UNIVERSIDADE DE LISBOA

Faculdade de Psicologia

Emotional processes in psychological adjustment and disorder – Their characteristics and evolution during the therapeutic process

Filipa Joana da Silva Machado Vaz

Orientadores: Prof. Doutor António José dos Santos Branco Vasco

Prof. Doutor Leslie Samuel Greenberg

Tese especialmente elaborada para obtenção do grau de Doutor em Psicologia,

na especialidade de Psicologia Clínica

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DECLARATION

According to Article 41 of the Regulation for the Postgraduate Studies of the University of Lisbon, approved by the Rectory No 1506/2006, this dissertation encompasses scientific articles submitted for publication to national and international indexed journals in collaboration with other authors. The author states that she was responsible for data collection, analysis and interpretation of results, as well as the writing, submission ad review of the paper submitted or publication.

Filipa Machado Vaz

September, 2018

ABSTRACT

The purpose of this dissertation was to study emotions and each emotional process namely emotional attention, emotion differentiation, emotion regulation, emotion intensity and emotion expression, the differences between clinical and non-clinical samples and the impact of each emotional process in psychopathology and in psychotherapy. Five studies were conducted. For the first study, we aimed to develop a global evaluation battery that allow us to have an integrative evaluation of all processes underlying emotions, in a Portuguese sample, namely emotional attention, emotion differentiation, emotion intensity, emotion regulation and emotion expression. Because there were already measures validated for Portuguese population that evaluated emotional attention, emotion differentiation and emotion regulation, in our first study we aimed to validate measures of emotion intensity (*Short Affect Intensity Scale;* Geuens & De Pelsmacker, 2002), emotion expression (*Emotion Expressivity Scale;* Kring, Smith, & Neale, 1994) and difficulties in emotion regulation (*Difficulties in Emotion Regulation Scale;* Gratz & Roemer, 2004). Our results replicated, in a large Portuguese adult sample, the factor structure that underlies the original versions of these three measures. So, with this first study, we gather several instruments in a global evaluation battery that enables us to understand each emotional process necessary for evaluate the complexity of emotions, in a Portuguese sample, which allowed us to proceed to the next studies. For the second study our main goals were to determine whether patients present one or more deficits in each emotional process and to investigate the association between these processes within psychopathology. The clinical sample presented high scores on unpleasant affect in the moment, deficits in several emotional processes, predominantly in emotion differentiation and regulation. Significant and important associations between emotional processes were also found within patients with psychopathology.

In the third study, our main purposes wereas to investigate the relationship between psychopathology and emotional attention, emotion differentiation, emotion regulation, emotion intensity and emotion expression and to evaluate differences in these abilities across patients with different types of psychopathologies. Our findings show that the emotion felt, difficulty identifying and describing feelings and difficulties in emotion regulation are significantly and positive correlated with symptoms of psychopathology. Moreover, patients with personality disorders differ significantly in their emotional processing abilities, such as emotion differentiation, intensity and regulation, compared to patients with major depressive disorder or generalized anxiety disorder or both. Thus, disturbances in emotional experience and processes play different roles across different types of psychopathologies. This study allows the comprehension of the impact of emotional processes for each form of psychopathology. In the fourth study, our main purpose was to investigate differences in emotional processes between a non-clinical sample and patients with different types of psychopathology. Our results showed, in the clinical sample, significant lower scores on Differentiation, Range and experiencing Positive Intensity and significant higher scores on Non-Acceptance of Emotional Responses, Difficulties Engaging in Goal-Directed Behavior and Limited Access to Emotion Regulation Strategies when compared to the non-clinical sample. In the fifth study, we investigated the differences in each emotional process for patients attending psychotherapy sessions in different Paradigmatic Complementary Metamodel (PCM) phases. Our results show that there is a decrease of unpleasant emotions felt and an increase of patients' self-perceived abilities to differentiate and to express emotions along therapy. Implications of the results for each study are discussed for clinical practice and for future investigations.

Key-words: Emotion; Emotional attention; Emotion Differentiation; Emotion Regulation; Emotion Intensity; Emotion Expression; Psychopathology; Psychotherapy.

RESUMO

Esta dissertação tem como objectivos o estudo das emoções e de cada um dos processos emocionais inerentes a uma emoção, nomeadamente atenção, diferenciação, regulação, intensidade e expressão emocional, compreensão das diferenças de cada um destes proessos numa amostra clínica e não clínica e estudo do impacto de cada um destes processos emocionais na psicopatologia e na psicoterapia. Cinco estudos foram realizados.

O primeiro estudo teve como objectivo a criação de uma bateria de avaliação que permita a avaliação de todos os processos emocionais de forma integrada, para a população portuguesa, nomeadamente atenção emocional, diferenciação emocional, intensidade emocional, regulação emocional e expressão emocional. Porque já existiam medidas de avaliação da atenção emocional, diferenciação e regulação emocional validadas para a população portuguesa, o primeiro estudo pretendeu validar medidas de avaliação da intensidade emocional (Escala de Avaliação da Intensidade Emocional; Geuens & De Pelsmacker, 2002), expressão emocional (Escala de Expressão Emocional, Kring, Smith, & Neale, 1994) e de dificuldades de regulação emocional (Escala de Avaliação das Dificuldades de Regulação Emocional; Grat & Roemer, 2004). Os resultados obtidos replicaram, numa amostra portuguesa, a estrutura factorial subjacente a cada uma das versões originais dos instrumentos. Com este estudo, foi possivel validar vários instrumentos que permirtiram a criação, para a População portuguesa, de uma bateria de avaliação global dos processos emocionais. O Segundo estudo teve como objectivo avaliar as caracteristicas dos processos emocionais de pacientes em psicoterapia e aprofundar a relação de cada processo com sintomatologia psicopatológica. A amostra clínica apresentou niveis elevados de emoções dolorosas e défices nas capacidades de diferenciação e de regulação emocional.

O terceiro estido teve como objectivo aprofundar a relação entre sintomatologia psicopatológica e as capacidades de atenção, diferenciação, regulação, intensidade e

expressão emocionais e avaliar as diferenças nestes processos de acordo com a sintomatologia psicopatológica apresentada pelo doente. Os resultados evidenciaram uma correlação positiva entre sintomas psicopatológicos e a emoção experienciada, dificuldades de identificação e diferenciação emocionais e dificuldades de regulação emocional. Pacientes com perturbações de personalidade evidenciaram diferenças significativas nas capacidades de diferenciação, regulação e intensidade emocionais quando comparados com doentes com perturbação depressiva major, ansiedade generalizada ou com comorbilidade entre sintomatologia depressiva e ansiosa. Este estudo permite compreender o impacto de alterações específicas de cada um dos processos emocionais em diferentes psicopatologias

O quarto estudo teve como objectivo avaliar as diferenças nos processos emocionais entre uma amostra sem psicopatologia e uma amostra clínica, com diferentes tipos de psicopatologia. Os resultados evidenciaram que a amostra clínica apresenta nívieis mais baixos de diferenciação, amplitude e intensidade emocionais e níveis mais elevados de não-aceitação da resposta emocional, dificuldades de envolvimento em comportamentos orientados para o objectivo e acesso limitado a estratégias de regulação emocional, quando comparada com uma amostra não-clínica. No quinto estudo, foram avaliadas as diferenças em cada processo emocional nos pacientes em psicoterapia em diferentes fases do Modelo de Complementaridade Paradigmática. Os resultados evidenciaram uma diminuição das emoções dolorosas e um aumento da capcaidade de diferenciação e expressão emocionais dos pacientes ao longo da terapia. As implicações dos resultados de cada estudo são discutidas para a prática clínica e para futuras investigações.

Palavras-chave: Emoção; Atenção emocional; Diferenciação emociona; Regulação emocional; Intensidade emocional; Expressão emocional; Psicopatologia; Psicoterapia.

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LIST OF ACRONYMS

BSI – Brief Symptom Inventory

EES - Emotion Expressivity Scale

EFT – Emotion Focused Therapy

DERS - Difficulties in Emotion Regulation Scale

PANAS - Portuguese version of the Positive and Negative Affective Schedule

PCM – Paradigmatic Complementary Model

SAIS – Short Affect Intensity Scale

TMMS – Trait Meta Mood Scale

CHAPTER I

Introduction

Emotion

"Why do people have emotions and what should they do with them?"

Leslie Greenberg (2002b, p.11)

Emotions do exist. However, the question "What is an emotion" stills hard to answer. As Joseph LeDoux stated, "One of the most significant things ever said about emotion may be that everyone knows what it is until they are asked to define it" (LeDoux, 1996, p. 23).

Although emotions were seen as disturbing aspects of human functioning and an inconvenient consequence of nobler cognitive processes (Izard & Harris, 1995; Stearns, 2008), they reemerged freshly, as an exciting research area, especially since 2000 (eg. Barrett, 2018; Gross, 2015; Kring, 2010; Sohl, Dietrich, Wallston, Ridner, 2017), with significant features being added or redrawn (Barrett, 2018; Ford & Gross, 2018; Gross, 2015; Kring, 2010).

So, once it was acknowledged that emotions have a significant impact on human functioning, the emphasis was put on understanding emotions (e.g. Barret, 2018), with a growing interest in studying each emotional processes (e.g. Barrett, 2006; Gross, 2015; Kring, 2010) and their impact in normal and abnormal development (Izard & Harris, 1995; John & Gross, 2004; Morris, Silk, Steinberga, Myers, & Robinson, 2007; Putnam & Silk, 2005; Kring, 2010).

Studies on emotion and psychopathology also increased dramatically over the past decades (for reviews see Aldao, Nolen-Hoeksema & Schweizer, 2010; Aldao, Gee, De Los Reyes & Seager, 2016; Kring, 2010) and nowadays are a lively investigation field, with growing data regarding the impact of emotions and emotional processes in the development or maintenance of psychopathology (Kring, 2010; Moran, Meh ta & Kring, 2012; Putnam & Silk, 2005).

Definition of Emotion

> "Psychology had a hard time with emotion.
> It may be that the multi-faceted nature of emotion is responsible for our difficulties in explaining and conceptualizing the phenomenon."
> (Scherer, 1987, p. 3)

One of the hardest questions for Psychology to answer is: What is emotion? This hard question brings out two other doubts: what processes are necessary for all emotions to occur and what are the sufficient conditions to guarantee that something is an emotion? (Gross, 2014).

Emotions are subjective reactions of the organism to a significant event (Barrett, Mesquita, Oschner & Gross, 2007) characterized by physical arousal, autonomic and neuroendocrine changes, cognitive processes, experiential features and behavioral changes (Gross, 2002, 2015).

Emotions vary, in their valence (pleasant or unpleasant), duration (quick or long), intensity (soft, mild or intense) and primary or secondary (initial emotional reaction or an emotional reaction to other emotion) (Greenberg, 2002a; Gross, 2014; Lindquist & Barrett, 2008).

Emotions are multifaceted responses (Gross, 2015) that allow the attribution of meaning to the experience, preparing the individual to act following the evaluation of the situation (Sroufe, 1996). They redirect attention to key features of the environment, optimizing sensory intake and helping decision-making process, behavioral responses, social interaction and episodic memory (Gross, 2014, 2015).

Thus, emotions are organizing processes that help people make more effective decisions in their environments by facilitating adaptive problem solving (Greenberg, 2002b;

Gross, 2015) and by helping evaluate whether the emotion is adaptive and healthy for the specific situation or unhealthy and problematic (Greenberg, 2002b).

Consequently, emotions have crucial functions, (Barrett, 2018, Gross, 2015; Keltner & Gross, 1999), namely: (1) translating external information into a personal and unique experience (Keltner & Gross, 1999; Gross, 2015); (2) organizing the best response (Barrett, 2018; Mauss, Levenson, McCarter, Wilhelm, & Gross, 2005); (3) social functions, helping to form and keep close social relationships (Keltner & Haidt, 1999; O'Toole, Jensen, Fentz, Zachariae & Hougaard, 2014) and to maintain long term and intimate relationships (Fischer & Manstead, 2008; Gross & John, 2003).

Although the definition of emotion seems very clear, some terms as emotion, mood, and affect are used interchangeably, creating conceptual chaos in the literature.

As already described, emotions are triggered by a specific stimulus (internal or external) that promotes a quick and strong physiological arousal but usually last a short period. Moods are very different from emotions, because usually they continue for days (Gross, 2015), and are more diffuse. Affect is commonly used for a global pleasant or unpleasant state (Gross, 2015; Rosenberg, 1998).

Emotional Components

“How emotions are made, if they aren’t simply trigered reactions?
Why do they vary so much?” (Barrett, 2018, p. XV)

All emotions are characterized by the arousal of one or more emotional components (Barrett, 2018; Gross, 2015, Kring, 2008; Lang, Bradley, & Cuthbert, 1998). After or even during a crucial situation, these emotional processes urge and interact with each other in a network that contributes in a differentiated way to the emotion (Sloan & Kring, 2007).

No matter which emotion, it is always aroused by an external or internal significant stimulus, to which the individual directs attention (Barrett, Mesquita, Ochsner & Gross, 2007; Gross, 2014; Sloan & Kring, 2007). So, for an emotional reaction occur, it is crucial that the individual attend the specific stimulus that caused it (Barrett, Mesquita, Ochsner & Gross, 2007; Greenberg & Pascual-Leone, 2006).

Emotional attention is defined as the attentional processing of emotional-laden information (Bradley et al., 2003; Gasper & Clore, 2000; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). It has been postulated that emotionally significant stimuli are processed with priority as they automatically capture attention due to their enhanced salience (Greenberg, 2002a; Gross, 2014). This process leads to physiological arousal, but this is not yet an emotion, once we need to give meaning to the experienced arousal to have an emotion (Barret, 2018, 2006).

This meaning is attributed according to the type of physiological activation experienced, the context in which it occurs, the past experiences and the episodic memories constructed (Barret, 2018, 2006). This process is named emotion differentiation, and it is the representation of emotion, i.e., the symbolizing and expanding of physiological arousal involving the recognition and attribution of meaning to the bodily felt sense and the comprehension of the causes and impact of the experienced emotion (Barrett, 2006; Barrett & Gross, 2001).

After emotional differentiation, the individual evokes emotion regulation strategies to manage the situation (Barrett, Gross, Christensen, & Benvenuto, 2001; Barret, Gross, Conner & Benvuto, 2001). Gross (1998) asserts that emotion regulation is “the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions” (p. 275).

Emotion regulation can be intrinsic (regulation of our own emotions) or extrinsic (when the goal is to regulate another person's emotions) (Gross, 2015).

Each emotion is experienced with a specific intensity. Emotional intensity is defined as "the individual differences in the strength with which individuals experience their emotions" (Larsen & Diener, 1987, p.2).

During these processes, the individual expresses (or not) the emotion. Emotion expression refers to "behavioral changes that tipically accompany emotion" (Gross & John, 1997, p.435), that can include so many different changes, for example in facial expressions, speech, body language, posture, or attitude (Gross & John, 1997). "Examples include smiling, growning, crying, or storming out of the room" (Gross, John & Richards, 2000, p. 712).

All of the components of emotion develop towards greater complexity and integration between them. Dysfunction in any or all of these components may lead to maladjustment of the individual or to the development of psychopathology (Kring, 2008, 2010).

Emotional Attention

It has been postulated that emotional stimulus are processed with priority as they automatically capture attention due to their enhanced salience (Bradley et al., 2003; Gasper & Clore, 2000; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). Emotional attention is considered the first process in the complex system of becoming conscious of emotion (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995; Taylor, Bagby, & Parker, 1997), by processing emotional-laden information.

Although sometimes used indifferently, emotional attention, emotion awareness and emotion differentiation are very different. Emotional attention is defined as the attentional processing of emotionally laden information (Bradley et al., 2003). Emotion awareness is the

capacity to perceive one's (and others') emotion (Sloan & Kring, 2007). Emotion differentiation is the ability to give meaning to the physiological arousal and recognize the differences between emotions (Barrett, 2006).

Because each emotion calls for the use of distinct emotional response strategies, lack of attention can evolve to difficulties in emotion regulation (Barrett, Gross, Christensen & Benvenuto, 2001; Thayer, Rossy, Ruiz-Padial & Johnsen, 2003) and, consequently, to some hardship dealing efficiently with unpleasant emotions. Not using the data obtained from emotional attention to the situation, can lead to with ruminative thinking, increasing the unpleasant emotion (Fernández-Berrocal & Extremera, 2008; Thayer, Rossy, Ruiz-Padial & Johnsen, 2003).

Emotion Differentiation

"Meaning intrinsically shapes how people perceive, categorize and experience reality."

(Barrett, F., 2006, p. 126)

As previously mentioned, emotion is not only the physiological activation of the organism in response to a stimulus but include a multiplicity of processes (Gross, 2015; Mauss, Levenson, McCarter, Whilhelm, & Gross, 2005).

Emotion is as a response to a significant stimulus creating a physiological reaction, to which the individual redirects attention and gives meaning to, differentiating it and gaining coherence. This process of emotion differentiation is characterized by a symbolization of emotion that allows the individual to understand and regulate the emotion felt (Barrett & Gross, 2001).

According to Feldman Barrett (2006, 2018), one of the most prominent authors in the field of emotions, emotion differentiation is the individual ability to recognize and attribute meaning to the physiological arousal. It is the mental construction of emotion, i.e., the symbolizing and expanding of physiological activation involving the recognition and

attribution of meaning to the bodily felt sense, and the recognition of the causes and impact of the experienced emotion (Barrett, 2018; Barrett & Gross, 2001). Categorizing an emotion gives it meaning, enabling the communication with others, creating better assumptions about it, and giving better indicators about how to act (Barrett, 2016).

Since the beginning of this century, there has been a great deal of research demonstrating that differentiating emotions leads to long-term improvements in mental and physical health (e.g., Pennebaker, 1995; Sohl, Dietrich, Wallston & Ridner, 2017).

Emotion differentiation, or nowadays, for some authors defined as emotion granularity (Barrett, 2018; Lindquist & Barrett, 2008) allows the individuals to symbolize the emotional arousal, giving meaning to the experience and distinguish among a diversity of unpleasant and pleasant emotions (Barrett, 2016; Tugade, Fredrickson, & Barrett, 2004).

Because emotion differentiation enhances the possibility of giving multiple meanings to the emotional experience, it allows a person to make sharpened conclusions about what lead to the emotional change, allowing the selection of a better and more adequate emotion regulation strategy, and giving information of how to communicate that emotion to others in an effectively and efficiently manner (Barrett, 2006; Barrett, Gross, Christensen & Benvenuto, 2001; Barrett, Gross, Conner & Benvenuto, 2001).

So, individuals with a high ability to differentiate emotions are described as having adequate emotion regulation strategies, better prosocial behavior and high academic abilities, allowing a better expression and consequent socialization of emotion (e.g., Barrett, Gross, Conner & Benvenuto, 2001; Mostow, Izard, Fine, & Trentacosta, 2002).

Conversely, some individuals experience emotions in an undifferentiated manner with positive correlations between the same valenced emotional states, suggesting that individuals are not distinguishing between different emotional experiences (Barrett, 1998; Lindquist & Barrett, 2008).

These individuals lower in emotion differentiation use superordinate categories as a way to differentiate the emotion felt (e.g., classify as “unpleasant” emotions that could be identified as “rage,” or “fear” or identify as “pleasant” emotions that could be defined as “passion” or “enthusiasm”) and experience those states as broad and undifferentiated (Lindquist & Barrett, 2008). Instead, individuals higher in differentiation are proficient in labeling emotions (e.g., they use “fear,” “sad” or “anger” in a daily basis, rather than “unpleasant”) (Lindquist & Barrett, 2008).

Emotion Regulation

“Emotion regulation research is flourishing.”

(Ford & Gross, 2018, p. 1)

Emotion regulation has been a focus of several fields of Psychology since the past century, dating back Freud study on psychological defenses (Freud, 1910 *cit in* Sloan & Kring, 2007), stress and coping research (Carver & Scheier, 1994) to the well-known Bowlby´s attachment theory (1969) (for more precise detailed historical overview of the field, see Gross, 2015).

Different conceptualization and measures have arisen during the past decades, in part, because differences in emotion regulation have an enourmous impact in several fields of psychology.

Nowadays, emotion regulation remains one of the most studied topics in psychology (Ford & Gross, 2018; Gross, 2015; Tamir, 2011). Personality and social psychologists are interested in how stable individual differences are in self-control influence on longer-term adaptation (e.g., Baumeister, Zell, & Tice, 2007; Gross & John, 2003). Clinical psychologists tend to focus on the dysregulation of emotions (i.e., failures and problems with emotion regulation; Greenberg, 2002a) and its contribution to various forms of psycopathology (e.g.,

Aldao, Nolen-Hoeksema & Schweizer, 2010; Kring, 2010; Kring & Sloan, 2009). Emotion researchers examine the specific experiential, expressive and physiological components of the emotional response process (Gross, 2015; Gross & Levenson, 1997) and developmental psychologists are interested in how children learn to regulate emotional states in ways that are adaptive and socially appropriate, thus becoming emotionally competent adults (e.g., Campos, Frankel, & Camras, 2004; Morris, Silk, Steinberg, Myers, & Robinson, 2007).

Today, emotion regulation is blooming everywhere, in the most different fields, for example, business (e.g., Côte, 2005), law (e.g., Maroney, 2006), medicine (e.g., Haque & Waytz, 2012), political science (e.g., Halperin, 2014), and sociology (e.g., Lively & Weed, 2014), with books, conferences and a growing number of articles related to emotion regulation.

This high (and growing) level of interest in emotion regulation is reflected in citation trends. Before 1990's, only a few citations contained the term "emotion regulation". For example, in 1990, PsycINFO had only four arti ofcles with the words "emotion regulation." After 1990, there has been an astounding growth in citations: in 2005, the PsycINFO citation count was 671. In May 2018, there were 10509 citations, making emotion regulation one of the most active research' area within psychology.

So, in the last years, studies in emotion regulation have been growing firm and have been variously defined by theorists and researchers.

Table 1 presents the main evolutions of emotion regulation in Psychology.

Table 1

Evolution of Emotion Regulation Definition

Author	Year	Definition
Dodge	1989	The process by which activation in one response domain serves to alter, titrate, or modulate activation in another response domain.
Cicchetti, Ganibanm & Barnett	1991	The intra and extraorganismic factors by which emotional arousal is redirected, controlled, modulated, and modified to enable an individual to adapt to emotionally arousing situations.
Thompson	1994	Emotion regulation consists of the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotion reactions, especially their intensive and temporal features, to accomplish one's goals.
Gross	1998	The process by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions.
Eisenberg & Morris	2002	Emotion regulation is defined as the process of initiating, maintaining, modulating, or changing the occurrence, intensity, or duration of internal feeling states and emotion-related motivations and physiological processes, often in the service of accomplishing one's goals.
Cole, Martin & Dennis	2004	Emotion regulation refers to changes associated with activated emotions. These include changes in the emotion itself or in other psychological processes (e.g., memory, social interaction). The term emotion regulation can denote two types of regulatory phenomena: emotion as regulating (changes that appear to result from the activated emotion) and emotion as regulated (changes in emotion).

Table 1. Continued

Author	Year	Definition
Gratz & Roemer	2004	Emotion regulation involves (a) awareness and understanding of emotions, (b) acceptance of emotions, (c) ability to control impulsive behaviors and behave in accordance with desired goals when experiencing negative emotions, and (d) ability to use situationally appropriate emotion responses as desired in order to meet individual goals and situational demands.
Campos, Frankel & Camras	2004	Emotion regulation is the modification of any process in the system that generates emotion or its manifestations in behavior. The processes that modify emotion come from the same set of processes as the ones that are involved in emotion in the first place. Regulation takes place at all levels of the emotion process, at all time that the emotion is activated, and is evident even before an emotion is manifested.

Note. Adapted from "On the need for conceptual and definitional clarity in emotion regulation research on Psychopathology", by Bloch, E., Moran, L. & Kring, A. in Kring, A. & Sloan, D. (Ed.)*, Emotion Regulation and Psychopathology. A Transdiagnostic Approach to Etiology and Treatment*, (p.90), 2010, New York, NY: Guilford Press

During the past years, many frameworks and different models for understanding emotion regulation have been presented, along different areas inside Psychology. However, the process model of emotion regulation (Gross, 1998, 2015) is the most important and broadly used model to the date.

Gross (1998) defined emotion regulation as "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (p.275).

Gross (1998) has proposed the process model of emotion regulation, that presents strategies according to the moment when they have their impact in emotion trajectory (namely before or after the response) regardless of their result.

So, emotion regulation strategies are devided in two broad categories, according to their moment on the emotion-generative process: before the response (antecedent-focused) or after (response-focused), distinguishing five emotion regulation strategies (see Figure 1; for a review, see Gross & Thompson, 2007)

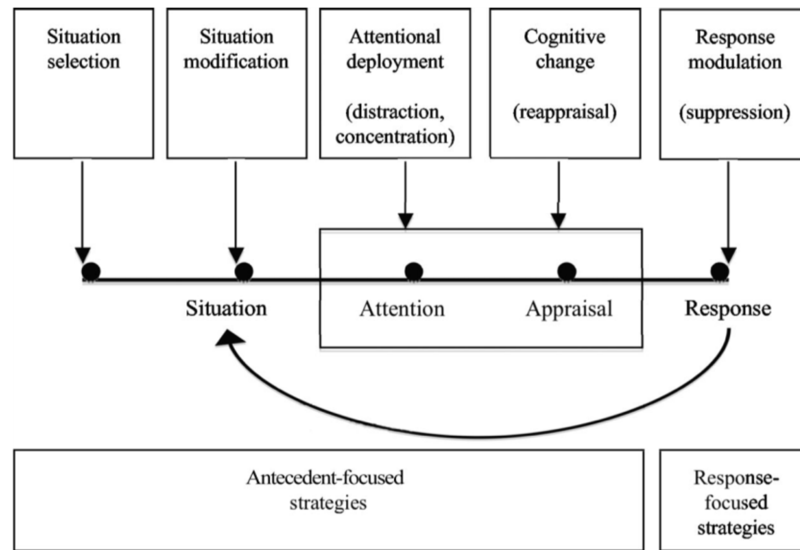


Figure 1. The process model of emotion regulation. Adapted from "Emotion Regulation: Conceptual Foundations," by J. J. Gross and R. A. Thompson, in J. J. Gross (Ed.), *Handbook of Emotion Regulation* (p. 10), 2007, New York, NY: Guilford Press.

Antecedent-focused strategies arise before the emotional response or just before a person enters a situation where emotional regulation might be necessary (Gross, 2002, 2015). For example, a person with a fear of public speaking may practice fifty times alone the same presentation, so that she may be able to speak after in public (antecedent-focused). This category of emotion regulation strategies includes situation selection, situation modification, attentional deployment, and cognitive change (Gross & Thompson, 2007; Gross, 2015).

By contrast, response-focused strategies take place after the emotional response is underway. This category encloses changing the response, usually with efforts to suppress the expression or experience of emotion (Gross, 2015). For example, if a person with the fear of

public speaking is feeling panic about her presentation, may avoid the presentation and run away from the conference.

Situation selection

Situation selection, shown in Figure 1 as the first emotional strategy to be used, involves selecting or avoiding situations, activities, places or people to change the emotion felt since the beginning (Gross, 2015).

Situation modification

Situation modification, shown in Figure 1 after situation selection, includes the strategies to modify the situation in order to avoid, change or reduce its emotional strenght (Gross, 2015).

Attentional deployment

Situation selection and situation modification are emotion regulation strategies that change the circumstances to which the individual might be exposed. Nonetheless, it might be reasonable to regulate emotions without modifying the situation itself. Attentional deployment refers to "how individuals direct their attention within a given situation so as to influence their emotions" (Gross & Thompson, 2007, p. 13).

So, attentional deployment includes changing the emotion felt by choosing the information we turn attention to. The best research forms of attention deployment are distraction and rumination.

Distraction involves "focuses attention on different aspects of the situation or moves attention away from the situation altogether" and "may also involve changing internal focus, such as when individuals invoke thoughts or memories that are inconsistent with the undesirable emotional state" (Gross & Thompson, 2007, p. 13). So, it involves a shift in attention whether with the physical withdrawal (such as turning off the tv during a terror

movie) or with the redirection of attention to a new internal emotion-eliciting stimuli (such as talking about something else) (Gross, 2015; Gross & Thompson, 2007).

Rumination refers to permanent attention and repetitively thinking on the emotion-eliciting event. Contrary to distraction, rumination maintains a persistent attention on emotion-eliciting stimuli and empowers the impact, extent and intensity of unpleasant emotions (Gross, 1998, 2008).

Cognitive change

Cognitive change (shown fourth in line in Figure 1) refers to "changing how we appraise the situation we are in to alter its emotional significance, either by changing how we think about the situation or our capacity to manage the demands it poses" (Gross & Thompson, 2007, p. 14).

The emotion regulation strategie based on cognitive change that has been more studied is reappraisal. ***Reappraisal*** involves changing a situation's emotional impact by changing it's meaning and therefore, the response to that situation (Gross, 2015; Gross & Thompson, 2007).

Response modulation

Response modulation is the last emotion regulation strategy and occurs after behavioral tendencies have started. Response modulation refers to "influencing physiological, experiential, or behavioral responding (…) after response tendencies have been initiated" (Gross & Thompson, 2007, p. 15).

The most researched strategy of response modulation is *expressive suppression*, which refers to the efforts to diminish an emotion-expressive behavior (Gross, 2015).

Another prominent model of emotion regulation, crucial for psychotherapy, was developed by Greenberg (2002a). According to the author, people can regulate the impact of

emotion by (a) choosing the circumstances to which they expose, (b) changing their emotion by examining the situation, or (c) restraining or increasing their response (Greenberg, 2002a).

According to Greenberg (2002a), at a first level, individuals regulate intakes or interrupt the meaning-construction processes. At the physiological level, emotion regulation allows the redirection, control, modeling and change of the emotional arousal, to allow the individual to have an adjusted reaction to emotional situations and to maintain an adaptive and flexible expression of emotions (Cicchetti, Ackerman, & Izard, 1995).

At the cognitive level, emotion regulation consists of the ability to symbolize in consciousness the physiological activation felt. The individual re-assesses the situation and modifies the meaning of his/her own emotions, with the aim of transforming or regulating his/her emotional reactions. This strategy of emotion regulation can be adaptive or nonadaptive. It is essential for adjustment to be able to re-assess situations and to create new meanings (Greenberg, 2002a). At the behavioral level, people can control what to express and what to suppress, or they can choose the situations they expose themselves to, by looking for specific emotion-arising stimulus or by avoiding (Greenberg, 2002a).

According to Greenberg (2002a), one of the most powerful forms of emotion regulation is the modification of the emotion by the activation of another emotion. The confrontation of emotional schemas to new experiences, in this case, emotional experiences, can lead to their change. The changing of an emotion by another emotion can result from different processes: (a) modification of the focus of attention; (b) accessing the needs and goals; (c) positive imagination; (d) representation of the expression of the emotions; (e) remembering another emotion; and, (f) speaking about the other emotion.

Emotion Expression

The notion that emotion expression is crucial for emotional development dates back, at least, since Charles Darwin' early research (1872 *cit in* Gendron & Barret, 2009) and it's currently enjoying a renewed interest (Gendron & Barret, 2009).

Since the initial interest in understanting the impact of emotional expression, several studies have been developed in different research areas of psychology, namely in health psychology (e.g., studies on emotion expression of cancer patients vs. healthy patients; Craft, Davis & Paulson, 2013; Sohl, Dietrich, Wallston & Ridner, 2017) and social psychology (e.g. see Levine and Feldman (1997), for expression of emotions during social interactions).

Emotion expression has also caught the interest of researchers in areas as personality psychology, with Abe and Izard (1999) evaluating the relation between personality and different forms of emotion expression and in the field of psychopathology, with studies exploring the main characteristics of emotional expression in psychiatric patients (Buck, Goldman, Easton, & Smith, 1998; Kring & Moran, 2008; Lang, et al., 2016).

So, people are very different in the degree to which they externally exhibit emotions (Sloan & Kring, 2007).

In 1994, Kring, Smith and Neale, authors of *Emotion Expressivity Scale,* developed the most well knowned definition of emotion expression, defining it as "outward display of emotion, regardless of valence or channel (facial, vocal, or gestural)" (p.934). This definition brings an essential innovation to the study of emotion expression because does not include prior criteria about which emotion is expressed or how the emotion is expressed (Kring, Smith & Neale, 1994).

Research in emotional expression identified that emotions could be expressed through several channels (Sloan & Kring, 2007), sometimes at the same time, namely verbal (i.e., tone voice), nonverbal (i.e., facial expressions or body movements), and physiological (e.g.,

heart rate, skin conductance) indicating the emotion felt at that moment (Kring & Gordon, 1998; Scherer & Ellgring, 2007a; Schirmer & Adolphs, 2017).

All this grown in the studies of emotional expression have explicit the several advantages of expressing emotions (Kallay, 2015; Kennedy-Moore & Watson, 2001).

When emotional expression is adaptive, is enables the acceptance of the emotion felt ("This emotion is painfull, but it isn't unsurpassable"), facilitating insight by understanding the leading causes and consequences of what one is feeling and why (Kennedy-Moore & Watson, 2001), providing after the resolution of the emotion felt (Pennebaker & Seagal, 1999; Pennebaker, 1995).

This insight can diminish distress, reducing intrusive and painful thoughts, by helping people understand what they are feeling in ways that weren't possible before they expressed and they stop feeling afraid of emotions or fear of fall apart if they allow themselves to express emotions. (e.g., Lepore, Ragan, & Jones, 2000).

Expressing emotions is also fundamental to personal relationships, by helping to clarify interpersonal misunderstandings and by eliciting support to others (Kennedy-Moore & Watson, 2001).

Sometimes, when emotion expression is maladaptive, it can increase distress by promoting guilt or shame ("It was my fault") (Kennedy-Moore & Watson, 2001).

Emotion Intensity

A salient characteristic of emotions is their intensity (Brans & Verduyn, 2014; Dixon-Gordon, Aldao & Reyes, 2015). The notion that people report feeling different intensities for each emotion called the attention of researchers and develop a line of research called emotion intensity (Frijda, Ortony, Sonnemans & Clore, 1992; Larsen & Diener, 1987). Given that intensity is a critical feature of emotion, it is somewhat surprising that it has received little systematic attention in psychological research.

The research on emotion intensity grown in the 1980's, when Larsen and colleagues (Larsen & Diener, 1987) began conducting daily studies of emotion using the experience-sampling methods. When examining daily emotions over months, they noticed that participants who exhibited swings upward in pleasant emotions on good days also showed swings downward in unpleasant emotions on hard days (Larsen & Diener, 1987).

Since these studies, emotion intensity start being regarded as reflecting the "individual differences in the strength with which individuals experience their emotions" (Larsen & Diener, 1987, p.2), indicating that individuals experience pleasant and unpleasant emotions with about the same intensity.

Thereby, emotion intensity refers to the arousal level of an emotion. For example, a child may express sadness, but this sadness may be so high in intensity, that is perhaps indicative of depression (Frijda, Ortony, Sonnemans & Clore, 1992; Larsen & Diener, 1987).

Nowadays, emotional intensity is being studied in relation to emotion regulation, with recent research (e.g., Dixon-Gordon, Aldao & Reyes, 2015), showing that variations in emotion intensity has an enormous impact in the selection and employment of emotion regulation strategies (Dixon-Gordon, Aldao & Reyes, 2015).

The lower the intensity, the better the emotion regulation strategy used. Conversely, high emotion intensities lead to higher difficulties in emotion regulation and even to avoidance of such strong emotions (Dixon-Gordon, Aldao & Reyes, 2015), becoming more difficult to regulate emotions after (Dixon-Gordon, Aldao & Reyes, 2015).

Given that emotion intensity is so crucial to emotion regulation, it must become one of the significant issues for Psychology in the next years.

Emotions in Psychopathology

Everyday, people use their emotions to manage the demands of a number of environmental stimuli and challenges, serving important intra and interpersonal functions (Keltner & Kring, 1998).

Emotions are critical in the etiology and maintenance of many forms of psychopathology. Studies on emotion and psychopathology increased dramatically over the past decades (for reviews see Aldao, Nolen-Hoeksema & Schweizer, 2010; Aldao, Gee, De Los Reyes, & Seager, 2016; Kring, 2010; Kring, & Sloan, 2009) and nowadays are a crucial and growing research field, with results showing the impact of different emotional components in the development or maintenance of psychopathology (Kring, 2010; Kring, & Sloan, 2009; Moran, Mehta & Kring, 2012).

An exploration in *PsychInfo* for peer-reviewed articles in May 2018, including the keywords, “emotion” and “psychopathology”, yields 5002 articles in just the past 20 years. By contrary, 80 years before 1990, only 441 articles have these keywords.

So, the most recent research include the evaluation of emotion and emotional components not only for disorders that clearly involve emotion disorders, such as the mood and anxiety disorders (Farach & Mennin, 2007; Kring, 2010; Mennin, Holaway, Fresco, Moore & Heimberg, 2007; Moran, Mehta & Kring, 2012) to behaviors less clearly linked to emotion difficulties, such as insomnia (Harvey, McGlinchey, & Gruber, 2009) and schizophrenia (Kring & Moran, 2008).

Nowadays, with emotions being considered as comprised of multiple processes, including emotional attention, emotion differentiation, expression, regulation, and intensity, investigation showed that the lack of coherence across emotional processes had been observed in different psychological disorders and had been considered an emotion disturbance (Kring, 2001).

So, almost all disorders in the DSM-5 (American Psychiatric Association, 2013) include symptoms that one or more emotional components are not working in an adaptive way, such as not paying attention to emotions, nonemotional differentiation, difficulties in emotion regulation, lack of emotion expressivity or inability to deal with emotional intensity.

This conceptualization has made psychopathology researchers to move beyond measures that only evaluate just one component of emotion (e.g., reported experience of sad mood, observer-rated expression) to a more interchangeable comprehension of emotion difficulties in different mental disorders (Aldao, Gee, De Los Reyes & Seager, 2016; Moran, Mehta & Kring, 2012). For example, in schizophrenia patients show a deficit in emotion expression but not in emotion attention (see Kring & Moran, 2008, for a review). Depression is not merely a disorder defined by unpleasant emotions, but also reflects difficulties in experiencing pleasant emotions and difficulties regulating emotion experience (Bylsma, Morris, & Rottenberg, 2008).

