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Metacognitive Interpersonal Therapy for Borderline Personality Disorder: A single case  
study

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## 1. Theoretical and Research Basis for Treatment

Borderline personality disorder (BPD) is marked by severe instability of self-image and interpersonal relationship, and emotional and behavioral dysregulation (APA, 2013). Self-harm as a dysfunctional strategy to regulate emotional suffering occurs in more than 75% of patients with BPD (Schmal & Herpertz, 2014); suicide reaches a rate almost 50 times higher than in the general population (Cristea et al., 2017).

Many manualized therapies have been shown to be effective for BPD, including Dialectical Behavioral Therapy (DBT; Linehan, 1993), Cognitive Therapy (Davidson, 2008), Cognitive Analytic Therapy (Ryle, 1997), Mentalization-Based Therapy (MBT; Bateman & Fonagy, 2004), Transference-Focused Psychotherapy (TFP; Clarkin, Yeomans, & Kernberg, 1999, 2006), Schema-Focused Therapy (SFT; Young, Klosko, & Weishaar, 2003), and System Training for Predictability and Problem Solving (STEPPS; Blum et al., 2008). These approaches are effective to some degree, but often patients end therapy with ongoing clinically significant symptoms and subjective suffering; drop-out rates and treatment non-response are also variable (Livesley, Dimaggio, & Clarkin, 2017).

One possible explanation for the variability in response and dropout is that the majority of treatments are focused on one selected domain of pathology, be it sub-optimal mentalizing (MBT), maladaptive schemas or disturbed object relations (ST and TFP), or emotion dysregulation (DBT). Coherently, it has been advocated that treatment for personality disorders, including BPD, should be aimed at tackling all impaired domains an individual patient presents with (Livesley et al., 2017).

Another explanation of variability of response and dropouts is that peculiar therapeutic strategies and interventions, characteristic of each manualized model, often require BPD patients to make psychological operations that are intrinsically incompatible with BPD pathology. For example, MBT focuses on strengthening the patient's ability to mentalize psychological causes of dysregulated suffering in order to regulate it. For this purpose, MBT therapists do not provide

explanations of internal processes leading to dysregulations from situational events, and encourages patients' spontaneous understanding of those processes. But the ability to mentalize intrinsically requires (and reflects) a (at least partially) regulated mind. BPD patients just lack the ability to reflect upon their mind in dysregulated states, and if they achieve this ability contingently, thanks to therapeutic interventions, they tend to rapidly lose it. In order to regulate suffering, in the first phase of therapy, BPD patients need an external regulatory function, that the therapist could carry out through explanations – with a soothing and validating attitude - of the patient's internal processes leading to dysregulation (Fisher, 2017). Progressively, through repeated experiences of this psychoeducational intervention “putting into order” the patient's internal processes, the latter will internalize this regulatory function and will use it to better understand the internal steps leading to dysregulated emotions and behavior. For another example, TFP focuses on the patient's dysfunctional interpersonal dynamics generating suffering, involving the patient in a joint exploration of therapeutic transference, in order to promote the patient's progress from splits between good and bad, to an integrated representation of self and others. But most BPD are peculiarly hyperactivated by the therapeutic relationship, either when they think the therapist is good and understanding, or when they think the therapist is bad and disinterested (Fisher, 2017), and these representations generate dysregulated states that are inconsistent with the possibility to collaboratively analyze what it is happening in the therapeutic relationship. For a final example, DBT focuses on a sort of behavioral shaping through the implementation of peculiar skills that enhance mindfulness and enable patients to better tolerate distress, regulate suffering, and functionally solve relational problems. But most BPD patient seem unable to discontinue usual behavior because they are indispensable survival strategies for avoiding psychic pain (Fisher, 2017). For example, angrily cutting oneself or urgently asking for attention are strategies aimed to (dysfunctionally) regulate fear of abandonment. So, patient could have difficulty adopting different behavior or keeping them in the long term.

Metacognitive Interpersonal Therapy (MIT) aims to solve the two limits above described: it is based on a comprehensive assessment of the different domains of BPD pathology, and it uses a hierarchy of strategies and interventions requiring BPD patients to make psychological operations that are intrinsically compatible with BPD pathology, and reflecting the achievement by the patient of progressively more sophisticated emotion regulation capabilities. MIT was manualized for PD with aspects of emotion inhibition and over-regulation (Dimaggio, Montano, Popolo, & Salvatore, 2015; Dimaggio, Ottavi, Popolo, & Salvatore, 2019) and adapted to individual with schizophrenia (Salvatore et al., 2009).

MIT has demonstrated effectiveness in two single case series (Cheli, Lysaker, & Dimaggio, 2019; Dimaggio et al., 2017) and one multiple-baseline single case series (Gordon-King, Schweitzer, & Dimaggio, 2018). Moreover, MIT in Groups (MIT-G) (Popolo & Dimaggio, 2016) has demonstrated effectiveness via RCT and noncontrolled routine care studies (Popolo et al., 2019a, 2019b). Until now, MIT has never been systematically applied to BPD.

#### *MIT perspective on BPD pathology*

Consistent with the above mentioned evidence, in BPD presentations, MIT focuses on the following domains of psychopathology in BPD: 1) impaired sense of self (Livesley et al., 2017); 2) maladaptive interpersonal schemas (Dimaggio et al., 2015, 2019); 3) impaired metacognition or mentalizing capacity (Bateman & Fonagy, 2004; Semerari et al., 2007); 4) emotion dysregulation and impulsivity (Carpenter & Trull, 2013; Chapman, 2019; Linehan, 1993).

