresolved regarding their own losses or abuse experiences (56-59). These individuals appear to be the most troubled in terms of PDs (17).

Twin studies have shown that genetic factors account for 45% of individual differences in adult attachment anxiety and 36% in attachment avoidance (22). The influence of genetic factors in attachment security has been estimated at between 23% and 45% and underscores the bidirectional nature of the development of attachment relationships: infants and children co-create patterns of relating with their caregivers. There is great

overlap between genetic factors influencing both attachment style and personality traits (60-63). Nevertheless, to the extent that these are separable, environmental factors ubiquitously appear to be the most important influence in the development of attachment. Among external factors, the most important is the secure presence of an effective primary caretaker who is sensitive to the infant's verbal and nonverbal cues and is able to respond to them without being overwhelmed by anxiety. A child who is securely attached has had his/her acute affective states consistently reflected back to him/her in an accurate, but not overwhelming, manner (26, 54, 64). This process equips the infant with an increasing

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capacity for mental processing, particularly *mentalization*, the capacity to understand the social world and one's internal world in terms of mental states; that is, the capacity to imagine that others have a mind that is essentially like one's own (39, 51, 57, 58, 65-67). This capacity means that an individual with a healthy personality interprets and responds to another's feelings, not just to their own experience. In this sense, the emergence of spoken language about feelings seems to be related to the attachment figure's ability to put the child's mental experience into words: securely attached children seem to acquire speech more rapidly and remain more verbally competent than insecure children (29, 68). Conversely, insecure attachment leads to developmental impairment of the internal state lexicon and subsequent alexithymia in adulthood (69). Effective therapies must therefore include a component that allows patients to recognize, label, and verbally communicate their feelings (26, 70-72).

Good-quality interactions with early caregivers are the critical element in the development of secure attachment. In turn, secure emotional attachment is more crucial for the

development of a healthy personality than intellectual stimulation of the infant (25). It is thus unsurprising that there is a high prevalence of childhood trauma in both insecurely attached individuals and PD patients (8, 45, 73-76). Childhood trauma is more strongly correlated with an incoherent/disorganized adult attachment style more than just with the general category of attachment insecurity (19, 36).

Rates of childhood trauma among individuals with PDs are high (73% report abuse, of which 34% is sexual, and 82% report neglect). Compared with healthy adults, PD patients are four times as likely to have suffered early trauma (14). Childhood physical abuse increases the risk for adult antisocial, borderline, dependent, depressive, passive-aggressive, and schizoid PDs (38). Infantile neglect is associated with risks for antisocial, avoidant, borderline, narcissistic, and passive-aggressive PDs (14, 54, 77). BPD is more consistently associated with childhood abuse and neglect than other PD diagnoses (14, 24, 51, 66, 73, 76, 77). Obsessive-compulsive PD has been associated with sexual abuse by noncaretakers (77).

However, not all people who have suffered childhood trauma develop adult psychopathology. The effects of trauma are influenced by attachment (75) and by biological dispositions, which are examined in the next section. For example, female victims of maltreatment and sexual abuse in adolescence or adulthood are at greater risk of developing posttraumatic symptoms if they have an anxious attachment style (78). Likewise, female victims of childhood trauma are more likely to develop somatization symptoms if they are fearfully attached (79). If traumatic events provoke activation of the attachment system, then individuals who tend to respond to these experiences through the inhibition of mentalizing function and emotional regulation are less likely to resolve these events, and more likely to manifest personality pathology later in life (80).

Neurobiological correlates of attachment and personality disorders

New technologies in human and animal neurosciences have enabled the investigation of both attachment and PDs from an enriching and novel perspective. A seminal discovery has been the identification of neural correlates of the innate predisposition to, and later need for, attachment relations. There is a common neurobiology of mother–infant, infant–mother, and romantic-partner attachment, linked to opioid alkaloids that are capable of reproducing the same neurological and behavioral effects as substance addiction (81, 82). Following these discoveries, two major neural systems have been shown to play a critical role in attachment behaviors: the dopaminergic reward-processing system and the oxytocinergic system (26). The role of the dopaminergic reward system in attachment behavior is understood as an evolutionary mechanism to motivate reproductive mating, maternal care and, ultimately, offspring survival. It leads individuals to seek close relations with other humans and produces satisfaction when they are attained. The areas of the brain recruited by this system include the striatum, a key projection of midbrain dopamine neurons that includes the putamen and caudate head (26).