So, emotion difficulties in mental disorders span both pleasant and unpleasant emotions, and their difficulties managing emotion (as in the case of all anxiety disorders, with intense and persistent fear); deficits in feeling certain types of emotions (as in the case of narcissistic personality disorder, with a lack of empathy); problems expressing emotions to others (for example, as in autism spectrum disorder, with a lack of emotional communication); and emotion regulation problems (as in borderline personality disorder, with difficulties in controlling anger) (Kring, 2008).

Table 2 presents the specific emotion disturbances in the main psychological disorders.

Table 2

Emotion Disturbances for each Psychological Disorder

Disorders	Symptoms
Mood disorders	
Major depressive episode; Dysthymia	Depressed mood, anhedonia
Manic or hypomanic episode	Elevated, expansive, or irritable mood
Anxiety disorders	
Panic disorder	Intense fear or discomfort
Agoraphobia	Anxiety
Specific and social phobias	Marked and persistent fear, anxious anticipation
Obsessive-compulsive disorder	Marked anxiety or distress
Posttraumatic stress disorder	Irritability, anger, anhedonia, restricted affect
Acute stress disorder	Anxiety or increased arousal
Generalized anxiety disorder	Excessive anxiety and worry, irritability
Somatoform disorders - Hypochondriasis	Preoccupation with fears of having a disease
Sleep disorders	
Sleep terror disorder	Intense fear and signs of autonomic arousal Clinically
Circadian rhythm sleep disorder,	significant distress
Impulse control disorders	
Pathological gambling	Irritability, dysphoric mood
Trichotillomania	Tension; pleasure or relief after hair pulling
Intermittent explosive disorder	Rage, anger
Pyromania, kleptomania	Tension or excited mood Marked distress
Substance-related disorders	
Alcohol intoxication	Mood lability
Alcohol withdrawal	Anxiety
Amphetamine and cocaine intoxication	Euphoria or affective blunting; anxiety, tension, anger
Amphetamine and cocaine withdrawal	Dysphoric mood
Caffeine intoxication	Nervousness, excitement; Euphoria, anxiety
Table 2. Continued	

Disorders	Symptoms
Adjustment disorders	Marked stress
Eating disorders	Fear to gain weigh
Dementias	
Dementia due to Pick's disease	Emotional blunting
Dementia due to Huntington's disease	Depression, irritability, anxiety
Personality disorders	
Paranoid personality disorder	Quickness to react angrily
Schizoid personality disorder	Emotional coldness, detachment, flattened affect
Schizotypal personality disorder	Inappropriate or constricted affect, excessive anxiety
Antisocial personality disorder	Lack of remorse, irritability
Borderline personality disorder	Affective instability, intense anger, difficulty controlling anger
Histrionic personality disorder	Rapidly shifting and shallow expressions of emotion
Narcissistic personality disorder	Lack of empathy
Avoidant personality disorder	Fear of criticism, disapproval, or rejection
Dependent personality disorder	Fear of being left alone
Dementias	
Dementia due to Pick's disease	Emotional blunting
Dementia due to Huntington's disease	Depression, irritability, anxiety
Childhood Disorders	
Autistic disorder, Asperger's disorder	Lack of emotion reciprocity; marked impairment in nonverbal behaviors, such as facial expression
Separation anxiety	Distress, worry, fearfulness
Oppositional defiant disorder	Quickness to lose temper, get angry, be annoyed by others
	Impairment in nonverbal behaviors
Childhood disintegrative disorder	Lack of social or emotion reciprocity

Note. Adapted from "Emotion disturbances in transdiagnostic processes in psychopathiology", by Kring, A.M. in Lewis, M., Haviland-Jones, J.M. & Barrett, L.F. (Ed.). *Handbook of Emotion, 3rd Edition* (p.692-693), 2008, New York, NY: Guilford Press

Emotional Processes in Psychopathology

Research and understanding of emotions give an essential contribution to the explanation of normal as well as abnormal development (Cichetti, Ackerman, & Izard, 1995).

In almost every form of psychopathology or difficulties dealing with development goals, one or more components of the emotional processing are not working adaptively (Barrett, Gross, & Benvenuto, 2001). These deficits can occur, for example, in attention (Gasper & Clore, 2000), differentiation (Emery, Simons, Clarke, & Gaher, 2014), expression (Kallay, 2015; Marx and Sloan, 2002), intensity (Brans & Verduyn, 2014; Lang, Larsson, Mavromara, Simis, Treasure, Tchanturia, 2016) and regulation (Fox, Axelrod, & Paliwal, 2007; Tull, Barrett, McMillan & Roemer, 2007; Weiss et al., 2015) of emotions. These problems will have an enormous impact in individual development and emotional adjustment. People with many sorts of psychopathology show more difficulty on one or more emotional components and these difficulties will enhance the risk of exacerbation or maintenance of psychopathological symptoms (Barrett, Gross, Christensen & Benvenuto, 2001).

Although emotions and each emotional processes are crucial for understanding the etiology and maintenance of psychopathology, little research has been conducted in this area, specially on understanding how each emotional processes is involved in abnormal development (Kring & Bachorowski, 1999) and how are they related in psychopathology.

Next, we explore the impact of each emotional process in the etiology and maintenance of psychopathology.

Emotional Attention and Psychopathology

The initial and one of the significant variables of how we feel are the emotional events we choose to pay attention to (LeDoux, 1996). Although there is some evidence of difficulties in emotional processes in psychopathology (Brans & Verduyn, 2014; Emery, Simons, Clarke, & Gaher, 2014; Fox, Axelrod, & Paliwal, 2007; Kallay, 2015; Lang,

Larsson, Mavromara, Simis, Treasure, Tchanturia, 2016; Marx and Sloan, 2002; Tull, Barrett, McMillan & Roemer, 2007; Weiss et al., 2015), little research has explicitly examined the relevance of emotional attention to the development and maintenance of psychopathological symptoms (Gasper & Clore, 2000)

Barrett and Gross (2001) argued that attention to one's emotions is crucial to effective emotion regulation. Individuals who turn attention to their emotions have greater accessibility to emotion knowledge and use this knowledge when regulating emotions (Barrett, Gross, Christensen, & Benvenuto, 2001). Limited attention to emotion has been linked to reduced social functioning and to low quality of life (Kokkonen et al., 2001).

Researchers hypothesized that poor emotional attention relates to lower psychological functioning because lacking the ability to turn attention to emotion impairs problem-solving and difficulties in communicating emotions to others strain the opportunities for gaining social support (Gratz, Rosenthal, Tull, Lejuez, & Gunderson, 2006; Taylor, Bagby, & Parker, 1997).

Researchers that examined the relationship between emotional attention and mental health have found a positive relationship between difficulties in emotional attention and poorer psychological functioning (Gratz, Rosenthal, Tull, Lejuez, & Gunderson, 2006). For example, building upon studies linking dysfunctional affect to disordered eating, researchers concluded that inadequate emotion attention may have a unique relation to this psychopathology (Johnson, Cohen, Kotler, Kasen, & Brook, 2002; Stice, Presnell, & Spangler, 2002; Wertheim, Koerner, & Paxton, 2001). Sometimes, difficulties in emotion attention can also arise from high attention to unwanted emotions, because it increases ruminative thoughts, generating depressive symptoms (Nolen-Hoeksema, Wisco, & Lyubomirsky 2008).

Emotion Differentiation and Psychopathology

The capability to label, acknowledge and differentiate emotions is called emotion differentiation (Barrett, 2018; Barrett, Gross, Christensen & Benvenuto, 2001; Barrett, Mesquita, Oschner & Gross, 2007). Labeling emotions (which involves acknowledgment and differentiation of emotions) has been shown to reduce distress as efficiently as “powerfull” emotion regulation strategies such as cognitive reappraisal or distraction (Barrett, Gross, Christensen & Benvenuto, 2001; Barrett, Mesquita, Oschner & Gross, 2007; Lieberman, Inagaki, Tabibnia, & Crockett, 2011). So, when individuals label a discrete emotional aroused state, they have access to better regulatory strategies for that emotion (Barrett, Gross, Christensen & Benvenuto, 2001).

Difficulties in clarifying, labeling and differentiating emotions have an impact in recognizing emotion, not allowing the access to emotion regulation strategies and not expressing effectively the emotion felt, with poor differentiators employing maladaptive regulation’ strategies such as substance use (e.g., Haviland, Hendryx, Shaw, & Henry, 1994) and alcohol abuse (Emery, Simons, Clarke, & Gaher, 2014; Kashdan, Ferssizidis, Collins, & Muraven, 2010).

Lack of understanding of emotion information has been shown to be characteristic of patients with depression (e.g., Mennin, Holaway, Fresco, Moore, & Heimberg, 2007), anxiety disorders (e.g., Mennin, Heimberg, Turk, & Fresco, 2005) and personality disorders (Erbas, Ceulemans, Lee Pe, Koval, & Kuppens, 2014; Putnam & Silk, 2005).

These findings also emerged when considering emotion differentiation across specific anxiety disorders. For instance, decreased emotion differentiation has been associated with symptoms of general anxiety disorder (McLaughlin, Mennin, & Farach, 2007; Mennin, Heimberg, Turk, & Fresco, 2005; Tull & Roemer, 2007), posttraumatic stress disorder (Tull

& Roemer, 2007; Weiss et al., 2012), panic attacks (Tull & Roemer, 2007) and social anxiety disorders (Kashdan & Farmer, 2014).

Perhaps the most well-know psychopathological syndrome that demonstrates the importance of emotion differentiation is alexithymia, with alexithymic individuals experiencing fewer emotions (e.g., Luminet, Rimé, Bagby, & Taylor, 2004; Mantani, Okomoto, Shirao, Okada, & Yamawaki, 2005) using fewer emotion words (e.g., Luminet, Rimé, Bagby, & Taylor, 2004) and demonstrating decreased abilities for regulating emotions (Parker, Taylor, & Bagby, 1998).

This inability in emotion differentiation promotes a greater somatic manifestations of emotion with alexithymic persons reporting more somatic complaints (e.g., Nakao, Barsky, Kumano, & Kuboki, 2002), more tension headaches (e.g., Yucel, Kora, Ozyalçin, Alçalar, Ozdemir, & Yücel, 2002), higher levels of hypertension (e.g., Todarello, Taylor, Parker, & Lanelli, 1995) and high cortisol reactivity during stress (e.g., Lindholm, Lehtinen, Hyyppa, & Puukka, 1990).

Emotion Regulation and Psychopathology

Regulation and dysregulation of emotions are receiving an enormous attention in research, namely in the study of normal and abnormal development (e.g. Kring & Sloan, 2009; Kring, 2010; Sheppes, Suri, Gross, 2015; Southam-Gerow & Kendall, 2001).

Because emotion regulation is central to understand the etiology and the maintenance of psychopathology, it has been one of the main variables in the study of emotional impact in psychopathology for at least the last 15 years (e.g., Gross, 2015).

Broadly, emotion regulation refers to "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross, 1998, p. 275).

Individuals ability to regulate emotions vary in many different ways, with some individuals regulating unpleasant emotions successfully while others cannot, responding to emotions in ways that exacerbate unadaptive emotions or reduce pleasant emotions. These differences play a crucial role in psychopathology (Block, Moran & Kring, 2010; Hofmann, Sawyer, Fanf, & Asnaani, 2012; Kring & Werner, 2004).

In psychopathology, difficulties in emotion regulation can occur when emotions are too intense (e.g., difficulties regulating fear during panic attacks; Tull & Roemer, 2007), when emotion regulation strategies are not suitable for the situation (e.g. a person with social anxiety disorder who leaves a party because can't regulate fear of rejection; Turk, Heimberg, Luterek, Mennin, & Fresco, 2005) or when emotion regulation strategies are endanger (e.g., a person with Post-Traumatic Stress Disorder; Tull, Bardeen, DiLillo, Moore & Gratz; 2015; Weiss et al., 2012).

Frequently, in psychotherapy, psychotherapists analyse that adult patients still use the same emotion regulation strategies that were adaptive during childhood but are fruitless and non-adaptive in adulthood (Gratz, Tull, Baruch, Bornovalova & Lejuez, 2008).

Several diagnoses in DSM-5 mention difficulties in emotion regulation. For example, "Depressed mood most of the day, nearly every day" in depression, "fear of dying" in Panic Disorder, "difficulty controlling anger" in borderline personality disorder; "fear and worry surronding social situations" in social anxiety disorder; "difficulty controlling worry" in generalized anxiety disorder; "rapidly shifting expressions of emotion" in histrionic personality disorder; "inability to experience and regulate painful emotional memories" in post-traumatic stress disorder (Diagnostic and Statistical Manual of Mental Disorders, fifth edition [DSM-V]; American Psychiatric Association, 2013).

Studies in eating disorders (Fairburn Cooper, & Shafran, 2003; Polivy & Herman, 2002), alcohol abuse (Sher & Grekin, 2007; Tice, Bratslavsky, & Baumeister, 2001) and

drugs (Fox, Axelrod, Paliwal, Sleeper, Sinha, 2007) suggest that individuals with non-adaptive emotion regulation often use food, alcohol or drugs to downregulate emotions.

Gross (1998; 2015) process model of emotion regulation is one of the most well-known model used to evaluate difficulties in emotion regulation across psychopathologies.

From the perspective of the Gross and Thompson (2007) model of emotion regulation, many psychopathological symptoms result from the problematic and inadequate use of emotion regulation strategies, namely difficulties in situation selection, situation modification, attentional deployment, cognitive change and response modulation.

The Process model of emotion regulation (Gross and Thompson; 2007) is one of the best conceptual frameworks to summarize the relationship between emotion regulation and psychopathology.

Situation Selection

Choosing situations carefully is the most important emotion regulation strategy to deal with defiant emotional events. (Gross, 2015) For example, a victim of sexual attack can avoid walking alone in dangerous neighborhoods during the night.

However, when used systematically or in a non-flexible way, it can become non-adaptive, promoting or maintain psychopathology (Campbell-Sills & Barlow, 2007). For example, patients with social anxiety disorder use situation selection frequently with systematic avoidance of specific fear social situations. Continuous avoidance of the feared situations maintains pathological fear, changes social relationships and, non-surprisingly, increases anger or sadness for missing out important situations (Campbell-Sills & Barlow, 2007). The relief felt after the avoidance of unpleasant emotion-inducing situations does not overcome the long-term consequences of avoidance (Barlow, 2000).

Situation Modification

Strong efforts to change the situation to modify its emotional impact is an important form of emotion regulation (Gross, 2015) and a lot of situation modification' strategies can be adaptive (Gross, 2015). However, in a study develop by Clark (2001) the results showed that situation modification strategies might not be useful, when they don´t allow the contact to the feared situations. Patients with a social anxiety disorder, although exposed to anxiety-producing situations, maintain their anxiety.

Attentional Deployment

Attentional deployment does not change the situation but redirects attention to which dimensions of the situation the individual wants to give attention to (Gross & Thompson, 2007). Perhaps one of the most common emotion disorders is the use of attentional deployment, either by intentionally focusing on or away from the situation.

Gross (1998) described three strategies for changing attentional focus, namely distraction, concentration and rumination. These strategies are all examples of maladaptive attentional deployment strategies characteristic across the range of emotion disorders (Gross, 1998).

Distraction

The most prevalent form of attentional deployment is distraction (Gross & Thompson, 2007). Distraction directs attention to nonemotional dimensions of the situation (e.g. by changing internal focus), or changes attention away from the immediate situation (Gross, 1998). When distraction is frequent, it becomes maladaptive because it dosen't allow to habituate to a feared situation (Gross, 1998).

Rumination

Rumination involves directive attention to unpleasant emotions and to their evaluated painful consequences (Gross, 1998; Gross & John, 2003; McLaughlin, Aldao, Wisco, Hilt,

2014). Rumination is a common emotion regulation strategy among individuals with mood disorders (e.g. rumination leads to long and more severe depressive symptoms; Gross, 1998; McLaughlin, Aldao, Wisco, Hilt, 2014; Spasojevic & Alloy, 2001).

For example, individuals with a bipolar disorder have been shown to ruminate even more than people with unipolar depression (Kim, Yu, Lee, & Kim, 2012). Bipolar disease is associated with not only increased rumination but also with rumination about pleasant emotion: rumination about pleasant emotions has been identified as an important risk factor for bipolar disease (Feldman, Joorman, & Johnson, 2008).

Worry

Worry, or focusing attention on possible future threats (Gross, 2002), is also a critical emotion regulation strategy, frequently used by patients with anxiety disorders, to avoide painfull emotions or intense physiological arousal (Borkovec, 1994; Borkovec, Alcaine, & Behar, 2004). Attention to future threats has been described as a strategy of non-processing unpleasant emotions (Borkovec, 1994).

For instance, general anxiety disorder is distinguished by excessive, uncontrollable worry (Borkovec, Alcaine, & Behar, 2004; Borkovec, & Roemer, 1995). But worrying is a strategy to prevent future problems, with patients reporting that worry is an, for them, superior form of emotion regulation (Borkovec, Alcaine, & Behar, 2004; Davey, Thallis & Capuzzo, 1996; MacLaughin, Menin,& Farach, 2007).

Cognitive Change

Another form of emotion regulation that individuals can engage in is cognitive change, or altering the way they appraise or ascribe meaning to the situation (Gross & Thompson, 2007). This component of emotion regulation process has primarily been studied concerning cognitive reappraisal or changing the meaning individuals assign to a given situation to

change the emotional meaning it holds (Campbell-Sills & Barlow, 2007; Gross & Thompson, 2007).

Reappraisal involves changing a situation's emotional impact by changing it's meaning and therefore, the response to that situation (Gross, 2015; Gross & Thompson, 2007) and has been shown to reduce unpleasant emotions (John & Gross, 2004; Urry, 2009) by reducing physiological arousal in unpleasant situations (Ray, McRae, Ochsner, & Gross, 2012; Urry, 2009).

Studies in clinical and nonclinical samples show a relationship between less frequent use of reappraisal and greater depression severity (Joorman & Gotbil, 2010).

Response Modulation

Response modulation refers to changing psysiological, behavioral, or cognitive responding to situations (Gross & Thompson, 2007).

The two best research response modulation strategies studied are (a) *expressive suppression*, and (b) *experiential avoidance*.

Emotion suppression

Suppression is an emotion modulation strategy intended to reduce unwanted emotion experiences and to inhibit the expression of emotion (Gross & Thompson, 2007).

Suppression interferes with recovery from distressing provocations and, if used regularly, reflects problems with emotion regulation. Suppression includes direct attempts to remove any component of an emotion response from conscious experience, including suppression of the experienced feeling of the emotion and inhibition of thoughts associated with emotion reactions (Richards & Gross, 2000).

According to Gross and John studies (2003) in nonclinical samples, those who use suppression in a daily basis, feel more unpleasant emotions, experience less pleasant emotions and describe more depressive symptoms.

Those with emotion suppression endorse limitations in specific domains of emotion regulation, including diminished pleasant and enhanced unpleasant emotional experience (Gross & John, 2003), diminished emotion clarity and ability to modulate emotion (Fernandez-Berrocal, Alcaide, Extremera, & Pizarro, 2006), and difficulties with controlling impulsive behaviors, such as aggression (Nagtegaal & Rassin, 2004).

Individuals that suppress emotions are more likely to be obsessional, anxious, and depressed (Marcks & Woods, 2005), with chronic suppression being associated with posttraumatic stress disorder, obsessive-compulsive disorder, generalized anxiety disorder, and specific phobia (Beevers, Wenzlaff, Hayes, & Scott, 1999).

Furthermore, the frequent suppression of emotions can have interpersonal consequences. Suppression of pleasant emotion expression decreases affiliation and closeness (Gross & Levenson, 1997).

Experiential avoidance

Experiential avoidance is a short-term, quick and inflexible tendency to escape or avoid emotions, feelings, sensations or memories by attempting to modify their form, frequency, intensity or by reducing some discomfort (Chawla & Ostafin, 2007).

Increasing evidence demonstrates that emotional avoidance is related to a wide variety of psychopathology and behavioral problems (see Chawla & Ostafin, 2007; Hayes, Wilson, Gifford, Follette, & Strosahl, 1996 for extensive reviews), namely to depression, stress, anxiety, general psychological distress, substance abuse (Chawla & Ostafin, 2007; Kashdan, Barrios, Forsyth & Steger, 2006), posttraumatic stress disorder symptomatology, deliberate self-harm, intolerance of chronic pain, internalized and externalized homophobia, trichotillomania and phobic fear (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996), substance abuse (Daughters, Lejuez, Kahler, Strong, Brown, 2005), and borderline personality disorder (Gratz, Rosenthal, Tull, Lejuez, & Gunderson, 2006),

Studies also report that experiential avoidance is negatively correlated with quality of life indices (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996), positive affect, life satisfaction and meaning in life (John & Gross, 2004; Kashdan, Barrios, Forsyth, Steger, 2006).

So, as previously described, there are a lot of studies relating emotion regulation strategies and psychopathology, but few studies have examined the relation between the use of more than one emotion regulation strategy and psychopathology.

A noteworthy exception is the meta-analysis by Aldao, Nolen-Hoeksema and Schweizer (2010), which examined the relation between the habitual use of six emotion regulation strategies (rumination, reappraisal, suppression, acceptance, problem solving, avoidance) and four groups of symptoms of psychopathology (depression, anxiety, substance-related disorders, and eating disorders) in studies that used clinical or normative samples.

Aldao and colleagues (2010) obtained a large effect size for the association of depression with rumination and avoidance, a medium to large effect size for problem-solving and suppression, and small effect size for acceptance and reappraisal.

Emotion Expression and Psychopathology

Several studies (e.g., Hollaender & Florin, 1983; Kallay, 2015; Kennedy-Moore & Watson, 2001) examined the relation between emotion expression and psychopathology because several psychopathologies contain diagnostic criteria about difficulties in emotion expression. For example, several personality disorders (Diagnostic and Statistical Manual of Mental Disorders, fifth edition [DSM-V]; American Psychiatric Association, 2013), with frequent, dramatic, yet rapidly shifting of expression of emotion is a hallmark of the histrionic personality disorder or constricted expression of emotion is a criterion for both schizotypal and schizoid personality disorders (Diagnostic and Statistical Manual of Mental Disorders, fifth edition [DSM-V]; American Psychiatric Association, 2013).

In the health psychology literature, several relationships between expressiveness and specific diseases have been reported, namely in cancer (Cox & McCay, 1982; Fernandez-Ballesteros, Ruiz & Garde, 1998) or coronary heart disease (Friedman, Hall, & Harris, 1985; Gentry, 1985).

Emotion Intensity and Psychopathology

Difficulties in emotional intensity are related to a wide variety of psychological symptoms, like depression (Rottenberg, Joormann, Brozovich, & Gotlib, 2005) psychosomatic symptoms (Larsen & Diener, 1987), cyclothymia, bipolar behavior (Diener, Larsen, Levine, & Emmons, 1985), borderline personality and passive-aggressive personality (Flett & Hewitt, 1995).

Experience of intense, unpleasant emotion is also shared across many different psychological disorders, including depression (Beutler, Engle, Oro-Beutler, Daldrup & Meredith, 1986; Mineka Watson, & Clark, 1998), anxiety disorders (Mineka Watson, & Clark, 1998), eating disorders (e.g., Stice, 2001), schizophrenia (Kring, 2001; Kring & Moran, 2008), substance-related disorders (e.g., Kassel, Stroud & Paronis, 2003), and a number of personality disorders (e.g., Berenbaum et al., 2006; Huprich, 2005; Putnam & Silk, 2005).

Emotions in Psychotherapy

"What we make of our emotional experience makes us all who we are."

(Greenberg, L., 2008, p.93)

A focus on emotion has been a crucial variable for psychotherapy dating as far back as Freud (1910 *cit in* Sloan & Kring, 2007).

Given that emotion is seen as an essential source of information it is clear that emotion needs to be attended to, explored, and treated in therapy to promote emotional change, personal growth and emotional adjustment (Goldman, Greenberg, & Angus, 2006; Greenberg, 2008; Samoilov & Goldfried, 2000).

Accessing and exploring painful emotions, within the context of a secure therapeutic relationship, is one of the most important studied technique used by several schools of psychotherapy (Freud, 1910 cit in Sloan & Kring, 2007; Rogers, 1961) and remains central in contemporary approaches across a variety of psychotherapy orientations (Goldman, Greenberg, & Pos, 2005; Greenberg, 2008; Greenberg, Auszara & Herrmann, 2007; Samoilov, & Goldfried, 2000).

Different Models of Working with Emotions in Psychotherapy

Regardless of the different theoretical assumptions supporting the various types of psychotherapy (e.g., psychodynamic, interpersonal, emotion-focused therapy, gestalt, client-centered, cognitive-behavioral), each model has included considerations and techniques to deal with emotions (for reviews, see Greenberg, 2008; Samoilov & Goldfried, 2000).

Studies show a marked relationship between in-session emotional experiencing and therapeutic gain in dynamic, cognitive (Beck & Dempster, 1976; Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996; Samoilov & Goldfried, 2000) and experiential therapies

(Greenberg, Auszara & Herrmann, 2007; Greenberg, 2008; Silberschatz, Fretter, & Curtis, 1986). Thereby emotional experiencing during the session might be a common factor that helps explain change across approaches (Barlow, Allen, & Choate, 2004; Castonguay & Beutler, 2006; Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996; Tracey, 2003; Weinberger & Rasco, 2007).

Helping people overcome their avoidance of emotions, focusing collaboratively on emotions and exploring them in therapy appear to be important in therapeutic change, whichever therapeutic approach is employed (Moses & Barlow, 2006; Greenberg, 2002b, 2008; Greenberg, & Korman, 1993).

Emotion-Focused Therapy

The most important and relevant form of psychotherapy working in emotions is emotion-focused therapy (EFT), which was developed by Leslie Greenberg (e.g., Greenberg, 2008; Greenberg, Rice, & Elliott, 1993; Goldman, Greenberg & Angus, 2006; Greenberg, Auszara, & Herrmann, 2007).

EFT is based on the fundamental assumption that some emotions are adaptive, whereas others are maladaptive. The primary therapeutic goal is for a client to become aware of these maladaptive emotions, to understand their source and to promote new emotion regulation strategies to deal with them (Greenberg, 2002a).

According to Greenberg (2002b), EFT is better suited in specific clinical conditions, including depression, generalized anxiety disorder and less well suited to others, such as panic disorder.

EFT for depression has been proved to be highly effective in depression in three separate studies (Greenberg & Watson, 1998; Goldman, Greenberg, & Angus, 2006; Watson, Gordon, Stermac, Kalogerakos, & Steckley, 2003).

Cognitive-Behavioral Therapy

Cognitive-behavioral therapy (CBT) has been trying to develop strategies to improve the work with emotions in psychotherapy (Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996; Clore et al., 1994; Samoilov & Goldfried, 2000).

Following from research on mood and anxiety disorders, Barlow, one of the most prominent authors in cognitive-behavioral therapy and colleagues have proposed a unified treatment for the mood and anxiety disorders (Barlow, Allen, & Choate, 2004), with focus on emotion-related mechanisms that may be commu to emotion disturbances that cut across mood and anxiety disorders (Moses & Barlow, 2006).

The Paradigmatic Complementary Model

As previously mentioned, different psychotherapies have been shown to be fundamentally equivalent in general effectiveness (Castonguay & Beutler, 2006; Stiles, Shapiro, Elliot, 1986). Therefore, it has been suggested that more research should be done to investigate the common factors (i.e., aspects that are not specific to any of school of psychotherapy, such as working alliance, the extent to which patients can engage in treatment, the facilitation of hope, the chance for emotional disclosure, support, advice, and encouragement to try out new explanations or perspectives and behaviors), rather than to validate specific psychotherapies (Vasco & Conceição, 2008; Wampold, 2001) .

The idea of common factors started being developed by Rosenzweig (Rosenzweig, 1936) and later on by Frank and Frank (Frank & Frank, 1991).

Since then, although several authors have proposed different common factors (Castonguay & Beutler, 2006; Grencavage & Norcross, 1990; Tracey, 2003), few of them provided useful ways of identifying, studying, and using them more efficiently in psychotherapy. Weinberger's explanation for this was that "what usually happens is that a proponent of a common factor or a set of common factors reviews the history of the factor,

points to its ubiquitous presence in all forms of therapy, cites the relevant research and moves on, confident that case has been proved.” (Weinberger, 1995, p.46).

Although common factors have been recently defended by several authors (Duncan, Miller, Wampold, & Hubble, 2010; Tracey, 2003; Wampold, 2010; Weinberger & Rasco, 2007), their mechanisms of change remain unclear. Therefore, due to their relevance for psychotherapy, these factors should be further investigated.

The contribution of different variables and factors for the efficacy of psychotherapy has been a subject of debate among psychotherapists (Castonguay & Beutler, 2006). According to the task force created to summarize the main conclusions regarding the efficacy of psychotherapy, and to clarify variables that may contribute to therapeutic change, three main perspectives may be presented for this contribution. Firstly, the empirically supported treatments (ESTs) perspective, which was developed by Diane Chambless (Chambless, & Hollon, 1998), underlines the importance of defining specific treatments (or technical procedures) that have been empirically proved to be effective for treating each mental disorder, as characterized by the Diagnostic and Statistical Manual of Mental Disorders (Chambless & Hollon, 1998; Nathan & Gorman, 2002). Secondly, the empirically supported therapeutic relationships (ESRs) perspective, which was developed by John Norcross in 2002, underlines that the efficacy of psychotherapy depends on the therapeutic relationship between therapist and patients, as well as on their characteristics. Therefore, this perspective defends that the quality of the therapeutic alliance is the primary factor for therapeutic change (Luborsky et al., 2006; Wampold, 2001), and that it needs to be improved according to patient’s clinical necessities, in order to increase therapeutic efficacy (Norcross, 2002). Thirdly, the empirically supported principles (ESPs) perspective, which is being headed by Louis Castonguay and Larry Beutler, underlines the importance of all the variables presented for the previous perspectives: technical procedures, the therapeutic alliance between the

therapist and the patient, as well as their own individual characteristics (Castonguay & Beutler, 2006). This conciliation of perspectives resulted in the development of 61 principles of therapeutic change (Castonguay & Beutler, 2006).

The relative importance of each of the previous variables on the efficacy of psychotherapy remains unclear. However, it has been suggested that patients' characteristics are a variable of primordial importance. In fact, studies suggest that the efficacy of psychotherapy may be enhanced should patients' characteristic be taken into account, besides of accounting for mental illness characteristics and therapeutic alliance (Beutler, 2002; Beutler & Clarkin, 1990; Beutler & Harwood, 2000; Castonguay & Beutler, 2006; Millon, 1999; Millon & Davis, 1996).

Therefore, one of the challenges of psychotherapy is for the therapist to establish which of the above variables should be more important to each patient, and to include them into heuristic instruments, in order to understand patients' problems and to make decisions regarding the clinical situation of each patient (i.e., case conceptualization) (Vasco, 1994; Vasco, Conceição, Silva, Ferreira & Vaz-Velho; 2018). This conceptualization is also necessary to anticipate potential problems that the patient may have during psychotherapy and to increase the empathy between psychotherapist and patient (Eells, 1997).

Furthermore, case conceptualization is based on the psychotherapeutic theories that each psychotherapist subscribes, depending on their "vision of the world". According to Pepper, there may be presented four different visons of the world (i.e., formism, mechanicism, contextualism, and organicism) (Pepper, 1942):

i. Formism is characterized by a vision of therapeutic models based on the causality of events. For example, the therapist believes that mental illnesses are a consequence of neuro-anatomical, biochemical, or psychological characteristics of

the patients. Therefore, there is the need to act on these characteristics to treat the patients.

ii. Mechanicism is characterized by a vision of the therapeutic models that defends behavior and cognitive functional analysis, based on mechanic or efficient causality. For example, the psychotherapist believes that the cause of the mental illness may be deficient external contingencies (such as reinforcement and punishment), dysfunctional thoughts, self-beliefs, or the world that surrounds the patient.

iii. Contextualism is characterized by a vision of the therapeutic models in which therapists use markers of therapeutic interaction, and genomes and systemic analysis of communication, making decisions based on formal causality, or on complex interactions and meanings "built here and now".

iv. Organicism is characterized by a vison of the therapeutic models mainly based on final causality (or theological). In this case, mental illness is caused by expectations and an abnormal developmental history.

Taking into account the wide spectrum of mental illnesses, although there are some exceptions (Lambert & Barley, 1994), none of the visions have proved to be significantly and consistently superior to the others (Vasco, Conceição, Silva, Ferreira & Vaz-Velho, 2018). In fact, psychotherapy based on different visions seems to lead to equivalent results, mainly when the psychological assessment is carried out a few months past the end of psychotherapy (Frank, 1979; Lambert & Ogles, 2004; Orlinsky & Howard, 1986; Wampold, 2001). The notion that any of the visions of the world is better than the others is on the genesis of the Paradigmatic Complementary Metamodel (PCM; Vasco, Conceição, Silva, Ferreira & Vaz-Velho; 2018).

PCM authors (Conceição & Vasco, 2002; Gonçalves & Vasco, 2014; Vasco, 2001, 2005; Vasco & Conceição, 2001, 2003; Welling et al., 2003) support that none of the visions of the world (i.e., formism, mechanicism, contextualism, and organicism) is better than the others. Indeed, they suggest that therapists should be aware of all visions and that they should be able to use all of them in a coordinated, complementary, and sequential fashion, according to patients' clinical needs and therapy moment. This is very important, so that therapists can regulate their interventions according to patient's unique characteristics (Vasco, 2005; Vasco, Conceição, Silva, Ferreira & Vaz-Velho; 2018)

Also, although each of the above visions may be used to explain parts of human functioning, neither of them may be used to explain this fully. In this way, to understand human functioning, it is necessary to in integrate and articulate "constitutive elements" (i.e., characteristics, beliefs and competencies), "functional relationships" among these elements and from "complex "structures" that develop and express themselves in complex "contexts" (e.g., meanings, emotions and relations). All these individual units need to have properties and states in common, so the state of each unit may be constrained, conditioned or dependent of the state of other units (Schwartz, Santerre, & Russek, 1999).

The Paradigmatic Complementary Model (PCM, Vasco, Conceição, Silva, Ferreira & Vaz-Velho; 2018) was developed to orient the decision-making processes in psychotherapy, allowing the therapist to make a sequential, integrative and complimentary use of common factors or general principles of change and specific techniques derived from various directions. (Vasco, 2006)

In the same way, the PCM may also be used for guiding exploratory psychotherapy research, as an integrative model of clinical knowledge, including process and mechanisms of change' associated with significant therapeutic results, and also to investigate potential

associations between putative causes and outcomes (Vasco, Conceição, Silva, Ferreira & Vaz-Velho; 2018).

The PCM is also very important because it allows an integrative and multivariable comprehension of patients, allowing a better understanding and better decisions along psychotherapy. This model has proven to be very useful with people with high level of regulation of psychological needs, but also with patients where it can be needed a schematic transformation, with comorbidity between Axis I and Axis II (Vasco, Conceição, Silva, Ferreira & Vaz-Velho; 2018).

For PCM, all therapeutic decisions must consider variables from patients, relationship and process (Branco Vasco, Conceição, Nunes da Silva, Ferreira & Vaz-Velho, 2018).

Patients must have their vital psychological needs satisfied. When difficulties in emotion regulation arise and the previous schema becomes non-adaptive, difficulties in regulating psychological needs may arise.

According to the main author (Vasco, 2006), psychological needs are states of emotional imbalance caused by a high or a less level of specific psychological nutrients that promote external or internal changes to restore balance. PCM takes into account fourteen psychological needs, arranged in seven dialectic and complementary polarities. For more details see table 3.

Table 3

Dialectic of psychological needs according Paradigmatic Complementary Model

Dialectic of psychological needs - Paradigmatic Complementary model-		
Proximity	↔	**Differentiation**
Need to establish and maintain close relationships		Need of differentiation and to auto-determination
Pleasure	↔	**Pain**
Physical and psychological		Need to tolerate inevitable pains Need to give a meaning to pain
Productivity	↔	**Recreation**
Need to produce something		Need to relax without feeling guilt
Control	↔	**Cooperation**
Need to influence everything		Need to give up and let it go
Actualization/ Explore	↔	**Tranquility**
Need to explore Exposure to what is new		Need to appreciate what we have
Self coerence	↔	**Self incoerence**
Coherence between Ideal and Real I Coherence between what is done, felt and think		Need to tolerate conflicts and occasional incongruencies
Self-esteem	↔	**Self-critic**
Need to be feel satisfied with the self		Need to identify, tolerate and learn as a need of personal insatisfactions

Note. Adapted from "O (meta)modelo de Complementaridade Paradigmática", by Vasco, Conceição, Silva, Ferreira & Vaz-Velho, in I, Leal (Ed.) *Psychotherapias, (*p. 339-361*),* Lisboa: Lidel/Pactor.

With the main goal of promoting needs regulation, PCM considers therapeutic alliance as the first and one of the most significant variables in therapeutic results (Branco Vasco, Conceição, Nunes da Silva, Ferreira & Vaz-Velho, 2018). Therapeutic alliance has been

considered the common factor with the highest impact on therapeutic results, in every psychotherapy model (Norcross 2002).

PCM also considers other variables important in psychotherapy, such as (1) Manage expectations along psychotherapy, (2) Ask for patient opinion and feedback; (3) Manage countertransference and (4) Repair alliance ruptures results (Branco Vasco, Conceição, Nunes da Silva, Ferreira & Vaz-Velho, 2018).

For PCM authors, the therapists must be open to experience, have good responsivity, be flexible, have tolerance to the unknown, be present, authentic, warmfull and have respect for patients.

According to the PCM, psychotherapy is understood as a temporal sequence of phases including four components: (1) The general principles of therapeutic change; (2) The therapeutic alliance; (3) The conceptualization of the patient and the therapist; (4) The temporal sequence of phases related to objectives.

Such as in different theoretical orientations (integrative or not), it has been suggested that the sequence of phases structuring strategic therapeutic objectives is a general principle of change in the PCM (Vasco, 2006).