*Impaired sense of self.* Humans have multiple self and others representations concerning different interactions, and yet remain capable of integrating these representations into an overarching cohesive sense of self (James, 1892; Gold & Kyratsous 2017; Kernberg, 1975, 1984). In BPD, the sense of self is impaired, disconnected or fragmented (Meares, 2012; Fisher, 2017). This often emerges from a developmental history characterized by repeated aversive experience (e.g. abuse and neglect) which frustrated ontogenesis of the basic need humans have for significant

others to be able to attune to their inner experience (Ibrahim, Cosgrave, & Woolgar, 2018; Meares, 2000; Quek et al., 2017; Sherry 2007). These aversive experiences lead to self-states that are disconnected, dissociated or compartmentalized, each with idiosyncratic patterns of ideas, affects and regulatory strategies (Fisher, 2017). For example, a man with BPD may rapidly oscillate among states of emotional detachment and physical weakness, anger with aggressiveness towards others or self-harm be, anxiety and urgent seeking for help, paranoia. This continuous oscillation among different self-aspects increases suffering and chaos (Fisher, 2017; Van der Hart, Nijenhuis, Steele, & Brown, 2006), and gives rise to typical situations in the therapy room: the patient ends a session grateful for having been understood and then a few hours later she texts the therapist saying he only cares about money.

*Maladaptive interpersonal schemas:* MIT defines schemas according to an adapted version of the Core Conflictual Relational Theme concept (CCRT, Luborsky & Crits-Christoph, 1990), based on the assumption that individuals form predictions of how the other will react to their core wishes (e.g., social rank, attachment, autonomy/exploration, group inclusion), generating multiple nuclear self-images and representations of others' responses related to those wishes. The activation of a core wish is associated to the emergence of at least two core self-images underlying each wish (Dimaggio et al., 2015). For example, the dominant wish is pathogenic, which leads to negative constructions of others, for example I am unlovable and I expect the other will reject me. Beyond problematic self-images, there is also an alternative, positive self-image, for example self as *loveable* which predicts the other will love and accept. Framed this way, a typical schema reads thus: "I want to be appreciated (*social rank motive*); I mostly believe I am unworthy (*negative self-image*), but I retain hope I am worthy (*alternative, benevolent self-image*). If I show my qualities, I am convinced the other will criticize me (negative response of the other), but there is a chance that he or she will praise me (*positive response of the other*)". The greater the complexity and severity of PD presentations, the harder it is for the individual to access positive images of self and others. In relationships, including the therapeutic one, BPD patients test the other (Gazzillo, Genova, Fedeli et

al., 2019; Weiss, 1993) in order to ascertain whether the negative representation is confirmed, or whether, contrastingly, the other is reacting according to the hoped positive ideas of self and others.

*Impaired metacognition:* metacognition denotes a spectrum of mental activities ranging from discrete acts in which people recognize specific thoughts and feelings, both of oneself and others, and distinguish them from reality (metacognitive differentiation); to more synthetic acts of integration, in which an array of thoughts, feelings, representations of self and others, and connections between events are integrated into larger complex representations. Metacognition also includes ‘mastery’ - the ability to use metacognitive knowledge to solve psychologically challenging events occurring in daily life (Semerari et al., 2003, 2007; Dimaggio & Lysaker, 2010). BPD is significantly associated with an impoverished capacity to reflect on one’s emotions (Bateman & Fonagy, 2004), deficits in understanding others’ intentions (Jeung & Herpertz, 2014), and difficulties in differentiating one’s own rigid self- and other representations from reality. Integration is also compromised in BPD patients, as a function of impaired sense of self: they oscillate between different and inconsistent representations of self and others, with limited capacity to form unified representations of themselves and others (Kernberg, 1975; Ryle, 1997; Semerari et al., 2014). Finally, mastery is poor in BPD patients as, in order to manage psychological distress, they tend to adopt non-reflective strategies, such as alcohol and drug abuse, compulsive sex or clinging dependency, self-harm, or perseverative thinking. Mastery mostly fails during episodes of emotion dysregulation.

*Emotion dysregulation and impulsivity* refers to a heightened sensitivity to emotionally-arousing stimuli, intense responses and difficulty in returning to baseline states once an emotion has been triggered (Gross & John, 2003; Hoben, Claes, Sleuwaegen, Berens, & Vansteelandt, 2018). BPD patients are also impulsive, tending to act rapidly, without planning and with reduced awareness of possible negative consequences (Chapman, Leung, & Lynch, 2018). Impulsivity contributes to dysregulated behaviors such as compulsive shopping, gambling, reckless driving and self-injury (Schmal & Herpertz, 2014). In BPD the power of interpersonal events in eliciting

dysregulated emotion is potentially mediated by re-activation of traumatic memories (Meares, 2012), often at the sensorimotor level (Fisher, 2017). Put simply, a contingent interpersonal event can re-activate arousal and reactions consistent with a traumatic memory the person does not consciously recall. On this basis, patients experience a sense of internal fragmentation and deep psychic pain with intense shame, perceiving themselves as worthless and unloveable (Hill, 2015). Correspondingly, individuals are unable to form adaptive plans and effective coping strategies.

*Interacting Domains.* BPD is more than the sum of the above listed domains. Those problems interact with each other, in particular in the context of problematic social interactions creating a “perfect storm”, which maintains difficulties. For example, a wish gets activated by an interpersonal trigger and the associated (underlying) painful self-image intrudes, alongside predictions that the others' response will leave the wish unfulfilled. This evokes negative emotions that the individual is unable to regulate, compounded by metacognitive inability to reflect on one's emotion. This leaves the individual re-inhabited by a traumatic relational pattern he/she is unable to consciously recall, experienced as a sense of fragmentation and psychic pain, often triggering dissociation. At times, in order to soothe pain, patients resort to maladaptive mastery strategies above described. These strategies, coupled with impulsivity, renders them unable to stop and reflect upon possible consequences of their actions. Sequelae may be both intrapsychic (e.g., perseverative thinking or rumination about interpersonal events), behavioral (e.g., substance abuse, self-harm), or interpersonal (e.g., clinging behaviors and frantic efforts to avoid abandonment). In the interpersonal domain, poor capacity to understand the mind of the others leaves individuals unable to gauge the negative impact their behavior has on others. Moreover, maladaptive behaviors evoke negative responses in the other, thus creating interpersonal cycles (Safran & Muran, 2000). For instance, the other may feel overwhelmed, criticized, confused or worried, with corresponding reactions that may reject or criticize the individual, further deteriorating the relationship and maintaining underlying dysregulated affects (see Figure 1).