Oxytocin is a neuroactive hormone produced in the hypothalamus and projected to brain areas that are associated with emotions and social behaviors. It plays an important role in the activation of the dopaminergic reward system (oxytocin receptors are located in the ventral striatum, a key dopaminergic area) and the deactivation of neurobehavioral systems related to social avoidance (26, 28). Oxytocin receptors are found in areas known to be recruited in attachment and other social behaviors, such as the bed nucleus of the stria terminalis, hypothalamic paraventricular nucleus, central nucleus of the amygdala, ventral tegmental area, and lateral septum. These areas are also rich in vasopressin (V1a) receptors, but oxytocin has been studied more extensively because it can be synthesized in the laboratory and safely administered to human subjects;

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therefore, experimental oxytocin research has been popular over the past decade. The experimental administration of vasopressin agonists in studies of attachment has not yielded significant results (83).

Oxytocin is a facilitator of attachment (24, 84): it enhances sensitivity to social cues (85-87), accelerates social connectedness (88), improves social memory (89, 90), and facilitates the encoding and retrieval of happy social memories (91). By attenuating activity in the extended amygdala (92), oxytocin also acts to neutralize negative feelings towards others, and enhances trust (88, 93, 94). Oxytocin can inhibit hypothalamic–pituitary–adrenal (HPA) axis activity when the attachment system is activated (26): secure attachment leads to “adaptive hypoactivity” of the HPA axis, which, in turn, reduces social anxiety (53).

It must be noted that these positive effects of oxytocin are not universal. The administration of oxytocin to adults has been shown to facilitate prosocial behavior toward members of their in-group only, and to enhance trust toward reliable and neutral peers but not peers who have proven to be unreliable (95, 96). The effects of oxytocin administration are also personality-dependent: individuals with alexithymia seem to improve their social abilities to a greater extent than people who do not show this trait (97).

Correspondingly, insecure attachment is closely bound to the divergent effects of oxytocin. The neuropeptide is found in lower concentrations among maltreated children and adults with a history of early separation, and in insecurely attached mothers during the puerperal period, which further hampers the establishment of secure attachment in their children (26). In the case of insecurely attached BPD patients, oxytocin decreases trust and the

likelihood of cooperative responses, and reduces dysphoric responses to social stress (27, 98).

In conclusion, oxytocin does not uniformly facilitate trust and prosocial behavior; its behavioral effects are mediated by the social context, personality traits, and the quality of early attachment (27, 99). This highlights the need to address PDs and mental health in general as an indivisible combination of environmental, psychological, and physical factors (25, 76).

This integrated, biopsychosocial perspective for understanding PDs is still novel. Most research has focused on BPD and antisocial PD (45, 100). For example, early maltreatment is more likely to produce adult antisocial behavior only in males with a polymorphism in the gene involved in the production of the neurotransmitter-metabolizing enzyme monoamine oxidase A (MAO_A). Males with high MAO_A activity show less antisocial behavior even if they have experienced early maltreatment. This indicates that certain genotypes can moderate sensitivity to stressors (101). In monkeys, impulsive aggression is correlated with low cerebrospinal fluid concentrations of 5-hydroxyindoleacetic acid (5-HIAA), which is involved in serotonergic metabolism. However, this inherited characteristic is modulated by attachment experiences: monkeys reared by mothers show higher concentrations of 5-HIAA than those reared by peers (102, 103). People with an avoidant attachment style show decreased activity of the striatum and ventral tegmental area, suggesting lack of response to social rewards. Conversely, people with a preoccupied attachment style show increased activity in the left amygdala, suggesting increased sensitivity to social punishment (104). In these cases attachment moderates the relation between genotype, nervous activity, and pathologic behavior.

As described in the previous section, early trauma has implications for attachment and personality pathology. The hippocampus is particularly vulnerable to stress, given its many glucocorticoid receptors. BPD patients show reduced hippocampal and amygdalar

volumes, especially if they have suffered early trauma (45, 105-107). Relational trauma promotes hemispheric lateralization, which adversely affects the early integration of brain hemispheres (108, 109). As a consequence, affective experiences, which are usually stored in the right front lobe, are split from the cognitive functions of the left hemisphere, explaining in part the emotional dysregulation found in BPD patients (26, 45, 100, 109, 110). Childhood trauma produces persistent sensitization of the HPA axis, which regulates stress responses. This effect is particularly noticeable in BPD females who have been abused (111, 112). The HPA axis is intimately linked with serotonergic function, which could explain the divergent effects of selective serotonin reuptake inhibitors (SSRIs) in BPD patients (113, 114).