In this way, the temporal sequencing component of PCM includes progresses both of the psychotherapist and patient (Vasco 2001; 2006; Vasco & Conceição, 2008; Vasco, Conceição, Silva, Ferreira & Vaz-Velho; 2018), according to seven phases (based on Goldfried's work, 1980) related to the implementation of strategic objectives:

The main objective of Phase 1 is to build trust, motivation, hope, and relationship structuring. For this, the psychotherapist listens to patients' problems, validates them, and negotiates roles, rules, and goals of therapy;

The main aim of Phase 2 is to increase awareness of self and experience. For this, the psychotherapist helps patients to become aware of inner conflicts, translating problematic

experiences as a whole (e.g., cognition, emotion, and behavior). This may contribute for patients to increase their awareness about relationships with others, explore or experience the impact of relevant situations, develop curiosity and interest in self-observation;

The main goal of Phase 3 is to develop a meaning related to experience and self. For this, the psychotherapist aims to help patients clarifying and relating feelings and attributions, as well as to increase awareness about how patients' past/present experiences may contribute for the origin and maintenance of the problem. This is important for the psychotherapist and patient to develop a shared understanding of patients' problems;

The main objective of Phase 4 is to promote and regulate responsibility. For this, the psychotherapist aims to increase patients' awareness and differentiation regarding their true needs by promoting: self-efficacy and resources for change; differentiation of patients' (or others') responsibilities regarding problems; responsibility for feelings, thoughts, actions and life choices; compassion for the self;

The main aim of Phase 5 is to implement repairing actions. For this, the psychotherapist promotes and implements plans to help patients to express themselves clearly and to handle situations in a way that respects their own needs. At this stage, it is intended to promote patients' assertion, management of internal and external expressions of identity, choice of lifestyles, and personal development;

The main goal of Phase 6 is to consolidate change. For this, the psychotherapist promotes the patients' ability to deal with intra and interpersonal obstacles to self-consolidation, harmonization of different parts of the self and experience (taking care of the new self and relationships that support it), acceptance of the inevitability of some degree of vulnerability or conflict in the experience and expression of identity;

The main objective of Phase 7 is the anticipation of the future and relapse prevention. For this, the psychotherapist helps the patient to: anticipate difficulties, and to develop

resources to manage them and potential future gratifications for the new self; interpret future difficulties as opportunities for growth and self-development; strengthen the sense of personal coherence; integrate experiences of the past.

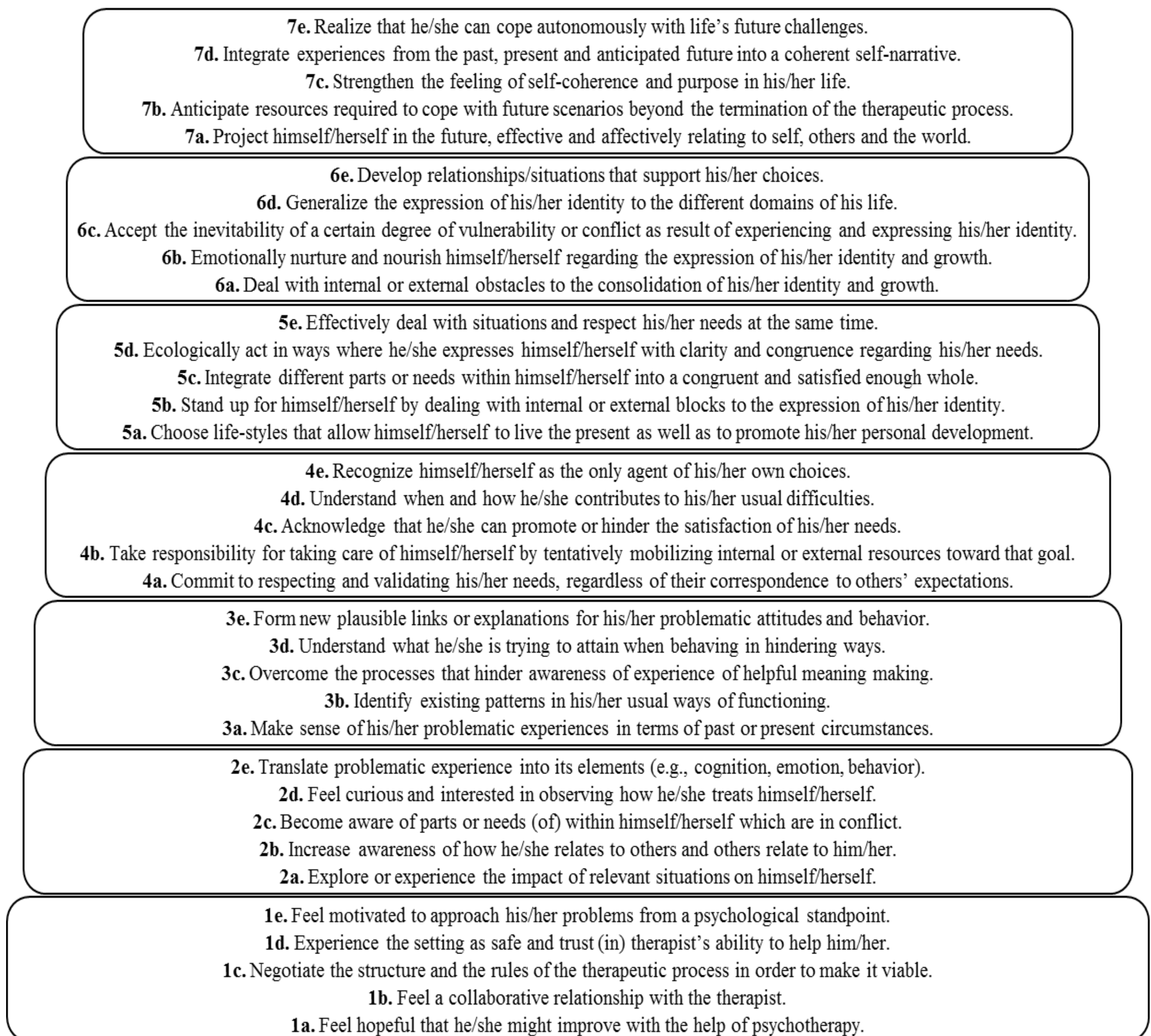
It is important to underline that the above phases may overlap and that they may oscillate cyclically. Sequence linearity tends to be greater in the patients with lower complexity problems. The main advantage of PCM is that it integrates different visions, allowing the combination of both cognitive and emotion interventions.

Furthermore, Vasco and Conceição (Vasco & Conceição, 2008) defined five general strategies for each phase, to clarify the work that needs to be done in each phase. According to Ferreira and colleagues (Ferreira, Vasco, Basseches, Santos, & Ferreira, 2015), the sequence of these phases is particularly important when working with patients with personality disorders, particularly in those who tend to be sensitive to misattunements and lack of responsivity from their therapists, needing more time and skills to attain therapeutic objectives.

To clarify the work that needs to be done in each phase, Vasco and Conceição (2008) defined five general strategies for each phase as presented in Figure 2.

Figure 2.

Sequential components for the seven phases of the Paradigmatic Complementarity Model



Note: Each phase has the following main goals: (1) trust, motivation, hope building, and structuring; (2) increasing awareness of self and experience; (3) meaning related to self and experience; (4) regulation of responsibility; (5) implementation of repairing actions; (6) consolidation of change; and (7) anticipation of the future and relapse prevention. Adapted from Vasco and Conceição (2008).

According to Ferreira and colleagues (Ferreira, Vasco, Basseches, Santos, & Ferreira, 2015), the sequence of these phases is particular crucial when working with patients with

personality disorders, particularly in those who tend to be sensitive to misattunements and lack of responsivity from their therapists, needing more time and skills to attain therapeutic objectives. This sequence also allows the therapist to work with a model and using some creativity, to respond to patient needs (Branco Vasco, Conceição, Nunes da Silva, Ferreira & Vaz-Velho, 2018; Ferreira, Vasco, Basseches, Santos, & Ferreira, 2015).

The sequence of the phases of the PCM has been investigated for the past 16 years with cross-sectional and longitudinal studies (Conceição 2010, Ferreira, Vasco, Basseches, Santos, & Ferreira, 2015; Vasco, Conceição, Nunes da Silva, Ferreira & Vaz-Velho, 2018). Such studies have consistently supported the temporal sequence of strategic objectives, and it's potential to improve personality disorders in long-term processes (Conceição 2010), and also to the improvement of emotion regulation abilities (Vasco, Conceição, Nunes da Silva, Ferreira & Vaz-Velho, 2018). Studies have also suggested that the articulation of therapist's promotion with patient's assimilation capacity, contributes to improving psychotherapists' and patients perception of the therapeutic alliance, which could potentially improve patient outcomes (Conceição, 2005, 2010).

For example, a recent study described a good outcome case (i.e., EVA) that developed a more differentiated and integrated sense of self, and how the psychotherapist facilitated this developmental process, using the PCM. In fact, the results indicated that during one year of psychotherapy, EVA's capacity evolved sequentially and cumulatively from Phase 1 to Phases 2 and 3, and that then she started developing Phase 4 capacities.

Despite the above, the PCM is still under research, and its full potential remains unclear, especially the impact of each emotional process of patients in psychotherapy in different stages of the PCM.

Emotional Processes in Psychotherapy

Outcome and process research in psychotherapy has shown strong empiric evidence that emotion processing is crucial to good results in psychotherapy (Greenberg, 2002a).

The following four principles provide an empirically understanding of which emotion change processes need to occur along psychotherapy: (1) increasing attention to emotion, (2) labeling and differentiating emotions, (3) enhancing emotion regulation, (4) expressing emotion (Greenberg, 2002).

Emotional Attention in Psychotherapy

For emotional change to occur in psychotherapy, the first and one of the most important goals is to turn patient'attention to their emotions. It is important to reinforce that emotion attention is not thinking about feeling; it includes turning attention to the emotion felt and allowing it in awareness (Greenberg, 2002b).

Emotional attention can be therapeutic in such different ways. Attention to emotion allows a more profound awareness of emotional experience and helps to overcome the avoidance of emotional experience with results from a variety of studies indicating that turning attention to emotional memories in psychotherapy sessions predict better outcomes (Foa & Jaycox, 1999).

Increasing patients' abilities to direct attention to emotions is an important component of almost all actual contemporary psychotherapy models including acceptance and commitment therapy, mindfulness-based cognitive-behavioral therapy and Emotion Focused Therapy (Greenberg & Pascual-Leone, 2006). Greenberg and Pascual-Leone (2006) considered the improvement of emotional attention as central to recovery, by accessing emotions in awareness for their adaptive information and capacity to organize action.

According to several models of experiential psychotherapy (e.g., Greenberg, Rice, & Elliott, 1993), helping clients arise attention to emotional experience in along psychotherapy

allows clients to engage in an in-depth exploration of their emotions related with painfull life events.

Also, researchers show that emotional attention is a necessary prerequisite to effective emotion regulation (Barrett & Gross, 2001; Barrett, Gross, Christensen, & Benvenuto, 2001).

So, client emotional attention within the context of a strong therapeutic alliance appears to be important processes for therapeutic improvement (Greenberg & Pascual-Leone, 1995, 1997).

Emotion Differentiation in Psychotherapy

The second component of the emotional process that should be considered in psychotherapy is the ability for emotion differentiation. Several studies showed that the ability to experience a great variety of emotions is crucial for mental health (Greenberg, 2002a). Differentiating emotions helps people make sense of their emotional felt experience, by creating new meanings for the emotion felt, allowing its integration into their ongoing self-narratives and by helping the development of new narratives (Greenberg & Angus, 2004; Greenberg, Auszara, & Herrmann, 2007).

The availability of a differentiated system of representations of emotions and the ability to correctly label emotions helps the individual to build and use knowledge about that state, which is often helpful for adaptive regulation, so crucial to psychotherapy (Goldman, Greenberg, & Angus, 2006; Goldman, Greenberg & Pos, 2005). For example, helping a patient recognizing an emotion as anger provides information about the nature and purpose of emotion (e.g., fighting for one's rights) its causes, its potential risks, and benefits, as well as information about the regulation strategies that are likely to be useful.

So, the process of differentiating emotions in psychotherapy allows that unsymbolized emotional memories to be assimilated in the present, promotes a better understanding of self

and others, and integrates all in a coherent story. Once emotions are label, they allow people to create new meanings to the past experience (Greenberg, Auszara, & Herrmann, 2007).

Emotion Regulation in Psychotherapy

The third component of emotional processing involves the regulation of emotion. Deficits in emotion regulation skills are a putative risk and maintaining factor in various forms of psychopathology (Berking, & Wupperman, 2012; Hofmann, Sawyer, Fanf, & Asnaani, 2012; Werner, & Gross, 2010). Because difficulties in emotion regulation are central in the development and maintenance of psychopathology, several interventions models consider emotion regulation skills as a central feature of the treatment.

For example, psychoanalysis focus on psychological defenses, to avoid painful emotions and thoughts (Freud, 1910 *cit in* Sloan & Kring, 2007). After, gestalt therapists consider that psychopathology comes from emotions blocked, suggesting that "dysfunction occurs when emotions are interrupted before they can enter awareness or go very far in organizing action" (Greenberg & Safran, 1989, p. 20). Humanistic therapies consider an openness to experience (Rogers, 1961) so that "the individual becomes more openly aware of his feelings and attitudes as they exist in him" and "he can take in the evidence in a new situation, as it is, rather than distorting it to fit a pattern which he already holds" (p. 115). Nowadays, cognitive-behavioral therapies also recognize the impact of avoidance of emotions, particularly on anxiety disorders (Foa & Jaycox, 1999; Rufer, Hand, Braatz, Alsleben, Fricke, & Peter, 2004). Finally, emotion regulation skills constitute a core component in dialectical behavior therapy (Linehan, 1993; Lynch, Trost, Salsman, & Linehan, 2007).

So, almost all psychotherapeutic treatments work to improve emotion regulation strategies. However, in some treatments (person-centered psychotherapy, psychodynamic treatments) general emotion regulation skills are not explicitly and directly addressed but are

assumed to be enhanced through the application of strategies considered to stimulate the healing process in general (e.g., personal growth, self-understanding, insight into unconscious motives). In other treatments, such as emotion focused therapy or cognitive-behavior therapy, these efforts often focus on emotions that are related to the client's symptoms.

Emotion Intensity in Psychotherapy

Increasing the intensity of emotional experience during the therapy has also been shown to predict positive outcomes in a variety of treatment approaches (Hendricks, 2002; Greenberg, 2002b). There is a lack of studies about the impact of emotion intensity in psychotherapy. Further studies are needed.

Emotion Expression in Psychotherapy

Emotion expression has also been shown to predict adjustment (Stanton, Danoff-Burg, Cameron, Bichop, Collins, Kirk, 2000). Emotion expression, in therapeutic contexts, does not mean simply speaking about emotion, but overcoming avoidance of feared and previously constricted emotions.

The patients with the best outcomes in psychotherapy improve their condition by talking about events, exploring emotions in a profound and associative way, using emotions to solve problems (Greenberg, 2002a).

Thus, for patients to change along psychotherapy they cannot just talk about emotion; they need to viscerally feel it and to use it to solve problems (Greenberg, 2002a). Also expressing painful emotions allows to perceive their experience as painful but not unbearable (Greenberg, Wortman & Stone, 1996).

Research questions

"Scientific revolutions tend to emerge not from a sudden discovery but by asking better questions." (Barrett, 2018, p. XV)

After contemplating the exposed in this literature review, it should be clear that emotion research has been growing with vigor and is an crucial field in psychology, where more than ever research is being undertaken all over the world (e.g., Aldao, Gee, De Los Reyes, & Seager, 2016; Barrett, 2018; Ford & Gross, 2018; Gross, 2015).

Along the literature review, we were concerned to deliver a broad outline of what has been the Emotion field, nonetheless limited by a focus on emotional process in adults.

The purpose of this dissertation was to study emotions and each emotional process namely, emotional attention, emotion differentiation, emotion regulation, emotion intensity and emotion expression, its relation in a clinical and non-clinical sample, their impact in psychopathology and their development along psychotherapy.

Six research questions guided our investigations:

(1) What are the main characteristics of the emotional process of patients in psychotherapy and how are they related?

(2) What is the relationship between emotional process and psychopathology?

(3) Are there significant differences in each emotional process according a specific psychopathology?

(4) What are the main differences in emotional process between patients with Depressive, Anxiety Disorders and patients with Personality Disorders?

(5) Are there any differences between emotional processes in patients and non-clinical populations?

(6) How does emotional process evolve along psychotherapy according to Paradigmatic Complementary Model?

Research Design

Five studies were conducted. All studies were developed with the concern to explore emotions as a multidimensional process, integrating emotional attention, emotion differentiation, emotion intensity, emotion regulation and emotion expression.

For the **first study**, we aimed to validate to Portuguese population psychometrically strong measures for emotional attention, emotion differentiation, intensity, regulation and expression. Because there were already measures that evaluated emotional attention, differentiation and regulation validated for Portugal, we aimed to validate measures of emotion intensity, emotion expression and difficulties in emotion regulation that can be used in adult research and psychotherapy. After this study, we were able to proceed to the investigation of emotional processes in non-clinical and in clinical populations, evaluating the relationship of each emotional processes with psychopathological symptoms and their impact along psychotherapy.

For the **second study**, our main goal was to determine whether patients present one or more deficits in each emotional process and to investigate the association between these processes within psychopathology.

In the **third study**, our primary purposes were to investigate the relationship between symptoms of psychopathology and emotional attention, emotion differentiation, emotion regulation, emotion intensity and emotion expression and to evaluate differences in these abilities across patients with different types of psychopathologies.

In the **fourth study**, our main purpose was to investigate differences in emotional processes between a non-clinical sample and patients with different types of mental disorders.

In the **fifth study**, we wanted to evaluate the differences in each emotional process for patients attending psychotherapy sessions in different Paradigmatic Complementary Metamodel (PCM) phases.

Dissertation structure

This dissertation is organized into **three chapters**.

The **first chapter** is the **Introduction** where an overview of the most recent investigation is made on emotions, each emotional process (emotional attention, emotion differentiation, regulation, expression, and intensity), the relationship between emotional processes and psychopathology and the importance of emotional process for psychotherapy.

The **second chapter** regards the **Empirical studies** and is divided into five scientific articles (three submitted to international scientific journals) according to the five studies previous presented. On the first study, we aim to validate to Portuguese population psychometrically strong, useful and practically measures for emotion intensity, emotion expression and difficulties in emotion regulation, so that we could have an integrative comprehension of all processes underlying emotions. Next, we wanted to understand the relationship between symptoms of psychopathology and emotional attention, emotion differentiation, emotion regulation, emotion intensity and emotion expression and to evaluate differences in these abilities across patients with different types of psychopathologies. Then we investigate differences in emotional processes between a non-clinical sample and patients with different types of mental disorders and for the last study, we aimed to evaluate the evolution in each emotional process for patients attending psychotherapy sessions according to Paradigmatic Complementary Metamodel.

In the **third and last chapter** – **Integrated discussion and final thoughts** – a holistic and integrated discussion of the main results of the different studies is presented. The implications that the results may have in practice are highlighted as well as a critical reflection about the limitations of the thesis. Relevant clues for future research are also provided.

CHAPTER II

Empirical Studies

Study 1 - Psychometric validation of three instruments for measuring emotional processes in a Portuguese Sample

Psychometric validation of three instruments for measuring emotional processes in a Portuguese Sample

Abstract

Objective. Emotions and emotional processes are an emergent research domain in psychology. Although in Portugal we can observe a growing interest in the study of emotions there still exist a lack of validated measures, not allowing the accurate evaluation of all emotional processes in the Portuguese population. **Design and methods.** This study explores the psychometric properties of Short Affect Intensity Scale, Difficulties in Emotion Regulation Scale*,* and Emotional Expressivity Scale in terms of internal consistency, temporal stability, and gender differences. The adaptations were carried out with a Portuguese sample of 823 subjects (53.94% males) aged between 17 and 72 years (M_{age} = 27.82, *SD* = 9.37). To evaluate the construct validity of the Portuguese version of each instrument, a principal component factorial analysis with specific rotation was performed. Both the Kaiser-Meyer-Olkin's measure and Bartlett's sphericity test were evaluated. Factors were extracted, according to the scree plot and to each author's original structure. Internal consistency was evaluated for each subscale and for the total score of each instrument. Item-total correlations were also computed. **Results.** A first-order confirmatory factor analysis (CFA) was performed to assess the fit of theoretical models supporting constructs to the data. The results replicate, in a large Portuguese adult sample, the factor structure that underlies the original versions of the three measures. **Conclusions.** The reliability of the Portuguese version of the *SAIS, DERS and EES* were assured both regarding internal consistency and temporal stability. The test-retest reliability across six months was good, meaning that the use of these instruments is relatively stable over time. Gender differences were found for all the three instruments.

Keywords: emotional processes; measures; psychometric properties; Portuguese validation

Psychometric validation of three instruments for measuring emotional processes in a Portuguese Sample

Introduction

Emotions are subjective reactions of the organism to a significant event in the internal or/ and external stimulus characterized by physical arousal, cognitive processes, experiential features and behavioral changes (Gross, 2002).

So, emotions are not only the physiological activation of the organism in response to a stimulus (Mauss, Levenson, McCarter, Whilhelm, & Gross, 2005), but a multiplicity of micro processes that involve the arousal and articulation of several components that interact in order to create and maintain an emotion, namely, emotional attention (e.g. Gasper, & Clore, 2000), emotion differentiation (e.g., Barret, 2006, 2016; Barrett & Russell, 2015), emotion intensity (e.g., Geuens & De Pelsmacker, 2002), emotion regulation (Ford & Gross, 2018) and emotion expression (Kring, Smith & Neale, 1994).

Although in Portugal we can observe a growing interest in the study of emotions (e.g., Basto & Salgado 2014; Machado Vaz, 2009; Queirós, Fernández-Berrocal, Extremera, Carral & Queirós, 2005) there is a lack of validated measures to evaluate each emotional process, not allowing their accurate evaluation in the Portuguese population.

In order to have an integrative comprehension of emotions and emotional processes involved in emotions, five emotional processes should be attended: emotional attention (Bradley et al., 2003), emotion differentiation (Barrett, Gross, Christensen, & Benvenuto, 2001; Barrett, 2018), emotion regulation (Gross, 2015; Gross & Thompson, 2007), emotion intensity (Larsen & Diener, 1987), and emotion expression (Kring, Smith, & Neale, 1994).

Emotional attention

It has been postulated that emotionally significant stimuli are processed with priority as they automatically capture attention due to their enhanced salience and more resources are

allocated for their perceptual processing (Bradley et al., 2003). So, emotional attention is the first necessary step to become aware of the type of emotion that one is feeling and a necessary prerequisite to effective emotion regulation (Barrett & Gross, 2001; Barrett, Gross, Christensen, & Benvenuto, 2001; Taylor, Bagby, & Parker, 1997).

Because each emotion arouse distinct emotion regulation strategies, lack of emotional attention makes it harder for individuals to select the best response strategies for dealing effectively with the stimulus at hand, potentially resulting in social dysfunction (Barrett, Gross, Christensen, & Benvenuto, 2001; Fernández-Berrocal & Extremera, 2008).

Measures in the attention category assess the extent to which individuals monitor and value their emotions, and therefore maximize their experience of emotion (Gohm & Clore, 2000). One of the most important measures that evaluate attention to emotion is the Attention subscale of Trait Meta-Mood Scale (TMMS, Salovey, Mayer, Goldman, Turvey, & Palfau, 1995). The authors describe the Attention subscale as the degree to which individuals tend to notice one's emotions (Salovey, Mayer, Goldman, Turvey, & Palfau, 1995). The Portuguese validation of the TMMS was develop by Queirós, Fernandez-Berroscal, Extremera, Carral and Queirós (2005).

Emotion differentiation

Emotion differentiation is the ability of the individual to recognize and attribute meaning to emotional arousal (Barrett, 2016; Barrett, Mesquita, Oschner & Gross, 2007). It is the mental representation of emotion, i.e., the symbolizing and expanding of physiological activation involving the following processes: (a) recognition and attribution of a meaning to the bodily felt sense, (b) understanding of the causes and consequences of the experienced emotion, (c) understanding of the social function of emotional behavior, and (d) ability to use coping strategies to regulate the physiological activation (Barrett, 2006; 2016).

Difficulties in emotion differentiation could be a part of the etiology of multiple problems, because not knowing what one feels makes it much harder to use feelings as information about one's current situation (Barrett, Gross, Christensen & Benvenuto, 2001; Emery, Simons, Clarke, & Gaher, 2014; Kashdan, Ferssizidis, Collins, & Muraven, 2010).

The Range and Differentiation of Emotional Experience Scale (RDEES, Kang & Shaver, 2004) is the best example of an instrument for self-characterization of emotional complexity (range and ability to differentiate emotion), assessing the degree to which people believe that they experience a broad range of emotional states with subtle distinctions (Lindquist & Barrett, 2008). This scale was validated for Portugal by Machado Vaz (2009).

Emotion intensity

People are very different in the intensity with which they react to emotional stimuli. Those differences introduced research in emotion intensity (Brans & Verduyn, 2014; Dixon-Gordon, Aldao & Reyes, 2015).

Emotion intensity refers to individual differences in the strength with which individuals experience their emotions, revealing the "strength with which different emotions (pleasant as well as unpleasant) are experienced" (Larsen & Diener, 1987, p.2). High emotion intensity is common across different psychological disorders, including depression (Mineka Watson, & Clark, 1998), anxiety disorders (Mineka Watson, & Clark, 1998), eating disorders (e.g., Stice, 2001), schizophrenia (Kring, 2001; Kring & Moran, 2008), substance-related disorders (e.g., Kassel, Stroud & Paronis, 2003), and in some personality disorders (e.g., Berenbaum et al., 2006; Huprich, 2005; Putnam & Silk, 2005).

Emotion intensity is usually measured using the 40-item Affect Intensity Measure (AIM, Larsen & Diener, 1987, p.2). The authors conceptualize emotion intensity as individual differences in the strength with which individuals experience their emotions (Larsen & Diener, 1987) indicating the intensity with which different emotions, pleasant as

well as unpleasant, are experienced. A basic and necessary assumption of Larsen definition is that individuals are prone to experience both pleasant and unpleasant emotions with about the same intensity (Larsen & Diener, 1987).

In order to revise this measure, to enhance its efficiency as a measurement instrument, and to resolve the problem of the factor structure, Geuens and Pelsmacker (2002) developed the Short Affect Intensity Scale (SAIS, 2002), which is equally valid and reliable as the previous scale, but it only includes 20 items.

Emotion regulation

Emotion regulation has received increased attention in recent years in psychology (e.g., Ford & Gross, 2018; Gross, 1998; 2015). Difficulties in emotion regulation are nowadays reported as one of the leading causes for the development and maintenance of psychopathology (e.g., Gross, 2015; Barrett, 2016; 2018). This led to increasing concern regarding the development of evaluation measures of emotion regulation (Gross & John, 2003; Gratz & Roemer, 2004).

To study emotion regulation, Gross and John (2003) developed the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003). Because the ERQ only evaluates two emotion regulation strategies—cognitive reappraisal and emotional suppression— there was a need to design other instruments that could give more information about difficulties in emotion regulation (Gratz & Roemer, 2004). So, Gratz and Roemer developed the Difficulties in Emotion Regulation Scale (DERS, 2004). The DERS was designed to evaluate relevant difficulties of emotional regulation, as described by several theories of emotion regulation, namely (a) Non-Acceptance of Emotional Responses; (b) Difficulties Engaging in Goal-Directed Behavior; (c) Impulse Control Difficulties; (d) Lack of Emotional Awareness; (e) Limited Access to Emotion Regulation Strategies; and (f) Lack of Emotional Clarity (Gratz & Roemer, 2004).

Emotion expression

Emotion expression refers to "behavioral changes that usually accompany emotion, including the face, voice, gestures, posture, and body movement" (Gross, John & Richards, 2000, p. 712). So, emotion expression refers to the outward display of emotions, regardless of valence or channel (facial, vocal, or gestural) (Kring, Smith & Neale, 1994; Sloan & Kring, 2007). This definition brings an essential innovation to the study of emotion expression because does not include which type of emotion is being expressed or how the emotion is expressed (Kring, Smith & Neale, 1994; Sloan & Kring, 2007).

Research in emotional expression identified that emotions could be expressed through several channels (Sloan & Kring, 2007), sometimes at the same time, namely verbal (i.e., vocal cues), nonverbal (i.e., facial or body cues), and physiological (e.g., heart rate, skin conductance) indicating the emotion felt at that moment (Kring & Gordon, 1998; Scherer & Ellgring, 2007; Schirme & Adolphs, 2017).

A good and frequently used self-report measure of emotional expressivity is the Emotional Expressivity Scale (EES; Kring, Smith, & Neale, 1994), a 17-item questionnaire that evaluates the extent to which an individual expresses pleasant and unpleasant emotions (Kring, Smith, & Neale, 1994).

Given the importance of each emotional process, for normal and abnormal development (Fairholme, Boisseau, Ellard, Ehrenreich, & Barlow, 2010; Kring, 2008; 2010), for the understanding of psychopathology (Beauchaine, 2015; Kring, 2008; 2010) and for the outcomes in psychotherapy (Greenberg, 2002a; 2008), psychometrically strong measures have been developed all around the world in order to evaluate each one of them. Although in Portugal we can observe a growing interest in the study of emotions (e.g., for more information about emotion differentiation and emotion regulation measures in Portugal, see

Machado Vaz, 2009), there is a lack of validated instruments for other emotional processes, not allowing the accurate evaluation of all emotional process in Portuguese population.

In Portugal, there already existed validated measures to evaluate the emotion felt (Positive and Negative Affective Schedule [PANAS], Watson, Clark, & Tellegen, 1988; validated by Galinha, & Pais Ribeiro, 2005), emotional attention (Trait Meta Mood Scale, [TMMS], Salovey, Mayer, Goldman, Turvey & Palfai, 1995 validated by Queirós, Fernandez-Berroscal, Extremera, & Queirós, 2005), emotion differentiation (Range and Differentiation of Emotional Experience Scale [RDEES], Kang & Shaver, 2004; validated by Machado Vaz, 2009), and emotion regulation (Emotion Regulation Questionnaire**,** [ERQ] Gross & John, 2003; validated by Machado Vaz, 2009).

Conversely, there was a lack of Portuguese versions of measures for evaluation of other emotional processes, such as emotion intensity and emotion expression. Also, there was a need to validate an instrument for a better evaluation of difficulties in emotion regulation.

The main goal of this study was to validate to a Portuguese sample measures that allowed the evaluation of other emotional processes, crucial to understanding the complexity of all processes involved in emotions, namely emotion intensity and emotion expression and difficulties in emotion regulation.

Therefore, in this study we translated and evaluated the psychometric properties of the Portuguese version of Short Affect Intensity Scale (Geuens & De Pelsmacker, 2002), Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004) and Emotional Expressivity Scale (Kring et al., 1994) in terms of construct validity, internal consistency, temporal stability and gender differences.

Method

Participants

The main goal in selecting the participants for these validation studies was to obtain a representative sample of the Portuguese population and to allow a subsample to complete the same emotional evaluation measures again after a six-month period. Simultaneously, the data were collected in a sample with the same characteristics as the samples used by the original authors when creating the evaluation instruments, namely in terms of age, gender and academic level. Also, the data were also obtained in several different academic degree students to have a more heterogeneous and representative sample.

The sample consisted of 823 subjects (53.94% males) aged between 17 and 72 years (M_{age} = 27.82, *SD* = 9.37). Most of the subjects had completed High School (70.8%) and were single (71.2%). The participants were distributed in all professional groups and the majority of them were Medium Level Technicians (26.6%) and Professional Sellers (20%). To check the temporal stability of the Portuguese version of the SAIS, DERS and EES, six months after the first administration, a subsample (n = 111) was contacted again so these instruments could be completed a second time, for a test-retest evaluation. This subset of individuals (57.65% males) aged from 18 to 50 years (M = 23.85, *SD* = 6.68) and most of them were single (87.4%). All of the subjects had completed High School (100%).

Characteristics of the whole sample and retest subsample are shown in Table 1.

Table 1

Socio-Demographic Characteristics of the Test Sample and the Retest Subsample

	Test sample (*N* = 823)		Retest sample (*n* = 111)	
Age	*M* = 27.82 (*DP* = 9.37)		*M* = 23.85 (*DP* = 6.68)	
Characteristic	*n*	%	*n*	%
Sex				
Male	444	53.90	64	57.6
Female	384	46.10	47	40.3
Marital status				
Single	586	71.21	97	87.37
Married	199	24.26	14	12.63
Cohabiting	11	1.32		
Divorced	24	2.90		
Widowed	3	0.40		
Education level completed				
Basic education[a]	133	17.50		
High school	542	70.80	111	100
University degree	76	9.97		
Postgraduate degree	10	.13		
Profession[b]	*n*	%	*n*	%
Directors, public administrators, managers	37	9.71	9	3.81
Intellectual and scientific professions	61	16.64	1	3.84
Medium Level Technicians	101	26.62	9	16.83
Office occupations and similar	57	15.03	7	10.93
Professional Sellers	76	20.00	9	8.83
Table 1. Continued				

	Test sample (N = 823)		Retest sample (n = 111)	
Profession[b]	*n*	%	*n*	%
Farmers and qualified workers in agriculture and fishing	1	.37		
Builders, technicians and similar workers	23	6.16	2	0.46
Repairer and construction workers	11	2.98		
Non-qualified workers	9	2.48		

[a]Up do 9 years. [b]According to the Portuguese Institute for Employment and Professional Training (IEFP)

Measures

Short Affect Intensity Scale *(SAIS,* Geuens, & De Pelsmacker, 2002)

One of the most important features in studying emotions is the evaluation of the intensity or magnitude of the emotion felt (Larsen & Diener, 1987). Emotional intensity is usually measured using the 40-item Affect Intensity Measure, an inventory intended to tap individuals' habitual affect intensity (Larsen & Diener, 1987).

Geuens and De Pelsmacker (2002) revised the above scale and reduced it to a shortened version (20 items) and called Short Affect Intensity Scale (SAIS, Geuens & De Pelsmacker, 2002). This allowed to enhance its efficiency as a measurement instrument and to resolve some problems that occurred in the original version, while providing equally valid and reliable data (Geuens & De Pelsmacker, 2002). SAIS is a self-report measure, with 20-item, developed by Geuens and De Pelsmacker (2002). The items require participants to indicate how often they feel in a certain way, with responses ranging from 1 (“I never feel like that”) to 6 (“I always feel like that”). The factor structure of the 20-item SAIS was evaluated by conducting principal component analysis. Three interpretable factors emerged: (a) Positive Intensity (8 positive items of strong feelings of happiness, elation, ecstasy, and energy); (b)

Negative Affectivity (6 items of non-adaptive emotions such as the experience of anxiety, tension, and nervousness, and unpleasnat emotional reactions such as being deeply affected by the sight of someone who is hurt, or feeling sick after looking at a picture of a violent car accident); and (c) Serenity (6 items describing pleasant emotions such as calm, content, being relaxed and peaceful) (all reversed items). Coefficient alphas on the scores on the total (α = .88), as well as on the subscales (α = .84, α =.74, and α = .85 for factors a, b, and c respectively), were high, indicating adequate internal reliability (Geuens & De Pelsmacker, 2002).

SAIS has been translated and the psychometric properties were evaluated in other countries including Sweden (Simonsson-Sarnecki, Lars-Gunnar, Lundh, Bertil, & Torestad, 1999). Also, translations for other languages have also been carried out though psychometric data is yet to be available (e.g., German, Spanish, Italian, Croatian).

Difficulties in Emotion Regulation Scale (DERS, Gratz and Roemer; 2004)

Although there is some research on the role of emotion regulation deficits in psychopathology (e.g.; Barret, 2016; Kring 2008; 2010), there's still an absence of comprehensive measures that adequately assess the complexity of this construct among adults (Gratz & Roemer, 2004). Considering the relevance of exploring difficulties of emotion regulation on patients, Gratz and Roemer (2004) developed the DERS, a self-report measure, based on a comprehensive and integrative conceptualization of emotion regulation.

The DERS (Gratz and Roemer, 2004) was created to evaluate difficulties of emotion regulation as described by different models of emotion regulation. The DERS includes 36 items that require participants to indicate how often each item applies to themselves, with responses ranging from 1 (almost never) to 5 (almost always). Following exploratory factor-analytic procedures, six interpretable factors reflecting the multifaceted nature of emotion regulation emerged: (a) Non-Acceptance of Emotional Responses, with items reflecting a

tendency to have negative secondary emotional responses to one's negative emotions, or non-accepting reactions to one's distress; (b) Difficulties Engaging in Goal-Directed Behavior, with items reflecting difficulties concentrating and accomplishing tasks when experiencing emotions with negative valence; (c) Impulse Control Difficulties, with items reflecting difficulties remaining in control of one's behavior when experiencing unpleasant emotions; (d) Lack of Emotional Awareness, with items reflecting the tendency to attend to and acknowledge emotions, or if reversed scored, reflects an inattention to, and lack of awareness of, emotional responses; (e) Limited Access to Emotion Regulation Strategies, with items reflecting the belief that there is little that can be done to regulate emotions effectively once an individual is upset; and (f) Lack of Emotional Clarity, with items reflecting the extent to which individuals know and are clear about the emotions they are experiencing.

Gratz and Roemer (2004) reported that the six factors were correlated with one another. The DERS was found to have high internal consistency (α = .93) as were each of the subscales, with Cronbach's alpha higher than .80 for each. Preliminary data also support the measure's construct validity. Total DERS and each subscale demonstrated good test-retest reliability over a period ranging from 4 to 8 weeks (r = .80). Despite some limitations (e.g. DERS focuses solely on regulation of emotions with an unpleasant valence), the data shows that DERS is a good measure to evaluate emotion deregulation and can be very helpfull in psychotherapy, for therapists to evaluate their patients.

Recently, the DERS was translated to other languages including French (Glauser & Scherer, 2013) Spanish (Hervás & Jódar, 2008), Greek (Mitsopoulou, Kafetsios, Karademas, Papastefanakis & Simos, 2013) Dutch (Neumann, A., van Lier, Gratz & Koot, 2010), Chinese (Wang, Liu, Du, & Zhongquan, 2007), Italian (Sighinolfi, Pala, Chiri, Marchetti & Sica, 2010), Hindi (Saxena, 2011), Japanese (Yamada & Sugie, 2012) and Turkish (Ruganci & Gençoz, 2010).

