Schema therapy for emotional dysregulation in personality disorders: a review

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Purpose of review
To give an update on the most recent studies regarding the role of schema therapy in the treatment of emotion dysregulation related to personality disorders.

Recent findings
In personality disorders, a lack of emotion regulation can be found. Schema therapy treats emotion dysregulation with a series of techniques, such as imagery rescripting, limited reparenting, chairwork, and cognitive restructuring to remove dysregulatory mechanism.

Summary
Schema therapy is one of the most efficient therapies for personality disorders. However, there is a lack of recent studies on how it treats emotion dysregulation. Although the treatment of emotional dysregulation is not the core of schema therapy, it is certainly important inside this theoretical framework. The mode model helps clinicians address their work toward the reduction of dysfunctional modes, whereas fostering functional modes.

Keywords
emotional dysregulation, imagery, partial reparenting, personality disorders, schema therapy

INTRODUCTION

Emotional dysregulation characterizes all personality disorders, and its treatment is a crucial point in therapy. Emotion regulation allows us to interact in a functional way with ourselves, with others, and with different situations, while emotional dysregulation leads to dysfunctional reactions, identified with dysfunctional modes in schema therapy. Recent studies show schema therapy to be more efficient when compared with other types of therapy, such as Transference focused Psychotherapy [1,2], treatment-as-usual and clarification-oriented psychotherapy [3].

The current review aims to show recent work regarding emotion regulation, emotional dysregulation, and how the latter is treated through schema therapy, illustrating the main techniques and strategies used in this theoretical framework.

Emotions and emotional regulation

The subject of emotional regulation has been thoroughly investigated throughout the years [4▪▪]. The idea of control over one's emotions dates back to long ago: it can be seen in religion, in philosophy, in literature. It is small wonder that this topic has been kept under the lens of researchers for the last century [4▪▪]. Countless clinicians and researchers have investigated it, with a spike in research within the last decade. Since emotions are a common shared aspect of our lives, not only psychological research, but also biological research, organizational research, social research, and many others have studied them. A widely accepted definition of emotional regulation has been given by the Cognitive Emotion Regulation model by Gross [4▪▪]. In addition, Grecucci *et al.* [5▪] the Cognitive Emotion Regulation model following recent advances in affective neuroscience and Experiential-Dynamic therapies,

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KEY POINTS

- One of the defining characteristics of personality disorders is emotional dysregulation (i.e. either an excessive emotional intensity or a reduced capability of perceiving one's emotions, along with the emotions of others).
- In recent findings, schema therapy has demonstrated to be one of the most effective form of treatment for personality disorders and their related emotional dysregulation, making it an important contribution to the current state of the art.
- Even if emotional regulation is not the focal point in schema therapy, it still shows high efficiency in the treatment of emotional dysregulation; techniques utilized in schema therapy and mode conceptualization allow an effective treatment of emotional dysregulation in personality disorders within a consistent theoretical framework.
- As the dynamics between change mechanisms in schema therapy and emotional dysregulation are still unclear, clinical and neuroimaging studies are necessary to strengthen the current theoretical framework.

made alternatives considerations on this topic. Different approaches have been elaborated through the years; appraisal approaches [6], psychological construction approaches [7], to quote a few. However, three points of contact can be found between different approaches: Cowen and Kelter [8▪▪] defined emotions as multicomponential and involving changes in subjective experience, behavior, and peripheral physiology. LeDoux *et al.* [9▪▪] claimed that although subjective experience certainly has a significant weight on our way of defining emotions, it is definitely not a good starting point for studying them. Kiefer *et al.* [10] stated that affective evaluation processes reliably influence the priming of autonomic changes that anticipate, support, and follow emotion-related behaviors.

On a second note, emotions, unlike moods, are believed to be limited in time: seconds, minutes at the most, are what it takes for us to use emotions to appraise our current situation (refer to PSYCHOPATHOLOGY AND EMOTIONAL REGULATION section for more details).

The third and final point of agreement is that the usefulness of information gathered through this appraisal depends on the context in which we use them. Dobricki and Pauli [11▪] demonstrated that emotions can helpfully guide our way of sensing and perceiving our environment, while Lopes *et al.* [12] stated that emotions show us which course of action carries more social or evolutionary advantages. However, the power emotions exert over our decision-making and behavior can be a double edged blade: what would be an appropriate emotional reaction in one context (e.g. hiding in fear when hearing a wild animal), may not be appropriate in another context (e.g. destroying a car in anger for an argument).