These complex interactions between “nature” and “nurture” put the concept of attachment in a privileged position from which to understand the etiology, development, and treatment of PDs (45, 110, 115, 116). Attachment is becoming a central concept in the development, planning, and assessment of psychotherapeutic interventions. At the same time, researchers are starting to assess the effects of psychotherapy on attachment, and relating them to process and outcome (31, 117, 118).

Links between attachment style and treatment outcome

Considering that empirical evidence demonstrates that insecure attachments are risk factors for PDs

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and other mental illnesses, researchers have taken an interest in the relationship between attachment and psychotherapeutic success.

It is widely accepted that attachment characteristics influence psychotherapeutic outcomes, but results are inconsistent (119, 120). Most studies show that securely

attached patients obtain better results (2, 34, 120-123), but others indicate better outcomes for avoidant and disorganized patients (39).

The largest meta-analysis on the influence of attachment on psychotherapeutic outcome in various diagnoses (including PDs) and heterogeneous psychotherapeutic orientations consistently found that while attachment anxiety negatively affects outcome, attachment avoidance has no effect. This meta-analysis confirmed that higher attachment security predicts better therapeutic outcomes (2).

Besides symptomatic outcomes, attachment is associated with drop-out. Adult avoidant attachment constitutes a risk for drop-out because patients are not fully committed, attached, or engaged with the therapist or the treatment (38, 124). Psychotherapy can be seen as a threat to these patients' defensive apathy, and increases negative transference (124, 125). Contrastingly, preoccupied patients are at risk of drop-out after perceived abandonments such as emergency cancellations or scheduled vacations. Fearfully preoccupied individuals are prone to drop-out in response to feeling attached to or dependent on the therapist and treatment (126).

Attachment also influences the therapeutic alliance, which in turn has important effects on outcome (127). While secure patients perceive their therapists as responsive and emotionally available, avoidant/fearful patients are reluctant to make personal disclosures, feel threatened, and suspect that the therapist is disapproving. Preoccupied patients long for more contact with the therapist and wish to expand the relationship beyond the bounds of therapy (44, 128).

Following Bowlby's attachment theory, not only protection-seeking but also caregiving behavior is influenced by attachment (129). Therefore, the therapist's attachment style also influences the process and outcome of treatment. Therapists with anxious attachment styles create strong therapeutic alliances, but the quality of the alliance decreases with

time when patients show interpersonal distress (130, 131). Sessions between an avoidant therapist and an anxious patient attain less depth (121).

Some studies have shown changes in patients' attachment resulting from treatment. One of the authors (PF) reported on a sample of BPD patients under psychodynamic treatment. After treatment, 40% of the sample was classified as secure; none of the patients had that classification at pretreatment (132). Patients with various diagnoses showed an increase in attachment security after 21 sessions of psychodynamic psychotherapy (133). A multisite study of several inpatient group psychotherapies found consistent improvement (compared with controls) of attachment security after 9 weeks' treatment, which was maintained at 1-year follow-up (119). In a randomized controlled trial of Transference-Focused Psychotherapy (TFP), Dialectical Behavior Therapy (DBT) and supportive therapy, only TFP showed an increased number of patients classified as secure after treatment (118). A successful treatment does not necessarily imply attaining a secure attachment style: female BPD patients whose attachment style changes from ambivalent to avoidant have shown better symptomatic results at the end of short-term therapy (31).

Attachment-oriented interventions

Although there is a great deal of interest in clinical applications of attachment theory, most clinical research in PDs is conceptual and case-study-based (117). For BPD, however, there has been more extensive research, including randomized controlled trials (RCTs), and meta-analyses of published studies. The American Psychiatric Association's guidelines for the treatment of BPD recommend psychotherapy as primary treatment, complemented by symptom-targeted pharmacotherapy (134). SSRIs are recommended for tackling emotional dysregulation and impulsivity, and antipsychotics for cognitive-perceptual symptoms. SSRIs could reduce HPA axis hyperactivation, contributing to the

patient's capacity to reflect on mental states without overreacting to them and thus facilitating psychotherapeutic interventions (45).