Emotion Expressivity Scale (EES, Kring, Smith & Neale, 1994)

Emotion expressiveness is enjoying a renewed interest in psychology with a lot of research evaluating expressivity in normal development and in psychopathology (Gendron & Barret, 2009).

In the need for a general measure of expressivity, Kring, Smith and Neale (1994) developed the Emotion Expressivity Scale (EES). This 17-item questionnaire is based on the definition of emotional expressiveness as the extent to which people outwardly display their emotions (Kring et al., 1994). Respondents evaluate statements such as “I don’t express my emotions to other people” and “I think of myself as emotionally expressive” on a 7-point Likert-type scale ranging from 1 (never true) to 6 (always true) (Kring et al., 1994).

EES has high internal consistency (average alpha of .91 across seven samples), and four-week test–retest reliability reported at .90 (Kring et al., 1994). The EES has also shown to convergent and discriminant validity based on both self-report, other report, and observational methods of assessment (Kring et al., 1994). For both t samples, women scored significantly higher than men (Kring et al., 1994).

Procedure

The Portuguese versions of three emotional measures were used in this study, namely: SAIS (Geuens & De Pelsmacker, 2002), DERS (Gratz & Roemer, 2004) and EES (Kring et al.1994). After guaranteeing the permission from the original authors of each measure, all were translated into Portuguese by a bilingual clinical psychologist and then translated back into English by an independent translator. Discrepancies emerging from each back-translation were discussed and minor adjustments to the Portuguese translations on the three me asures were made.

This first study of the three measures' validation was carried out with an adult non-clinical population. The subjects were randomly selected from 12 Portuguese Universities and Technical Schools, so we could obtain data from students with different cultural backgrounds and different academic levels. The aim was also to obtain a sample similar to the one used by the authors in the development and validation of the three instruments.

Subjects were informed both verbally and in paper about the purposes of the study. Confidentiality was granted. In addition to EES, SAIS and DERS subjects also completed socio-demographic questionnaire, with questions on gender, age, educational level, and marital status. To assess the test-retest reliability, a subsample of 111 subjects was contacted six months later and completed the three measures for a second time.

Data analysis strategy

SPSS (Version 17.0) and Bentler's (1995) EQS version 6.1 were used to analyze the data. Data analysis strategy was the same as the one from the original studies, so the results obtained would not differ due to the use of different analysis.

To evaluate the construct validity of the Portuguese version of each measure, a principal component factorial analysis with specific rotation was performed. Both Kaiser-Meyer-Olkin's measure and Bartlett's sphericity test were evaluated to attend the factorability of the data. Factors were extracted, according to the scree plot and to each author's original structure.

Internal consistency was evaluated by computing Cronbach's alpha for each subscale and the total score of each instrument. Item-total correlations were also computed.

A first-order confirmatory factor analysis (CFA) was performed for the three instruments to assess the fit of theoretical models supporting constructs to the data.

First, all three instruments were tested for local adjustment, i.e., the items of each dimension were tested in a first order model using the latter as a latent variable to check for

the significance of each item to its latent factor ($p \leq .05$) using the measurement equations values. Then item parcels were built in order to perform the reflective first order confirmatory factor analyses, i.e., to build randomly composite item indicators. Although still in debate (Coffman & MacCallum, 2005; Meade & Kroustalis, 2005), there is a robust theoretical framework that supports it (e.g., Bandalos & Finney, 2001; Holt, 2004). The parceling procedure increases the parameters stability and enhanced the relationship between the number of parameters to be estimated and the sample size.

Parcels were built so that there were three indicators per subscale. However, in the case of five-, four-, and two-item subscales, different procedures were followed. Hence, subscales with five items were built with two parcels and one single item, and subscales with four items were built with one parcel and two single items.

In the case of SAIS the parcelled items were reflective indicators of the three latent factors when the first-order confirmatory factor analysis was performed. All CFA's present the fit indices for the Model chi-square, Model degrees of freedom and significance value (*p*), the Bentler Comparative Fit Index (CFI; Bentler, 1990); the Steiger-Lind Root Mean Square Error of Approximation (RMSEA; Steiger, 1990) with its 90% confidence interval and the Standardized Root Mean Square Residual (SRMR).

For each instrument, temporal stability was also evaluated, six months after the first administration.

Gender differences were evaluated using Independent samples *t*-tests.

Results

Short Affect Intensity Scale

Construct Validity

To assess the construct validity of the Portuguese version of the SAIS, the data analysis strategy selected was the same as the one from the original study, so the results obtained wouldn't differ due to the use of different analysis. An exploratory factor analysis using the Principal Component Method with Varimax rotation was performed. Both Kaiser-Meyer-Olkin's measure (= 0.85) and Bartlett's sfericity test (p<.001) attested the factorability of the data. Three factors were extracted, according to the scree plot and according to the author's original structure, explaining 50.72% of the variance. Table 2 presents the items distributed by the three factors as well as the variance explained by each factor.

Table 2.

Principal Component Analysis and Internal Consistency of Portuguese version of the SAIS

Items	Components		
	1	**2**	**3**
1. When I feel happy, it is a strong type of exuberance.	**.64**	-.11	.06
2. My happy moods are so strong that I feel like I'm in heaven.	**.68**	-.09	-.00
3. If I complete a task I thought was impossible, I am ecstatic	**.59**	-.05	.20
4. When I'm feeling well, it's easy for me to go from being in a good mood to being really joyful	**.60**	.06	.05
5. When I'm happy, I feel like I'm bursting with joy	**.78**	-.07	.15
6. When I'm happy, I feel very energetic	**.68**	.07	.13
7. When things are going good, I feel "on top of the world"	**.66**	-.09	.06
8. When I'm happy, I bubble over with energy	**.65**	.04	.13
9. Sad movies deeply touch me	.13	.06	**.45**

Table 2 Continued

Items	Components		
	1	2	3
10. When I talk in front of a group for the first time, my voice gets shaky and my heart races	.11	.10	**.58**
11. When I do something wrong, I have strong feelings of shame and guilt	.09	.05	**.76**
12. When I do feel anxiety, it is normally very strong.	.05	-.02	**.74**
13. When I feel guilty, this emotion is quite strong.	.14	.04	**.77**
14. When I feel guilty, this emotion is quite strong.	.08	.04	**.73**
15. When I'm happy, it's a feeling of being untroubled and content rather than being zestful and aroused	.08	**.52**	.21
16. When I succeed at something, my reaction is calm and contentment	-.07	**.78**	.04
17. When I know I have done something very well, I feel relaxed and content rather than excited and elated	-.02	**.81**	.01
18. When I feel happiness, it is a quiet type of contentment	-.04	**.85**	.05
19. I would characterize my happy moods as closer to contentment than joy	-.04	**.68**	.01
20. When I am happy, the feeling is more like contentment and inner calm than one of exhilaration and excitement	-.13	**.80**	.05
Eigen value	3.67	3.48	2.99
% Variance	18.36	17.39	14.95
Cronbach's Alpha	.82	.77	.84

Note. In bold the factorial items' loadings accordingly with the final structure

The first factor groups' items 1, 2, 3, 4, 5, 6, 7 and 8 matching the Positive Intensity subscale. The second factor integrates items 9, 10, 11, 12, 13 and 14 matching the Negative Affectivity subscale and the third factor includes the items 15, 16, 17, 18, 19 and 20, corresponding to the original Serenity subscale. These results show the direct equivalence between the Portuguese version of SAIS and the original version of the questionnaire.

Internal consistency

Cronbach's Alpha was calculated to determine the internal consistency of the Portuguese version of SAIS. Results indicate that the Portuguese version of SAIS had high internal consistency (α =.78). Item-total correlations ranged from r = .34 to r = 0.75. All items had item-total correlations above r = .30.

Also, all of the three SAIS subscales had adequate internal consistency. Cronbach's Alpha for Positive Intensity factor reached .83, Negative Affectivity factor was .78 and, factor Serenity reached .85.

Confirmatory Factor Analysis

The SAIS three dimensions' first order factor structure presented acceptable fit indexes, namely, χ^2/df [97.35]=24, <.001; CFI= .97, SRMR = .04, RMSEA= .06, 90% CI_{RMSEA} [.05, .07].

All indicators' loadings for the measurement equation presented significance ($p \leq .05$) for their latent factors Positive Intensity (IP), Negative Intensity (IN) and Serenity (SE). All indicators loaded positively to their respective latent factor, as expected. Item loadings (standardized beta scores) were relatively balanced for the IP latent factor (between .83 and .71) although for IN (between .53 and .84) and for SE (between .72 and .90) these values were a little unbalanced (between .55 and .70). The correlation between factors replicates the original model. For the association between IP and IN there was a significant positive and moderate correlation (*corr*(IP, IN) =.34, p ≤ .05), between IP and SE the association was positive and significant (*corr*(IP, SE) = .09, p ≤ .05), and finally, between IN and SE there was a significant and negative correlation (*corr*(IN, SE) = -.12, p ≤.05). See Figure 1 for a detailed summary.

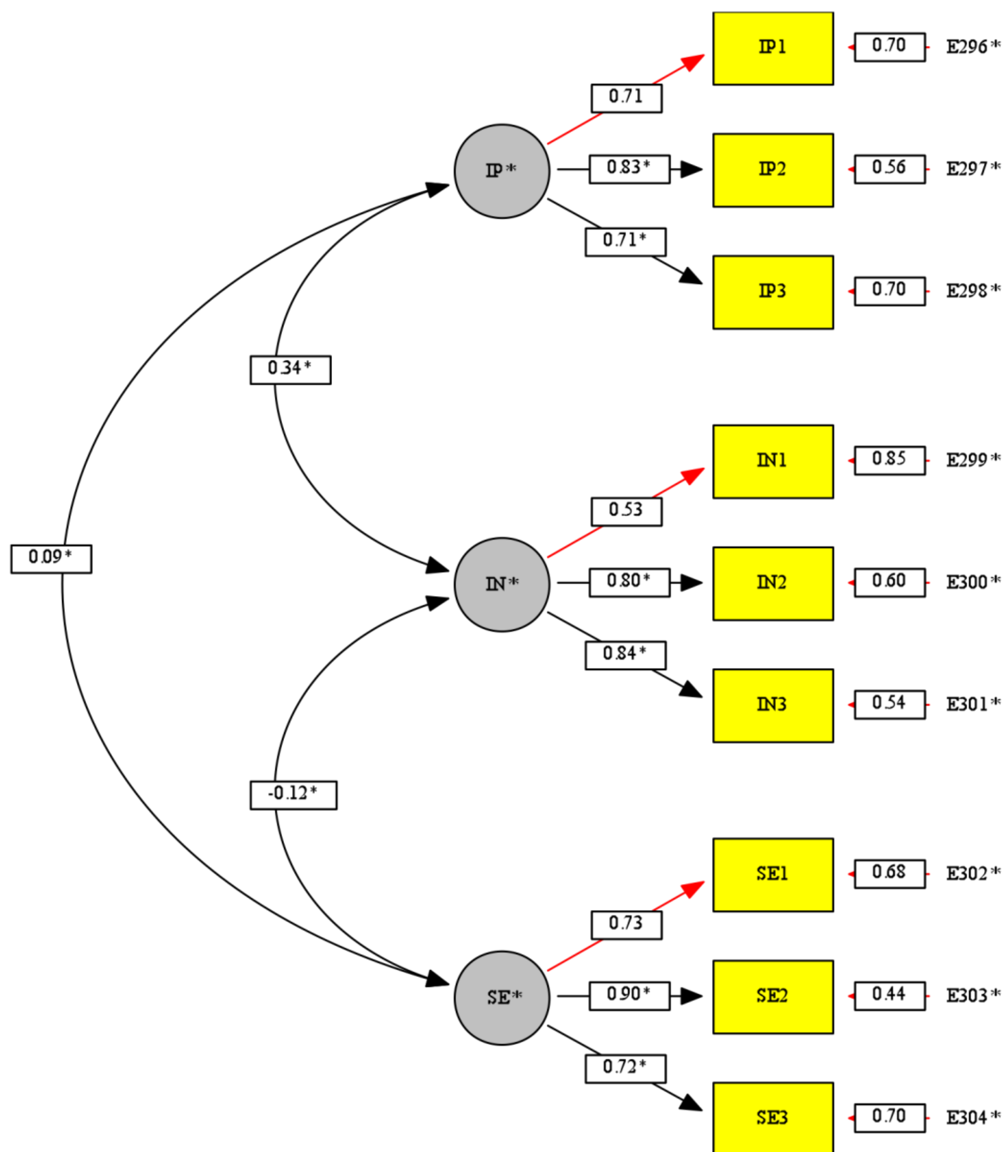


Figure 1. First-order confirmatory factor analysis for Short Affect Intensity Scale with values for beta standardized item loadings, standard errors and correlations between latent factors. Measurements scale loadings significant at p ≤. 05. IP1 to IP3 = parcels for Positive Intensity; IN1 to IN3 = parcels for Negative Intensity; SE1 to SE3 = parcels for Serenity; *Free parameters. In red the fixed parameter (1.00) for establishing the model metrics

Test-Retest Reliability

To check the temporal stability of the Portuguese version of the *SAIS*, a retest was administered in 110 adults six months after the first administration.

Table 3.

Test-retest Reliability of the Portuguese version of the *SAIS*

	Retest (6 months later)			
	Positive intensity	*Negative Intensity*	*Serenity*	*SAIS*
Positive intensity	.39**			
Negative Intensity		.51**		
Serenity			.36**	
SAIS				.53**

Note. ** $p < .001$

As shown in Table 3, the correlations between the factors in the two moments were all positive and statistically significant, as expected. The test-retest correlation ranged between .36 for the *Serenity* subscale and .53 for the Total scale.

Gender Differences

Mean scores for women and men on the overall SAIS as well as each subscale and *t*-values for the *t-test* are shown in Table 4.

Table 4.

Gender differences in Positive Intensity, Negative Intensity, Serenity and SAIS

	Males (n=444)		Females (n=384)		
	M	*SD*	*M*	*SD*	*t*
Positive Intensity	29.54	4.90	30.44	5.05	2.58**
Negative Affectivity	19.41	4.42	22.10	4.46	8.65***
Serenity	14.90	4.45	14,82	4.77	-.27
Total SAIS	63.87	8.29	67.36	9.25	5.72***

Note. Total SAIS = Total Short Affect Intensity Scale; **p < .001; ***p < .000

Women evidenced significant greater positive intensity (M = 30.44, SD = 5.05) than men (M = 29.54, SD = 4.90), $t(826) = 2.58$, p <.01 and described themselves with high negativity affectivity comparing to men (M = 22.10, SD= 4.46 *vs* .M = 19.41, SD = 4.42), $t(826) = 8.65$, p < .00. As for the serenity subscale, there were no gender differences. For the overall SAIS, women (M = 29.54, SD= 4.90) had significant higher scores than men (M = 29.54, SD= 4.90), $t(826) = 2.58$, p <.001.

Discussion

The main purpose of this study was to assess the psychometric properties of the Portuguese translation of the SAIS (Geuens & De Pelsmacker, 2002) regarding its construct validity, reliability and gender differences. Our results replicate, in a large Portuguese adult sample, the three-factor structure that underlies the original *SAIS* version. These results are supported by both an initial exploratory factorial analysis as well as a confirmatory factor analysis, whose fit indexes suggest that the three-factor model represents an acceptable solution to *SAIS*.

The reliability of the Portuguese version of the *SAIS* was assured both in terms of internal consistency and temporal stability. In fact, for the three subscales of the *SAIS* the Cronbach's alphas were acceptable. Although lower than the one from the original study, the test-retest reliability across six months was moderate, meaning that the use of these emotion intensity measures was stable over time. Finally, in the same line as Geuens and De Palmacker (2002) results, gender differences were found regarding the positive affectivity, negative intensity subscales and for the overall SAIS, with women reporting higher than men.

In summary, the results of the current study support the validity and reliability, highlighting the quality of the Portuguese version of the *SAIS*. Considering that *SAIS* is already translated and the psychometric properties evaluated in other countries (e.g. Sweden; Simonsson-Sarnecki, Lars-Gunnar Lundh, Bertil, & Torestad, 1999) and has been widely used all over the world (e.g., Germany, Spain, Italy, Croatia), transcultural studies comparing the use of emotion intensity strategies may follow. In addition, in future studies, its use with normative and clinical samples, may provide an opportunity for comparing those populations regarding their emotion intensity.

Difficulties in Emotion Regulation Scale

Results

Construct Validity

A Principal Component Analysis with a Promax oblique rotation was performed and both Kaiser-Meyer-Olkin's measure (0.95) and Bartlett's sfericity test ($p < .001$) attested the factorability of the data. Just like the original version of the instrument, six factors were extracted explaining 59.64% of the variance. Table 5 presents the items distributed by the six factors as well as the variance explained by each factor.

Table 5.

Principal Component Analysis and Internal Consistency of the Portuguese Version of Difficulties in Emotion Regulation Scale

	Components					
	1	**2**	**3**	**4**	**5**	**6**
1. I am clear about my feelings	.01	**.67**	.04	-.05	-.16	-.03
2. I pay attention to how I feel	-.07	**.81**	.09	-.04	-.01	-.14
3. I experience my emotions as overwhelming and out of control	.46	.28	**.54**	-.04	.06	-.11
4. I have no idea how I am feeling	.37	.16	**.64**	-.15	.03	.05
5. I have difficulty making sense of my feelings	.33	-.10	**.66**	-.05	-.00	.06
6. I am attentive to my feelings	-.01	**.76**	-.06	-.04	-.09	-.01
7. I know exactly how I am feeling	.11	**.71**	-.22	-.14	.09	.08
8. I care about what I am feeling	.00	**.66**	-.11	.08	.19	.00
9. I am confused about how I feel	-.08	-.10	**.57**	.15	.20	.08
10. When I'm upset, I acknowledge my emotions	-.07	**.50**	-.11	.20	.10	.37
11. When I'm upset, I become angry with myself for feeling that way	-.16	.10	.14	.22	**.64**	.04
12. When I'm upset, I become embarrassed for feeling that way	.46	.09	.36	.00	**.54**	-.05
13. When I'm upset, I have difficulty getting work done	.33	.00	.17	**.55**	.22	-.15

Table 5. Continued

	Components					
	1	**2**	**3**	**4**	**5**	**6**
14. When I'm upset, I become out of control	**.64**	.06	.44	.00	.06	-.04
15. When I'm upset, I believe that I will remain that way for a long time	**.75**	.00	.05	-.01	.04	-.01
16. When I'm upset, I believe that I'll end up feeling very depressed	**.70**	-.01	-.01	.01	.13	-.04
17. When I'm upset, I believe that my feelings are valid and important	.27	.31	-.02	**.34**	-.26	.37
18. When I'm upset, I have difficulty focusing on other things	.42	-.01	-.08	**.67**	.04	-.07
19. When I'm upset, I feel out of control	**.64**	-.01	.41	.03	.03	-.04
20. When I'm upset, I can still get things done	.24	.00	.00	-.29	-.02	**.73**
21. When I'm upset, I feel ashamed with myself for feeling that way	.54	.00	.15	-.14	**.49**	.07
22. When I'm upset, I know that I can find a way to eventually feel better	-.32	.04	.24	.07	.12	**.70**
23. When I'm upset, I feel like I am weak	**.63**	-.04	-.08	.01	.39	-.01
24. When I'm upset, I feel like I can remain in control of my behaviors	-.02	-.10	-.07	-.04	.09	**.74**
25. When I'm upset I feel guilty for feeling that way	**.60**	.01	.05	-.01	.47	.04
26. When I'm upset, I have difficulty controlling my behaviors	**.63**	-.01	.30	.18	.04	-.08

Table 5. Continued

	Components					
	1	**2**	**3**	**4**	**5**	**6**
27. When I'm upset, I have difficulty controlling my behaviors	**.63**	-.01	.30	.18	.04	-.08
28. When I'm upset, I believe that there is nothing I can do to make myself feel better	**.75**	-.03	-.00	-.02	.00	-.00
29. When I'm upset, I become irritated with myself for feeling that way	.53	-.02	-.13	.06	**.56**	.09
30. When I'm upset, I start feel bad about myself	**.70**	-.04	-.16	.00	.43	.07
31. When I'm upset, I believe that wallowing in it is all I can do	**.70**	.11	.07	-.04	-.23	.04
32. When I'm upset, I lose control over my behaviors	**.67**	-.07	.41	.01	-.05	.02
33. When I'm upset, I have difficulty thinking about anything else	.56	-.07	-.11	**.57**	-.01	-.09
34. When I'm upset, I take time to figure out what I'm really feeling	-.00	.07	.18	.40	-.09	**.40**
35. When I'm upset, it takes me a long time to feel better	**.72**	-.04	-.11	.31	-.09	.04
36. When I'm upset, my emotions feel overwhelming	**.72**	.04	.01	.18	-.09	-.03
Eigenvalue	12.25	4.06	1.61	1.31	1.17	1.04
% Variance	34.04	11.28	4.47	3.66	3.27	2.91

(*Note*. In bold the factorial items' loadings accordingly with the final structure)

The first factor groups' items 15, 16, 22, 28, 30, 31, 35 and 36 matching the Limited Access to Emotion Regulation Strategies subscale. The second factor integrates items 2, 6, 8, 10 almost matching the Lack of Emotional Awareness subscale. The third factor includes the items 3, 14, 19, 32 and almost corresponds to the original Impulse Control Difficulties subscale. The fourth factor has the same structure as the one from the original version, containing items 13, 18, 20, 26, 33, representing the original Difficulties Engaging in Goal-Directed Behavior subscale. The fifth factor integrates the items of Non-Acceptance of Emotional Responses (items 11, 12, 21, 23, 25, 29) subscale, equal to the original version of DERS. The last factor integrates items 20, 22, 24 e 34 not matching any subscale equal to the original version of the instrument.

The items of Emotional Clarity subscale are scattered in factors 2 and 3.

Confirmatory Factor Analysis

Due to some problems in Principal Component Analysis (e.g. some items didn't load in the original factor), we decided, just like the authors, to test whether the factor structure of the DERS in our Portuguese sample was equivalent to the structure found for adults using a Confirmatory Factor Analysis (CFA).

Several criteria were used for determining the goodness-of-fit to the data for the postulated structure of *DERS*. These included the Comparative Fit Index (CFI; Bentler, 1990), the standard root mean squared residual (SRMR), and the Root Mean Error of Approximation (RMSEA; Browne & Cudeck, 1992), along with its 90% confidence interval. The traditional criteria in terms of model-fitness judgments were adopted, namely .90 for the CFI fit index (Hu & Bentler, 1999), and less than .08 for the RMSEA (Browne &Cudeck, 1992). Six latent variables were specified, corresponding to the six subscales of the DERS, which were allowed to correlate.

The DERS six dimensions' first order factor structure presented acceptable fit indexes, namely, χ^2/df [1650.35]=417,*p*<. 001; CFI=.91, SRMR = .07, RMSEA=.06, 90% CI_{RMSEA} [.06, .06] suggesting that the structure of the DERS in portuguese adults is equivalent to that found among the original authors.

All indicators loaded positively for the measurement equation presented significance (p ≤ .05) for their latent factors *Non-Acceptance of Emotion Response* (NER), *Difficulties Engaging in Goal Directed Behavior* (DEGB), *Impulse Control Difficulties* (ICD), *Lack of Emotional Awareness (*LEA), *Limited Access to Emotion Regulation Strategies* (LER) and *Lack of Emotional Clarity* (LEC).

The analysis of correlation matrix showed us that items 1, 7, 20, 22 and 24 were misunderstood by the subjects so we decided to take them off.

The correlation between factors replicates the original model. For the association between NER and DEGB there was a significant positive and high correlation (*corr*(NER, DEGB) =.76, p ≤ .05), between DEGB and ICD the association was positive and significant (*corr*(DEGB, ICD) = .76, p ≤ .05), between ICD and LEA the association was positive but moderate and significant (*corr*(ICD, LEA) = .15, p ≤ .05), between LEA and LER the association was positive but also moderate and significant (*corr*(LEA, LER) = .22, p ≤ .05) and finally, between LER and EC there was a significant and positive correlation (*corr*(LER, EC) = .68, p ≤.05). See Figure 2 for a detailed summary.

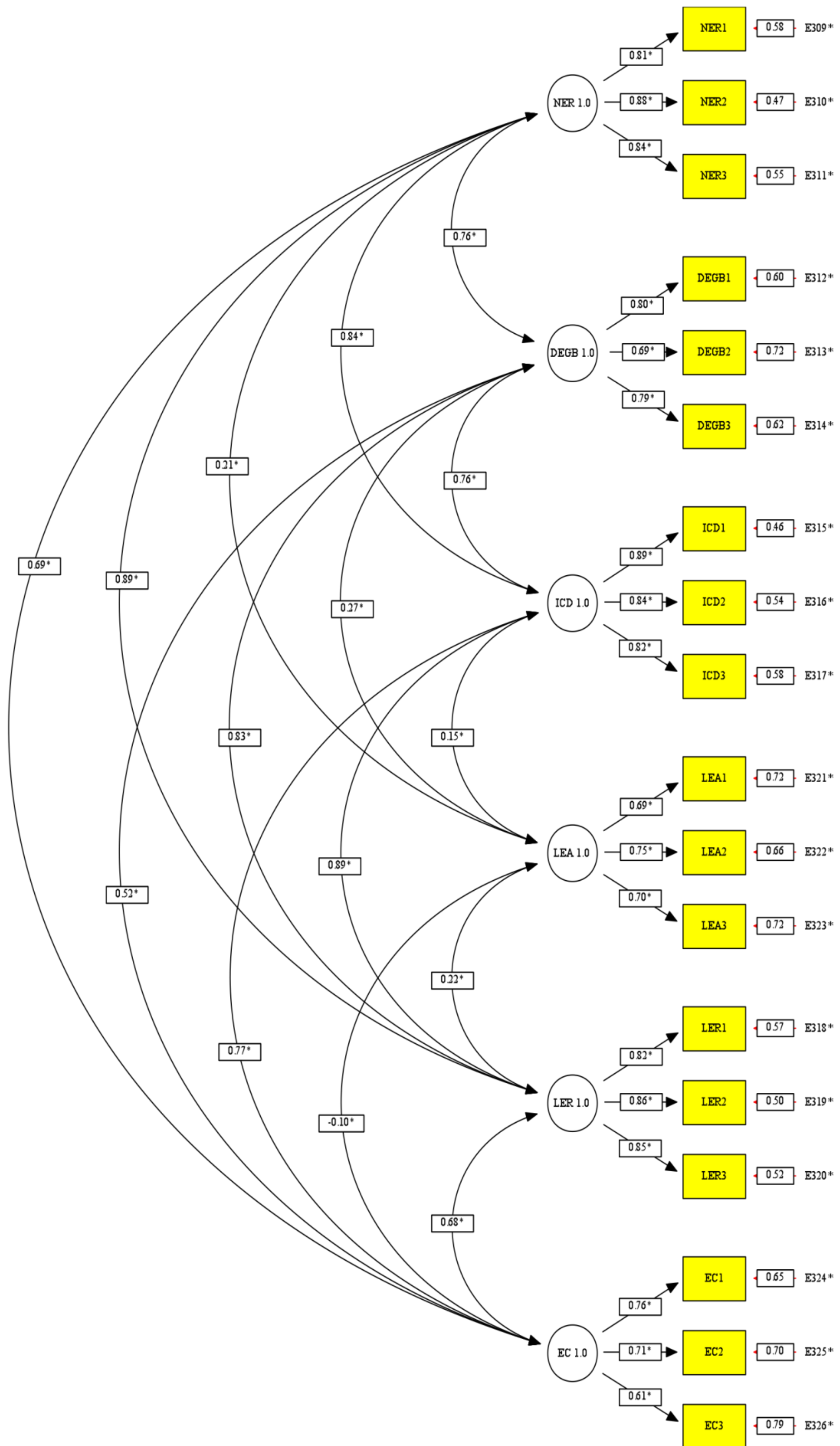

NER1
NER2
NER3
0.58
0.47
0.55
E309*
E310*
E311*
0.81*
0.88*
0.84*
NER 1.0
0.76*
DEGB1
DEGB2
DEGB3
0.60
0.72
0.62
E312*
E313*
E314*
0.80*
0.69*
0.79*
DEGB 1.0
0.84*
0.21*
0.76*
ICD1
ICD2
ICD3
0.46
0.54
0.58
E315*
E316*
E317*
0.89*
0.84*
0.82*
ICD 1.0
0.69*
0.89*
0.37*
0.15*
0.83*
LEA1
LEA2
LEA3
0.72
0.66
0.72
E321*
E322*
E323*
0.69*
0.75*
0.70*
LEA 1.0
0.89*
0.52*
0.22*
LER1
LER2
LER3
0.57
0.50
0.52
E318*
E319*
E320*
0.83*
0.86*
0.85*
LER 1.0
0.77*
-0.10*
0.68*
EC1
EC2
EC3
0.65
0.70
0.79
E324*
E325*
E326*
0.76*
0.71*
0.61*
EC 1.0

Figure 2. First-order confirmatory factor analysis for DERS with values for beta standardized item loadings, standard erros and correlations between latent factors. Measurements scale loadings significant at p ≤. 05. N1 to N3 = parcels for *Non-Acceptance of Emotional Responses*; DEGDB1 to DEGDB3 = parcels for *Difficulties Engaging in Goal-Directed Behaviour*; LEA1 to LEA3 = parcels for *Lack of Emotional Awareness;* LEE1 to LEE3 = parcels for *Limited Access to Emotion Regulation Strategies;* EC1 to EC3 = parcels for *Impulse Control*; *Free parameters.

Internal consistency

To assess the internal consistency of DERS and of the six subscales in Portuguese population, alpha coefficients were computed, the outcomes which are given in Table 6.

Table 6

Internal consistency of DERS subscales

Non-Acceptance of Emotional Responses	.86
Difficulties Engaging in Goal-Directed Behaviour	.83
Impulse Control Difficulties	.88
Lack of Emotional Awareness	.74
Limited Access to Emotion Regulation Strategies	.87
Lack of Emotional Clarity	.73

Results indicated that the Portuguese version of DERS had high internal consistency (α = .91). Alpha coefficients of the various subscales were also calculated and are good to very good (in most cases well over .70 and in many cases even over .80). Even the lowest values, like .65 for *Lack of Emotional Clarity* is still acceptable when the number of items per scale is considered.

Item-total correlations ranged from r = .30 to r = .88. All items had item-total correlations above r = .30.

Test-Retest Reliability

The Portuguese version of *DERS* demonstrated significant test-retest reliability over a period of six months (.61).

Table 7.

Test-retest Reliability of the Portuguese version of the DERS

	Retest (6 months later)					
	Non-Acceptance of Emotional Responses	*Difficulties Engaging in Goal-Directed Behaviour*	*Impulse Control Difficulties*	*Lack of Emotional Awareness*	*Limited Access to Emotion Regulation Strategies*	*Lack of Emotional Clarity*
Non-Acceptance of Emotional Responses	.22**					
Difficulties Engaging in Goal-Directed Behaviour		.45**				
Impulse Control Difficulties			.33**			
Lack of Emotional Awareness				.39**		
Limited Access to Emotion Regulation Strategies					.36**	
Lack of Emotional Clarity						.41**

Note $^{**}p<.001$

As shown in Table 7, the correlations between the factors in the two moments were all positive and statistically significant for each subscale.

Gender differences

Table 8 presents the mean scores for men and women on the overall DERS as well as for each subscale and *t* values for the *t-test*.

Table 8.

Gender Differences in total DERS and in all Subscales

	Males (N = 444) Mean (SD)	Females (N = 384) Mean (SD)	*t*
Non-Acceptance of Emotional Responses	14.22 (5.21)	13.91 (5.35)	-.68
Difficulties Engaging in Goal-Directed Behavior	13.24 (3.61)	13.43 (3.61)	.92
Impulse Control Difficulties	15.92 (5.62)	15.12 (5.09)	-2.27*
Lack of Emotional Awareness	16.64 (3.89)	16.54 (4.52)	-.35
Limited Access to Emotion Regulation Strategies	16.74 (5.64)	15.73 (5.34)	-2.78***
Lack of Emotional Clarity	11.93 (3.40)	11.44 (3.36)	-2.05*
DERS	88.51 (20.09)	86.01 (19.32)	- 1.82

Note

* p <.005; ** p <.01; *** p <.00

Significant mean differences were found in three subscales of DERS.

Men revealed significant higher values comparing to women in *Impulse Control Difficulties* (M= 15.92, SD= 5.62 *vs.* M= 15.12, SD= 5.09), $t(826) = -2.27$, $p < .05$ and in

Limited Access to Emotion Regulation Strategies (M= 16.74, SD= 5.64 *vs.* M= 15,73, SD= 5.34), $t(826) = -2.78$, $p < .01$. Men also described themselves with less ability to know the emotions they usually fell, reporting higher values than women in *Lack of Emotional Clarity* (M= 11.93, SD= 3.40 *vs.* M= 11.44, SD= 3.36), $t(827) = -2.05$, $p < .05$.

Discussion

The aim of the present work was to validate the Portuguese version of the DERS. The original instrument was translated and backtranslated for adjustment of some items. The structure and reliability analyses were performed with a large sample of adults, with very satisfying results.

So, the factor structure of the DERS previously established among the original English sample was replicated in our Portuguese sample. Findings from CFAs revealed that the structure of the DERS in Portuguese adults is equivalent to that previously found for the population used among the original study (Gratz & Roemer, 2004). Furthermore, the internal consistency coefficients of the factors were acceptable to high and comparable with those reported by Gratz and Roemer (2004) in their adult sample.

Test-retest reliability for the full scale was found to be fairly high and identical to what was found by Gratz and Roemer (2004). The different subscale scores were also reproducible over a period of time of six months (with *p* values over .67), indicating significant agreement between the two periods. Items 1, 2, 22 and 24 and all items of the scale *Lack of Emotional Awareness* must be use carefully. These items are all the reversed items from the scale, so this might be the consequence of a misinterpretation of these items. This last result with the scale *Lack of emotional awareness* was also found for the original English version and also in the French validation (Dan-Glauser & Scherer, 2013).

Gender differences were found with men revealing higher *Impulse Control Difficulties, Limited Access to Emotion Regulation Strategies* and *Lack of Emotional Clarity* comparing to women.

Further investigations should be carried out to assess the DERS Portuguese validation in other samples (e.g., in children and adolescents).

Nonetheless, the successful analyses presented in this paper offer the opportunity to reliably use the Portuguese version of the DERS, which can benefit both patients and researchers.

Considering that *DERS* is already validated in several countries (e.g. Spain, Grece, Germany, China, India, Japan and Turky) and has been widely used all over the world, transcultural studies comparing the use of difficulties in emotion regulation may follow.

In addition, in future studies, its use with normative and clinical samples, may provide an opportunity for comparing those populations in terms of their difficulties in emotion regulation.

Emotional Expressivity Scale

Results

Construct Validity

To assess the construct validity of the Portuguese version of EES (Kring et al., 1994), a Principal Component Analysis with a Varimax rotation was performed. Kaiser-Meyer-Olkin's measure (.89) and the Bartlett's sfericity test [χ^2 (136) = 5039.4, p <. 001] attested the factorability of the data and one factor was extracted explaining 33.5% of variance. Table 9 presents the loadings of each item.

Table 9.

Principal Component Analysis of the Portuguese Version of EES

	Component
1. I don’t express my emotions to other people	**.66**
2. Even when I’m experiencing strong feelings, I don’t express them outwardly	**.72**
3. Other people believe me to be very emotional	**.42**
4. People can “read” my emotions	**.48**
5. I keep my feelings to myself	**.69**
6. Other people aren’t easily able to observe what I’m feeling	**.52**
7. I display my emotions to other people	**.56**
8. People think of me as an unemotional person	**.64**
9. I don't like to let other people see how I am feeling	**.62**
10. I can't hide the way I am feeling	**.42**
11. I am not very emotionally expressive.	**.61**
12. I am often considered indifferent by others	**.50**
13. I am able to cry in front of other people	**.38**
14. Even if I am feeling very emotional, I don't let others see my feelings	**.66**
15. I think of myself as emotionally expressive	**.54**
16. The way I feel is different from how others think I feel	**.46**
17. I hold my feelings in	**.74**

*(**Note.*** In bold the factorial items’ loadings accordingly with the final structure)

These results show the direct equivalence between the Portuguese version of *EES* and original version of the questionnaire.

Internal consistency

Cronbach’s Alpha was calculated to determine the internal consistency of the Portuguese version of EES. Results indicate that the Portuguese version of EES had high

internal consistency (α =. 87). Item-total correlations ranged from r = 0.34 to r = 0.65. All items had item-total correlations above r = .34.

Confirmatory factor analysis

The EES one dimension' first order factor structure presented acceptable fit indexes, namely, χ^2/df [4.12]=2, $p < .001$; CFI = 1.00, SRMR = .01, RMSEA =.04, 90% CI_{RMSEA} [.00, .09].

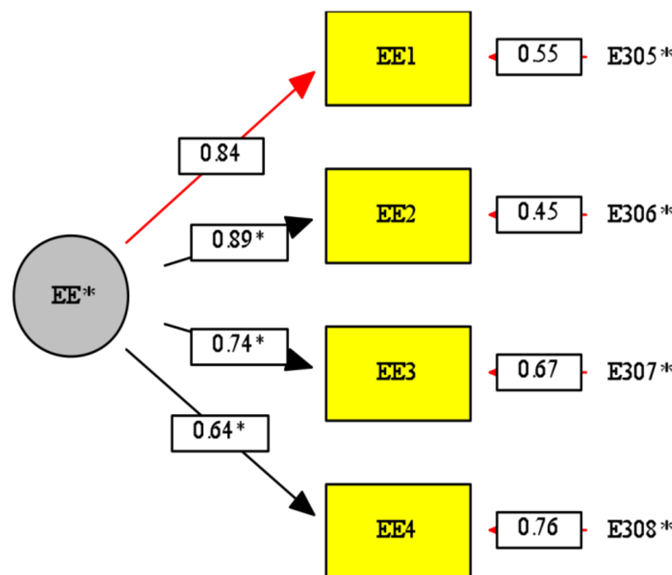


Fig3. First-order confirmatory factor analysis for Emotional Expressivity Scale with values for beta standardized item loadings, standard erros and correlations between latent factors. Measurements scale loadings significant at p ≤. 05. EE1 to EE4 = parcels for *Emotional Expressivity.*

Test-Retest Reliability

A second sample of 110 adults completed the EES on two occasions (with a 6-months interval) to assess test-retest reliability. The 6-months test-retest correlation was r = .752 (n = 110, $p < .001$).