However while three points of agreement exists, a concise definition of emotional regulation and its usefulness cannot be found in current literature. The aforementioned manipulation of the emotions we decide to feel and/or show is an invaluable tool: emotions are an important part of how we communicate with our fellow human; therefore, emotional regulation is our way of knowing what to 'say'. This definition is not in contrast with the classic one by Gross [4▪▪], according to which the term emotion regulation indicates a series of strategies we use to regulate one of the aspects of the emotional reactions. However, it distances itself from the cognitive perspective, stemming from Affective Neuroscience [13]. According to this model, emotions are dysregulated when they come along with excessive conditioned anxiety, or when they are triggered by defensive strategies. Given its recency, however, research is needed and underway.

PSYCHOPATHOLOGY AND EMOTIONAL REGULATION

As mentioned earlier, emotional regulation is part of a virtuous circle: for example, quelling one's irritation can often be an efficient strategy to prevent a stressful situation from escalating and causing irritation to become full-fledged anger. This precious regulating system, however, can find its functionality damaged in cases of psychopathology.

According to recent literature, it is possible to describe psychopathology as a set of failures in emotional regulation. In their theoretical articles, Grecucci *et al.* [14] and Grecucci *et al.* [5▪] proposed that emotions are in line with principles derived from Affective Neuroscience elicited by relevant events, and consist of specific subjective, behavioral and physiological responses that activate (onset), rise (velocity), reach a maximum peak (amplitude), and fall flat in a given time window (duration) in analogy with the physics of sound waves. The onset, amplitude, and duration depends on the relevance of the stimulus (proportionality principle, etc.), and secondarily on temperamental features (genetic principle).

$$\sigma_{(o,v,a,d)} = f(S,T) \quad (1)$$

where σ is the affective response (with a given onset '*o*', velocity '*v*', amplitude '*a*', and duration '*d*'),

as a function of stimulus (*S*) and temperamental features (*T*).

According to this model, emotions are not inherently dysregulated. When the affective response is no longer proportional to the exogenous features of the stimulus (*S*), nor to the endogenous features of the individual (*T*), a factor (δ) must be added to the equation (1) to explain the dysregulated affective state. This factor indicates some type of dysregulatory mechanism that altered the normal affective response. This is typically observed in personality disorder, such as borderline personality where the affective response is no longer proportional to the stimulus itself. Two types of dysregulatory mechanisms have been isolated [14]: excessive conditioned anxiety due to previous association between the emotional stimulus and an aversive consequence, and defensive affects, or secondary emotions that add to the original emotional response (see also [15▪]). Eq. (1) can be adjusted into:

$$\sigma_{(o,v,a,d)} = f(S, T, \delta) \quad (2)$$

Notably, δ is able to alter one of the four aspects of the original affective response (*o*, *v*, *a*, *d*). This model has been presented elsewhere with the name Experiential Dynamic Emotion Regulation (EDER) model [16▪]. In this article, we focus on the δ, the dysregulatory mechanisms, isolated by the Schema Therapy model, that clinicians want to reduce or remove to foster emotion regulation in their patients. Notably, the EDER model aims to remove dysregulatory mechanisms, and not to add new regulatory strategies to help the client [as usually prescribed by the Gross Cognitive Emotion Regulation model, and by standard Cognitive-Behavioral Therapies (CBTs) or Dialectical Behavior Therapy (DBT)]. Schema therapy, in line with EDER principles, has developed a series of techniques to remove Dysregulatory mechanism in clients.

SCHEMA THERAPY AND EMOTIONAL REGULATION

In this work, we review the schema therapy conceptualization of dysregulatory mechanism in personality disorders, including, as seen in a study by Norton and Abbot [17▪], 'odd or eccentric disorders' (Cluster A), 'dramatic, emotional or erratic disorders' (Cluster B), 'anxious or fearful disorders' (Cluster C) and how ST proposes to remove them [18▪▪].

Schema therapy derives from the pioneering work of Morina *et al.* [19▪▪] with personality disorders. It was developed as a transdiagnostic approach, but, as seen in a recent study by de Klerk *et al.* [20▪▪], it also provides disorder specific models for most personality disorders. Several studies have shown that schema therapy-based treatment is effective for patients, especially in cases of borderline [1,21–23] and other personality disorders [3], depression [24,25▪▪], post-traumatic stress disorder [26], eating disorders [27], and complex obsessive compulsive disorders [28▪]. Therefore, the idea that schema therapy holds a superior effectiveness when compared with other currently available treatments has been corroborated by several studies.