Insert figure 1 about here

### *Basic principles of MIT for BPD*

MIT for BPD adopts a set of step-by-step procedures, divided into 1) *Shared formulation of functioning and regulation*; and 2) *Change-promoting*.

*Shared formulation of functioning and regulation* comprises the following steps:

- Eliciting autobiographical episodes, saturated with detail, in which affect dysregulation occurred. These are used as exemplars to help patients recognize their mental states, particularly cognitive-affective antecedents of emotion dysregulation.
- Collaboratively devising an early formulation of schema, reconstructing the structure of typical interpersonal antecedents of emotion dysregulation, precipitating recognition that a crystallized self-image connected to these mental states exists;
- Validating and normalizing patient's dysfunctional behaviors (e.g., self-harm) as human attempts, albeit maladaptive, to managing distressing thoughts and affects.
- Once a shared understanding of typical maladaptive interpersonal schemas is reached, clinician and patient use this as the basis for negotiation of a therapeutic contract, including treatment goals, tasks, rules and reciprocal commitments (Linehan, 1993). Therapists emphasize that engagement with therapeutic tasks is crucial to therapy effectiveness. The main goals in this therapeutic phase are: a) reducing emotional and behavioral dysregulation, b) promoting metacognition, namely helping patients to identify cause-effect links between interpersonal events, core ideas about self and others, behaviors, and symptoms; c) further understand the structure of the schemas and (once patients are able to reflect upon their developmental history) reconstruct their origins.
- Using the therapeutic relationship to reduce dysregulation. MIT therapists make substantial use of implicit communicative signals as facial expression, prosody and posture to regulate patients' arousal, validate emotions and attune with patients' psychological pain. Moreover, therapists negotiate a contract for ad-hoc engagement with the patient regarding between-

session contact, with a view to managing extreme distress states (Gunderson, 2010; Livesley, 2016).

- Promoting more autonomous mastery strategy in order to reduce dysregulation and impulsivity. Examples include re-activating the exploratory- and play-systems (Panksepp & Biven, 2012) in order to engage patients in activities that foster well-being and curiosity, thus fostering the emergence of positive states (Frederickson, 2001). Other strategies include Mindfulness (Kabat-Zinn, 2004; Linehan, 2001), *grounding* (Lowen, 1975), or exercises derived from martial arts, e.g. *tai chi chuan* and *chi kung* (Dimaggio et al., 2019).
- Once patients become capable of some autonomous regulation and are aware of their maladaptive interpersonal patterns, therapy moves into the Change promoting part of treatment, aimed at structural change of such those patterns.

*Change promoting* comprises the following steps:

- Helping patients to increase differentiation. This step entails the realization that their maladaptive views of self and others do not necessarily mirror reality but are mostly reflections of learned developmental experiences. For example, the therapist may help the patient to realize that the core-idea of self as unlovable is at times replaced by a positive self-concept which does not dwell in consciousness long enough to be included in her identity. The patient discovers that she is not unlovable, but she tends to think so, while at times she harbors different, more benevolent ideas. Another form of differentiation is passing from: “I deserve rejection because I am unworthy” to “I realize that I learnt to think I am unworthy and other reject me but now sometimes I note others are welcoming. I then feel worthy, contrary to my past experiences”
- This ability is usually achieved in-session, but patients may be unable to keep the capacity in mind between sessions, or to use different perspectives on social interactions to plan adaptive actions. In-session change is not the only driver of improvement. Consistent with experiential learning (Kolb, 1984), change needs to be sustained through: planning change,

performing new behaviors and reflecting about them in subsequent sessions (Dimaggio et al., 2015, 2019)

- Accessing core wishes that were previously suppressed because of schema-driven expectations. Patients begin to understand that they have passions or interests that they are not providing room for, and which, once pursued, could give them a sense of fulfillment and worthiness. This happens in the context of promoting exploratory behavior, including accessing avenues for self-actualization and for fulfilling one's innermost desires;
- Later in therapy, change involves promoting a more nuanced understanding of how people think, feel and behave. Finally, patients become aware of how their behaviors contribute to problems and conflicts, which take the form of interpersonal cycles fueling distress, together with a sense of empathy towards others.

The term *interpersonal* in MIT needs clarification about commonalities and differences respect to classical interpersonal therapy (IPT; Weissman, Markowitz, & Klerman, 2000). The most relevant commonality is that in both MIT and IPT a foundational aspect of treatment is a good therapeutic alliance, characterized by affective attunement and positive regard. The most relevant difference is that MIT's goal is not, as IPT one, to change patients' *real* dysfunctional relationship patterns, putatively considered as source of pathological suffering, but to reshape the patient's dysfunctional and maladaptive *representations* of relationship, namely interpersonal schemas, guiding problematic affects, cognitions and behaviors in interactions. This has two consequences: 1) since schemas are deeply radicated, MIT is not time-limited respect to IPT; 2) in MIT behavioral exposure aims to foster differentiation between schemas and reality, not improve patients' problem-solving solutions to relational difficulties.

We emphasize that this is not a phase-based model of treatment, but an iterative one. For example, if a patient enters into a state of dysregulation during the change-promoting phase, the therapist can shift back to regulation steps. In MIT, therapists continuously act to validate patients' distress (Linehan, 1993) and regulate the therapeutic relationship in order so to minimize ruptures

and repairing them when they occur (Safran & Muran, 2000). For example, therapists are attentive towards identifying negative counter-transferential feelings that BPD patients may elicit, such as fear for patients' life or concerns regarding possible legal consequences of patients' suicide, or therapist concerns such as irritation, impotence or guilt (Colli et al., 2014). These aspects are addressed through therapist supervision.

Given the above, we aimed to explore whether individual MIT can address the needs of patients with BPD. We used a single case approach, evaluating reliable clinical change in symptoms and functioning from intake to therapy termination. We also provide a qualitative description of the therapy process.