Gender differences

Mean scores for women and men on the overall *EES* and *t* value for the *t-test* are shown in Table 10.

Table 10.

Gender Differences in the Portuguese Version of EES

	Males (N=444) Mean (SD)	Females (N=384) Mean (SD)	*t*
Emotional Expressivity Questionnaire	60.44 (12.12)	67.26 (12.70)	7.87***

Note

*** p <.000

From the table above, we can see that female (M = 67.26, SD = 12.70) revealed significantly higher emotional expressiveness than men (M = 60.44, SD = 12.1), t (796) = 7.87, p <.00

Discussion

The main purpose of this study was to assess the psychometric properties of the Portuguese translation of the EES (Kring, Smith & Neale, 1994), regarding its validity, reliability and gender differences.

Our results replicate, in a large Portuguese adult sample, the factor structure that underlies the original version (Kring, Smith & Neale, 1994). These results are supported by both an initial exploratory factorial analysis as well as a confirmatory factor analysis, whose fit indexes reinforce the one-factor model as an acceptable solution to *EES*.

The reliability of the Portuguese version of the *EES* was assured both regarding internal consistency and temporal stability.

The test-retest reliability across six months, was moderate meaning the use of this emotion expressivity scale was relatively stable over time.

Such as the original instruments (Kring et al., 1994), gender differences were found in terms of emotional expressivity with women reporting higher expressiveness than men

In summary, these results support the validity and reliability of EES, highlighting the quality and relevance of the Portuguese version.

Future studies, comparing normative and clinical samples, may provide an opportunity for comparing those groups regarding their emotion expressivity.

Concluding Discussions

Emotions and emotional processes are an emergent research domain in psychology (Barrett, 2018) as research increasingly supports the importance of emotions in health (e.g. Craft, Davis & Paulson, 2013; Frattaroli, 2006; Sohl, Dietrich, Wallston & Ridner, 2017), in normal and abnormal development (e.g. Southam-Gerow & Kendall, 2001), in psychopathology (e.g. Kring, 2010; Moran, Mehta & Kring, 2012) and in the course of psychotherapy (Greenberg, 2002a; 2007).

Given the value of emotion and emotional processes, it is crucial that in Portugal we have psychometrically strong, stable and useful measures validated to Portuguese population.

Many measures of different emotional processes have been developed within the last 15 years in Portugal (Machado Vaz, 2009; Queirós, Fernández-Berrocal, Extremera, Carral & Queirós, 2005).

Because there were already measures validated for Portugal that evaluated emotional attention (Queirós, Fernandez-Berroscal, Extremera and Queirós, 2005), emotion

differentiation (Machado Vaz, 2009) and emotion regulation (Machado Vaz, 2009), in this study we validated measures of emotion intensity (Geuens & De Pelsmacker, 2002), emotion expression (Kring, Smith, & Neale, 1994) and a measure of difficulties in emotion regulation (Gratz & Roemer, 2004).

Emotion intensity was usually measured using the 40-item Affect Intensity Measure (AIM, Larsen & Diener, 1987), however to enhance its efficiency as a measurement instrument, and to resolve the problem of the factor structure, Geuens and Pelsmacker (2002) developed the Short Affect Intensity Scale (SAIS, 2002). Our results replicated, in a large Portuguese adult sample, the three-factor structure that underlies the original *SAIS* version.

The reliability of the Portuguese version of the *SAIS* was assured both in terms of internal consistency and temporal stability and, in the same line as Geuens and De Palmacker (2002) results, gender differences were found with women reporting higher positive affectivity and higher negative intensity than men.

Considering that *SAIS* is already translated and the psychometric properties evaluated in other countries (e.g. Sweden; Simonsson-Sarnecki, Lars-Gunnar Lundh, Bertil, & Torestad, 1999) and has been widely used all over the world (e.g., Germany, Spain, Italy, Croatia), transcultural studies comparing the use of emotion intensity strategies may follow.

In addition, in future studies, its use with normative and clinical samples, may provide an opportunity for comparing those populations regarding their emotion intensity.

Considering that emotion regulation is a crucial variable in studying emotions (Gross, 2015; Gross & Thompson, 2007), we also had the need to validate an instrument that could allow a better understanding of relevant difficulties in emotion regulation (Gratz & Roemer, 2004). So, in this study we validated Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004), with the factor structure among the original English sample being replicated in our Portuguese adult sample, with good internal consistency and temporal

stability. This fruitful study offers the opportunity to reliably use the Portuguese version of the DERS, which can benefit both psychotherapists along psychotherapy and researchers.

Considering that *DERS* is already validated in several languages including French (Glauser & Scherer, 2013) Spanish (Hervás & Jódar, 2008), Greek (Mitsopoulou, Kafetsios, Karademas, Papastefanakis & Simos, 2013) Dutch (Neumann, A., van Lier, Gratz & Koot, 2010), Chinese (Wang, Liu, Du, & Zhongquan, 2007), Italian (Sighinolfi, Pala, Chiri, Marchetti & Sica, 2010), Hindi (Saxena, 2011), Japanese (Yamada & Sugie, 2012) and Turkish (Ruganci & Gençoz, 2010) and has been widely used all over the world (e.g. Neumann, Van Lier, Gratz & Koot, 2010), transcultural studies may follow.

In addition, in future studies, its use with normative and clinical samples, may provide an opportunity for comparing those populations in terms of their difficulties in emotion regulation.

The explicit advantages of studying emotion expression (e.g. Craft, Davis & Paulson, 2013; Kallay, 2015; Kennedy-Moore & Watson, 2001; Sohl, Dietrich, Wallston & Ridner, 2017)) made us validate a good and commonly used self-report measure of emotional expressivity, namely Emotional Expressivity Scale (EES; Kring, Smith, & Neale, 1994).

Our results replicate, in a large Portuguese adult sample, the factor structure that underlies the original version (Kring, Smith & Neale, 1994), with good internal consistency and temporal stability. Such as the original authors (Kring et al., 1994), gender differences were found in terms of emotional expressivity with women reporting higher expressiveness than men.

These results support the validity and reliability of EES, highlighting the quality and relevance of the Portuguese version and future studies may now examine how emotion expressivity may be associated with different outcomes.

With all the instruments previously validated to Portugal, together with the new ones validated in this study, we can now have a global and integrative evaluation of all the complex processes underlying each emotion, namely emotional attention, emotion differentiation, emotion intensity, emotion regulation and emotion expression in Portugal.

These measures can now be use, together or separately, in several studies that may want to explore the impact of each emotional process in any psychological dimension (or even in a physical or social variable) and along psychotherapy, to evaluate progression along psychotherapy, providing an important assessment to therapists as to whether their case formulation and intervention are the more suitable to the patient.

Considering that all these three instruments are validated in several countries and ages and have been widely used all over the world, transcultural studies may follow.

Limitations

These three studies were not conducted without limitations.

There is an inherent limitation to assess emotions using paper-and-pencil measures. The use of self-raters questionnaires to evaluate emotional processes might raise some problems such as self-protective biases, emotions felt while answering, and, the lack of ability for understanding one's inconsistencies (Spain, Eaton, & Funder, 2000).

Nonetheless, self-raters prove to be an evaluation measure closer to emotional experience than even the evaluation of most well-acquaint peers (Watson & Clark, 1991).

Additionally, to overcome some of these limitations, we choose to select instruments validated using peer reports, observational data, and physiologic parameters.

So, we believe that the use of these three self-report measures in Portugal to evaluate emotional processes might be a strength to any study. Furthermore, only the use of this kind of instrument could allow the evaluation of all emotional processes in such a significant sample at the same time.

Future directions

Now, with the validation of these three instruments, we are able to proceed with the investigation of the emotional processes in non-clinical and in clinical populations in Portugal, assessing the relationship of each emotional process with psychopathological symptoms and its impact in psychotherapy.

Future studies might also be usefull in different samples, representing a wide age range, including children, adolescents or older adults.

Also, in future studies, its use in studies with normative and clinical samples, may provide an opportunity for comparing those populations regarding these emotional processes.

Study 2 - Multidimensional Emotional Processes of Patients in Psychotherapy

Multidimensional Emotional Processes of Patients in Psychotherapy

Abstract

Objective. Emotions and emotional processing have an emergent role in psychotherapy as its research holds promise for understanding the causes and treatments of psychopathologies. However, studies to date have typically explored a particular emotion disturbance in specific disorders. Therefore, our main objectives were to determine whether patients with the most prevalent psychopathologies present one or more deficits in each emotional process and to investigate the association between these components in those patients. **Design and Methods.** This study included a clinical sample of 120 patients (*M* = 33.00, *SD* = 10.60), who completed eight self-report measures on emotional experience (i.e., Positive and Negative Affect Schedule), attention (i.e., Trait-Meta Mood Scale), differentiation (i.e., Range and Differentiation of Emotional Experience Scale, and Toronto Alexithymia Scale), intensity (i.e., Short Affect Intensity Scale), regulation (i.e., Emotion Regulation Questionnaire, Difficulties in Emotion Regulation Scale) and expression (i.e., Emotional Expressivity Scale). **Results.** Our clinical sample presented deficits in several emotional processes, predominantly in differentiation and regulation. Moreover, there are significant associations between constructs of emotional processing in patients. **Conclusions.** These findings clarify the interplay between different emotional processes in a clinical sample and allow improvement of treatment outcomes for therapeutic approaches focusing on these processes.

Keywords: emotional process, emotions, psychotherapy, psychopathological symptoms

Multidimensional Emotional Processes of Patients in Psychotherapy

Introduction

Emotions have been shown to be crucial to understand the causes and development of psychopathology in the past several decades (e.g., Barret, 2016; Barret & Russell, 2015; Kring, 2010). Emotions can be defined as subjective reactions to a significant event in the internal and external environment of the organism (Sroufe, 1996). These reactions evolve and allow the attribution of a meaning to the event, therefore preparing individuals to respond to their environment in accordance with the evaluation of the situation (Barett & Gross, 2001). Thus, emotions have important intrapersonal and interpersonal functions such as to direct attention to key features of the environment, optimize sensory intake, adjust decision making, organize response systems, promote social interactions and relationships, and enhance episodic memory (Gross, 2015).

However, emotions are not only the physiological activation of the organism to a significant event or stimulus, but comprise several components that interact with each other to create and maintain it (Kring, 2008; Sloan & Kring, 2007).

These components of emotion, i.e., emotional processes, have been characterized by several researchers as different contributors to the emotional response, namely, emotional attention (e.g. Gasper, & Clore, 2000; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995), emotion differentiation (e.g., Barrett, 2018, Barrett & Russell, 2015), emotion intensity (e.g., Geuens & De Pelsmacker, 2002; Keltner & Ekman, 1996), emotion regulation (e.g., Ford & Gross, 2018; Gross, 2015; Gross & Thompson, 2007; Kring & Werner, 2004), and emotion expression (e.g., Gross, John & Richards, 2000; Kring, Smith & Neale, 1994). Dysfunction in any of these components may lead to maladjustment of the individual and to development of psychopathology (Kring, 2010).

Emotional attention has been defined as the first step necessary to become aware of the type of emotion that one is feeling (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). As different emotions may require the use of different response strategies, individuals must have enough emotional attention abilities to act efficient and accordingly with the environment at hand (Barrett, Gross, Conner, & Benvenuto, 2001). Furthermore, emotional attention has been referred to as one of the primary mechanisms by which individuals regulate emotions (Gross & Thompson, 2007; Koole, 2009). Nevertheless, approximately 10% of the general population is characterized by poor emotional attention (Linden, Wen, & Paulhus, 1995).

Several researchers have studied the relation between emotional attention and mental health and found a link between deficits in emotional attention and poorer social and psychological functioning, and lower quality of life (Fox, Axelrod, Sleeper, Sinha & Paliwal, 2007; Gratz & Roemer, 2004; Gratz, Rosenthal, Tull, Lejuez, & Gunderson, 2006; Salters-Pedneault, Roemer, Tull, Rucker & Mennin, 2006; Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007). In clinical populations, some studies suggest that poor emotional attention is linked to eating disorder (Fairburn, Cooper, & Shafran, 2003). On the other hand, high emotional attention to unpleasant emotions (i.e., normatively categorized as "sadness", "anger", or "fear") may trigger an inadequate coping strategy and hence more depressive symptoms (Fernandez-Berrocal & Extremera, 2008; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008).

Emotion differentiation is the ability of the individual to recognize and assign a meaning to the physiological activity due to a significant event or stimulus (Barrett, 2018; Barrett & Gross, 2001). It is the mental construction of emotion, i.e., the symbolizing and expanding of physiological activation involving the recognition and attribution of meaning to the bodily felt sense, and the recognition of the causes and impact of the experienced emotion (Barrett, 2018; Barrett & Gross, 2001). Categorizing an emotion gives it meaning, enabling

the communication with others, creating better assumptions about it, and giving better indicators about how to act (Barrett, 2016).

Because emotion differentiation enhances the possibility of giving multiple meanings to the emotional experience, it allows a person to make sharpened conclusions about what lead to the emotional change, allowing the selection of a better and more adequate emotion regulation strategy, and giving information of how to communicate that emotion to others in an effectively and efficiently manner (Barrett, 2006; Barrett, Gross, Christensen & Benvenuto, 2001; Barrett, Gross, Conner & Benvenuto, 2001).

So, individuals with a high ability to differentiate emotions are described as having adequate emotion regulation strategies, better prosocial behavior and high academic abilities, allowing a better expression and consequent socialization of emotion (e.g., Barrett, Gross, Conner & Benvenuto, 2001; Mostow, Izard, Fine, & Trentacosta, 2002).

On the other hand, deficits in emotion differentiation could, in part, be the cause of multiple disorders, because not knowing what one feels makes it much harder to use emotions as information about one's current situation (Schwarz & Clore, 1996). Indeed, recent studies have described an association of deficits in emotional differentiation with greater levels of psychopathology (Emery, Simons, Clarke, & Gaher, 2014; Kashdan, Ferssizidis, Collins, & Muraven, 2010).

Lack of differentiation of emotion information has been shown to be characteristic of patients with depression (e.g., Mennin, Holaway, Fresco, Moore, & Heimberg, 2007), anxiety disorders (e.g., Mennin, Heimberg, Turk, & Fresco, 2005) and personality disorders (Erbas, Ceulemans, Lee Pe, Koval, & Kuppens, 2014; Putnam & Silk, 2005).

These findings also emerged when considering emotion differentiation across specific anxiety disorders. For instance, decreased emotion differentiation has been associated with symptoms of general anxiety disorder (McLaughlin, Mennin, & Farach, 2007; Mennin,

Heimberg, Turk, & Fresco, 2005; Tull & Roemer, 2007), posttraumatic stress disorder (Tull & Roemer, 2007; Weiss et al., 2012), panic attacks (Tull & Roemer, 2007) and social anxiety disorders (Kashdan & Farmer, 2014).

Emotion intensity is defined as the individual differences in the strength with which individuals experience their emotions (Larsen & Diener, 1987, p.2), indicating that individuals experience pleasant and unpleasant emotions with about the same intensity.

Therefore, emotional states differ from each other not only in quality, but also in intensity, and individuals can experience both pleasant and unpleasant emotions with the same intensity (Larsen & Diener, 1987). Moreover, variations in emotion intensity can relate to differences in the selection and implementation of emotion regulation strategies (Sheppes et al., 2014; Zimmermann & Iwanski, 2014).

In fact, the expression or experience of inappropriately intense emotions can be a symptom of psychopathology (Brody, 1985). Difficulties in emotional intensity are related to a wide variety of psychological symptoms, like depression (Rottenberg, Joormann, Brozovich, & Gotlib, 2005) psychosomatic symptoms (Larsen & Diener, 1987), cyclothymia, bipolar behavior (Diener, Larsen, Levine, & Emmons, 1985), borderline personality and passive-aggressive personality (Flett & Hewitt, 1995).

Emotion regulation has received a lot of attention in research in recent years in psychology and today is blooming everywhere, remaining one of the most studied topics in psychology (Ford & Gross, 2018; Gross, 2015; Tamir, 2011).

During the past years, many frameworks and different models for understanding emotion regulation have been presented, along different areas inside Psychology. However, the process model of emotion regulation (Gross, 1998, 2015) is the most important and broadly used model to the date.

Gross (1998) defined emotion regulation as “the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions” (p.275).

Individuals ability to regulate emotions vary in many different ways, with some individuals regulating unpleasant emotions successfully while others cannot, responding to emotions in ways that exacerbate unadaptive emotions or reduce pleasant emotions. These differences play a crucial role in psychopathology (Block, Moran & Kring, 2010; Hofmann, Sawyer, Fanf, & Asnaani, 2012; Kring & Werner, 2004).

In psychopathology, difficulties in emotion regulation can occur when emotions are too intense (e.g., difficulties regulating fear during panic attacks; Tull & Roemer, 2007), when emotion regulation strategies are not suitable for the situation (e.g. a person with social anxiety disorder who leaves a party because can’t regulate fear of rejection; Turk, Heimberg, Luterek, Mennin, & Fresco, 2005) or when emotion regulation strategies are endanger (e.g., a person with Post-Traumatic Stress Disorder; Tull, Bardeen, DiLillo, Moore & Gratz; 2015; Weiss et al., 2012).

Several diagnoses in DSM-5 refer difficulties in emotion regulation. For example, “Depressed mood most of the day, nearly every day” in depression, “fear of dying” in Panic Disorder, “difficulty controlling anger” in borderline personality disorder; “fear and worry surronding social situations” in social anxiety disorder; “difficulty controlling worry” in generalized anxiety disorder; “rapidly shifting expressions of emotion” in histrionic personality disorder; “inability to experience and regulate painful emotional memories” in post-traumatic stress disorder (Diagnostic and Statistical Manual of Mental Disorders, fifth edition [DSM-V]; American Psychiatric Association, 2013).

Emotion expression, i.e., the extent to which individuals “outward display of emotion, regardless of valence or channel (facial, vocal, or gestural)” (Kring, Smith & Neale, 1994; p.934) it’s currently enjoying a renewed interest (Gendron & Barret, 2009).

Research in emotion expression identified that emotions could be expressed through several channels (Sloan & Kring, 2007), sometimes at the same time, namely verbal (i.e., tone voice), nonverbal (i.e., facial expressions or body movements), and physiological (e.g., heart rate, skin conductance) indicating the emotion felt at that moment (Kring & Gordon, 1998; Scherer & Ellgring, 2007a; Schirmer & Adolphs, 2017).

All this grown in the studies of emotional expression have explicit the several advantages of expressing emotions (Kallay, 2015; Kennedy-Moore & Watson, 2001).

Expression can be done in adaptive or maladaptive ways: when it is adaptive, expression of distress can lead to enhanced acceptance of feelings or increased understanding, clarification of interpersonal misunderstandings, or alter another person's behavior in a desired way (Pennebaker & Seagal, 1999); when it is maladaptive, expression exacerbates distress by leading to unpleasant emotions of guilt or shame, rehearsing grievances, or impairing social relationships (Kennedy-Moore & Watson, 2001). Several studies examined emotion expressivity and psychopathology (Kring, Kerr, Smith, & Neale, 1993; Marx and Sloan, 2002).

Although research on emotions have greatly contributed to understanding the causes and development of mental disorders, recent studies on emotions and emotional processing have been focused on a specific emotion disturbance in a particular disorder (e.g., Demiralp et al., 2012; Emery, Simons, Clarke, & Gaher, 2014; Erbas, Ceulemans, Boonen, Noens, & Kuppens, 2013; Kring, 2010). Therefore, it is important to determine whether deficits in emotional processing are present in patients with different psychopathologies to improve their psychotherapeutic treatments. The first aim of this study was to investigate whether

patients with the most prominent psychopathologies (i.e., depression, anxiety, and personality disorders), who were attending psychotherapy sessions in private practice, report disturbances in emotional experience and in several components of emotional processing, namely emotional attention, differentiation, intensity, regulation, and expression, using self-report measures (i.e., Positive and Negative Affect Schedule, TMMS-24, RDEES, TAS-20, SAIS, DERS, ERQ, and EES). The second aim of this study was to evaluate possible associations between these components of emotional processing. We hypothesize that our clinical sample of patients in psychotherapy will present deficits in more than one component of emotional processing.

Method

Participants

This cross-sectional study was performed using a convenience clinical sample of 120 adult patients who were attending psychotherapy sessions in Portugal. These patients were recruited by their therapists between January and November of 2012. Criteria for inclusion were 18 years of age or older and attended sessions of psychotherapy. Participants were excluded if they presented substance use disorders and psychotic disorders.

Socio-demographic and clinical characteristics of the participants are shown in Table 1. Mean age of the clinical sample was 33.0 years (*SD* = 10.6). More than half of the sample was female (63.3%), single (65.0%), and 48.4 % had a university degree. The most prevalent diagnosed psychopathologies were anxiety (25.8%), depression and anxiety (21.7%), depression (18.3%), and personality disorder (8.3%). The median number of psychotherapy sessions was 14, with a minimum number of 1 session and a maximum of 130 sessions.

Table 1

Socio-demographic and Clinical Characteristics of the Patients in Psychotherapy

	Clinical sample (N = 120)	
Characteristic	*n*	%
Gender		
Female	76	63.30
Male	44	36.70
Marital status		
Single	78	65.0
Married	27	22.5
Marital status		
Divorced	8	6.71
Cohabiting	3	2.53
Widowed	2	1.73
Education level completed		
9th grade or less	16	13.32
High School	39	32.52
3-5 years' graduate degree	53	44.27
Postgraduate degree	5	4.21
Professional status		
Employed	74	61.72
Other	45	37.53
Psychopathology diagnosis		
Anxiety disorder	31	25.83
Comorbid depressive and anxiety disorder	26	21.71

Table 1. Continued

Characteristic	Clinical sample (N = 120)	
	n	%
Depressive disorder	22	18.39
Personality disorder	10	8.38
Anxiety and personality disorder	6	5.03
Depressive and personality disorder	6	5.04
Anxiety disorder and other	2	1.75
Depressive, anxiety and personality disorder	1	0.87
Other	6	5.08

Measures

Emotion

The Portuguese version of the Positive and Negative Affective Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was used to measure emotional experience (Galinha & Pais-Ribeiro, 2005). Patients were instructed to rate to what extent they have experienced 20 different emotions within two subscales. Ten items measure Positive Affect (e.g., strong, proud, interested), and ten items measure Negative Affect (e.g., afraid, ashamed, nervous).

Positive Affect reflects a combination of arousal and pleasant valence, and Negative Affect reflects a combination of arousal and unpleasant valence. The patients' responses were measured on a 5-point Likert-type scale, ranging from 1 point ("very slightly or not at all") to 5 points ("extremely"). PANAS was used to assess emotional experience during different time intervals (i.e., at this moment, today, past few days, past few weeks, and past year). The Portuguese version of PANAS has high internal consistency for both Positive Affect (Cronbach's α = .86) and Negative Affect (Cronbach's α = .89) (Galinha & Pais-Ribeiro, 2005).

Emotional attention

The Trait Meta-Mood Scale (TMMS; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995) is a self-report instrument to assess individual perceptions about their ability to deal with emotional states and emotions and to distinguish and regulate them (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). We used the modified and reduced version of TMMS developed by Fernandez-Berrocal, Extremera, and Ramos (2004) — TMMS-24 — and validated by Queirós, Fernández-Berrocal, Extremera, Carral, and Queirós (2005). TMMS-24 consists of 24 items with a 5-point Likert-type scale, ranging from 1 point ("strongly disagree") to 5 points ("strongly agree"). It includes three subscales - Attention, Clarity, and Repair - measuring different aspects of perceived emotional intelligence. In this study, we used the Attention subscale of the TMMS-24 that refers to paying close attention to emotions, accepting emotions, valuing them and letting oneself experience them fully and intensively. Individuals scoring high on the Attention subscale value their feelings and believe in letting them guide their behavior.

Emotion differentiation

The Range and Differentiation of Emotion Experience Scale (RDEES; Kang & Shaver, 2004) is a self-report instrument for assessing psychological significance of individual differences in emotion complexity, which was conceptualized as having two correlated aspects: Range (i.e., the range or span of different emotions experienced by a patient); and Differentiation (i.e., how well a person can distinguish subtle differences among similar emotions). We used the Portuguese validation of RDEES (Machado Vaz, 2009), which includes 14 items rated on a 7-point Likert-type scale that require participants to indicate how characteristic they feel that the items are, ranging from 1 ("does not describe me at all") to 7 ("describes me extremely well"). Higher RDEES scores are indicative a greater range and better emotion differentiation ability, and lower scores are indicative of worst differentiation.

Portuguese version of RDEES presents internal consistency scores of Cronbach's α = .63 in the Range subscale and α = .82 in the Differentiation subscale (Machado Vaz, 2009).

We have also used the Clarity subscale of the TMMS-24, previously described, and the TAS-20 (Bagby, Parker, & Taylor 1994) to evaluate the ability to differentiate between emotions. TAS-20 is a self-reporting instrument for assessing alexithymia (i.e., "multifaceted construct encompassing difficulty identifying subjective emotional feelings, and distinguishing between feelings and the bodily sensations of emotional arousal, difficulty describing feelings to other people, an impoverished fantasy life, and a stimulus-bound, externally oriented cognitive style") (Parker Taylor, & Bagby, 2003). We used the Portuguese version of TAS-20 developed by Verissimo (2001), which includes 20 items measured on a 5-point Likert-type scale, ranging from 1 point ("strongly disagree") to 5 points ("strongly agree"). TAS-20 comprises three subscales: Difficulty Identifying Feelings, Difficulty Describing Feelings and Externally Oriented Thinking. This Portuguese validation of TAS-20 presents a good internal consistency for the total score (Cronbach's α = .75) (Verissimo, 2001).

Emotion intensity

The Short Affect Intensity Scale (SAIS; Geuens & De Pelsmacker, 2002), which is a self-reporting instrument for assessing emotion intensity. It includes 20 items that require participants to indicate the extent by which they agree with the statements, measured on a 5-point Likert-type scale, ranging from 1 point ("strongly disagree") to 5 points ("strongly agree"). SAIS comprises three subscales: Positive Intensity, Negative Affectivity and Serenity. In this study, we used the Portuguese version of the SAIS validated by Machado Vaz and Vasco (2018) with adequate internal consistency (Positive Intensity, Cronbach's α =.83; Negative Affectivity, Cronbach's α =.78; Serenity, Cronbach's α =.85).

Emotion regulation

We used the Repair subscale of the Trait Meta Mood Scale (TMMS; Queirós, Fernández-Berrocal, Extremera, Carral, & Queirós, 2005), the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003), and the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) to measure patients' perceived emotion regulation strategies.

The Portuguese version of ERQ (Machado Vaz, 2009) consists of 10 items rated on a 7-point Likert-type scale, ranging from 1 point ("strongly disagree") to 7 points ("strongly agree"). The instrument comprises two subscales: Reappraisal, measuring cognitive change involving the re-evaluation of a potentially evocative situation in a way that alters its forthcoming emotion impact; and Suppression, measuring response modulation strategy that involves inhibiting ongoing emotion-expressive behavior. Higher scores reflect a greater emotion regulation tendency. Internal reliability scores of ERQ ranged from Cronbach's α of .76 in the Reappraisal subscale, to Cronbach's α of .61 in the Suppression subscale (Machado Vaz, 2009).

We have also used the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) to assess emotion regulation, which is a self-report instrument for assessing the complexities and clinically-relevant difficulties of emotion regulation. It includes 36 items that require patients to indicate how often each item applies to themselves, rated on a 5-point Likert-type scale with responses ranging from 1 ("almost never") to 5 ("almost always"). Six interpretable factors reflecting the multifaceted nature of emotion regulation emerged can be identified in DERS: (a) Non-Acceptance of Emotional Responses (non-acceptance), with items reflecting a tendency to have unpleasant secondary emotional responses to one's negative emotions, or non-accepting reactions to one's distress; (b) Difficulties Engaging in Goal-Directed Behavior (goals), with items reflecting difficulties concentrating and accomplishing tasks when experiencing negative emotions; (c) Impulse

Control Difficulties (impulse), with items reflecting difficulties remaining in control of one's behavior when experiencing negative emotions; (d) Lack of Emotional Awareness (attention), with items reflecting the tendency to attend to and acknowledge emotions, or if reversed scored, reflects an inattention to, and lack of awareness of, emotional responses; (e) Limited Access to Emotion Regulation Strategies (strategies), with items reflecting the belief that there is little that can be done to regulate emotions effectively once an individual is upset; and (f) Lack of Emotional Clarity, with items reflecting the extent to which individuals know and are clear about the emotions they are experiencing. Higher scores are indicative of higher difficulties in emotion regulation, whereas lower scores are indicative of lower difficulties in emotion regulation. Internal consistency is high (Cronbach's $\alpha = .91$) for the Portuguese version of DERS (Machado Vaz & Vasco, 2018).

Emotion expression

The Emotion Expressivity Scale (EES; Kring, Smith, & Neale, 1994) was used to evaluate the perceived emotion expression ability of the patients. EES is a self-report instrument for assessing the extent to which an individual outwardly expresses pleasant and unpleasant emotions. It includes 17 items, requiring respondents to evaluate statements such as "I don't express my emotions to other people" using a 6-point Likert-type scale ranging from 1 point ("never true") to 6 points ("always true"). EES scores predict greater psychological distress, with lower scores associated with greater psychological distress. In this study, we used the Portuguese version of the EES validated by Machado Vaz and Vasco (2012) with high internal consistency (Cronbach's $\alpha = .87$).

Procedure

Psychotherapists invited their patients to participate in the study, by providing them the "Patient's Book". This book included: a formal invitation to participate in the study (Appendix A); sociodemographic questions which included age, gender, marital and

employment status, and educational level; eight instruments for self-report of emotional processes; instructions for answering to these instruments (either immediately after the psychotherapy session, or at home); and instructions for the patients to return their answers to the psychotherapist in a sealed envelope (either in the following appointment, or as soon as possible). Furthermore, these instructions stated that only the study researchers (and not the therapists) would have access to the answers. Psychotherapists were instructed to return the sealed envelopes with the patients' answers to the study researchers. Scores of self-report instruments as well as answers pertaining sociodemographic characteristics completed by the patients were collected by the researchers. Written informed consent was obtained from all participants before study inclusion.

Data Analysis

All data were entered in SPSS (Version 17.0) and statistical analysis was performed in R (Version 3.3.2). There were missing data, so analyses were not performed on all 120 patients. Sociodemographic data and scores for each self-report instrument to measure emotional processes were analyzed using descriptive statistics, both for the full sample and for gender subgroups. The normality of these scores was investigated using Shapiro-Wilk's test. Differences between self-reported scores for emotional processes with respect to gender were tested using Student's t-test for independent samples, if both scores were normally distributed, or using Wilcoxon rank sum test with continuity correction, if at least one of the scores was not normally distributed (statistical threshold, $p = .05$).

Associations between pairs of scores obtained for each self-report instrument were evaluated by correlation analyses, using Pearson's ρ correlation coefficient (r), if both scores were normally distributed, or using Kendall's τ correlation coefficient (r_τ), if at least one of the scores was not normally distributed (statistical threshold, $p = .05$). Correlation

coefficients of between .0-.19 are regarded as very weak, .20-.39 as weak, .40-.59 as moderate, .60-.79 as strong, and .8-1.0 as very strong.

Results

Perceived Emotional Experience of the Patients

We evaluated the emotional experience of patients in psychotherapy using the PANAS scale. The medians and ranges on PANAS scores for our clinical sample are shown in Table 2. Median scores for Positive Affect varied from 23.01 (*MR* = 10-50), for the time interval “moment”, to 27.08 (*MR* = 10-49) in “past few weeks”. On the other hand, median scores for Negative Affect varied from 14.09 (*MR* = 10-50) in “moment” to 27.09 (*MR* = 10-50) in “past year”.

Table 2

Medians and Ranges for PANAS as a Function of Time Frame

	Moment		Today		Past few days		Past few weeks		Past year	
Subscale	*n*	*Mdn*	*n*	*Mdn*	*n*	*Mdn*	*n*	*Mdn*	*n*	*Mdn*
Positive Affect	107	23.01 (10-50)	106	23.03 (10-47)	104	27.06 (10-48)	103	27.08 (10-49)	104	25.51 (11-48)
Negative Affect	108	14.09 (10-50)	104	16.06 (10-42)	104	21.04 (10-47)	102	23.09 (10-44)	103	27.09 (10-50)

Note. The variation in sample size is due to the variation in the number of patients in psychotherapy who completed the self-report instrument. For all subscales, scores are indicative of more extreme responding in the direction of the construct assessed. PANAS = Positive and Negative Affective Schedule.

Differences between scores on the PANAS for males and females were also examined, as shown in Table 3. No statistically significant differences were identified between Positive Affect scores for males and for females, for any of the time intervals. Similarly, no statistically significant differences were identified between Negative Affect scores for males and for females, for the time intervals "moment", "today", and "past few days". However, Wilcoxon test indicated that Negative Affect scores were significantly higher for women (*Mdn* = 29.01, Range = 14-50) than for men (*Mdn* = 25.09, Range = 10-43) for the time interval "past year", $W = 825$, $p = .005$.

Table 3

Gender Differences for PANAS

	Males		Females			
Subscale	*n*	*Mdn*	*n*	*Mdn*	*W*	*p*
Positive Affect						
Moment	38	24.01 (10-47)	69	23.091 (10-50)	1414	.506
Today	38	24.52 (10-47)	68	23.087 (10-45)	1415	.421
Past few days	37	27.03 (10-46)	67	26.07 (13-48)	1359	.420
Past few weeks	36	27.05 (10-45)	67	26.05 (11-49)	1311	.471
Past year	36	25.51 (13-48)	68	25.59 (11-44)	1276	.727
Negative Affect						
Moment	39	14.04 (10-38)	69	14.06 (10-50)	1349	.985

Table 3. Continued

Subscale	Males		Females			
	n	*Mdn*	*n*	*Mdn*	*W*	*p*
Negative Affect						
Today	39	16.04 (10-38)	65	16.06 (10-42)	1296	.853
Past few days	39	21.07 (10-40)	65	22.03 (10-47)	1200	.653
Past few weeks	37	21.07 (10-43)	65	25.03 (10-44)	928	.056
Past year	38	25.09 (10-43)	65	29.01 (14-50)	825	**.005**

Note. The variation in sample size is due to the variation in the number of patients in psychotherapy who completed the self-report instrument. For all subscales, scores are indicative of more extreme responding in the direction of the construct assessed. PANAS = Positive and Negative Affective Schedule; *W* = Wilcoxon test statistic. Significant level at $p < .05$ in boldface.

Perceived Emotional Processing Abilities of the Patients

Emotional attention

In this study, we used several self-report instruments to examine the emotional processing abilities of the patients. Most patients who completed the TMMS-24 Attention subscale were classified as having "adequate" attention (49.17%, $n = 57$), whereas 37.11% of patients were classified as having "too high" attention ($n = 43$) and 13.82% as having "too low" attention ($n = 16$).

The highest percentage of "strongly disagree" answers was identified for item "I think about my mood constantly" (4.23%, $n = 5$), and the highest percentage of "strongly agree" answers was identified for item "It's worth paying attention to my emotions or moods (45.01%, $n = 54$). The lowest percentage of "strongly disagree" answers was identified for items "I care much about what I'm feeling" and "I let my feelings interfere with what I'm

thinking" (0.8%, $n = 1$), and the lowest percentage of "strongly agree" answers was identified for item "I think about my mood constantly" (15.09%, $n = 18$).

We have also checked for gender differences in the scores on self-report instruments measuring emotional attention. Thus, no statistically significant differences were identified between males ($Mdn = 30.0$, Range = 20-40; $n = 44$) and females ($Mdn = 32.01$, Range = 8-40; $n = 72$) for Attention, $W = 1313$, $p = .122$.

Table 4

Classification of the Perceived Emotional Processes Abilities Using the TMMS-24 Scores

Subscale	Classification	Males	Females
Attention	Too low	≤21	≤24
	Adequate	22-32	25-35
	Too high	≥33	≥36
Clarity	Should improve	≤25	≤23
	Adequate	26-35	24-34
	Excellent	≥36	≥35
Repair	Should improve	≤23	≤23
	Adequate	24-35	24-34
	Excellent	≥36	≥35

Note. TMMS-24 = Trait Meta-Mood Scale 24. Adapted from Queirós et al. (2005).

Emotion differentiation

Most patients who completed the TMMS-24 Clarity subscale were classified as having "adequate" clarity (51.31%, *n* = 58), whereas 38.9% of patients were classified as having "should improve" clarity (*n* = 44) and 9.78% as having "excellent" clarity (*n* = 11).

The highest percentage of "strongly disagree" answers in the TMMS-24 Clarity subscale was identified for item "I can always tell how I feel" (10.82%, *n* = 13), and the highest percentage of "strongly agree" answers was identified for item "I am usually very clear about my feelings" (16.73%, *n* = 20). The lowest percentage of "strongly disagree" answers was identified for items "I am rarely confused about my feelings" and "I am often aware of my feelings on a matter" (0.81%, *n* = 1), and the lowest percentage of "strongly agree" answers was identified for item "I can always tell how I feel" (15.01%, *n* = 5).

Analysis of the gender differences in the TMMS-24 Clarity scores yielded no statistically significant differences between males (*Mdn* = 27.51, Range = 18-40; *n* = 42) and females (*Mdn* = 26.09, Range = 11-38; *n* = 71), *W* = 1527, *p* = .833.

Scores on the RDEES for our clinical sample are displayed in Table 5.