In personality disorders, emotion dysregulation is often central: this can be seen especially in borderline personality disorder (BPD) [29,30,31▪], but also in antisocial personality disorder [32,33], and other disorders. Given the fact that one of the core concepts of schema therapy [i.e. early maladaptive schemas (EMS)] is comprised of '*stable and enduring themes, comprised of memories, emotions, cognitions, and bodily sensations regarding oneself and one's relationship with others, that develop during childhood*' [34] (p.7), and seeing how emotions are an important facet of personality disorders, it is easy to see how emotions play a key role in schema therapy.

In their earlier article, Dadomo *et al.* [35▪] claimed that, in schema therapy, emotion dysregulation is mainly seen as a consequence of adverse early experiences that become reactivated in daily life (see the concept of mode). Negative experiences in childhood have led to avoid, hypercompensate, or passively accept situations in which patients might face similar emotions. This results in the avoidance of emotions and intimate relationships. In this article, emotional dysregulation is not conceptualized as in Gross's model. Although emotion-oriented interventions are the focal point in schema therapy, the authors point out that emotion regulation is not schema therapy's main target. In addition, the mode model has been adapted to describe emotion regulation in schema therapy. The goal of the relational, experiential, cognitive, and behavioral techniques illustrated in schema therapy is to let the patient experience a safe attachment in the therapeutic relationship, to meet primary emotional needs.

In this work, modes are described as intense predominant emotional states linked to a pattern of thinking, feeling, and behaving based on a set of specific needs. Modes are usually activated by external stimuli or internal states, are transient by definition, and may comprise both adaptive and maladaptive responses [33,36,37]. The conceptual core here is that different mental states have different purposes, related to different basic needs. How do modes create emotion dysregulation? We point out that every mode is associated with specific dysregulated emotions and dysregulatory strategies.

Child modes are characterized by specific dysregulated emotions such as anger, shame, sadness, etc. . . In this modality, one of the two dysregulatory mechanism considered by EDER can be found: defensive affect (for example, feeling ashamed when expressing anger); conditoned anxiety (anxiety associated with tender feelings of attachment). The second macrocategory of modes contains the dysfunctional coping modes that reflect dysfunctional regulatory strategies such as overcompensation, avoidance, or surrender [35▪].

Coping modes are problematic regulatory strategies that produce a momentary relief, but ultimately maintain dysregulated emotional states, similarly to what psychoanalysis calls defense mechanisms [35▪].

The third macrocategory of modes is the dysfunctional parent mode, that generates the most severe dysregulated emotions (e.g. a critical parent mode that induces excessive guilt) [35▪].

The last category is the healthy adult which can be considered as a collection of self-soothing and acceptance-based-regulatory strategies that regulate emotions and produce a happy child state of mind [35▪]. The aim of schema therapy is to reduce the child modes, stop the caustic effect of the parent modes, and find other strategies rather than coping modes. Finally, schema therapy aims to increment the adult mode. In sum, following EDER principles, the therapist helps the client by removing the dysregulatory mechanisms knows as dysfunctional child, parent and coping modes [δ, in Eq. (2)], so that the normal affective response [Eq. (1)] can be re-established. This is a great point of departure from CBT/DBT conceptualization of therapy (and thus from Gross's model [4▪▪]), according to which the therapist adds regulatory strategies to help the client, rather than primarily removing dysfunctional strategies.

Dysfunctional coping modes are usually the first target of schema therapy. They should be reduced at first, so that the patient can easily replace them with healthier strategies. However, these modes have a defensive function, so caution is advised. On the contrary, dysfunctional parent modes are to be stopped. Once they're stopped, their power to induce dysregulated emotions ceases [35▪]. Following these two steps, the therapist can work on the child modes. When patients enter a child mode, the therapist has to support and comfort them, so they may create and strengthen healthier modes. All techniques are implemented with limited reparenting, a relational procedure that gives patients protection, safety, empathy, care, and behavioral limits.

There are four interventions at the heart of treatment in schema therapy [35▪]:

(1) The therapeutic relationship is designed to:
   (a) transform the therapy session in a safe place in which patients can experience and explore their emotions, needs, desires, and feelings, providing emotional–relational corrective responses;
   (b) contrast abusive or punitive relationship that patients experienced during their childhood, a major trigger for emotion dysregulation in the present;
   (c) help patients recognize and meet unacknowledged needs from early childhood, so that they can recognize and satisfy the present ones, creating a link between present and past situations. These three points allows the patient to create a restorative experience against those damaging experiences that have created his/her schemas and modes [38]. This process is based on a secure attachment between therapist and patient: development of a healthy attachment is a prerequisite for normal psychological functioning.
(2) Limited reparenting uses the therapeutic relationship as a secure base, as the emotional needs patients had as children were not met by their caregivers. The therapist must create a space in which patients can be functional children. This is propedeutic to patients functioning, later on, as healthy adults. Therefore, the therapist creates an environment of warmth, tenderness, acceptance, and sympathy. An important goal of limited reparenting is to teach patients how to regulate their emotions. This is done by using modeling techniques in which patients learn the therapist's method of emotional regulation. This method will then be internalized by the patient, subsequently becoming a part of the healthy adult mode.
(3) Experiential techniques – once the patients are capable to activate intense emotions associated with the vulnerable child mode, imagery work, dialogs, and letter writing can begin. One of the main components of these techniques stems from a very linear and simple concept: as emotional regulation implies emotions, and imagery holds the most powerful impact on emotion when compared with verbal processing, it seems obvious that to treat personality disorders imagery must be employed. Therefore, negative imagery can be contrasted by positive imagery and its related image restructuring [33,36,37]. In imagery work, instead of describing situations, patients recall images of various upsetting situations. Once the scene is set, therapists can enter and support patients, giving them the

help and protection they need. Once the child patients have been protected by the therapist, the adult patients are taught to protect the child patients. Another important tool is found in frequent dialogues that help child patients, and stop the punitive parent version of patients from crushing them.

(4) Once emotional foundations have been set, a solid cognitive structure can be built or re-established. This is referred to as cognitive restructuring. Once patients have a solid base they can rely on, an educational goal is set. This is related to teaching patients about their emotions and their needs, to give them a right to emotions: patients must know that they are allowed to feel, especially in the case of emotions that carry a critical weight, like anger.

(5) Finally, once patients have been nurtured as children, once they have been given access to emotion regulation techniques, once they have built their own cognitive structure, behavioral pattern breaking can begin. Since behavior (and its consequences) related to emotional dysregulation in personality disorder patients tends to be self-reinforcing, it is important to teach patients how to apply what they learned during therapy outside of the walls of therapeutic relationship.

Although schema therapy clearly differs from DBT, some parallels can be made. Fassbinder's and colleagues [39▪▪] in their work on the differences between DBT and schema therapy showed how they address emotion regulation. In this case, the authors provide an overview of background and theory of DBT and schema therapy. In fact, DBT techniques are strictly linked to Gross's model [4▪▪]. In this article, emotion regulation has been analyzed using both framework and therapeutic techniques from DBT and schema therapy. In brief, Gross model defines five loci of possible regulation: situation selection, situation modification, attentional deployment, appraisal, and response modulation. Let us consider each point and make parallels with schema therapy.

(1) Situation selection: Schema therapy explains why patients avoid potentially useful situations and don't leave harmful situations using the concepts of schema avoidance, schema surrender and schema overcompensation.

(2) Situation modification: Similarly, schema therapy assumes that problem solving skills, that are necessary to improve situations, may be blocked by schema avoidance, schema surrender, or schema overcompensation.

(3) Attentional deployment: Dysfunctional schemas and modes are maintained, as attention is focused on information that confirms the dysfunctional schema or mode.

(4) Appraisal: One core assumption of schema therapy is that information processing and decision making is influenced by EMS and that psychopathology is related to a dominance of dysfunctional modes to the detriment of the healthy adult mode.

(5) Response modulation: schema therapy assumes that psychopathology in this category is related to dysfunctional modes, in particular dysfunctional child and parent modes and coping mode.

In addition, this work analyzes and compares two different ways of reading and working with personality disorder and can be very useful to the clinician.

Therefore, keeping in mind currently available literature on the topic, and considering just how much of schema therapy is based on emotions, how they interact inside us, and how they influence our relationship with the world and with other people, it seems logical to openly suggest that schema therapy has high efficacy on personality disorders, since it tackles this often talked about but seldom given real clinical importance aspect of our lives.

CONCLUSION

We know very little on how schema therapy changes the mechanisms that act on emotion regulation, especially regarding the effect some experiential exercises have on different disorders, compared with verbalization-based treatments. Further studies focused on these variables are necessary, and neuroimaging tools must be implemented, to study modes in general population and in patients with specific personality disorders. Furthermore, we will have to understand subjective variables acting on execution and effectiveness of imagery techniques. The comparison between theoretical models and the need to find practical intervention tools often create questions about which is the best point of view. There are many points of contact between emotional dysregulation and schema therapy; on the other hand, these two visions stem from different methodologies of problematic situation analysis. However, this difficulty in coordinating points of view can be the start of the creation of a new interpretative-applied model.

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Conflicts of interest

There are no conflicts of interest

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- ■ of special interest
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