## **2. Case Introduction**

Angie (pseudonym) was in her mid-30's, unemployed, and sought help after the break-up of a romantic relationship. She was severely depressed, socially isolated and described suicidal ideation. Her boyfriend had left her after discovering that Angie was sexting with another man. Her ex-partner had always been jealous and possessive with Angie. He frequently engaged in abusive sadomasochistic sex games, including violence during sex, or asking her to seduce another man and have sex with him while her ex-partner watched. Angie described "mixed feelings" about these requests. She reported alternating between "hating him", feeling sexually excited (especially when she perceived her ex partner's excitement), and fearing that he would leave her if she did not please him.

## **3. Presenting problems**

Angie often called her ex-partner, driven by dysregulated anger and if he did not answer or appeared distant, she dissociated, cutting herself, binge-eating or misusing alcohol. She suffered insomnia, which gave her severe migraines. Angie was irritable and verbally aggressive with her relatives. When arguing with them, she often threw or destroyed things. She described herself as

“always anxious”. She felt “stuck”, and described herself as “half a person” for having “never carried out what she wanted”, for example academic studies. Simultaneously, she “had always felt confused and unable to understand” what she really wanted. She had frequent phases of perseverative thinking, especially about “happy moments in the relationship” with her ex-partner. Angie had no previous history of psychopharmacological or psychotherapeutic treatment.

#### **4. History**

Angie had a high school diploma. She lived in a small South Italian town with her parents, both farmers, and her younger sister. Her father and mother were in their late 50's. He was described by her as violent and humiliating. She described her mother as “totally dependent on him” and neglecting towards her. From childhood onwards Angie had felt sad and anxious, had few contacts with peers, and struggled with school. Angie recalled her fear when she saw her father's harried expression, usually precipitating an assault on her and her sister. At such times, Angie's mother had a “blank look on her face”, as if she were only “letting the storm pass”, or she scolded Angie and her sister for “annoying dad”. Angie stopped displaying any emotions in family situations and trended to binge on high calorie food when she felt sad or angry. At high school, she had various sexual relationships with different boys. She felt guilty about these and frightened her father might find out, but she stated that feeling sexually attractive towards boys was the only thing that enhanced her self-esteem. After her high school diploma Angie experienced a profound crisis regarding which university to choose for further study. Angie wanted to continue her education but couldn't identify an area of interest. She went to law school in the nearby provincial capital. In this context she had a number of stormy sexual relationships. She quit university after a year because “it was impossible to bear the anxiety for exams”. Angie returned to live permanently with her parents, working for her father and maintaining the household with her mother.

#### **5. Assessment**

Angie, s SCID-II interview (First, Williams, Benjamin, & Spitzer, 2016) revealed that she met DSM - 5 (APA, 2013) 8 criteria for BPD: 1) she made frantic efforts to avoid abandonment; 2) her interpersonal relationships were unstable, oscillating between idealization and disillusionment; 3) she had a very unstable self-image; 4) she showed impulsive behaviors (e.g., binge eating and alcohol abuse); 5) her affects were unstable, with irritability and frequent episodes of dysphoria; 6) she felt profound emptiness; 7) she showed very intense anger when she felt abandoned; 8) she showed transitory episodes of paranoid ideation.

Angie's GSI score of 2.1 in SCL-90 (Derogatis, 1994) indicated severe distress, with high levels of dissociation, depersonalization, paranoia, anxiety, somatization and depression.

At the *Difficulties in Emotion Regulation Scale* (DERS; Gratz & Romer, 2004) Angie scored 118.

Test assessment was performed by an expert clinical psychologist. Angie's therapist was also a clinical psychologist and psychotherapist with >5 years of MIT experience. The psychiatrist at Angie's intake consultation was one of MIT's creators. He was also the case manager, and managed Angie's medication.

## **6. Case Conceptualization**

Angie showed all domains of BPD psychopathology above described.

*Angie's impaired sense of self.* Angie's sense of self was discontinuous, fragmented. She often oscillated between different compartmentalized self-aspects. For example, when faced with stimuli which she interprets as neglecting from her ex-partner, she seemed first dominated by anger, alongside a tendency to criticize or attack her partner, underpinned by a core idea of the self as 'strong but mistreated'. She then seemed to shift to a state where she felt unworthy, as she realized the partner was distant, accompanied by overwhelming emotions of shame and self-loathing. In other moments, she resorted to compulsive, maladaptive self-soothing such as binge eating and alcohol abuse. Angie was unable to integrate these different self-aspects in a coherent sense of self, and at the same time she had diminished capacity wto integrate different representations of others.

For example, she described her mother as caring, and soon after this comment described them as sadistic, positioning herself as the innocent victim. Similarly, as we will show in the treatment history, she swung from positioning herself as loveable and the therapist as understanding, to herself as unloveable and the therapist as rejecting. This led her, from the very beginning of therapy, to use the therapeutic relationship as a test (Gazzillo, Genova, Fedeli et al., 2019; Weiss, 1993) in which she carefully scrutinized her therapist's communications for signs of distance and rejection. MIT therapists address this problem in an articulated way. First, starting from the assumption that the therapeutic relationship is the basic catalyst of an integrated self. In this perspective the therapist helps the patient to achieve as soon as possible an integrated representation of the therapist her/himself. For this purpose, the therapist promptly recognizes the occurring patient's relational test, and avoids to confirm the patient's negative relational expectation. For example, a therapist could recognize her irritation elicited by the patient's diffident mimic expression; then the therapist should regulate her irritation, hypothesize that it is the manifestation of a test, and, with a validating attitude, involve the patient in an exploration of what it is happening *in vivo* in the relationship, and reassuring the patient. In other cases, the oscillations among multiple – often incompatible – patient's representation of the therapist frequently cause drastic relationship rupture. MIT therapists consider fundamental throughout the course of the treatment regulating the therapeutic relationship and working to prevent and repair ruptures, on the basis of the principle that any intervention, no matter how technically correct, risks failing if carried out at a moment of relationship rupture (Safran & Muran, 2000).