Mentalization-Based Treatment (MBT)

Mentalization is the process by which we make sense of each other and ourselves, implicitly and explicitly, in terms of subjective states and mental processes (135). Mental disorders in general can be seen as the mind misinterpreting its own experience of itself and therefore of others (136). The concept of mentalization is rooted in attachment theory. It postulates that one's understanding of others depends on whether one's own mental states were adequately understood by caring, attentive, non-threatening adults. Problems in affect regulation and attentional control stemming from dysfunctional attachment relationships (40, 74, 137) are mediated through a failure to develop a robust mentalizing capacity (26, 64, 66, 71, 136, 138-142).

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Under stressful conditions, and in the face of activation of their flawed attachment system, BPD patients temporarily lose their mentalization capacity, consequently misunderstanding social causality and showing cognitive and emotional dysregulation (26, 135, 140). MBT aims to stabilize the patient's sense of self and help him/her maintain an optimal level of arousal in the context of a well-managed (i.e. neither too intense nor too detached) attachment relationship between patient and therapist (140, 143). The therapist must be aware of the hypersensitivity of such patients to interpersonal anxiety, which could overwhelm the patient's mentalization capacity, putting the therapeutic relationship at risk (5, 136, 140, 144-146).

Despite MBT's psychoanalytic origins, interventions are taken from various psychotherapeutic approaches. This plurality, together with the minimal amount of training and supervision necessary (147-150), makes MBT appealing to professionals from various orientations. MBT interventions are designed to stress the attachment relationship within controlled conditions and to lend special attention to the therapeutic relationship. For a detailed description of the techniques and therapeutic stance, we recommend reading the treatment manuals (143, 151).

Mentalization theory is now being applied to the treatment of numerous disorders (e.g., posttraumatic stress disorder, eating disorders, antisocial PD, and depression) in a number of contexts (inpatient, partial hospitalization (38, 147-149) and outpatient (152)), and in different groups of patients (adolescents, families (153), and substance abusers (136)) (65). MBT has been manualized for PDs (143, 151) and shown to be efficacious in RCTs (147-149, 152).

MBT for inpatients with severe BPD has shown to be superior to routine general psychiatric care in improving depressive symptoms, decreasing suicidal and self-harm acts, reducing inpatient days, and improving social and interpersonal function. Improvements started 6 months into treatment and continued to increase to the end of the 18-month treatment (147). Follow-up every 3 months after the end of treatment showed that patients kept improving to 18 months (148). A further follow-up of the same study, 8 years after initial randomization, showed that MBT patients maintained their gains and showed better social and vocational status and less symptomatology than controls (149). The higher costs of implementing MBT were offset by less inpatient care during treatment and decreased service utilization during follow-up (154). In an outpatient setting, an RCT of MBT versus structured clinical management showed faster change for MBT patients in suicide attempts, severe self-harm incidents, self-reported interpersonal functioning, and psychiatric symptoms (152).

An 18-month, group-based MBT treatment for antisocial PD is currently being tested (38). Preliminary results show reduced self-reported aggression and reduced psychiatric symptomatology after the first 6 months of treatment. However, the authors warn about the difficulty of engaging these patients. Another unpublished study of MBT for antisocial PD is currently being carried out at a high-security hospital in England (38).

Transference-Focused Psychotherapy (TFP)

TFP is a manualized psychodynamic treatment for patients with BPD (155). It is based on both object-relations and attachment theories: representations of self and others, together with their affective valence, are derived from the internalization of attachment relationships with caregivers. The degree of differentiation and integration of these representations are disturbed in individuals with BPD (150, 156).