Table 5

Medians and Ranges of the RDEES and TAS-20 Scores

	Clinical sample (*N* = 120)			
Instrument	*n*	%	*Mdn*	Range
RDEES				
Range	113	94.21	21.02	6-32
Differentiation	107	89.27	32.07	9-56
Total	106	88.32	54.01	15-78

Table 5. Continued

Instrument	Clinical sample (N = 120)			
	n	%	*Mdn*	Range
TAS-20				
Difficulties Identifying Feelings	110	91.71	19.01	7-35
Difficulties Describing Feelings	110	91.73	15.06	8-25
Externally Oriented Thinking	110	91.75	26.02	17-40
Total	102	85.01	59.51	36-100

Note. The variation in sample size is due to the variation in the number of patients in psychotherapy who completed the self-report instrument. For all subscales, scores are indicative of more extreme responding in the direction of the construct assessed. RDEES = Range and Differentiation of Emotion Experience Scale; TAS-20 = Toronto Alexithymia Scale 20.

The median score for RDEES Total was 54.01 (*MR* = 15-78). The highest percentage of "does not describe me at all" answers was identified for item "I don't experience a variety of feelings on an everyday basis" (28.32%, *n* = 34), and the highest percentage of "describes me extremely well" answers was identified for item "I have experienced a wide range of emotions throughout my life" (20.83%, *n* = 25). The lowest percentage of "does not describe me at all" answers was identified for items "I experience a wide range of emotions" and "I am aware that each emotion has a completely different meaning" (2.51%, *n* = 3), and no "describes me extremely well" answers were identified for item "I don't experience many different feelings in everyday life".

The median score for TAS-20 Total was 59.51 (*MR* = 36-100) (see Table 5). According to the answers to TAS-20, 15.0% (*n* = 18) of patients were classified as "normal", 35.81% (*n* = 43) as "possibly having alexithymia" and 34.28% (*n* = 41) as "having alexithymia". The highest percentage of "strongly disagree" answers was identified for item "I prefer to just let things happen rather than just describe them" (32.15%, *n* = 39), and the highest percentage of

"strongly agree" answers was identified for item "I find examination of my feelings useful in solving personal problems" (45.05%, $n = 54$). The lowest percentage of "strongly disagree" answers was identified for items "Being in touch with emotions is essential" and "I find examination of my feelings useful in solving personal problems" (1.78%, $n = 2$), and the lowest percentage of "strongly agree" answers was identified for item "I find it hard to describe how I feel about people (0.82%, $n = 1$).

As we can see in Table 6, no statistically significant differences between males and females were identified for TMMS-24 Clarity, RDEES, and most TAS-20 scores (see Table 6). However, median score for the TAS-20 Difficulty Describing Feelings subscale was significantly higher for males ($Mdn = 16.04$, Range = 8-23) than for females ($Mdn = 14.06$, Range = 9-25), $W = 1753$, $p = .045$.

Table 6

Gender differences for TMMS-24 Clarity, RDEES, and TAS-20

	Males		Females			
Instrument	*n*	*Mdn*	*n*	*Mdn*	*W*	*p*
TMMS-24						
Clarity	42	27.51 (18-40)	71	26.09 (11-38)	1527	.833
RDEES						
Range	42	20.01 (12-28)	71	21.09 (6-32)	1468	.891
Differentiation	39	32.03 (17-54)	68	32.08 (9-56)	1357	.846
Total	39	54.04 (34-74)	67	54.07 (15-78)	1327	.898

Table 6. Continued

Instrument	Males		Females		*W*	*p*
	n	*Mdn*	*n*	*Mdn*		
TAS-20						
Difficulty Identifying Feelings	41	18.01 (8-32)	69	19.06 (7-35)	1433	.914
Difficulty Describing Feelings	42	16.04 (8-23)	68	14.06 (9-25)	1753	**.045**
Externally Oriented Thinking	39	26.06 (17-33)	71	26.01 (17-40)	1335	.758
Total	38	59.02 (36-84)	64	59.59 (39-100)	1295	.589

Note. The variation in sample size is due to the variation in the number of patients in psychotherapy who completed a particular self-report instrument. For all subscales, scores are indicative of more extreme responding in the direction of the construct assessed. RDEES = Range and Differentiation of Emotion Experience Scale; TAS-20 = Toronto Alexithymia Scale 20; TMMS-24 = Trait Meta Mood Scale 24, *W* = Wilcoxon test statistic. Significant at the $p < .05$ level in boldface.

Emotion intensity

Results for emotion intensity are presented in Table 7.

Table 7

Medians and Ranges of the Scores for SAIS

	Clinical sample (N = 120)			
Instrument	n	%	*Mdn*	Range
SAIS				
Positive Intensity	115	95.81	28.02	8-40
Negative Affectivity	113	94.22	23.05	10-30
Serenity	115	95.81	22.01	6-30

Note. The variation in sample size is due to the variation in the number of patients in psychotherapy who completed the self-report instrument. For all subscales, scores are indicative of more extreme responding in the direction of the construct assessed. SAIS = Short Affect Intensity Scale.

The median scores for SAIS were 28.02 (Range = 8-40) for Positive Intensity, 23.05 (Range = 10-30) for Negative Affectivity, and 22.01 (Range = 6-30) for Serenity (see Table 7). The highest percentage of "strongly disagree" answers was identified for item "My happy moods are so strong that I feel like I'm in heaven" (25.82%, n = 31), and the highest percentage of "strongly agree" answers was identified for items "When I talk in front of a group for the first time, my voice gets shaky and my heart races" and "When I do feel anxiety it is normally very strong" (37.53%, n = 45). The lowest percentage of "strongly disagree" answers was identified for items "When I'm feeling well, it's easy for me to go from being in a good mood to being really joyful", "When I'm happy, I bubble over with energy", and "When I do feel anxiety it is normally very strong" (2.54%, n = 3), and the lowest percentage

of “strongly agree” answers was identified for item “My happy moods are so strong that I feel like I’m in heaven” (9.21%, n = 11).

No statistically significant differences between males and females were identified for SAIS scores regarding the Positive Intensity and Serenity subscales (see Table 8 below). However, the median score for the Negative Affectivity subscale was significantly higher for females (*Mdn* = 24.07, Range = 10-30) than for males (*Mdn* = 21.04, Range = 14-30), W = 1064, p = .014.

Table 8

Gender differences for SAIS

	Males		Females			
Instrument	*n*	*Mdn*	*n*	*Mdn*	*W*	*p*
SAIS						
Positive Intensity	43	28.01 (14-38)	72	29.04 (8-40)	1497	.770
Negative Affectivity	41	21.04 (14-30)	72	24.07 (10-30)	1064	**.014**
Serenity	42	20.55 (6-29)	73	22.03 (6-30)	1284	.148

Note. The variation in sample size is due to the variation in the number of patients in psychotherapy who completed a particular self-report instrument. For all subscales, scores are indicative of more extreme responding in the direction of the construct assessed. SAIS = Short Affect Intensity Scale, W = Wilcoxon test statistic. Significant at the $p < .05$ level in boldface.

Emotion regulation

Most the patients who completed the TMMS-24 Repair subscale were classified as having "adequate" repair (57.56%, *n* = 69), whereas 30.0% of patients were classified as having "should improve" repair (*n* = 36) and 8.32% as having "excellent" repair (*n* = 10). The highest percentage of "strongly disagree" answers in the TMMS-24 Repair subscale was identified for item "When I become upset, I remind myself of all the pleasures in life" (15.86%, *n* = 19), and the highest percentage of "strongly agree" answers was identified for item "I have much energy when I'm happy" (35.86%, *n* = 43). The lowest percentage of "strongly disagree" answers was identified for item "I have much energy when I'm happy" (1.78%, *n* = 2), and the lowest percentage of "strongly agree" answers was identified for item "When I become upset, I remind myself of all the pleasures in life" (6.79%, *n* = 8).

Regarding results in emotion regulation, results are presented in Table 9.

Table 9

Medians and Ranges of ERQ and DERS Scores

	Clinical sample (*N* = 120)			
Instrument	*n*	%	*Mdn*	Range
ERQ				
Reappraisal	96	80.04	26.04	7-42
Suppression	115	95.85	16.08	4-28
DERS				
Non-Acceptance of Emotional Responses	112	93.32	15.01	6-30
Difficulty Engaging in Goal-Directed Behavior	115	95.84	12.07	4-20

Table 9. Continued

	Clinical sample (N = 120)			
Instrument	*n*	%	*Mdn*	Range
DERS				
Impulse Control Difficulties	114	95.04	10.03	5-25
Lack of Emotional Awareness	114	95.02	19.06	11-30
Limited Access to Emotion Regulation Strategies	113	94.29	17.01	8-34
Lack of Emotional Clarity	116	96.71	9.09	6-17
Total	105	87.58	84.06	49-136

Note. The variation in sample size is due to the variation in the number of patients in psychotherapy who completed the self-report instrument. For all subscales, scores are indicative of more extreme responding in the direction of the construct assessed. DERS = Difficulties in Emotion Regulation Scale, ERQ = Emotion Regulation Questionnaire.

For the ERQ subscales, median Reappraisal score was 26.04 (*MR* = 7-42) and the median Suppression score was 16.08 (*MR* = 4-28), as shown in Table 9. The highest percentage of “completely disagree” answers was identified for item “When I am feeling positive emotions, I am careful not to express them” (30.01%, n = 36), and the highest percentage of “completely agree” answers was identified for item “When I want to feel less negative emotions (such as sadness or anger), I change what I’m thinking about” (17.58%, n = 21). The lowest percentage of “completely disagree” answers was identified for item “When I want to feel more positive emotions (such as joy or amusement), I change what I’m thinking about” (7.56%, n = 9), and the lowest percentage of “completely agree” answers was identified for item “When I am feeling positive emotions, I am careful not to express them” (5.01%, n = 6). The median total score for DERS was 84.06, the minimum total score was 49 and the maximum total score was 136. The highest percentage of “almost never” answers was

identified for item "I have no idea how I am feeling" (50.87%, n = 61), and the highest percentage of "almost always" answers was identified for item "I care about what I am feeling" (29.21%, n = 35). Lowest percentage of "almost never" answers were identified for item "I pay attention to how I feel" (0%), and the lowest percentage of "almost always" answers was identified for item "When I'm upset, I know I can find a way to eventually feel better" (1.71%, n = 2). No statistically significant differences between males and females were identified for TMMS-24 Repair, ERQ, and DERS scores (see Table 10).

Table 10

Gender Differences for TMMS-24 Repair, ERQ, and DERS

	Males		Females			
Instrument	*n*	*Mdn*	*n*	*Mdn*	*W*	*p*
TMMS-24						
Repair	44	27.01 (9-38)	71	26.09 (8-40)	1649	.618
ERQ						
Reappraisal	39	27.07 (7-38)	57	26.02 (7-42)	1204	.494
Suppression	42	16.04 (4-25)	73	16.04 (4-28)	1531	.991
DERS						
Non-Acceptance of Emotional Responses	39	13.04 (7-27)	73	16.09 (6-30)	1126	.069
Difficulty Engaging in Goal-Directed Behavior	42	12.50 (7-20)	73	12.01 (4-20)	1699	.336

Table 10. Continued

Instrument	Males		Females		*W*	*p*
	n	*Mdn*	*n*	*Mdn*		
DERS						
Impulse Control Difficulties	42	10.02 (5-25)	72	10.06 (5-25)	1429	.624
Lack of Emotional Awareness	42	20.07 (11-30)	72	19.01 (11-30)	1562	.771
Limited Access to Emotion Regulation Strategies	43	16.01 (8-31)	70	18.04 (9-34)	1421	.621
Lack of Emotional Clarity	42	9.05 (6-15)	74	9.05 (6-17)	1699	.399
Total	38	83.06 (49-112)	67	86.01 (55-136)	1118	.301

Note. The variation in sample size is due to the variation in the number of patients in psychotherapy who completed a particular self-report instrument. For all subscales, scores are indicative of more extreme responding in the direction of the construct assessed. DERS = Difficulties in Emotion Regulation Scale; ERQ = Emotion Regulation Questionnaire; TMMS-24 = Trait Meta Mood Scale 24, *W* = Wilcoxon test statistic. Significant at the $p < .05$ level.

Emotion expression

Ninety percent of the patients answered to the EES (n = 108), which presented a median total score of 55.01 (*MR* = 38-84). The highest percentage of "never true" answers was identified for item "I am often considered indifferent by others" (25.04%, n = 30), and the highest percentage of "always true" answers was identified for item "I keep my feelings to myself" (15.06%, n = 18). The lowest percentage of "never true" answers was identified for item "Other people aren't easily able to observe what I am feeling" (1.79%, n = 2), and the lowest percentage of "always true" answers was identified for item "I am often considered indifferent by others" (0.81%, n = 1).

No statistically significant differences between males (*Mdn* = 55.01, Range = 42-72; *n* = 41) and females (*Mdn* = 56.09, Range = 38-84; *n* = 67) were identified for EES scores, $W = 1152$, $p = 0.161$.

Correlations between Emotional Experience and Emotional Processes

Emotional experience

To investigate the relationship between the different components of emotional experience and processing, correlations among scores on PANAS, TMMS-24, RDEES, TAS-20, RDEES, SAIS, DERS, ERQ, and ESS were examined in our clinical sample. The results for these correlations are displayed in Tables 11 to 19. Regarding emotional experience, the median scores of all time intervals for PANAS Positive Affect scales were significantly associated among each other ($p < .05$), and these were positive associations (see Table 11).

Table 11

Correlations between PANAS Positive Affect and Emotional Processes

	PANAS Positive Affect				
Instrument	moment	today	PFD	PFW	PY
PANAS Positive Affect					
moment	—	—	—	—	—
today	**.77****	—	—	—	—
PFD	**.56****	.58**	—	—	—
PFW	**.44****	.50**	.81**	—	—
PY	**.31****	.34**	.37**	.56**	—

Table 11. Continued

Instrument	PANAS Positive Affect				
	moment	today	PFD	PFW	PY
PANAS Negative Affect					
moment	-.05	-.13	-.08	-.07	.06
Today	-.09	-.10	-.06	-.08	.08
PFD	-.13	-.09	-.13	-.10	.08
PFW	-.08	-.06	-.11	-.25*	-.03
PY	.10	.09	.13	-.12	-.14*
Trait Meta Mood Scale					
Clarity	**.27****	.22**	.39**	.24*	.01
Repair	**.22****	.25**	.48**	.43**	.24**
Toronto Alexithymia Scale 20					
Difficulty Identifying Feelings	**-.21****	-.16*	-.30**	-.28**	-.09
Externally Oriented Thinking	-.04	-.07	-.08	-.08	-.14
Short Affect Intensity Scale					
Positive Intensity	**.14***	.22**	.14*	.13	.13
Negative Affectivity	-.09	-.09	-.11	-.17*	-.10
Difficulties in Emotion Regulation Scale					
Non-Acceptance of Emotional Responses	**-.22****	-.24**	-.24**	-.31**	-.21**
Impulse Control Difficulties	-.04	-.05	-.13	-.22**	-.14*
Limited Access Emotion Regulation Strategies	**-.18***	-.23**	-.28**	-.34**	-.26**
Lack of Emotional Clarity	-.07	-.07	-.04	-.12	.05
Total	**-.17***	-.19**	-.28**	-.38**	-.21**

*Note. Significant correlations in boldface PANAS = Positive and Negative Affective Schedule, PFD = past few days, PFW = past few weeks, PY = past year, *p < .05, **p < .01.*

The strongest evidence for a significant association within these scales was that between Positive Affect "past few days" and Positive Affect "past few weeks", $r(99) = .81$, $p < .001$. On the other hand, in the majority of cases, the scores of PANAS Positive Affect scales were not significantly associated with PANAS Negative Affect ($p > .05$). Scores of PANAS Positive Affect scales were significantly associated ($p < .05$) with scales of other instruments. For each of the PANAS Positive Affect scales, the strongest evidence for significant associations as shown in Table 11. The strongest positive correlation was found between Positive Affect "past few days" and TMMS-24 Repair, $r(99) = .48$, $p < .001$, whereas the strongest negative correlation was found between Positive Affect "past few weeks" and DERS Total, $r(91) = -.38$, $p < .001$. Correlations with PANAS Negative Affect are shown in Table 12.

Table 12

Correlations between PANAS Negative Affect and Emotional Processes

	PANAS Negative Affect				
Instrument	moment	today	PFD	PFW	PY
PANAS Negative Affect					
moment	—	—	—	—	—
today	**.74****	—	—	—	—
PFD	**.46****	**.57****	—	—	—
PFW	**.36****	**.46****	**.65****	—	—
PY	**.14***	**.17***	**.21****	**.61****	—
TMMS-24					
Clarity	-.05	-.12	**-.15***	-.13	.06
Repair	**-.15***	**-.17***	-.11	-.19	-.03

Table 12. Continued

Instrument	PANAS Negative Affect				
	moment	today	PFD	PFW	PY
TAS-20					
DIF	-.02	.00	.12	.19	**.28****
EOT	.03	-.09	**-.15***	-.13	.07
SAIS					
Positive Intensity	.06	.05	.09	.00	-.03
Negative Affectivity	.08	.08	.12	**.15***	**.21****
DERS					
NAER	**.16***	**.16***	**.22****	**.29****	**.21****
ICD	**.19****	**.22****	**.21****	**.30****	**.23****
LAERS	**.22****	**.23****	**.20****	**.33****	**.25****
LEC	**.22****	**.19****	**.24****	**.24****	**.17***
Total	**.25****	**.23****	**.27****	**.51****	**.36****

Note. Significant correlations in boldface. DERS = Difficulties in Emotion Regulation Scale, DIF = Difficulty Identifying Feelings, EOT = Externally Oriented Thinking, ICD = Impulse Control Difficulties, LAERS = Limited Access to Emotion Regulation Strategies, LEC = Lack of Emotional Clarity, NAER = Non-Acceptance of Emotional Responses, PANAS = Positive and Negative Affective Schedule, PFD = past few days, PFW = past few weeks, PY = past year, SAIS = Short Affect Intensity Scale, TAS-20 = Toronto Alexithymia Scale 20, TMMS-24 = Trait Meta Mood Scale 24.

*$p < .05$, **$p < .01$.

PANAS Negative Affect scales were significantly associated ($p < .05$) among each other, and these were all positive associations. PANAS Negative Affect scales were also significantly associated ($p < .05$) with those of scales of other instruments. The strongest positive correlation was found between Negative Affect “past few weeks” and DERS Total, $r(90) = .51$, $p < .001$, whereas the strongest negative correlation was found between Negative Affect “today” and TMMS-24 Repair, $r_\tau = -.17$, $p = .019$.

Emotional attention

As presented in Table 13, scores of TMMS-24 Attention were significantly ($p < .05$) associated with scales of other instruments. The strongest evidence for significant and positive associations was identified between TMMS-24 Attention and DERS Lack of Emotional Awareness, $r_\tau = .43$, $p < .001$.

The correlation between scores on the TMMS-24 subscales Attention and Clarity was significantly positive, $r_\tau = .29$, $p < .001$. Conversely, the strongest evidence for significant and negative associations was identified between the scores of TMMS-24 Attention and TAS-20 Difficulty Describing Feelings, $r_\tau = -.17$, $p = .014$.

Table 13

Significant Correlations between TMMS-24 Attention and other Emotional Processes

Instrument	TMMS-24 Attention
DERS *Lack of Emotional Awareness*	.43**
TMMS-24 Clarity	.29**
SAIS Negative Intensity	.19**
DERS Total	.16*
DERS *Difficulties Engaging in Goal-Directed Behavior*	.16*
Emotional Expressivity Scale (Total)	-.16*
TAS-20 *Difficulty Describing Feelings*	-.17*

Note. DERS = Difficulties in Emotion Regulation Scale, SAIS = Short Affect Intensity Scale, TAS-20 = Toronto Alexithymia Scale 20, TMMS-24 = Trait Meta Mood Scale 24.

**p < .05, **p < .01.*

Emotion differentiation

All significant correlations between the median scores of TMMS-24 Clarity, RDEES, and TAS-20 are shown in Tables 14, 15, and 16, respectively. The strongest significant and positive association was identified between TMMS-24 Clarity and RDEES Differentiation, $r(102) = .44$, $p < .001$; whereas the strongest significant and negative association was found between TMMS-24 Clarity and TAS-20 Difficulties Identifying Feelings, $r(103) = -.46$, $p < .001$ (see Table 14). The scores of all RDEES subscales were significantly associated among each other, and these were positive associations (see Table 15). The strongest significant association within these subscales was that between RDEES Differentiation and RDEES Total, $r(104) = .93$, $p < .001$. The scores of RDEES subscales were also significantly associated with those of scales of other instruments. The strongest significant and positive associations were identified between the scores of TMMS-24 Clarity and RDEES Differentiation and Total, $r(102) = .44$, $p < .001$, $r(101) = .43$, $p < .001$, respectively (see Table 14). Conversely, the strongest significant and negative associations were identified between the scores of TAS-20 Difficulty Identifying Feelings and RDEES Total and Differentiation, $r(97) = -.23$, $p = .020$, and $r(98) = -.28$, $p = .005$, respectively (see Table 15). No significant and negative associations were identified between the scores of Range and those of scales of the other instruments.

As presented in Tables 11 to 16, TAS-20 was significantly associated with scales of other instruments. For each of the TAS-20 subscales, the strongest significant and positive associations were identified between the scores of Difficulty Identifying Feelings and DERS Total, $r(98) = .31$, $p = .002$; Difficulty Describing Feelings and ERQ Suppression, $r_\tau = .33$, $p < .001$; Externally Oriented Thinking and ERQ Suppression, $r_\tau = .17$, $p = .016$; and TAS-20 Total and DERS Lack of Emotion Clarity, $r_\tau = .30$, $p < .001$. On the other hand, for each of the TAS-20 subscales, the strongest significant and negative associations were identified

between the scores of Difficulty Identifying Feelings and TMMS-24 Clarity, $r(103) = -.46$, $p < .001$; Difficulty Describing Feelings and TMMS-24 Attention, $r_\tau = -.17$, $p = .014$; Externally Oriented Thinking and PANAS Negative Affect "past few days", $r_\tau = -.16$, $p = .032$; and TAS-20 Total and TMMS-24 Clarity, $r_\tau = -.22$, $p = .002$.

Table 14

Correlations between TMMS-24 Clarity and other Emotional Processes

Instrument	TMMS-24 Clarity
RDEES Differentiation	.45**
RDEES Total	.43**
TMMS-24 Repair	.39**
ERQ Reappraisal	.23*
RDEES Range	.20*
TMMS-24 Attention	.29**
DERS Lack of Emotional Awareness	.42**
DERS_Impulse Control Difficulties	-.14*
DERS Difficulties Engaging in Goal-Directed Behavior	-.14*
DERS_Lack of Emotional Clarity	-.14*
DERS_Limited Access to Emotion Regulation Strategies	-.17*
DERS_ Non-Acceptance of Emotional Responses	-.20**
Toronto Alexithymia Scale 20	-.22**
Emotional Expressivity Scale_Total	-.22*
TAS-20_Difficulty Identifying Feelings	-.46**

Note. ERQ = Emotion Regulation Questionnaire, RDEES = Range and Differentiation of Emotional Experience Scale , TAS-20 = Toronto Alexithymia Scale 20, TMMS-24 = Trait Meta Mood Scale 24. *$p < .05$, **$p < .01$.

Table 15

Correlations between RDEES and other Emotional Processes

	RDEES		
Instrument	Range	Differentiation	Total
RDEES			
Range	—	—	—
Differentiation	**.27****	—	—
Total	**.60****	**.93****	—
TAS-20			
DIF	-.03	**-.28****	**-.23***
Total	.02	**-.16***	-.11
DERS			
DEGDB	.02	.03	.04
ICD	**.14***	-.02	.03
LEA	-.10	**.31****	**.21***
LEC	.09	-.09	-.06
ERQ			
Reappraisal	-.01	**.23***	**.21***
Suppression	**.16***	.03	.07

Note. Significant correlations in boldface. DEGDB = Difficulties Engaging in Goal-Directed Behavior, DERS = Difficulties in Emotion Regulation Scale, DIF = Difficulty Identifying Feelings, ERQ = Emotion Regulation Questionnaire, ICD = Impulse Control Difficulties, LEA = Lack of Emotional Awareness, LEC = Lack of Emotional Clarity, TAS-20 = Toronto Alexithymia Scale 20, RDEES = Range and Differentiation of Emotional Experience Scale.

*$p < .05$, **$p < .01$.

Table 16

Correlations between TAS-20 and Other Emotional Processes

	TAS-20			
Instrument	DIF	DDF	EOT	Total
TAS-20				
DIF	—	—	—	—
DDF	**.31****	**—**	**—**	—
EOT	**.21****	**.26****	**—**	—
Total	**.69****	**.56****	**.50****	—
SAIS				
Negative Intensity	**.25****	.05	.04	**.16***
DERS				
NAER	**.29****	**.17***	.01	**.25****
DEGDB	**.19****	.07	-.01	.13
ICD	**.21****	.07	-.06	.12
LEA	**-.24***	**-.15***	-.04	**-.16***
LAERS	**.20****	**.14***	.01	**.17***
LEC	**.29****	**.21****	.10	**.30****
Total	**.31****	.13	.04	**.20****
ERQ				
Reappraisal	-.05	.01	.10	.03
Suppression	**.18****	**.33****	**.17***	**.29***
EES				
Total	**.30****	**.18***	.12	**.22****

Note. Significant correlations in boldface. DDF = Difficulties Describing Feelings, DEGDB = Difficulties Engaging in Goal-Directed Behavior, DERS = Difficulties in Emotion Regulation Scale, DIF = Difficulty Identifying Feelings, EES = Emotional Expressivity Scale, EOT = Externally Oriented Thinking, ERQ = Emotion Regulation Questionnaire, ICD = Impulse Control Difficulties, LAERS = Limited Access to Emotion Regulation Strategies, LEA = Lack of Emotional Awareness, LEC = Lack of Emotional Clarity, SAIS = Short Affect Intensity Scale, NAER = Non-Acceptance of Emotional Responses, TAS-20 = Toronto Alexithymia Scale 20.

$^{*}p < .05$, $^{**}p < .01$.

Emotion regulation

All significant correlations between the median scores of TMMS-24 Repair, ERQ, and DERS are shown in Tables 11 to 19. The strongest significant and positive association was identified between TMMS-24 Repair and ERQ Reappraisal, $r(93) = .65$, $p < .001$; whereas the strongest significant and negative association was found between TMMS-24 Repair and DERS Total, $r(100) = -.38$, $p < .001$ (Table 18). For the ERQ Suppression subscale, the strongest significant and positive association was identified with EES Total, $r_\tau = .45$, $p < .001$. The strongest significant and negative associations were identified between the scores of ERQ Reappraisal and DERS Total, $r(85) = -.30$, $p = .005$, and ERQ Suppression and PANAS Positive Affect “past few weeks”, $r_\tau = -.23$, $p < .001$.

Table 17

Correlations between TMMS-24 and ERQ and other Emotional Processes

	TMMS-24	ERQ	
Instrument	Repair	Reappraisal	Suppression
TMMS-24			
Clarity	**.39****	**.23***	-.02
ERQ			
Reappraisal	**.65****	—	—
Suppression	-.00	-.00	—
DERS			
NAER	**-.22****	**-.15***	**.22****
DEGDB	**-.21****	**-.16***	**.14***
ICD	**-.28****	-.12	.11
LEA	.16	.11	**-.14***
LAERS	**-.35****	**-.22****	**.15***
LEC	-.08	-.06	**.23***
Total	**-.38****	**-.30****	**.16***
EES			
Total	-.15	-.02	**-.45****

Note. Significant correlations in boldface. DEGDB = Difficulties Engaging in Goal-Directed Behavior, DERS = Difficulties in Emotion Regulation Scale, EES = Emotion Expressivity Scale, ERQ = Emotion Regulation Questionnaire, ICD = Impulse Control Difficulties, LAERS = Limited Access to Emotion Regulation Strategies, LEA = Lack of Emotional Awareness, LEC = Lack of Emotional Clarity, NAER = Non-Acceptance of Emotional Responses. $^{*}p < .05$, $^{**}p < .01$.

Scores of DERS scales were significantly associated with those of scales of other instruments. For each of the DERS scales, the strongest significant and positive associations were identified between the scores of: Non-Acceptance of Emotional Responses and PANAS Negative Affect "past few weeks", $r_\tau = .29$, $p < .001$; Difficulty Engaging in Goal-Directed Behavior and PANAS Negative Affect "past few weeks", $r_\tau = .25$, $p < .001$; Impulse Control Difficulties and PANAS Negative Affect "past few weeks", $r_\tau = .30$, $p < .001$; Lack of Emotional Awareness and TMMS-24 Attention, $r_\tau = .43$, $p < .001$; Limited Access to Emotion Regulation Strategies and PANAS Negative Affect "past few weeks", $r_\tau = .33$, $p < .001$; Lack of Emotional Clarity and TAS-20 Total, $r_\tau = .30$, $p < .001$; and DERS Total and PANAS Negative Affect "past few weeks", $r(90) = .51$, $p < .001$.

For each of the DERS scales, the strongest significant and negative associations were identified between the scores of: Non-Acceptance of Emotional Responses and PANAS Positive "past few weeks", $r_\tau = -.31$, $p < .001$; Difficulty Engaging in Goal-Directed Behavior and TMMS-24 Repair, $r_\tau = -.21$, $p = .002$; Impulse Control Difficulties and TMMS-24 Repair, $r_\tau = -.28$, $p < .001$; Lack of Emotional Awareness and TAS-20 Difficulty Identifying Feelings, $r(106) = -.24$, $p = .011$; Limited Access to Emotion Regulation Strategies and TMMS-24 Repair, $r_\tau = -.35$, $p < .001$; Lack of Emotional Clarity and TMMS-24 Clarity, $r_\tau = -.14$, $p = .043$; and DERS Total and TMMS-24 Repair, $r(100) = -.38$, $p < .001$.

Table 18

Correlations between DERS and Other Emotional Processes

	DERS						
Instrument	NAER	DEGDB	ICD	LEA	LAERS	LEC	Total
DERS							
DEGDB	**.35****	—	—	—	—	—	—
ICD	**.45****	**.43****	—	—	—	—	—
LEA	-.11	.05	-.12	—	—	—	—
LAERS	**.51****	**.51****	**.51****	-.06	—	—	—
LEC	**.26****	**.16***	**.26****	-.07	**.23****	—	—
Total	**.63****	**.59****	**.57****	.15	**.70****	**.33****	—
EES							
Total	**.21****	**.16***	**.24****	-.15	**.17***	**.14***	**.26***

Note. Significant correlations in boldface. DEGDB = Difficulties Engaging in Goal-Directed Behavior, DERS = Difficulties in Emotion Regulation Scale, EES = Emotion Expressivity Scale, ICD = Impulse Control Difficulties, LAERS = Limited Access to Emotion Regulation Strategies, LEA = Lack of Emotional Awareness, LEC = Lack of Emotional Clarity, NAER = Non-Acceptance of Emotional Responses.

$^{*}p < .05$, $^{**}p < .01$.

Emotion intensity

As presented in Tables 11, 12, 13, 16 and 17, the scores of SAIS subscales were significantly associated with those of scales of other instruments. For each of the SAIS subscales, the strongest significant and positive associations were identified between the scores of Positive Intensity and PANAS Positive Affect “today”, $r_\tau = .22$, $p = .002$, and Negative Affectivity and EES Total, $r_\tau = .27$, $p < .001$. No significant and positive

associations between the score of SAIS Serenity and that of scales of other instruments were identified. Conversely, for each of the SAIS scales, the strongest significant and negative associations were identified between the scores of SAIS Negative Affectivity and TMMS-24 Repair, $r_\tau = -.22$, $p < .001$, SAIS Serenity and PANAS Positive Affect “past few days”, $r_\tau = -.16$, $p = .025$. No significant negative associations between the score of SAIS Positive Intensity and that of scales of other instruments were identified.

Table 19

Correlations between SAIS and Other Emotional Processes

	SAIS		
Instrument	Positive Intensity	Negative Intensity	Serenity
Short Affect Intensity Scale			
Positive Intensity	—	—	—
Negative Affectivity	**.13***	—	—
Serenity	**-.28****	.03	—
TMMS-24			
Attention	.11	**.12****	.02
Repair	.11	**-.22****	.07
Difficulties in Emotion Regulation Scale			
Non-Acceptance of Emotional Responses	.00	**.23****	.03
Difficulties Engaging in Goal-Directed Behaviour	-.02	**.22****	-.07
Impulse Control Difficulties	.09	**.20****	-.13
Limited Access to Emotion Regulation Strategies	-.03	**.23****	-.05

Table 19. Continued

	SAIS		
Instrument	Positive Intensity	Negative Intensity	Serenity
Lack of Emotional Clarity	.06	**.17***	-.11
Total	.01	**.23****	-.03
Emotion Regulation Questionnaire			
Reappraisal	**.15***	-.11	.07
Suppression	-.03	**.23****	.07
Emotion Expressivity Scale			
Total	-.03	**.27****	.06

Note. Significant correlations in boldface. *p < .05, **p < .01.

Discussion

The aim of this study was to characterize emotional experience and the associations among different emotional processes in a clinical sample of patients in psychotherapy.

Emotional experience in a clinical sample

According to our preliminary hypothesis, patients in psychotherapy show differences in affect scores. Indeed, our clinical sample showed a relatively low range of Positive Affect and high range of Negative Affect particularly at longer time frames (e.g., past few days, past few weeks, and past year). Our findings are in accordance with previous studies of emotional processes among patients with anxiety and depression, which reported low levels of pleasant emotions as characteristic of depression and social phobia and high levels of unpleasnt emotions as being characteristic of anxiety and depression (Mineka, Watson, & Clark, 1998; Watson, 2005). Compared with previous studies (Watson, 2005), our clinical sample of patients with psychopathologies showed even lower scores for pleasant emotions in the same time frame.

Just like in our research, other studies found similar results regarding gender differences in emotional experience, with female patients obtaining significantly higher scores on unpleasant emotions (Crawford, & Henry, 2004; Watson, Clark, & Tellegen, 1988). These findings are supported by several studies about unpleasant emotions being generally reported more by women than by men, including disgust, sadness, vulnerability, fear, anxiety, shame and embarrassment (Fischer, Rodriguez Mosquera, Van Vianen, & Manstead, 2004; Simon & Nath, 2004).

As expected, our study demonstrate that Positive Affect is more strongly associated with Clarity, Repair, and Positive Intensity, whereas Negative Affect is more strongly associated with Difficulties in Emotion Regulation. These findings suggest that our sample of patients in psychotherapy might have increased difficulties to regulate unpleasant emotions.

Emotional Processes in a clinical sample

The second goal of our study was to evaluate if patients undergoing psychotherapy presented disturbances in any emotional component and analyse the relation between them.

Emotional attention

As we previously predicted, half of the patients in our clinical sample were considered as having too high or too low perceived emotional attention.

These deficits in emotional attention won't allow the individuals to select appropriate response strategies for dealing with emotional situations (Barrett, Gross, Christensen, & Benvenuto 2001). Indeed, several authors hypothesized that poor emotional attention relates to lower psychological functioning because lacking the ability to turn attention to emotions impairs problem solving or coping abilities and difficulty in communicating emotions to others limits opportunities for gaining social support (Fox, Axelrod, Paliwal, Sleeper & Sinha, 2007; Gratz & Roemer, 2004; Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007). Consistent with this, numerous studies who examined the relation between emotional

attention and mental health have found a relation between non-functional emotional attention and poorer psychological functioning (Cloitre, Miranda, Stovall-McClough, & Han., 2005; Fox, Axelrod, Paliwal, Sleeper & Sinha, 2007; Gratz & Roemer, 2004; Salters-Pedneaultt, Roemer, Tull, Rucker, & Mennin, 2006; Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007; Taylor, Bagby, & Parker, 1997).

Emotion differentiation

Regarding different constructs related to emotion differentiation, our findings showed that almost half of our clinical sample should improve their Clarity abilities. Previous studies also reported decreased emotional clarity in patients presenting symptoms of general anxiety disorder, social anxiety disorder, and posttraumatic stress disorder (Baker, Holloway, Thomas, Thomas, & Owens, 2004; McLaughlin, Menin, & Farach 2007; Tull & Roemer, 2007; Weiss et al., 2012).

As expected for Clarity, our study showed association with emotion differentiation. Moreover, Clarity was negative correlated with Difficulty Identifying Feelings, which measures the patient's inability to accurately identify and label emotions.

Our findings showed that our clinical sample presents low range of emotions and low ability to differentiate emotional experience, when compared to non-clinical populations.

Difficulties in clarifying, labeling and differentiating emotions have an impact in recognizing emotion, not allowing the access to emotion regulation strategies and not expressing effectively the emotion felt, with poor differentiators employing maladaptive regulation' strategies such as substance use (e.g., Haviland, Hendryx, Shaw, & Henry, 1994) and alcohol abuse (Emery, Simons, Clarke, & Gaher, 2014; Kashdan, Ferssizidis, Collins, & Muraven, 2010).

Lack of understanding of emotion information has been shown to be characteristic of patients with depression (e.g., Mennin, Holaway, Fresco, Moore, & Heimberg, 2007), anxiety

disorders (e.g., Mennin, Heimberg, Turk, & Fresco, 2005) and personality disorders (Erbas, Ceulemans, Lee Pe, Koval, & Kuppens, 2014; Putnam & Silk, 2005).

Our clinical sample also presented a high prevalence of alexithymia symptoms, with approximately 70% of our sample being classified as having alexithymia or as "possibly having alexithymia". Other studies with clinical populations have also shown similar or higher prevalence of patients with alexithymia symptoms, for instance about 33% in outpatient psychiatric patients, 47% in inpatients (Todarello, Taylor, Parker, & Fanelli, 1995; Wise, Mann & Hill, 1990), and over 60% in patients with posttraumatic stress disorder (Zeitlan & McNally, 1993).

Elevated alexithymia scores had also been found in patients with reporting more somatic complaints (e.g., Nakao, Barsky, Kumano, & Kuboki, 2002), more tension headaches (e.g., Yucel, Kora, Ozyalçin, Alçalar, Ozdemir, & Yücel, 2002), higher levels of hypertension (e.g., Todarello, Taylor, Parker, & Lanelli, 1995) and high cortisol reactivity during stress (e.g., Lindholm, Lehtinen, Hyyppa, & Puukka, 1990).

However, in contrast to the study of Parker, Taylor and Bagby (2003), in our sample, men scored significantly higher then women on difficulties in describing feelings.