*Maladaptive interpersonal schemas.* Angie's main maladaptive interpersonal schema was: *core self-image was unlovable*. When her *Wish* to be comforted and loved emerged (attachment) she expected the *Other's Response* to be *neglecting*. When she encountered actual or perceived rejection she experienced sadness, shame, confusion and ruminated on potential rejection. Angie often tried to master this internal state with angry requests for attention, seduction and clinging behaviors. When these interpersonal strategies failed, she resorted to alcohol, binge eating, self-

injury or dissociation. An alternative healthy core self-image as *loveable* was also present and faced a representation of the response of the *Other* as welcoming and benevolent. This alternative adaptive self-image implicitly guided her to seek therapy, but it did not achieve full access to consciousness. MIT therapist addresses this problem through two principles: first, through repeated intervention of psychoeducation throughout therapy, the therapist fosters the patient's awareness of how the activation of the schema in daily situations generates suffering and dysregulated behaviors; and helps the patient to realize her ideas about self and others are schema-dependent and do not necessarily correspond to reality. In a more advanced phase of therapy, the therapist proposes behavioral exercises, which offer patients an opportunity to accomplish behavioral tasks. This offer patient's graded exposure to feared scenarios, enabling them to collect information about their actual experiences, whilst noting possible inconsistencies with schema-driven predictions. Moreover, these experiments foster contact with the healthy self - as the person may select behaviors focused on preferences that they have previously overlooked.

*Impaired metacognition.* Angie had pronounced problems in several metacognitive domains. Especially when dysregulated, she was able to recognize her anger, but could not recognize underlying sadness, or identify a sense of unworthiness connected to the idea of being unlovable. She had limited differentiation: if she thought the other was distant she was unable to realize that this was just a belief. Angie did not decenter: she struggled to understand others' minds and appreciate others' points of view. For example, she often attributed the intention to reject to her partner, whilst refusing to acknowledge that he might be unavailable because he was tired or managing his own problems. Finally, she had poor metacognitive mastery, evidenced by an inability to use self-and other related information to form adaptive to soothe her distress.

MIT therapists use a step-by-step procedure to progressively stimulate patients' metacognitive abilities throughout therapy, and – considering that metacognitive abilities fluctuate over time, from session to session and at different moments in the same session – they constantly attune their interventions to contingent patients' level of metacognitive functioning. For example, if



a patient is not able to recognize that she/he is angry, the therapist needs to first carry out some minimal interventions aimed at promoting the recognition of anger; then the therapist helps the patient to understand that that anger is a reaction to the fear of abandonment, and that the latter is in turn the expression of a self-image as unloveable surfacing consciousness. Then, if the patient shows a positive feedback, the therapist helps the patient to improve emotion regulation strategies.

MIT therapists always tactfully divert patients from narratives that are abstract or intellectualized, and base their work on eliciting specific narrative episodes. This method further improves metacognition, because this kind of narrative they are the most fertile in order to explore patients' subjective experience, problematic emotions, meaning making style and biased interpretations of the self's and other's ideas and intentions.

*Emotion dysregulation and impulsivity.* Angie frequently went through phases of dysregulated deep psychic pain, during which she indulged in impulsive behaviors as alcohol abuse and binge eating. These phases were elicited by interpersonal events, in turn reactivating traumatic memories she did not recall at the level of episodic memory, in which she perceived herself as worthless and unloveable. MIT addresses this problem in different ways throughout therapy. In the very first phase, MIT considers essential a functional integration with pharmacological therapy, which should reduce arousal fluctuations. In this phase the therapist assertively guides the patient to recognize problematic feelings and self-images, explaining the patient that their dysregulated emotions and behaviors are understandable in the light of traumatic experiences, and rapidly involve the patient in the shared aim of regulating that suffering, and in learning regulatory strategies. In this perspective, the therapist, while exploring, guiding to emotional recognition and explaining, continuously regulates the patient's dysregulated nervous system through nonverbal communication (e.g., a compassionate tone of voice, a secure and calm attitude), having the role of an "auxillary" regulating prefrontal cortex (Diamond, Balvin, & Diamond, 1963; Fisher, 2017) for the patient.

In advanced phases, when the patient starts displaying greater self-regulation and a more integrated representation of the therapist, the latter involves the patient to co-construct a menu of autonomous emotion regulation strategies. These could be selected choosing identified pleasant activities, as a means of connecting with healthy desires, and to divert attention from distress-provoking thoughts.

## **7. Course of Treatment and Assessment of Progress**

### ***Shared Formulation of Functioning and Therapeutic Contract***

In the consultation session, Angie started talking about her dysregulated anger and her tendency to self-harm, binge or misuse alcohol. She attributed this to her ex-partner, especially if he appeared distant. The therapist created a calm and validating relational atmosphere and facilitated her recall of specific episodes in which she became dysregulated in the aforementioned ways. Consequently, she became more aware of cognitive-affective antecedents of emotion dysregulation.

For example, she told an episode in which she phoned her partner and angrily told him she felt neglected. He replied by ending the call. The therapist helped her understand that, at that moment, she was driven by a need for proximity. When her partner reacted abruptly she thought he did not care about her, eliciting the sense of her unlovability. The therapist helped her realize that she reacted to this sadness by switching to a state in which she (unfairly) felt abandoned, precipitating anger. This sequence of sadness and anger then made her confused. The therapist used the following case formulation: “Angie, it occurs to me that these episodes highlight how strong is your need to be cared for and loved. A part of you thinks you deserve it, but it is very small. Mostly you are convinced the other will be distant and uninterested in you, confirming your core idea of being unworthy and unlovable. When you focus on the idea that you do deserve to be loved, you think the other’s neglect is unfair and you then become vulnerable to intense anger. Soon after this rage you feel an overwhelming psychic pain which you cannot control, and then you become confused. In these moments you think your life is meaningless and you feel fragmented. By the way I don’t think you don’t deserve love and attention and that your existence is meaningless, but I am

not trying to convince you”. Angie fully agreed with these observations and reported feeling understood.