The primary goal of TFP is to reduce symptomatology and self-destructive behavior by modifying representations of self and others as they are enacted in the therapeutic relationship, and, ultimately, change the patient's underlying personality organization. TFP is a structured treatment consisting of twice-weekly 45-minute sessions over 3 years. Its primary focus is on the predominant affect-laden themes that emerge in the therapeutic (transference) relationship, while monitoring the patient's life outside sessions. The therapist uses techniques of clarification, confrontation, and transference interpretation (i.e., interpretation of the current patient–therapist interactions, which unveil the patient's disparate perceptions of self and others including the therapist). In contrast to MBT, TFP considers interpretation as the route to integration of these disparate perceptions and representations, and activation of the attachment system is not avoided (124, 157). In turn, the integration of these representations and their concomitant emotions enables the development of a more complex capacity to think about the thoughts, feelings, intentions,

and desires of self and others (i.e., mentalization) (158). This leads to increased modulation of affect, coherence of identity, greater capacity for intimate relationships, reduction in self-destructive behaviors, and general improvement in functioning (118, 150, 156).

TFP is well tolerated, and has positive outcomes in parasuicidal behaviors, emergency room visits, hospitalizations, hospital days, and global functioning (159).

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TFP in outpatient settings has shown to be more effective than treatment as usual (118), and its results are comparable to those of DBT (160) in suicidality after 1 year of treatment, and superior in outcomes of violence and irritability (161). After 3 years of treatment, studies show reductions in BPD symptoms and pathologic personality traits, and improvement of general quality of life (162, 163). TFP has also demonstrated structural changes in attachment and mentalization (118, 158).

Schema-Focused Therapy (SFT)

Stemming from a cognitive-behavioral orientation, SFT conceptualizes BPD patients psychologically and emotionally as young children (164). Their inner world is understood as being formed by four pathologic self-schemas that have become fixed as a result of the interplay between genetic endowment and inappropriate parenting (165). These schemas are evident in BPD patients at different moments (71). Patients can act as detached protectors (showing emotional withdrawal and behavioral avoidance), punitive parents (self-harm), abandoned/abused children (frightened isolation), or angry/impulsive children (expressing rage directed toward those who did not meet their childhood emotional needs)

(164). These same schemas exist in antisocial patients, together with the powerful presence of a “healthy adult” schema, an executive function for higher cognitive skills (166). SFT techniques are cognitive, behavioral, and experiential. The most important is “limited reparenting” by the therapist: the practitioner attempts to meet the patient’s unfulfilled emotional needs by being warm and sympathetic, self-disclosing, giving extra sessions and telephone or email exchanges, or praising the patient. The idea is to develop a therapeutic relationship that is both a contrast and an antidote to the abusive relationships the patient experienced as a child, while maintaining professional and therapeutic boundaries (164, 165). Once this bond is achieved, cognitive techniques attempt to change unhealthy schemas and the patient is encouraged to practice new behaviors outside the session. SFT is a twice-weekly therapy lasting at least 2 years.

Outcomes of SFT have been found to be superior to TFP in reduction of borderline symptoms and general psychopathology, and in quality of life improvement. SFT also showed lower drop-out rates and better quality of therapeutic alliance (162, 167). SFT was also shown to be slightly more cost-effective than TFP (168). These results are limited due to several methodological flaws of the trial (150). Another study found that adding 8 months of group SFT to treatment as usual (individual psychotherapy) showed no drop-out and increased the success rate from 16% to 94%. Symptomatic gains were maintained at 6-month follow-up (169). An ongoing trial of SFT with forensic patients presenting antisocial, borderline, narcissistic, and paranoid PDs has preliminarily shown good symptomatic outcomes and low attrition rates (170). SFT has also shown good outcomes in interpersonal problems in people diagnosed with agoraphobia and cluster C PDs (171).

Across pathologies, different treatments work for different subgroups. It could be argued that while MBT is a more generic approach that is optimal for BPD patients with multiple personality problems that might undermine focusing on specific attachment relationships,

TFP and SFT are more focused, efficacious attempts at exploring particular significant interpersonal relationship representations.

Conclusion

Attachment theory overarches the psychological, psychiatric, social, and neuroscientific work on PDs. Its usefulness has been shown in the scientific field, and it is being translated into clinical settings. Practitioners can profit from the use of simple measures of attachment in order to tailor their interventions to maximize gains and minimize iatrogenic effects, which are all too common in the treatment of PDs (2, 19, 23, 29, 117, 122). Many mental health interventions have the potential to activate the attachment system of vulnerable patients but lack a structure to contain the emotional and behavioral consequences of the stress aroused, ranging from drop-out to suicide (150, 167). Therefore, it is necessary to modify treatment settings in order to offer a “secure base” from which to start a curative change in relationship representations (136, 158, 172).

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