Finally, our results showed a negative association of difficulties identifying feelings with positive affect, clarity, and emotion differentiation. As reported in previous investigations, individuals who have highly differentiated emotional experiences may have activated more highly discrete emotion knowledge (i.e., have lower levels of difficulties identifying feelings) during the representation process than individuals with global emotion experiences (Barrett, 1998).

Emotion intensity

Recent research suggests that variations in emotion intensity relate to differences in the selection and implementation of emotion regulation strategies (e.g., Sheppes et al., 2014;

Zimmermann & Iwanski, 2014). Compared with a sample from the general adult population without psychopathology (Geuens & De Pelsmacker, 2002), our clinical sample of patients with psychopathologies showed higher positive intensity, higher negative affectivity and higher serenity.

At lower emotional intensities, people prefer to use adaptive strategy, thereby processing their emotions (Dixon-Gordon, Aldao & Reyes, 2015). Conversely, at higher emotional intensities, people prefer to use avoidance, a putatively maladaptive strategy, thus disengaging from their emotions (Sheppes, 2014; Sheppes & Levin, 2013; Sheppes, Scheibe, Suri, & Gross, 2011). In turn, the use of avoidance strategies, such as suppression, may yield further increases in emotional intensity (Campbell-Sills, Barlow, Brown, & Hofmann, 2006).

As such, research suggests that emotional intensity may play an important role in the type of regulation process that people carry out (Dixon-Gordon, Aldao & Reyes, 2015). Our results confirm these studies, showing a negative correlation between the negative affectivity and the ability to repair their emotions, indicating that the higher the intensity of unpleasant emotions, the harder it is to regulate it.

Emotion regulation

In our clinical sample, patients present high use of reappraisal and high levels of Suppression. Other studies with clinical populations have reported similar prevalence of patients with high suppression (Richards & Gross, 2006). Suppression is an emotion modulation strategy intended to reduce unwanted emotion experiences and to inhibit the expression of emotion (Gross & Thompson, 2007).

Studies have documented the greater use of suppression among clinical populations, compared with healthy controls, in a wide range of psychological disorders (Marcks & Woods, 2005; Nagtegaal & Rassin, 2004). In one study, individuals who tended to naturally suppress their expressive behavior were more likely to be obsessional, anxious, and

depressed (Marcks & Woods, 2005). Another study, comparing individuals with anxiety and mood disorders with control pa Those with emotion suppression endorse limitations in specific domains of emotion regulation, including diminished pleasant and enhanced unpleasant emotional experience (Gross & John, 2003), diminished emotion clarity and ability to modulate emotion (Fernandez-Berrocal, Alcaide, Extremera, & Pizarro, 2006), and difficulties with controlling impulsive behaviors, such as aggression (Nagtegaal & Rassin, 2004).

Individuals that suppress emotions are more likely to be obsessional, anxious, and depressed (Marcks & Woods, 2005), with chronic suppression being associated with posttraumatic stress disorder, obsessive-compulsive disorder, generalized anxiety disorder, and specific phobia (Beevers, Wenzlaff, Hayes, & Scott, 1999).

Furthermore, the frequent suppression of emotions can have interpersonal consequences. Suppression of pleasant emotion expression decreases affiliation and closeness (Gross & Levenson, 1997).

High levels of reappraisal were also found in our clinical sample. Although this result might not be the expected, because reappraisal has been shown to be an adaptive emotion regulation strategy, previous investigations found that in other contexts, reappraisal can maintain unpleasant emotional states (Nolen-Hoeksema, 2000). In fact, two categories of reappraisals associated with psychopathology have been described: (a) self-elaboration (e.g., “Others must think poorly of me”) (Northoff et al., 2006); and (b) emotional resistance or nonacceptance of one’s current emotional experience (e.g., “I’ll do anything to not feel like this”) (Hayes, Luoma, Bond, Masuda, & Lillis, 2006).

As expected, in our sample, emotional suppression was associated with difficulties differentiating feelings and with alexithymia. Suppression is an emotion regulation strategy intended to reduce unwanted emotional experiences (Gross & Thompson, 2007). Suppression

includes direct attempts to remove any component of an emotional response from conscious experience, including suppression of the experienced feeling of the emotion, inhibition any components of emotion (Richards & Gross, 2006), and inhibition of thoughts associated with emotional reactions. So, individuals who use suppression tend to have more difficulties understanding and labeling their emotions.

Also, in our study, patients in psychotherapy reported high levels of non-acceptance of emotional responses, lack of emotional awareness and higher limited access to emotion Regulation Strategies.

Contrary to what we expected, our clinical sample presented normal levels of impulse control difficulties and lower difficulties Engaging in goal-directed behavior.

Emotion expression

Finally, patients' perceived emotion expression abilities were also assessed in our study. Our findings suggest that patients in psychotherapy present adequate levels of emotion expression.

Moreover, emotion expression was related to other constructs. The strongest positive association was identified between the score of expression and unpleasant affect, which might be due to the need of patients in therapy to express more negative affectivity because it is the most difficult experience to regulate.

The strongest significant and negative association was identified between expression and emotion suppression. This relationship is obvious because suppression is a response-focused strategy that attempts to inhibit the expression of emotion (Gross & Thompson, 2007). So, the more the patients express, the less they suppress.

Notably, in our study, we did not found differences between men and women for emotion expressivity, as previously described by other authors.

Limitations

This study presents some limitations. The clinical sample consisted of a relatively heterogeneous population with the most prominent psychopathologies, i.e., depressive, anxiety and personality disorders, thus the results may not be generalizable to other populations with low levels of psychopathic symptoms.

Second, this was a cross-sectional study, which included a convenience sample. Therefore it was only possible to examine only once emotional processes in each patient, regardless of their number of previous psychotherapy sessions, the severity of symptoms, or treatment outcomes. Hence, the picture that emerges may not be entirely representative of each patient emotional performance. Third, this performance was examined implicitly, as we used self-report instruments that depend on the patients' perception of their own emotional processing abilities. Finally, it should be noted that there is no control group to assess whether the observed dysregulations of emotional processing are specific for psychotherapy clients versus non-psychotherapy clients.

Conclusions and Future Prospects

In conclusion, we have shown that a clinical population of patients attending psychotherapy exhibits deficits predominantly in abilities to differentiate and regulate emotions.

It is important to further investigate these findings to further clarity the role of emotion processes in psychotherapy. Indeed, future work is needed to examine the specific ways in which patients with psychotherapies respond to therapies focused on components of emotional processing.

It would also be informative to include another type of measurements of emotions and emotional processing in everyday life, specifically interviews and explicit performance-based instruments.

Additionally, it would be useful to examine every therapy session to evaluate the variability of patients' emotional processing across the entire course of therapy and determine how it relates to other processes or variables of therapy.

Further investigations also should compare normative and clinical samples, to better characterize the active ingredients of adaptive and maladaptive emotional processing.

Study 3 - Emotional Processes and Psychopathology

Abstract

Objective. Emotions have become critical to understand the causes and development of psychopathologies because of their impact on the psychological adjustment of the individual to its environment and development challenges. However, it is unclear the impact of each emotional process in the etiology and maintenance of different psychopathologies. Therefore, our main purposes were to investigate the relationship between psychopathology and emotional attention, emotion differentiation, emotion regulation, emotion intensity and emotion expression, and to evaluate differences in these abilities across patients with different types of psychopathologies. **Design and Methods.** This study included a clinical sample of 120 patients (44 males and 76 females; M_{age} = 33.0 years, SD = 10.6 years) attending psychotherapy, who completed nine instruments to measure their levels of symptoms of psychopathology and emotional experience and processing (i.e., emotion attention, differentiation, intensity, regulation, and expression). **Results.** Our findings show that the emotion felt by the patient, difficulties in emotion regulation and difficulties identifying and describing feelings are significantly correlated with symptoms of psychopathology. Moreover, patients with personality disorders differ significantly in their emotional processing abilities, such as emotion differentiation, intensity and regulation, compared to patients with major depressive disorders or generalized anxiety disorders or both. **Conclusions.** Thus, disturbances in emotional processes may play essential roles across different types of psychopathologies.

Keywords: emotional processes, psychotherapy, psychopathology

Emotional Processes and Psychopathology

Introduction

Emotions have become crucial to understanding the causes and development of psychopathologies in the past decades (e.g., Aldao, Gee, De Los Reyes, & Seager, 2016; Beauchaine, 2015; Kring, 2010). Emotions can be defined as subjective reactions to a specific stimulus or significant events that can be internal or external to the environment of the organism developing over time and allowing the attribution of meaning to the event, therefore preparing individuals to respond to their environment (Sroufe, 1996). Thus, emotions have essential intrapersonal and interpersonal functions, namely to direct attention to features of the situation, optimize sensory intake, adjust decision making, organize response systems, promote social interactions and relationships, and even enhance memory (Gross, 2015).

However, emotion is not only the physiological activation of the organism in response to a stimulus but include a multiplicity of processes (Mauss, Levenson, McCarter, Whilhelm, & Gross, 2005). These components of emotion, i.e. emotional processes, have been characterized by several researchers as different contributors to the emotional response, namely, emotional attention (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995), emotion differentiation (Barrett & Gross, 2001; Barrett, Gross, Christensen, & Benvenuto, 2001), emotion intensity (Larsen & Diener, 1987), emotion regulation (Aldao, Gee, De Los Reyes, & Seager, 2016; Gross, 2015), and emotion expression (Kring, Smith, & Neale, 1994). Dysfunction in one or more of these components may lead to maladjustment of the individual and to the development of psychopathology (Barrett, Gross, Christensen & Benvenuto, 2001).

Emotional attention is considered the first process in the complex system of becoming conscious of emotion (Taylor, Bagby & Parker, 1997), by processing emotional-laden

information. As emotions may require the use of sophisticated strategies, individuals must have enough emotional attention abilities to be aware and react efficiently to the near environment (Barrett & Gross, 2001). Furthermore, emotional attention has been referred to as one of the primary mechanisms for emotion regulation (Gross & Thompson, 2007; Koole, 2009). Several researchers have studied the relation between emotional attention and mental health and found a link between deficits in emotional attention and poorer social and psychological functioning and lower quality of life (Cloitre, Miranda, Stovall-McClough, & Han, 2005; Gratz & Roemer, 2004; Gratz, Rosenthal, Tull, Lejuez, & Gunderson, 2006; Kokkonen et al., 2001; Salters-Pedneault, Roemer, Tull, Rucker, & Mennin, 2006; Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007; Taylor, Bagby, & Parker, 1997). In clinical populations, some studies suggest that inadequate emotional attention is linked to eating disorders (Bruch, 1982; Goodsitt, 1977). On the other hand, high emotional attention to unpleasant emotions (i.e., sadness, anger or fear) may trigger inadequate coping strategies and hence more depressive symptoms (Fernandez-Berrocal, Alcaide, Extremera, & Pizarro, 2006; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008).

According to Feldman Barrett (2006), one of the most prominent authors in the field of emotions, emotion differentiation is the individual ability to recognize and attribute meaning to the physiological arousal. It is the mental construction of emotion, i.e., the symbolizing and expanding of physiological activation involving the recognition and attribution of meaning to the bodily felt sense, and the recognition of the causes and impact of the experienced emotion (Barrett, 2018; Barrett & Gross, 2001). Categorizing an emotion gives it meaning, enabling the communication with others, creating better assumptions about it, and giving better indicators about how to act (Barrett, 2016).

Emotion differentiation, or nowadays, for some authors called emotion granularity (Barrett, 2018; Lindquist & Barrett, 2008) allows the individuals to symbolize the emotional

arousal, giving meaning to the experience and distinguish among a diversity of unpleasant and pleasant emotions (Barrett, 2016; Tugade, Fredrickson, & Barrett, 2004).

This ability to distinguish discrete emotions within broad emotional experiences enables a more effective emotion regulation and adequate regulatory responses (Barrett & Gross, 2001). So, deficits in emotion differentiation could be partially involved in the cause of multiple mental disorders, because not knowing what one feels makes it much harder to use emotions as information about one's current situation (Schwarz & Clore, 1996). Indeed, recent studies have described an association between deficits in emotion differentiation and higher levels of psychopathology (Lindquist & Barrett, 2008).

Emotion regulation has received increased attention in recent years in psychology (Ford & Gross, 2018; Gross, 2015) and nowadays, remains one of the most studied topics in psychology (Ford & Gross, 2018; Gross, 2015; Tamir, 2011).

The most influential model of emotion regulation was developed by Gross (2015), who defined emotion regulation as "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (p.275).

In psychopathology, difficulties in emotion regulation can occur when emotions are too intense (e.g., difficulties regulating fear during panic attacks; Tull & Roemer, 2007), when emotion regulation strategies are not suitable for the situation (e.g. a person with social anxiety disorder who leaves a party because can't regulate fear of rejection; Turk, Heimberg, Luterek, Mennin, & Fresco, 2005) or when emotion regulation strategies are endanger (e.g., a person with Post-Traumatic Stress Disorder; Tull, Bardeen, DiLillo, Moore & Gratz; 2015; Weiss et al., 2012).

Several diagnoses in DSM-5 mention difficulties in emotion regulation. For example, "Depressed mood most of the day, nearly every day" in depression, "fear of dying" in Panic

Disorder, “difficulty controlling anger” in borderline personality disorder; “fear and worry surronding social situations” in social anxiety disorder; “difficulty controlling worry” in generalized anxiety disorder; “rapidly shifting expressions of emotion” in histrionic personality disorder; “inability to experience and regulate painful emotional memories” in post-traumatic stress disorder (Diagnostic and Statistical Manual of Mental Disorders, fifth edition [DSM-V]; American Psychiatric Association, 2013).

Emotion intensity is defined as the difference in the strength with which individuals experience their emotions (Larsen & Diener, 1987, p2), indicating the intensity with which different emotions are experienced. Therefore, emotional states differ from each other not only in quality but also in intensity (Larsen & Diener, 1987). Variations in emotion intensity can relate to differences in the selection and implementation of emotion regulation strategies (Sheppes, 2014; Zimmermann & Iwanski, 2014). In fact, the experience of an inappropriate intensity of emotions can be a symptom of psychopathology (Brody, 1985).

Difficulties in emotional intensity are related to a wide variety of psychological symptoms, like depression (Rottenberg, Joormann, Brozovich, & Gotlib, 2005) psychosomatic symptoms (Larsen & Diener, 1987), cyclothymia, bipolar behavior (Diener, Larsen, Levine, & Emmons, 1985), borderline personality and passive-aggressive personality (Flett & Hewitt, 1995).

Experience of intense, unpleasant emotion is also shared across many different psychological disorders, including depression (Beutler, Engle, Oro-Beutler, Daldrup & Meredith, 1986; Mineka Watson, & Clark, 1998), anxiety disorders (Mineka Watson, & Clark, 1998), eating disorders (e.g., Stice, 2001), schizophrenia (Kring, 2001; Kring & Moran, 2008), substance-related disorders (e.g., Kassel, Stroud & Paronis, 2003), and a number of personality disorders (e.g., Berenbaum et al., 2006; Huprich, 2005; Putnam & Silk, 2005).

Finally, emotion expression has been defined as “outward display of emotion, regardless of valence or channel (facial, vocal, or gestural)” (Kring, Smith & Neale, 1994; p.934). This component of the emotion processing can be adaptive or maladaptive: when it is adaptive, expression of distress can lead to enhanced acceptance of emotions or increased understanding, clarification of interpersonal misunderstandings, or alter another person's behavior in a desired way; when it is maladaptive, expression exacerbates distress by leading to unpleasant emotions of guilt or shame, rehearsing grievances or impairing social relationships (Marx and Sloan, 2002).

Several studies (e.g., Hollaender & Florin, 1983; Marx and Sloan, 2002) examined the relation between emotion expression and psychopathology because several psychopathologies contain diagnostic criteria about difficulties in emotion expression.

Research on emotions has been actively involved in understanding the factors that contribute to the development of mental disorders. However, recent studies on emotion experience and emotional processing have focused on a specific emotional disturbance in disorder (Gross, 2015). Therefore, it is essential to determine which emotional process is not working adaptively in patients with different psychopathologies. This might be very important not only to understand the emotional functioning in each psychopathology but also to improve their treatment.

The purpose of this study is to investigate the emotions felt and each emotional process (i.e., emotional attention, differentiation, intensity, regulation, and expression) in patients attending psychotherapy. Specifically, the main objectives of this study were: (a) to assess the relationship between the emotion felt, emotional attention, differentiation, intensity, regulation, and expression with the severity of psychopathological symptoms; (b) to evaluate the differences in each emotional process between patients with major depressive disorder, generalized anxiety disorder and patients with comorbidity between depressive and anxiety

disorders; and (c) to assess the differences in emotional experience and each emotional process between patients with major depressive disorder, generalized anxiety disorder and patients with comorbidity between depressive and anxiety disorders and patients with personality disorders.

Method

Participants

We performed a cross-sectional study using a convenience sample of 120 adult patients who were attending psychotherapy sessions. These patients were recruited by their psychotherapists between January and November of 2012. Criteria for inclusion in this study were 18 years of age or older and diagnosis of psychopathology by the psychotherapist. Patients' diagnoses were classified according to the *DSM-5* diagnostic system (APA, 2013). Participants were excluded from this study if they presented substance use disorders or psychotic disorders.

Socio-demographic and clinical characteristics of the participants are shown in Table 1. The mean age of the clinical sample was 33.0 years (*SD* = 10.6), most patients were female (63.3%) and single (66.1%), and 51.3% had a university degree. The most common diagnosed psychopathologies were: 30.0% patients classified as having generalized anxiety disorder, 23.6% of patients with comorbidity between depression and anxiety disorders, 20.0% with major depression disorder and 19.2 % of patients classified as having personality disorders.

Table 1

Socio-demographic and Clinical Characteristics of the Patients in Psychotherapy

	Clinical sample (*N* = 120)	
Characteristic	*n*	%
Gender		
Female	76	63.28
Male	44	36.72
Marital status		
Single	78	66.12
Married	27	22.93
Divorced	8	6.81
Cohabiting	3	2.53
Widowed	2	1.71
Education level completed		
9th grade or less	16	14.21
High School	39	34.53
3-5 years' graduate degree	53	46.95
Postgraduate degree	5	4.411
Professional status		
Employed	74	62.24
Unemployed	45	37.76
Psychopathology diagnosis		
General anxiety disorder	33	30.01
Comorbid depressive and anxiety disorders	26	23.62
Major depressive disorder	22	20.03
Personality disorder	23	19.23

Measures

Severity of symptoms of psychopathology

The Brief Symptom Inventory (BSI; Derogatis, 1993) was used to measure levels of psychopathology of the clinical sample. BSI is a self-report instrument with 53 items, which describes a variety of problems and complaints, comprising a shortened form of the revised Symptom Checklist-90 (SCL-90-R). Patients are asked to rate the extent to which they have been disturbed in the past week by several symptoms using a 5-point Likert-type scale ranging from 0 points ("not at all") to 4 points ("extremely"). Scores are obtained in the following nine subscales: Somatization, Obsessive Compulsion, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. The Global Severity Index (GSI), combines information about the number of symptoms and the intensity of distress and indicates the patients' distress level. Higher subscale scores and global scores indicate more severe psychopathology. In this study, we used the Portuguese validation of BSI by Canavarro (1999) with a good internal consistency for all scales (α between .62 and .82).

Emotional experience

We assessed the emotional experience felt by the patients at various moments in time (i.e., at this moment, today, past few days, past few weeks, and past year) using the Portuguese version of the Positive and Negative Affective Schedule (PANAS; Galinha & Pais-Ribeiro, 2005). Patients were instructed to rate to what extent they have experienced 20 different emotions within two subscales. Ten items measure Positive Affect (e.g., strong, proud, interested), and the remaining 10 items measure Negative Affect (e.g., afraid, ashamed, nervous). Positive Affect reflects a combination of arousal and pleasant valence, and Negative Affect reflects a combination of arousal and unpleasant valence. The patients' responses were measured on a 5-point Likert-type scale, ranging from 1 point ("very slightly

or not at all") to 5 points ("extremely"). The Portuguese version of PANAS has high internal consistency with Cronbach's alpha of .86 for Positive Affect and .89 for Negative Affect (Galinha & Pais-Ribeiro, 2005).

Emotional attention

We used the modified version of the Trait Meta-Mood Scale (TMMS) developed by Fernandez-Berrocal, Extremera, and Ramos (2004), i.e. TMMS-24, and validated by Queirós, Fernández-Berrocal, Extremera, Carral, and Queirós (2005), to measure the perceived abilities of the patients to deal with emotions, and to clearly distinguish and regulate them (Salovey, Mayer, Goldman, Turvey & Palfai, 1995). TMMS-24 consists of 24 items on which patients are required to rate the extent to which they agree with each item on a 5-point Likert-type scale, ranging from 1 point ("strongly disagree") to 5 points ("strongly agree"). It includes three subscales with eight items each measuring different aspects of perceived emotional intelligence (i.e., Attention, Clarity, and Repair). The Attention subscale refers to paying close attention to feelings, accepting feelings, valuing them and letting oneself experience them fully and intensively (e.g., "I pay a lot of attention to how I feel"). Individuals scoring high on the Attention subscale value their feelings and believe in letting them guide their behavior. Clarity refers to the way patients can perceive their own emotions (e.g., "I am rarely confused about my feelings"), whereas Repair refers to patients' perception of their abilities to disrupt unpleasant emotional states and to prolong the pleasant ones (e.g., "If I find myself getting mad, I try to calm myself down"). Lower scores for Attention, together with higher scores for Clarity and Repair are associated with a better emotional adjustment (Queirós, Fernández-Berrocal, Extremera, Carral & Queirós, 2005). Portuguese validation of the TMMS-24 presents an adequate internal consistency of .80 for Attention, .79 for Clarity, and .85 for Repair (Queirós et al., 2005).

Emotion differentiation

We used the Portuguese validation of the Range and Differentiation of Emotion Experience Scale (RDEES) by Machado Vaz (2009) to assess the emotion differentiation abilities of the patients. RDEES (Kang & Shaver, 2004) is a self-report instrument, which assesses the psychological significance of the differences between individuals in emotion complexity. This complexity is conceptualized as having two correlated aspects: Range (i.e., span of different emotions experienced by a patient); and Differentiation (i.e., how well a patient can distinguish subtle differences among similar emotions). RDEES includes 14 items rated on a 7-point Likert-type scale that requires participants to indicate how characteristic they feel that the items are, ranging from 1 ("does not describe me at all") to 7 ("describes me extremely well"). The Range subscale includes six items (e.g., "I experience a wide range of emotions"), and the Differentiation subscale involves eight items (e.g., "I am aware that each emotion has a completely different meaning"). Higher RDEES scores indicate greater range and better emotion differentiation abilities, and lower scores are indicative of worst differentiation abilities. The Portuguese version of RDEES presents good internal consistency of .63 for Range, and .82 for Differentiation (Machado Vaz, 2009).

We have also used the above-mentioned Clarity subscale of TMMS-24 and Toronto Alexithymia Scale 20 (TAS-20; Bagby, Parker, & Taylor, 1994) to evaluate the patients' abilities to differentiate between emotions. TAS-20 is a self-reporting instrument for assessing alexithymia (Parker, Taylor, & Bagby, 2003). We used the Portuguese version of TAS-20 developed by Verissimo (2001), which includes 20 items measured on a 5-point Likert-type scale, ranging from 1 point ("strongly disagree") to 5 points ("strongly agree"). TAS-20 comprises three subscales: Difficulty Identifying Feelings (seven items; e.g., "I am often confused about what emotion I am feeling"), Difficulty Describing Feelings (five items; e.g., "It is difficult for me to find the right words for my feelings"), and Externally Oriented

Thinking (eight items; "I prefer to analyze problems rather than describe them"). This Portuguese validation of TAS-20 presents a good internal consistency of .75 for the total score (Verissimo, 2001).

Emotion intensity

We used the Short Affect Intensity Scale (SAIS; Geuens & De Pelsmacker, 2002) to measure self-reported emotion intensity of the patients (i.e., "stable individual differences in the strength with which individuals experience their emotions"). This scale includes 20 items that require participants to indicate the extent by which they agree with the statements, measured on a 5-point Likert-type scale, ranging from 1 point ("strongly disagree") to 5 points ("strongly agree"). SAIS includes three subscales: Positive Intensity, Negative Affectivity, and Serenity. Higher scores are indicative of higher emotion intensity than lower ones. In this study, we used the Portuguese version of the SAIS validated by Machado Vaz (2018) with adequate internal consistency (Positive Intensity, α =.83; Negative Affectivity, α =.78; Serenity, α =.85).

Emotion regulation

We used the Repair subscale of the TMMS-24 (Queirós, Fernández-Berrocal, Extremera, Carral & Queirós., 2005), the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003), and the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) to measure patients' perceived emotion regulation strategies. The Portuguese version of ERQ consists of 10 items rated on a 7-point Likert-type scale, ranging from 1 point ("strongly disagree") to 7 points ("strongly agree") (Machado Vaz, 2009). The instrument comprises two subscales: Reappraisal, which integrates five items, measuring cognitive change involving the re-evaluation of a potentially evocative situation in a way that alters its forthcoming emotional impact and Suppression, which involves five items, measuring response modulation strategy that involves inhibiting ongoing emotion-expressive behavior.

Higher scores reflect a greater emotion regulation tendency. Internal reliability scores of ERQ ranged from Cronbach's alpha of .76 in the Reappraisal subscale, to Cronbach's alpha of .61 in the Suppression subscale (Machado Vaz, 2009).

DERS is a self-report instrument for assessing the complexities and clinically-relevant difficulties of emotion regulation (Gratz & Roemer, 2004). It includes 36 items that require patients to indicate how often each item applies to themselves, rated on a 5-point Likert-type scale with responses ranging from 1 ("almost never") to 5 ("almost always").

DERS includes six factors reflecting the multi-faceted nature of emotion regulation: (a) Non-Acceptance of Emotional Responses (non-acceptance), with six items reflecting a tendency to have negative secondary emotional responses to one's negative emotions, or non-accepting reactions to one's distress; (b) Difficulties Engaging in Goal-Directed Behaviour (goals), with five items reflecting difficulties concentrating and accomplishing tasks when experiencing negative emotions; (c) Impulse Control Difficulties (impulse), with six items reflecting difficulties remaining in control of one's behaviour when experiencing negative emotions; (d) Lack of Emotional Awareness (attention), with six items reflecting the tendency to attend to and acknowledge emotions, or if reversed scored, reflects an inattention to, and lack of awareness of, emotional responses; (e) Limited Access to Emotion Regulation Strategies (strategies), with eight items reflecting the belief that there is little that can be done to regulate emotions effectively once an individual is upset; and (f) Lack of Emotional Clarity (clarity), with five items reflecting the extent to which individuals know and are clear about the emotions they are experiencing. Higher scores are indicative of higher difficulties in emotion regulation, whereas lower scores are indicative of lower difficulties in emotion regulation. Internal consistency is high (α = .91) for the Portuguese version of DERS (Machado Vaz, 2018).

Emotion expression

We used the Emotion Expressivity Scale (EES; Kring, Smith & Neale, 1994) to evaluate the perceived emotion expression ability of the patients. EES is a self-report instrument for assessing the extent to which an individual outwardly expresses pleasant and unpleasant emotions. It includes 17 items, requiring patients to evaluate statements such as “I don’t express my emotions to other people” and “I think of myself as emotionally expressive,” using a 6-point Likert-type scale ranging from 1 point (“never true”) to 6 points (“always true”). EES scores predict greater psychological distress, with lower scores associated with greater psychological distress. In this study, we used the Portuguese version of the EES validated by Machado Vaz (2018) with a high internal consistency ($\alpha = .87$).

Procedure

Patients with psychopathologies were invited to participate in the study by their psychotherapists, who provided them with the “Patient’s Book”. This book included: (a) formal invitation to participate in the study (Appendix A); (b) sociodemographic questions, which included age, gender, marital and employment status, and educational level; (c) eight instruments for self-report of emotional processes; (d) one instrument for self-report of levels of psychopathological symptoms; (e) instructions for answering to the self-report instruments (either immediately after the psychotherapy session, or at home); and (f) instructions for the patients to return their answers to the psychotherapist in a sealed envelope (either in the following appointment, or as soon as possible). These instructions stated that only the study researchers, and not the therapists, would have access to the answers. Written informed consent was obtained from all participants before study inclusion.

Psychotherapists were instructed to return the sealed envelopes with the answers of the patients to the study researchers. Scores of self-report instruments and socio-demographic

data from the questionnaires were completed by all patients and collected by the researchers. Patients were grouped per diagnosis and classified as having major depressive disorder, generalized anxiety disorder, co-morbidity between depressive, and anxiety disorders or personality disorders.

Data Analysis

All data were entered in SPSS (Version 17.0) and statistical analysis was performed in R (Version 3.3.2). Sociodemographic data of the patients and their scores from the self-report instruments (i.e., PANAS, TMMS-24, RDEES, TAS-20, SAIS, ERQ, DERS, EES, and BSI) were analyzed using descriptive statistics. Scores from either the total number of patients or subgroups of patients per diagnosis were tested for normality using the Shapiro-Wilk's test. Categorical variables were summarized as number and percentage, and continuous variables were summarized by mean (standard deviation) or median (minimum-maximum).

Correlation analysis was used to evaluate associations between pairs of scores, using Pearson's ρ correlation coefficient, if both scores were normally distributed, or using Kendall's τ correlation coefficient, if at least one of the scores was not normally distributed (statistical threshold, $p = .05$).

Scores were compared across patients, i.e., depressive versus anxiety versus depressive and anxiety disorders, and between patients who had depressive and/or anxiety disorders versus those who had personality disorders. Differences between scores were tested using Student's t-test for independent samples or one-way analysis of variance, if all scores were normally distributed, or using Wilcoxon rank-sum test with continuity correction or Kruskal-Wallis analysis of variance by ranks, if at least one of the scores was not normally distributed (statistical threshold, $p = .05$).

Results

Relation Between Emotional Experience, Emotion Processes, and Psychopathology

To analyze the relationship between emotional processes and psychopathology, patients were given instruments to measure emotion felt (i.e., PANAS) and several emotional processes (i.e., TMMS-24, RDEES, TAS-20, SAIS, ERQ, DERS, and EES), as well as symptoms of psychopathology (i.e., BSI). Therefore, we used BSI to assess the severity of symptoms of psychopathology in our clinical sample before proceeding to further analyses. Table 2 shows the results of our sample, for each of the scored BSI subscales and GSI.

Table 2

BSI and GSI Measuring the Symptoms of Psychopathology of the Clinical Sample

	Score			
Psychopathology symptom	*M*	*SD*	*Mdn*	Range
Somatization	.86	.78	0.71	.00-3.14
Obsessive Compulsion	1.56	.81	1.50	.00-4.00
Interpersonal Sensitivity	1.45	.94	1.25	.00-3.50
Depression	1.60	.92	1.50	.00-4.00
Anxiety	1.42	.88	1.33	.00-3.67
Hostility	1.17	.80	1.00	.00-4.00
Phobic Anxiety	.87	.94	0.60	.00-4.00
Paranoid Ideation	1.42	.91	1.40	.00-4.00
Psychoticism	1.23	.82	1.00	.00-3.20
Global Severity Index	1.29	.69	1.20	.09-3.32

Correlations between scores on the PANAS subscales and scores on the BSI subscales were examined. Most scores for PANAS Positive Affect and Negative Affect were significantly associated with BSI subscales. As shown in Table below, scores of Positive Affect were negatively correlated with scores of psychopathological symptoms, whereas scores of Negative Affect presented positive correlations.

The strongest positive associations were found between Negative Affect “past few days” and BSI Anxiety, $r_\tau = .331$, $p < .001$, Negative Affect “past few days” and Global Severity Index, $r_\tau = .322$, $p < .001$, and Negative Affect “today” and BSI Depression, $r_\tau = .307$, $p < .001$.

The strongest evidence for a negative association between emotional experience and symptoms of psychopathology were those between Positive Affect “past few weeks” and BSI Depression, $r_\tau = -.304$, $p < .001$. and Positive Affect “past few weeks” and BSI Obsession-Compulsion, $r_\tau = -.280$, $p < .001$.

Table 3. *Correlations for Scores on the Brief Symptom Inventory and Emotional Experience in the Clinical Sample*

	Brief Symptom Inventory									
PANAS scale	Somatization	Obsessive Compulsion	Interpersonal Sensitivity	Depression	Anxiety	Hostility	Phobic Anxiety	Paranoid Ideation	Psychoticism	GSI
Positive Affect										
Moment		-.23	-.21	-.20	-.19		-.20			-.20
Today	-.18	-.27	-.19	-.24	-.15		-.23		-.17	-.24
PFD	-.20	-.21	-.20	-.27	-.18				-.19	-.23
PFW	-.17	-.28	-.23	**-.30**	-.16				-.25	-.25
PY			-.15	-.15						
Negative Affect										
Moment	.16	.20	.25	**.30**	.25	.263	.18	**.30**	.25	.29
Today	.18	.21	.25	**.30**	.27	.276	.22	.23	.27	**.30**
PFD	.17	.24	.26	.25	**.33**	.202	.23	.20	.27	**.32**
PFW	.14	.28	.28	.27	.24	.180	.17	.17	.29	**.30**
PY	.15	.18	.16	.18				.15	.20	.17

Note. Only the significant correlations are shown ($p < .05$). Correlation coefficients above .30 in boldface; PANAS = Positive and Negative Affective Schedule, PFD = past few days, PFW = past few weeks, PY = past year; GSI = Global Severity Index

Table 4. *Correlations of Brief Symptom Inventory and Emotional Processing in the Clinical Sample*

	TMMS: Attention	TMMS: Clarity	TMMS: Repair	RDEES: Total	RDEES: Differentiation	RDEES: Range	TAS20: Total	TAS20: DIF	TAS20: DDF	TAS20: EOT	ERQ: Reappraisal	ERQ: Suppression	DERS: NAER	DERS: DEGDB	DERS: ICD	DERS: LEA	DERS: LAERS	DERS: LEC	DERS: Total	SAIS: Positive	SAIS: Negative	SAIS: Serenity	EES
BSI: Somatization	-.132						.221	.233	.211			.153	.208		.203		.218	.139	.184				.169
BSI: Obsession Compulsion		-.187					**.305**	**.306**	.225			.257	.288	.298	.296		**.309**	.275	**.374**		.215		.253
BSI: Interpersonal Sensitivity			-.170				**.327**	.274	.253	.148		.258	.287	.276	.253		**.332**	.255	**.357**		.245		.254
BSI: Depression			-.233				.251	.244	.191			.154	.296	.205	.255		**.395**	.226	**.347**		.211		.193
BSI: Anxiety		-.161	-.205	-.141	-.135		.255	.254	.182			.169	.268	.219	.276		.269	**.313**	**.315**	.134	.214		.206
BSI: Hostility		-.172	-.132										.191	.214	**.338**	-.178	.255	.199	.249	.165		-.161	.180
BSI: Phobic Anxiety		-.145					.192	.208	.173			.188	.260	.138	.211		.240	.241	.243				.181
BSI: Paranoid Ideation							.229		.270	.163		.262	.166	.200	.209		.241	.249	.253		.247		.252
BSI: Psychoticism		-.144	-.200				**.318**	.285	**.306**			.229	**.368**	.250	**.314**		**.374**	.284	**.351**		.262		.196
BSI: GSI		-.162	-.177				**.318**	.283	.247			.226	**.310**	.250	**.319**		**.362**	**.302**	**.372**		.222		.255

Note. Only significant correlation coefficients are shown (p < .05). Correlation coefficients above .30 in boldface. BSI = Brief Symptom Inventory; DDF = Difficulty Describing Feelings; DEGDB = Difficulties Engaging in Goal-Directed Behavior; DERS = Difficulties in Emotion Regulation Scale; DIF = Difficulty Identifying Feelings; EES = Emotion Expressivity Scale; EOT = Externally Oriented Thinking; ERQ = Emotion Regulation Questionnaire; GSI = Global Severity Index; ICD = Impulse Control Difficulties; LAERS = Limited Access to Emotion Regulation Strategies; LEA = Lack of Emotional Awareness; LEC = Lack of Emotional Clarity; NAER = Non-Acceptance of Emotional Responses; RDEES = Range and Differentiation of Emotional Experience Scale; SAIS = Short Affect Intensity Scale; TAS-20 = Toronto Alexithymia Scale 20; TMMS-24 = Trait Meta-Mood Scale 24.

As we can see in the table above, Attention subscale of TMMS-24 was negatively correlated with BSI score for Somatization. Regarding emotion differentiation, Clarity scores show, although weak, significant negative correlations with the scores of seven BSI subscales and GSI (Table 4). RDEES scores presented no significant correlation with the BSI scores, except for the Total and Differentiation scores, which were negatively associated with BSI Anxiety.

On the other hand, TAS-20 Total score was significantly positively correlated with BSI Somatization, Obsession-Compulsion, Depression, Phobic Anxiety, Paranoid Ideation, Psychoticism and GSI (Table 4), showing the highest coefficient of correlation with Interpersonal Sensitivity. These results are confirmed by the significant positive correlations between Difficulty Identifying Feelings and BSI Somatization, Obsession-Compulsion, Interpersonal Sensitivity, Depression, Anxiety, Phobic Anxiety, Psychoticism, and GSI (Table 4). Moreover, Difficulty Describing Feelings showed significant positive correlations with BSI Somatization, Obsession-Compulsion, Interpersonal Sensitivity, Depression, Anxiety, Phobic Anxiety, Paranoid Ideation, Psychoticism, and GSI (Table 4). Finally, Externally Oriented Thinking was significantly positively correlated with BSI Interpersonal Sensitivity and Paranoid Ideation, although with correlation coefficients below .20.

Correlation analysis of the scores measuring emotion intensity showed that SAIS Positive Intensity was positively correlated with Anxiety and Hostility scores of the BSI scale, although with very low correlation coefficients (Table 4). Moreover, SAIS Negative Affectivity showed significant positive correlations with BSI Obsession-Compulsion, Interpersonal Sensitivity, Depression, Anxiety, Paranoid Ideation, Psychoticism, and GSI. SAIS Serenity was negatively correlated with BSI Hostility and was not associated with other BSI subscales.