On the basis of this shared formulation, the therapist and Angie drafted a therapeutic contract as follows:

“When we are driven by the idea of being unlovable and unworthy, some events make this idea sound real. At that point we experience intense pain and deep shame, feelings we can’t bear. We may think the other is responsible for that pain and then become angry and aggressive at him. At these times we might resort to strategies that take away the pain for a while, like drinking, over-eating, or self-harming. This is human, it shows we try to soothe the pain. For some individuals, like in your case, these processes are more intense and can cause problems. Would you agree that our goals are: first, learning how to regulate your pain in a way that does not further harm you; second that we try and understand how you develop the idea you do not deserve to be loved and cared for; and third, helping the part of you feeling to deserve love and happiness to realize her life goals?”

Angie agreed to weekly MIT sessions with one of the authors (NM). It was also agreed that in moments of crisis she could phone, subject to availability, either the psychiatrist or the therapist to help regulate unbearably intense distress. She was also prescribed Topiramate (75 mg/day) and Fluoxetine (60mg/day), to reduce ongoing distress and break-through impulsivity.

In the first psychotherapy session, the therapist (NM) summarized the formulation drafted during the intake session and then commenced working with Angie on building emotion regulation strategies. During the first four-five months of therapy, Angie often resorted to calling the therapist in moments of crisis. At these times her therapist firstly validated her choice to seek support instead of adopting dysfunctional strategies, and then calmly asked simple questions such as: “Please Angie, wait a moment, help me understand what happened inside of you”. Then, using a compassionate tone she moved the dialog towards shared problem-solving: “Well, now let’s try to

overcome this moment together”. She then suggested using bodily-oriented self-regulation such as breathing modulation (having taught Angie this in previous sessions).

When Angie started displaying greater self-regulation, the therapist introduced questions during sessions that were focused on improving metacognitive monitoring, such as: “When did the problem begun?”, “Where were you and with whom, what were you doing?”. This way, she helped Angie reconstruct cognitive-affective antecedents of dysregulation.

Next, the therapist acted to increase Angie’s awareness of her capacity to regulate distress. In sessions, she tried to sustain Angie’s awareness of a broader range of ideas and emotions; encouraging her to integrate emerging healthy aspects of function into her self-image. For example: “You entered into a state where you lose control over your feelings, and become vulnerable to the idea that you will never be loved. But then you notice feeling benefit from our contact and performed exercises that made you feel better, this demonstrates that you can move towards increased wellbeing”.

In terms of the therapeutic relationship, during this phase Angie held contradictory views of her therapist, moving rapidly from expressing gratitude at feeling understood to expressing anger that she thought the therapist was not interested in her. For example, when her therapist answered Angie’s phone calls Angie felt grateful, whereas when she did not Angie arrived at the next session already angry. These inconsistent attitudes and behaviors were felt by the therapist as confusing and annoyed her that Angie criticized her. Through supervision, the therapeutic team guided the therapist to understand that her problematic feelings towards the patient were partially attributable to Angie’s behaviors, and partially to the therapist’s own feelings of inadequacy. She thought she was not up to the task of managing self-harm and feared Angie might commit suicide. Through the team discussion, the therapist was able to regulate these problematic thoughts and feelings, subsequently guiding Angie to realize that she was driven by the anxiety that her therapist was not genuinely involved, but that did not correspond to the therapist’s own perceptions.

The therapist used metacommunication regarding the therapeutic relationship to integrate the different representations that Angie held: “Often you say that you feel I want to understand you, but at the beginning of this session you were irritated because you thought that I didn’t answer your call - because I don’t care about you. Our agreement is that this may happen, but regardless you feel hurt anyway, because you think I didn’t answer because I have no interest in you. This is human, we all experience these feelings, even with loved ones. We know they care for us, but the next day we are upset or disappointed at them. At times, it is difficult to remember that the person we think has hurt us is the same person whom we feel loved by. When we experience intense negative emotions, this is particularly difficult, it is like remembering a broader image existed. The best way to manage these difficulties is if you feel free to tell me when you have a negative idea of me. Then we can talk about this and tackle with the problem”. Through these interventions, aimed at repairing ruptured alliances promoting integration, Angie began tolerating that the therapist did not return phone calls or email, and to achieve a more integrated representation of the therapist herself.

The next step was to encourage Angie to use more autonomous regulation strategies. Angie and her therapist co-constructed a menu of emotion regulation activities that Angie could select when highly aroused. They also identified pleasant activities, as a means of connecting with healthy desires, and to divert attention from distress-provoking thoughts. Angie’s immediate reaction was to reported feeling rejected, as she thought that therapist just wanted to get rid of her. The therapist noted this reaction and emphasized that the goal was to promote self-agency, and she still remained available as in the past. Angie understood this rationale and ceased interpreting this according to her maladaptive schema. In the following months she mastered use of physical exercises, listening to music, body-oriented meditation and mindfulness as successful regulatory strategies.

In subsequent months, as Angie began to better understand the roots of her dysregulation, her distress further decreased, enabling therapy to move to revising maladaptive interpersonal schemas and promoting differentiation. One important episode occurred when Angie retrieved a

distant memory, helping her further understand how her schema were formed. Angie remembered that when she was 8 her parents sent her to her grandmother for several months, so they could care for Angie's younger sister, whilst she was in hospital. Angie remembered they did not call or visit her. Moreover, her grandmother was depressed and mistreated Angie. She vividly remembered the day she returned home. Angie was happy and wanted to hug both her parents and her sister, but her mother only coldly waved 'hello' to her. Via this memory she understood how her rejection sensitivity, which dominated her romantic relationships (and was present in the therapeutic relationship), could be rooted in her developmental history.

### ***Change promoting***

Through her increased capacity to connect recent episodes with historical antecedents, aided by the therapist's formulation, Angie began to realize her ideas about self and others were schema-dependent and did not necessarily correspond to reality. She realized her parents did not meet her need to be loved and cared for: "I was angry with them. Now, I reckon they were victims of neglecting parents in turn. I understand their attitude was the reflection of their suffering and not a lack of appreciation towards me... I was convinced I was unlovable but now I hope to be loved for who I am".

At the same time, the therapist fostered the expression of Angie's healthy self, first helping her to focus on desires and preferences that she had previously overlooked, then encouraging her to achieve them, exposing to feared interpersonal scenarios. As an example, Angie understood with the therapist's help, that she had a deep passion for theater, therefore her therapist encouraged activities in this field. Angie participated in a drama course where she experienced curiosity, enthusiasm and group-inclusion. This experientially reinforced Angie's recognition that her self-perception as unloveable was schema-driven and not a reflection of reality. During sessions at this time, Angie reported gratitude to the therapist and the atmosphere in session was steeped in a sense of sharing and playfulness.

### ***Outcomes***

After eighteen months of therapy positive outcomes were evident. Angie had constructed a more stable and comprehensive image of herself, which now incorporated self as loveable. She still experienced moments in which she felt unlovable, but could quickly acknowledge that these were schema-dependent constructions rather than fact. Simultaneously she felt satisfied and active when she acted according to her own desires. Identifying and pursuing her own self-identified goals was mirrored in a reduction in the frequency of Angie's feelings of emptiness. At the end of therapy all scales displayed reliable clinical changes (see Table 1): at SCID-II assessment, Angie no longer met the clinical definition of BPD; her GSI at SCL-90 score fell from 2.100 to 0.222; her score at *Difficulties in Emotion Regulation Scale* (DERS) fell from 118 to 57.

#### **8. Access and barriers to care**

There were no issues regarding access and/or barriers to care.

#### **9. Complicating Factors**

These positive improvements notwithstanding, a number of issues remained. In her daily life, when Angie perceived social rejection she would still abruptly return to previous patterns of anger. In the following episode, she found herself caught in an interpersonal cycle (Safran & Muran, 2000).

Angie felt embarrassed at the idea of going alone to a party organized by her theatre partners, so she asked another theatre partner if they could go together. The other woman could not attend, and the negative schema was reactivated: Angie thought the other was neglecting and unfair towards her, undermining Angie's wish to be loved and accepted. Consequently, she became angry, accusing her friend of cheating her. Her friend felt hurt and there was a momentary break in their friendship.

Through dialogue with the therapist Angie acknowledged that her attitude had provoked the other to react in a way that fueled Angie's own anger, underpinning Angie's maladaptive core schema of deserving to remain alone. Through this awareness Angie progressively learnt to gain critical

distance from her schema-driven ideas about others, thus curtailing the urge to express anger and verbal aggression. Correspondingly, her relationships steadily improved.

## **10. Follow-up**

After 18 months of therapy, Angie was sustaining positive gains in symptoms and social contact, and therapy moved to fortnightly follow-up sessions for 5 months, then one session every 3 weeks for the next 5 months. Her gains remained stable at 12 months follow up. In daily life, Angie was attending a training program with a business - she reported happiness about this outcome. Angie was involved with a theater group, forming new friendships and experiencing a sense of sharing, belonging and cooperation. Under stress she still tended to oscillate between moments of responsive emotion regulation and a tendency to react with anger and resentment, albeit at greatly reduced frequency compared to before treatment.

## **11. Treatment Implications of the case**

We suggest that BPD patients can benefit from psychotherapy that sequentially addresses impaired sense of self, maladaptive interpersonal schemas, impaired metacognition, emotion dysregulation and impulsivity. We describe the case of a woman with BPD with paranoid traits, successfully treated with MIT. In the first phase, the therapy focused on promoting emotion and impulse regulation, integration of opposite patient's representations of self and of the therapist, and metacognitive capacity to understand one's disturbing emotions and stereotyped and maladaptive schema eliciting dysregulated behaviors. Subsequently in therapy, the therapist focused on helping the patient to apprehend that self and other-related cognitions were schema-dependent and did not necessarily correspond to reality, simultaneously improving metacognitive capacity to understand others' minds and promoting healthy parts of self. In our opinion, addressing the entire spectrum of impaired domains in BPD takes longer – and that justify a treatment of 18 months as the one described - but produces more stable clinical result and might lead to lower dropout.



MIT shows some peculiarities compared to other treatments for BPD cited in the introduction: 1) MIT therapists use a step-by-step procedure to progressively stimulate patients' metacognitive abilities throughout therapy, and – considering that metacognitive abilities fluctuate over time, from session to session and at different moments in the same session – they constantly attune their interventions to contingent patients' level of metacognitive functioning.

It is worth noting in this context, that compared to MIT for personality disordered patients with prevalent inhibited trait, with BPD patients therapist tend to be more asserting in guiding the patient to recognize problematic feelings and self-images; that for the aim to speed up the recognition of the subjective nature of emotional suffering and rapidly involve the patient in the shared aim of regulating that suffering.

A second peculiarity is that, in order to further improve metacognition, MIT therapists always tactfully divert patients from narratives that are abstract or intellectualized, and base their work on eliciting specific narrative episodes. A third characteristic is that MIT considers essential throughout the course of the treatment regulating the therapeutic relationship and working to prevent and repair ruptures, on the basis of the principle that any intervention, no matter how technically correct, risk failing if carried out at a moment of relationship rupture (Safran & Muran, 2000).

While this case-study supports testing the use of MIT to treat BPD, several important limitations remain. There has been no specific research into MIT's effectiveness in BPD and this is one of the first cases in which the implementation of the model is described. It may be that the effectiveness of the intervention was not exclusively dependent on its specific technique, but instead on other non-specific variables, such as appropriate use of therapist empathy, good therapeutic alliance, and positive regard. Also, Angie's relatively short duration of illness onset may have been a factor towards her good response. We also acknowledge this was a good outcome case. Accordingly, our next step is to report further case studies from within a pre-registered study. These limitations notwithstanding, MIT appears a viable option treat BPD, as evidenced by symptom reduction and increased adaptive functioning.

## **12. Recommendations to Clinicians and Students**

The core message of our work is that a fine-grained case formulation, continuously revised during treatment (Gazzillo, Dimaggio, & Curtis, 2019) is crucial to therapy planning and success in the treatment of BPD. A second recommendation is that BPD patients' impaired sense of self and dichotomous representations of the therapist can present obstacles to therapy itself. Patients oscillate from a self-image as loveable facing a welcoming other, to a self-image of unworthiness facing a neglecting other. When patients engage with the therapeutic relationship, the clinician can feel confused and overwhelmed, reacting in ways that perpetuate problematic interpersonal cycles. In this perspective, it is important that, from the outset, therapists focus on promoting integration of patient's inconsistent representations of the therapist her/himself and on understanding patients' conscious or subconscious relational tests. A final recommendation is that therapy should not only address psychopathology, but also promote contact with healthy self-aspects, both in-session and in daily life.

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The authors declared that they had no conflicts of interests with respect to their authorship or the publication of this article.

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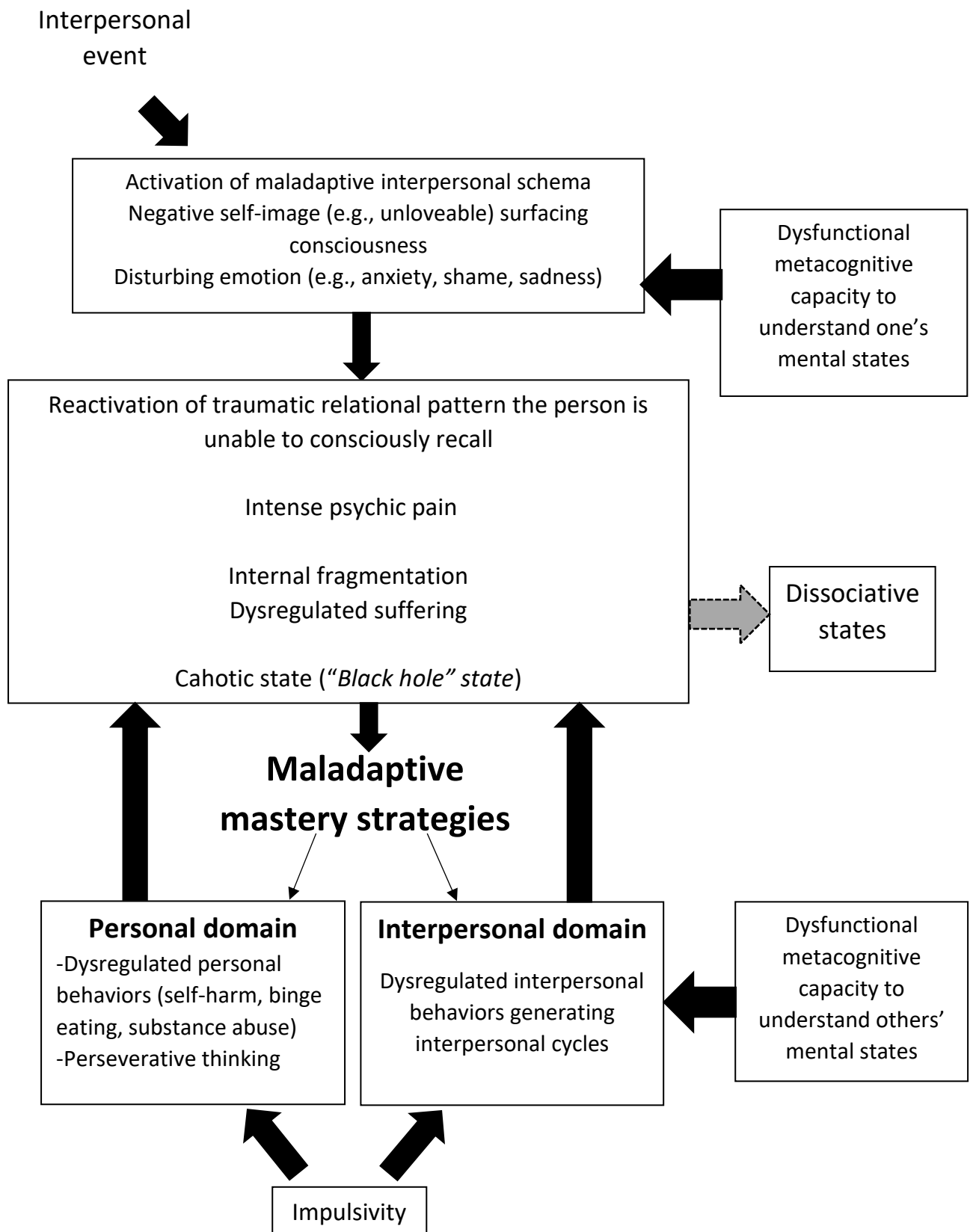


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### **Figure 1. The interaction of psychopathological domains in BPD**

An interpersonal event can activate a wish, from which the associated underlying painful self-image appears, together with predictions that others will respond in ways that will leave the wish unfulfilled. This evokes dysregulated negative emotions (e.g., anxiety, shame, sadness) and inhibited metacognitive capacity to reflect on one's emotions. This renders the individual 're-inhabited' by a traumatic relational pattern she is unable to consciously recall, experienced as a sense of internal fragmentation and intense psychic pain - a "black hole" mental state. This can elicit primitive processes aimed at reducing incoming emotional information, namely dissociative states. In order to self-soothe, the emerging dysregulated pain state may also induce the person to resort to maladaptive mastery strategies, both in the personal (e.g, perseverative thinking) and interpersonal (e.g, angry request for attention) domain. These strategies are co-determined by impulsivity, which in turn hinders reflection about possible consequences of actions. In the interpersonal domain, strategies are co-determined by person's diminished capacity to understand the others. In both domains, strategies may bring momentary relief, but then become dysregulation-sustaining mechanisms (see text).