All correlations between emotion regulation strategies and symptoms of psychopathology are shown in Table 4. TMMS-24 Repair presented significant but weak negative correlations (i.e., coefficients above -.21) with BSI Interpersonal Sensitivity, Depression, Anxiety, Hostility, Psychoticism and GSI. The Reappraisal subscale of ERQ (an adaptive regulation strategy) was not associated with all BSI scores, whereas the Suppression subscale (an unadaptive regulation strategy) showed significant positive correlations with all BSI subscales except Hostility.

Furthermore, most scales of Difficulties in Emotion Regulation scale were significantly associated with the BSI scores with correlation coefficients ranging between .139 and .395. Scores on DERS Total, Non-Acceptance of Emotional Responses, Difficulties Engaging in Goal-Directed Behavior, Impulse Control Difficulties, Limited Access to Emotion Regulation Strategies and Lack of Emotional Clarity were positively correlated with all BSI subscales (Table 4). On the other hand, only one significant correlation was found between Lack of Emotional Awareness and the BSI subscale Hostility.

Finally, as shown in Table 4, scores of EES Total measuring emotion expression were significantly and positively associated with all BSI subscales, although with low correlation coefficients, ranging between .16 and .25.

Differences Between Emotion Experience and Emotion Process Based on Psychopathology Diagnosis

To assess relationships among emotion experience and emotion processes and psychopathologies, this study examined the differences between patients with different forms of psychopathology. Scores were compared across patients who had major depressive disorder versus generalized anxiety disorder versus comorbid depressive and anxiety disorders, and between patients who were diagnosed by the therapist as having personality disorders versus those who had major depressive disorder, generalized anxiety disorder or both.

Patients with a major depressive disorder, generalized anxiety disorder and comorbid depressive and anxiety disorders

Regarding differences in the emotion experience and emotion processes of patients within major depressive disorder, generalized anxiety disorder and comorbid depressive and anxiety disorders, no statistically significant differences were identified for PANAS scores (Table 5).

Table 5

Differences between Emotional Experience as a Function of the Patients Diagnosis

	Mdn (Range)			
PANAS scale	Major depressive disorder	Generalized anxiety disorder	Comorbid depressive and anxiety disorder	*p*
Positive Affect				
Moment	24.51 (13-44)	20.01 (10-47)	20.01 (10-32)	.076
Today	22.54 (14-38)	22.02 (10-47)	19.53 (10-45)	.207
Past few days	26.03 (14-39)	27.54 (10-46)	18.56 (10-43)	.179
Past few weeks	26.05 (17-39)	27.03 (13-45)	21.57 (10-34)	.281
Past year	27.07 (13-40)	27.05 (13-48)	22.03 (13-39)	.405
Negative Affect				
Moment	14.03 (10-35)	13.57 (10-46)	15.54 (10-29)	.600
Today	16.04 (10-35)	16.05 (10-38)	15.04 (10-42)	.833
Past few days	25.09 (11-43)	23.02 (10-47)	22.04 (10-39)	.811
Past few weeks	27.03 (12-44)	22.03 (10-43)	22.54 (12-31)	.470
Past year	29.01 (13-45)	24.01 (12-43)	29.06 (14-40)	.374

Note. For all subscales, scores are indicative of more extreme responding in the direction of the construct assessed. PANAS = Positive and Negative Affective Schedule.

Similarly, no statistically significant differences were identified between patients with major depressive disorder, generalized anxiety disorder and co-morbid depressive and anxiety disorders for the scores measuring emotional attention, differentiation, intensity, regulation and expression (Table 6).

Table 6

Differences between Emotional Processing as a Function of the Patients Diagnosis

	Mdn (Range)			
Scale	Major depressive disorder	Generalized anxiety disorder	Comorbid depressive and anxiety disorder	*p*
Emotional attention				
TMMS-24: Attention	29.51 (8-40)	32.0 (18-40)	32.04 (14-38)	.458
Emotion differentiation				
TMMS-24: Clarity	27.04 (11-40)	27.01 (20-37)	26.01 (15-35)	.354
RDEES: Total	51.03 (34-72)	52.03 (32-78)	51.04 (15-74)	.940
RDEES: Differentiation	30.04 (17-49)	33.02 (16-46)	32.03 (9-56)	.739
RDEES: Range	21.06 (13-29)	20.03 (12-32)	19.07 (6-29)	.239
TAS-20: Total	57.53 (36-100)	57.06 (40-84)	62.51 (40-86)	.237
TAS-20: DIF	21.04 (10-32)	17.57 (7-29)	19.05 (10-35)	.051
TAS-20: DDF	15.07 (9-21)	14.01 (9-23)	14.08 (8-25)	.666
TAS-20: EOT	26.01 (17-40)	26.03 (20-33)	27.09 (17-36)	.616
Emotion intensity				
SAIS: Positive Intensity	30.02 (16-40)	28.05 (13-38)	28.09 (8-38)	.455
SAIS: Negative Affectivity	22.54 (14-30)	22.06 (10-29)	24.01 (16-30)	.201
SAIS: Serenity	23.08 (10-30)	20.06 (9-30)	22.54 (6-30)	.546
Emotion expression				
EES	52.05 (44-84)	50.01 (42-70)	56.01 (38-72)	.203

Table 6. Continued

Scale	Mdn (Range)			
	Major depressive disorder	Generalized anxiety disorder	Comorbid depressive and anxiety disorder	*p*
Emotion regulation				
TMMS-24: Repair	27.01 (9-38)	26.01 (15-40)	24.01 (8-36)	.417
ERQ: Reappraisal	24.54 (9-38)	27.04 (7-42)	26.05 (12-42)	.878
ERQ: Suppression	16.07 (4-25)	15.08 (4-28)	13.09 (4-21)	.242
DERS: Total	89.04 (49-114)	83.09 (56-136)	81.06 (55-122)	.696
DERS: NAER	14.57 (6-30)	15.05 (7-27)	16.07 (7-29)	.835
DERS: DEGDB	10.01 (5-18)	11.04 (4-20)	13.04 (6-19)	.184
DERS: ICD	9.08 (5-17)	9.09 (5-25)	11.09 (5-18)	.296
DERS: LEA	19.03 (11-28)	21.01 (11-30)	18.01 (12-29)	.278
DERS: LAERS	17.55 (8-27)	15.05 (10-31)	18.55 (9-30)	.299
DERS: LEC	9.09 (6-17)	9.09 (6-17)	9.06 (6-16)	.997

Note. For all scales, scores are indicative of more extreme responding in the direction of the construct assessed.. DDF = Difficulty Describing Feelings, DEGDB = Difficulties Engaging in Goal-Directed Behavior, DERS = Difficulties in Emotion Regulation Scale, DIF = Difficulty Identifying Feelings, EES = Emotion Expressivity Scale, EOT = Externally Oriented Thinking, ERQ = Emotion Regulation Questionnaire, ICD = Impulse Control Difficulties, LAERS = Limited Access to Emotion Regulation Strategies, LEA = Lack of Emotional Awareness, LEC = Lack of Emotional Clarity, NAER = Non-Acceptance of Emotional Responses, RDEES = Range and Differentiation of Emotion Experience Scale, SAIS = Short Affect Intensity Scale, TAS-20 = Toronto Alexithymia Scale 20, TMMS-24 = Trait Meta-Mood Scale 24.

Patients with major depressive disorder, generalized anxiety disorder and comorbid depressive and anxiety disorders and personality disorders.

Comparison of the PANAS scores measuring the emotion showed that patients with personality disorders, have significantly higher scores for PANAS Positive Affect "moment" and "today" than those of patients with major depressive disorder, generalized anxiety disorder and comorbid depressive and anxiety disorders (Table 7).

Table 7

Differences between Emotion Experience as a Function of the Patients Diagnosis

	Mdn (Range)		
PANAS scale	*Patients with major depressive disorder, generalized anxiety disorder and comorbid depressive and anxiety disorders*	*Personality disorders*	*p*
Positive Affect			
Moment	22.01 (10-47)	27.01 (12-50)	**.016**
Today	22.08 (10-47)	29.03 (12-37)	**.025**
Past few days	26.03 (10-48)	27.56 (14-39)	.294
Past few weeks	27.07 (10-49)	27.08 (14-39)	.991
Past year	25.05 (11-48)	28.01 (12-44)	.485
Negative Affect			
Moment	14.03 (10-46)	15.01 (10-50)	.601
Today	15.02 (10-42)	16.56 (10-30)	.454
Past few days	22.01 (10-47)	21.07 (10-34)	.856
Past few weeks	23.09 (10-44)	25.09 (14-40)	.419
Past year	27.01 (10-45)	27.51 (12-50)	.794

Note. Personality disorders. PANAS = Positive and Negative Affective Schedule. Significant level at $p < .05$ in boldface.

Results from the assessment of emotion processes of patients with major depressive disorder, generalized anxiety disorder and both disorders versus personality disorders patients are shown in Table 8.

Table 8

Differences between Emotion Experience as a Function of the Patients Diagnosis

	Mdn (Range)		
Scale	*Patients with major depressive disorder, generalized anxiety disorder and comorbid depressive and anxiety disorders*	*Personality disorders*	*p*
Emotional attention			
TMMS-24: Attention	32.01 (8-40)	30.03 (22-40)	.824
Emotion differentiation			
TMMS-24: Clarity	26.56 (11-40)	28.07 (20-38)	.316
RDEES: Total	53.06 (15-78)	57.08 (41-73)	**.015**
RDEES: Differentiation	32.01 (9-56)	36.51 (15-54)	.084
RDEES: Range	20.0 (6-32)	22.06 (16-30)	**.032**
TAS-20: Total	58.0 (36-100)	62.07 (39-76)	.156
TAS-20: DIF	19.0 (7-35)	21.09 (10-30)	.642
TAS-20: DDF	14.5 (8-25)	16.01 (9-22)	.072
TAS-20: EOT	26.0 (17-40)	25.52 (19-32)	.997
Emotion intensity			
SAIS: Positive Intensity	28.0 (8-40)	29.09 (14-39)	.939
SAIS: Negative Affectivity	22.03 (10-30)	25.05 (17-30)	**.023**
SAIS: Serenity	22.00 (6-30)	20.10 (10-29)	.386

Table 8. Continued

Scale	*Mdn* (Range)		*p*
	Patients with major depressive disorder, generalized anxiety disorder and comorbid depressive and anxiety disorders	*Personality disorders*	
Emotion regulation			
TMMS-24: Repair	26.03 (8-40)	26.03 (15-34)	.928
ERQ: Reappraisal	26.30 (7-42)	26.30 (7-36)	.775
ERQ: Suppression	16.40 (4-28)	17.03 (4-25)	.250
DERS: Total	83.04 (49-136)	93.07 (66-133)	**.025**
DERS: NAER	15.04 (6-30)	18.01 (8-28)	.084
DERS: DEGDB	12.08 (4-20)	15.01 (6-20)	**.010**
DERS: ICD	10.07 (5-25)	14.02 (5-20)	**.004**
DERS: LEA	20.04 (11-30)	19.02 (12-29)	.862
DERS: LAERS	16.01 (8-31)	21.53 (10-34)	.074
DERS: LEC	9.01 (6-17)	9.03 (7-14)	.450
Emotion expression			
EES	55.01 (38-84)	59.03 (46-73)	.057

Note. For all scales, scores are indicative of more extreme responding in the direction of the construct assessed. Depressive, anxiety, and depressive and anxiety disorders without comorbid personality disorders; Personality disorders. Significant level at $p < .05$ in boldface. DDF = Difficulty Describing Feelings, DEGDB = Difficulties Engaging in Goal-Directed Behavior, DERS = Difficulties in Emotion Regulation Scale, DIF = Difficulty Identifying Feelings, EES = Emotion Expressivity Scale, EOT = Externally Oriented Thinking, ERQ = Emotion Regulation Questionnaire, ICD = Impulse Control Difficulties, LAERS = Limited Access to Emotion Regulation Strategies, LEA = Lack of Emotional Awareness, LEC = Lack of Emotional Clarity, NAER = Non-Acceptance of Emotional Responses, RDEES = Range and Differentiation of Emotional Experience Scale, SAIS = Short Affect Intensity Scale, TAS-20 = Toronto Alexithymia Scale 20, TMMS-24 = Trait Meta-Mood Scale 24.

As we can see in table 8, no statistical differences were found in emotional attention between the two groups.

Regarding emotion differentiation, we found that patients with personality disorders showed significantly higher scores for RDEES Total and Range than those of patients with major depressive disorder, generalized anxiety disorder and comorbid depressive and anxiety disorders. Patients with personality disorders also showed significantly higher scores for the emotion intensity in Negative Affectivity, compared to those of patients without personality disorders. Moreover, patients with personality disorders showed significantly higher scores for difficulties in emotion regulation, namely Difficulties Engaging in Goal-Directed Behavior, Impulse Control Difficulties, and significantly higher total Difficulties in Emotion Regulation Scale, relatively to those of patients without personality disorders.

Finally, for emotion expression, no statistically significant differences were found between patients with personality disorders and patients with major depressive disorder, generalized anxiety disorder and comorbid depressive and anxiety disorders (Table 8).

Discussion

Everyday, people use their emotions to manage the demands of a number of environmental stimuli and challenges, serving important intra and interpersonal functions (Keltner & Kring, 1998).

Emotions are critical in the etiology and maintenance of many forms of psychopathology. Studies on emotion and psychopathology increased dramatically over the past decades (for reviews see Aldao, Nolen-Hoeksema & Schweizer, 2010; Aldao, Gee, De Los Reyes, & Seager, 2016; Kring, 2010; Kring, & Sloan, 2009) and nowadays are a crucial and growing research field, with results showing the impact of different emotional components in the development or maintenance of psychopathology (Kring, 2010; Kring, & Sloan, 2009; Moran, Mehta & Kring, 2012).

So, the most recent research include the evaluation of emotion and emotional components not only for disorders that clearly involve emotion disorders, such as the mood and anxiety disorders (Farach & Mennin, 2007; Kring, 2010; Mennin, Holaway, Fresco, Moore & Heimberg, 2007; Moran, Mehta & Kring, 2012) to behaviors less clearly linked to emotion difficulties, such as insomnia (Harvey, McGlinchey, & Gruber, 2009) and schizophrenia (Kring & Moran, 2008).

Nowadays, with emotions being considered as comprised of multiple processes, including emotional attention, emotion differentiation, expression, regulation, and intensity, investigation showed that the lack of coherence across emotional processes had been observed in different psychological disorders and had been considered an emotion disturbance (e.g., Kring, 2001).

Therefore, in almost every form of personal non-adjustment, one or more components of the emotional processing might not be working adaptively (Aldao, Nolen-Hoeksema &

Schweizer, 2010; Barrett, Gross, Christensen & Benvenuto, 2001). These deficits can occur, for example, in attention (Fox, Axelrod, Paliwal, Sleeper, & Sinha, 2007), differentiation (Emery, Simons, Clarke, & Gaher, 2014), expression (Marx and Sloan, 2002), intensity (Berenbaum et al., 2006; Huperich, 2005; Putnam & Silk, 2005) and regulation (Barret, 2016; Gross, 2015) of emotions.

So, a multi-emotional process approach to the understanding of psychopathology can have two clear advantages. First, it will allow investigators to include multiple emotion processes in the same statistical models and, thus, identify which aspects of emotion are more central to the development or maintenance of psychopathology.

Second, by assessing multiple emotional processes, investigators open the door to the possibility of understanding how different emotional processes might influence one another. For example, recent work suggests that the use of maladaptive emotion differentiation strategies (e.g., non-labelling emotions) moderates the association between symptoms of depression, anxiety and the use of adaptive emotion regulation strategies (e.g., acceptance and reappraisal) (e.g., Aldao, Jazaieri, Goldin, & Gross, 2014; Aldao & Nolen-Hoeksema, 2012).

Emotion felt, components of emotional process and psychopathology

The first aim of this study was to investigate the relationship between the emotion felt, the emotional processes and symptoms of psychopathology of patients attending psychotherapy.

Results showed that emotion felt and emotion processes can be related to severity of symptoms of psychopathology. Significant associations were found between psychopathological symptoms and Negative Affect, Difficulty Identifying Feelings, Difficulty Describing Feelings and Difficulties in Emotion Regulation. First, a negative correlation between BSI Depression symptoms and PANAS Positive Affect “past few weeks”

was found, which indicates a relationship between difficulties in experiencing pleasant emotion experience and levels of depressive symptoms. Indeed, other authors have also observed that depression can reflect difficulties in experiencing pleasant emotions (Bylsma, Morris, & Rottenberg, 2008). Moreover, the PANAS has been used extensively in studies of anxiety and depression, with low levels of Positive Affect being characteristic of depression (Mineka, Watson, & Clark, 1998; Watson, 2005).

Second, we found a positive correlation between Negative Affect "moment" and "today" with the severity of Depression symptoms, indicating that unpleasant emotions might have an essential role in the etiology or in the maintenance on major depressive disorder. In fact, Negative Affect has been shown to significantly predict self-reported depression (Dyck, Jolly, & Kramer, 1994; Mineka, Watson, & Clark, 1998; Watson, 2005). Furthermore, in our study, Negative Affect is positively correlated with Anxiety, Paranoid Ideation and Global Severity Index. Other studies obtained the same result, with the experience of excessive unpleasant emotions being related with anxiety symptoms (Mineka, Watson, & Clark, 1998), eating disorders (Bruch, 1982; Stice, 2001), substance-related disorders (Kassel, Stroud, & Paronis, 2003), and personality disorders (Berenbaum et al., 2006; Huprich, 2005; Putnam & Silk, 2005).

Third, our findings show that symptoms of psychopathology positively correlated with measures of alexithymia, i.e., Difficulty Identifying Feelings and Difficulty Describing Feelings, which were used to evaluate patients' difficulties in emotion differentiation. Previous studies have shown a significant correlation between difficulties in emotion differentiation and several disorders, including depression (Grabe, Spitzer, & Freyberger, 2004; Taylor, Bagby, & Parker, 1991) and anxiety disorders (Frewen, Pain, Dozois, & Lanius, 2006; Parker, Taylor, & Bagby, 2003; Turk, Heimberg, Luterek, Mennin, & Fresco, 2005). Indeed, alexithymia is the most well-known psychopathological symptom

demonstrating the impact of emotion differentiation in psychopathology (Parker, Taylor, & Bagby, 1998), with alexithymic individuals experiencing fewer emotions (e.g., Luminet, Rimé, Bagby, & Taylor, 2004; Mantani, Okomoto, Shirao, Okada, & Yamawaki, 2005) using fewer emotion words (e.g., Luminet, Rimé, Bagby, & Taylor, 2004) and demonstrating decreased abilities for regulating emotions (Parker, Taylor, & Bagby, 1998).

For instance, the positive correlation of TAS-20 with Obsessive Compulsion in this study has been previously observed with decreased emotion clarity being related with symptoms of general anxiety disorder, panic disorder and social anxiety disorder (Baker, Holloway, Thomas, Thomas, & Owens, 2004; Tull & Roemer, 2007). Consequently, individuals with symptoms of posttraumatic stress disorder (Ehring & Quack, 2010; Weiss et al., 2012), general anxiety disorder (Mennin & Fresco, 2009; Mennin, Heimberg, Turk, & Fresco, 2005; Salters-Pedneault et al., 2006), and social anxiety disorder (Mennin & Fresco, 2009; Turk, Heimberg, Luterek, Mennin, & Fresco, 2005) were found to develop difficulties with repairing unpleasant mood and accessing effective emotion regulation strategies when distressed.

Also, the positive correlation of TAS-20 Total with Interpersonal Sensitivity found in our study might be explained by the fact that people who suffer from alexithymia not only have deficits in the experience of emotion but also exhibit low levels of spontaneous expressive behavior (Luminet, Rimé, Bagby, & Taylor, 2004).

Finally, our findings also show that Difficulties in Emotion Regulation correlated positively with all symptoms of psychopathology. This is in accordance with previous studies, which demonstrated that difficulties in emotion regulation are present in most psychopathologies (Werner & Gross, 2010). This might be explained by the fact that many current diagnostic criteria explicitly contain difficulties, disruptions or use of unadaptive emotion regulation strategies (Barlow, 2000; Kring & Werner, 2004). Several diagnoses in

DSM-5 mention difficulties in emotion regulation. For example, “Depressed mood most of the day, nearly every day” in depression, “fear of dying” in Panic Disorder, “difficulty controlling anger” in borderline personality disorder; “fear and worry surrounding social situations” in social anxiety disorder; “difficulty controlling worry” in generalized anxiety disorder; “rapidly shifting expressions of emotion” in histrionic personality disorder; “inability to experience and regulate painful emotional memories” in post-traumatic stress disorder (Diagnostic and Statistical Manual of Mental Disorders, fifth edition [DSM-V]; American Psychiatric Association, 2013).

Studies in eating disorders (Fairburn Cooper, & Shafran, 2003; Polivy & Herman, 2002), alcohol abuse (Sher & Grekin, 2007; Tice, Bratslavsky, & Baumeister, 2001) and drugs (Fox, Axelrod, Paliwal, Sleeper, Sinha, 2007) suggest that individuals with non-adaptive emotion regulation often use food, alcohol or drugs to downregulate emotions.

Emotion experience and processes across patients with major depressive disorder, generalized anxiety disorder and comorbid depressive and anxiety disorders

The second aim of this study was to assess the differences in emotions felt and emotion processes in patients with major depressive disorder, generalized anxiety disorder and/or both, by comparing emotion abilities of patients with major depressive disorder versus patients with generalized anxiety disorder versus patients with comorbid depression and anxiety. Statistical analysis showed that patients with these different psychopathologies do not present significant differences in emotion experience as well as in emotion processes, namely emotional attention, differentiation, intensity, regulation, and expression.

So, the non-existence of differences in emotion processes between patients with depression and anxiety has turned clear that many of the observed emotion disturbances may be common across disorders.

Our results are in accordance with the report of the APA planning committee for the *DSM-5* (Kupfer, First, & Regier, 2002) when evaluating the current system for the classification of psychological problems, based on collections of topographically defined co-occurring symptoms: “Epidemiological and clinical studies have shown extremely high rates of comorbidities among disorders, thus undermining the hypothesis that the syndromes represent distinct etiologies” (p.xviii).

A new path for the future of emotion and psychopathology research must be developed to overcome these limitations.

Emotion experience and processing across patients with major depressive disorder, generalized anxiety disorder and comorbid depressive and anxiety disorders and personality disorders

The third aim of this study was to evaluate the differences in emotions felt and emotion processing between patients with personality disorders and those with depressive disorders, anxiety disorders, or both, without comorbid personality disorders. Our results show that patients with personality disorders differ significantly in some emotion processing abilities, namely emotion differentiation, regulation and intensity, compared to patients with depressive disorders, anxiety disorders or both.

Patients with personality disorders showed higher scores for Positive Affect in the shorter timeframes (i.e., moment and today), which was consistent with previous observations that lower levels of positive affect are characteristic of mood disorders, such as depression and social phobia (Mineka, Watson, & Clark, 1998; Watson, 2005). Also, patients with personality disorders presented higher scores on RDEES Total and on the construct Range, compared to patients with depression and anxiety disorders.

At the same time, patients with personality disorders reported higher scores on Intensity of Negative Affectivity compared to patients with depressive disorders, anxiety disorders or both. In fact, the experience of excessive unpleasant emotion is common across many different disorders, namely on several personality disorders (Berenbaum, Raghavan, Le, Vernon & Gomez, 2006; Huperich, 2005; Putnam & Silk, 2005). Research also indicates that individual differences in emotion intensity are related to personality disorders, like the risk for borderline personality and passive-aggressive personality (Flett & Hewitt, 1995).

Finally, patients with personality disorders reported significantly higher scores of Difficulties in Emotion Regulation, Difficulties Engaging in Goal-Directed Behavior, and Impulse Control Difficulties, compared to patients with depressive disorders, anxiety disorders or both. The previous investigation showed that all personality disorders (such as borderline personality disorder) involve problematic emotional responses (APA, 2013). Furthermore, personality disorders thought to be characterized by emotion regulation difficulties, including borderline personality disorder (versus non-personality-disorder outpatients; Gratz, Rosenthal, Tull, Lejuez & Gunderson, 2006).

Limitations

There are some main limitations of our study that should be mentioned and addressed in future research. First, this study included a smaller number of patients with personality disorders, compared to patients with depressive disorders, anxiety disorders or both. So, it can be unclear the extent to which our sample is representative of either patients with depressive disorders, anxiety disorders or both and personality disorders.

Second, when therapists rated patients with personality disorder, they did not specify which personality disorder they were referring to. Although the goal was to compare patients with depressive disorders, anxiety disorders or both and personality disorders, this does not

allow the full understanding of which personality disorders they were referring to, not allowing the analysis of emotional processes differences in each personality disorders. Nevertheless, the study provides preliminary evidence of the potential etiologic differences of emotion processes deficits in different psychopathologies.

Third, although we used well-established measures of all constructs included in our study these measures all involved retrospective self-report. Although this type of measure is commonly used, it depends on the patients' perception of their emotion processing abilities. This could be particularly relevant in some patients who may have a diminished ability to accurately identify their emotion experience (Lipsanen, Saarijarvi, & Lauerma, 2004).

Notwithstanding these limitations, these findings make new inroads in the role of emotion factors in the psychopathology and highlight many exciting opportunities for future work in this area.

Future research would benefit from assessing emotions and all emotional processes in individuals with psychopathology in real-time, or by using event sampling methods that have been used in previous research (e.g., Buckner, Crosby, Silgado, Wonderlich, & Schmidt, 2012; Lischetzke, Cuccodoro, Gauger, Todeschini, & Eid, 2005). This would allow an evaluation of relations between moment-by-moment fluctuations in emotion processes.

For future research, it would also be usefull to increase the sample size and to include a control group of the general population, including also another type of instruments to measure emotions and emotion processing in everyday life.

Future research would also benefit from examining causal associations between variables, such as using longitudinal studies.

Conclusions

This study analyzed several emotion processes simultaneously in patients with some of the most prevalent psychopathologies in the general population (i.e., depressive disorders and anxiety disorders). This is in contrast with most studies, which evaluate one emotion process in a specific pathology (Aldao, Nolen-Hoeksema and Schweizer, 2010).

Hence, our results have several notable implications. The first implication concerns the need for a greater understanding of which emotion processes can have a major influence on psychopathological symptoms. This multiprocess approach allows investigators to identify which aspects of emotion are more central to the development or maintenance of psychopathology. Such findings are especially pertinent given current debates regarding the importance of emotion processes in psychopathology and for psychotherapy' outcomes.

Second, our findings suggest that emotion process may be targets for interventions designed to reduce psychopathology. Our findings may have implications for the treatment of psychopathologies, as a more comprehensive understanding of disruptions in emotion processing in different disorders may indicate which emotion process should be primarily managed by the psychotherapist. One direction for future research will be to compare the emotion processing abilities of the patients at several moments or stages of the therapeutic process. Such interventions may be especially crucial for individuals with personality disorders. Overall, this study constitutes an essential initial step in our understanding of the dynamic emotion changes that take place when people suffer from psychopathology. We hope that this work motivates additional research to systematically examine the processes by which individuals suffering from psychopathology can learn to modify their emotion processes over time.

Study 4 - Differences in Emotional Processing in Clinical and Non-Clinical Populations

Differences in Emotional Processing in Clinical and Non-Clinical Populations

Abstract

Objective. The study of emotions and emotional processes has become increasingly important, especially in the past few years, as a means of understanding the onset and maintenance of psychopathologies. Therefore, our main purpose was to investigate differences in emotional processes between individuals without symptoms of psychopathology and patients with different types of mental disorders. **Design and Methods.** This study included a non-clinical sample of 675 individuals with ages between 18 and 72 years (M_{age} = 26.0) and a clinical sample of 120 patients with ages between 18 and 66 years (M_{age} = 32.0), who were attending psychotherapy. All participants completed instruments measuring their levels of symptoms of psychopathology, and their emotional processes, namely emotion differentiation, emotion regulation, emotion intensity and emotion expression. **Results.** Our results showed significantly lower scores on Differentiation, Range, and Positive Intensity in the clinical sample than the non-clinical sample. Results also showed significantly higher scores on Non-Acceptance of Emotional Responses, Difficulties Engaging in Goal-Directed Behavior and Limited Access to Emotion Regulation Strategies in the clinical sample. No significant differences between samples were found for Lack of Emotional Awareness, Impulse Control Difficulties, Lack of Emotional Clarity, Reappraisal, Suppression, Serenity, Negative Affectivity, and Emotional Expressivity. **Conclusions.** Our findings indicate that patients with psychopathology show significant differences in emotional differentiation, regulation, and intensity compared to individuals from the non-clinical population. Therefore, our results suggest that the role of emotional differentiation, regulation and intensity in the development of psychopathologies should be further studied, as a perspective to improve psychotherapeutic interventions.

Keywords: emotions, emotional processes, psychopathology, clinical and non-clinical population

Differences in Emotional Processing in Clinical and Non-Clinical Populations

Introduction

Emotions can be defined as action dispositions of the individuals towards specific internal or external stimulus or events of the environment, which evolve and allow the attribution of meaning to the event, therefore preparing individuals to respond to their environment (Sroufe, 1996). Therefore, emotions can have crucial functions, namely directing attention to features of the environment, optimizing sensory intake, adjusting decision making, organizing response systems and promoting social interactions and relationships (Gross, 2015).

However, emotions are more than just physiological activations of the organism in response to a stimulus (Mauss, Levenson, McCarter, Whilhelm, & Gross, 2005).

Emotions are activated and maintained by the arousal and articulation of several components that interact with each other and have been characterized by several researchers as different contributors to the emotional response, namely, emotion differentiation (Barrett, Gross, Christensen, & Benvenuto, 2001), regulation (Gross, 2015), intensity (Larsen & Diener, 1987), and expression (Kring, Smith, & Neale, 1994).

Dysfunctions in any of these emotional processes may lead to maladjustment of the individual and the development of psychopathology (Aldao, Gee, De Los Reyes, & Seager, 2016; Beauchaine, 2015; Kring, 2010).

Emotion differentiation, according to Feldman Barrett (2006, 2018), one of the most prominent authors in the field of emotions, is the individual ability to recognize and attribute meaning to the physiological arousal. It is the mental construction of emotion, i.e., the symbolizing and expanding of physiological activation involving the recognition and attribution of meaning to the bodily felt sense, and the recognition of the causes and impact of the experienced emotion (Barrett, 2018; Barrett & Gross, 2001).

Categorizing an emotion gives it meaning (Barrett, 2006), allows the individual to distinguish between discrete emotions within broad emotional experiences and consequently, to effective regulate the emotion felt (Barrett & Gross., 2001). Therefore, deficits in emotion differentiation play a crucial role in the onset of multiple psychopathologies, because not knowing what one feels makes it much harder to use emotions as information about current situation (Schwarz & Clore, 1996).

So, individuals with a high ability to differentiate emotions are described as having adequate emotion regulation strategies, better prosocial behavior and high academic abilities, allowing a better expression and consequent socialization of emotion (e.g., Barrett, Gross, Conner & Benvenuto, 2001; Mostow, Izard, Fine, & Trentacosta, 2002).

Conversely, some individuals experience emotions in an undifferentiated manner with positive correlations between the same valenced emotional states, suggesting that individuals are not distinguishing between different emotional experiences (Barrett, 1998; Lindquist & Barrett, 2008).

Lack of understanding of emotion information has been shown to be characteristic of patients with depression (e.g., Mennin, Holaway, Fresco, Moore, & Heimberg, 2007), anxiety disorders (e.g., Mennin, Heimberg, Turk, & Fresco, 2005) and personality disorders (Erbas, Ceulemans, Lee Pe, Koval, & Kuppens, 2014; Putnam & Silk, 2005).

These findings also emerged when considering emotion differentiation across specific anxiety disorders. For instance, decreased emotion differentiation has been associated with symptoms of general anxiety disorder (McLaughlin, Mennin, & Farach, 2007; Mennin, Heimberg, Turk, & Fresco, 2005; Tull & Roemer, 2007), posttraumatic stress disorder (Tull & Roemer, 2007; Weiss et al., 2012), panic attacks (Tull & Roemer, 2007) and social anxiety disorders (Kashdan & Farmer, 2014).

Indeed, recent studies reported an association between deficits in emotion differentiation and higher levels of psychopathology (Demiralp et al., 2012; Erbas, Ceulemans, Lee Pe, Koval, & Kuppens, 2014; Kashdan & Farmer, 2014) and with increased alcohol abuse (Emery, Simons, Clarke, & Gaher, 2014; Kashdan, Ferssizidis, Collins, & Muraven, 2010).

Emotion regulation, defined as the "process by which individuals influence which emotions they have, when they have them and how they experience and express these emotions" (Gross, 1998, p.275), has also been related to psychopathology (Gross, 2015; Barrett, 2016).

Because emotion regulation is central to understand the etiology and the maintenance of psychopathology, it has been one of the main variables in the study of emotional impact in psychopathology for at least the last 15 years (e.g., Gross, 2015).

In psychopathology, difficulties in emotion regulation can occur when emotions are too intense (e.g., difficulties regulating fear during panic attacks; Tull & Roemer, 2007), when emotion regulation strategies are not suitable for the situation (e.g. a person with social anxiety disorder who leaves a party because can't regulate fear of rejection; Turk, Heimberg, Luterek, Mennin, & Fresco, 2005) or when emotion regulation strategies are endanger (e.g., a person with Post-Traumatic Stress Disorder; Tull, Bardeen, DiLillo, Moore & Gratz; 2015; Weiss et al., 2012).

Several diagnoses in DSM-5 mention difficulties in emotion regulation. For example, "Depressed mood most of the day, nearly every day" in depression, "fear of dying" in Panic Disorder, "difficulty controlling anger" in borderline personality disorder; "fear and worry surronding social situations" in social anxiety disorder; "difficulty controlling worry" in generalized anxiety disorder; "rapidly shifting expressions of emotion" in histrionic personality disorder; "inability to experience and regulate painful emotional memories" in

post-traumatic stress disorder (Diagnostic and Statistical Manual of Mental Disorders, fifth edition [DSM-V]; American Psychiatric Association, 2013).

Emotional states are considered to differ from each other not only in quality but also in intensity (Larsen & Diener, 1987).

The notion that people report feeling different intensities for each emotion called the attention of researchers and develop a line of research called emotion intensity (Frijda, Ortony, Sonnemans & Clore, 1992; Larsen & Diener, 1987).

Emotion intensity has been defined as the "difference in the strength with which individuals experience their emotions" (Larsen & Diener, 1987, p.2).

Experience of inappropriately intensity in emotions has been reported as a symptom of psychopathology (Dixon-Gordon, Aldao, & De Los Reyes, 2015). Difficulties in emotional intensity are related to a wide variety of psychological symptoms, like depression (Rottenberg, Joormann, Brozovich, & Gotlib, 2005) psychosomatic symptoms (Larsen & Diener, 1987), cyclothymia, bipolar behavior (Diener, Larsen, Levine, & Emmons, 1985), borderline personality and passive-aggressive personality (Flett & Hewitt, 1995).

Emotional expression, one of the most visible and measurable emotional component, has been defined as the extent to which individuals "outward display any type of emotion, irrespective of their valence or channel (facial, vocal, or gestural)" (Kring, Smith, & Neale, 1994, p.934).

When emotional expression is adaptive, is enables the acceptance of the emotion felt ("This emotion is painfull, but it isn't unsurpassable"), facilitating insight by understanding the leading causes and consequences of what one is feeling and why (Kennedy-Moore & Watson, 2001), providing after the resolution of the emotion felt (Pennebaker & Seagal, 1999; Pennebaker, 1995).

This insight can diminish distress, reducing intrusive and painful thoughts, by helping people understand what they are feeling in ways that weren't possible before they expressed and they stop feeling afraid of emotions or fear of fall apart if they allow themselves to express emotions. (e.g., Lepore, Ragan, & Jones, 2000).

Expressing emotions is also fundamental to personal relationships, by helping to clarify interpersonal misunderstandings and by eliciting support to others (Kennedy-Moore & Watson, 2001).

Sometimes, when emotion expression is maladaptive, it can increase distress by promoting guilt or shame ("It was my fault") (Kennedy-Moore & Watson, 2001).

Several studies (e.g., Hollaender & Florin, 1983; Kallay, 2015; Kennedy-Moore & Watson, 2001) examined the relation between emotion expression and psychopathology because several psychopathologies contain diagnostic criteria about difficulties in emotion expression. For example, several personality disorders (Diagnostic and Statistical Manual of Mental Disorders, fifth edition [DSM-V]; American Psychiatric Association, 2013), with frequent, dramatic, yet rapidly shifting of expression of emotion is a hallmark of the histrionic personality disorder or constricted expression of emotion is a criterion for both schizotypal and schizoid personality disorders (Diagnostic and Statistical Manual of Mental Disorders, fifth edition [DSM-V]; American Psychiatric Association, 2013).

In the health psychology literature, several relationships between expressiveness and specific diseases have been reported, namely in cancer (Cox & McCay, 1982; Fernandez-Ballesteros, Ruiz & Garde, 1998) or coronary heart disease (Friedman, Hall, & Harris, 1985; Gentry, 1985).

Although research on emotions has been actively involved in understanding the factors that enable the development and maintenance of psychopathologies (for reviews see Aldao, Nolen-Hoeksema & Schweizer, 2010), recent studies on emotional processing have focused

on only one specific emotional disturbance in distinct mental disorders (Gross, 2015). Hence, it is essential to compare the main differences in emotional processes in non-clinical and clinical populations.

Therefore, the main objective of this study was to evaluate the differences in emotion differentiation, emotion regulation, emotion intensity and emotion expression, between individuals without psychopathologies and a clinical sample of patients.

Method

Participants

We performed a cross-sectional study using convenience samples of 675 individuals from the general population (i.e., non-clinical sample) and of 120 patients attending psychotherapy sessions (i.e., clinical sample) in Portugal. Individuals from the non-clinical sample were randomly selected by the researchers from January of 2011 to January of 2012 at twelve Portuguese Universities and Technical Schools. Inclusion and exclusion criteria for these non-clinical sample were as follows: being 18 or more years old, and not suffering from any psychopathology. Patients attending psychotherapy sessions were recruited by their psychotherapists between January and November of 2012. Inclusion criteria for patients were: being 18 or more years old, and having a diagnosis of psychopathology by their psychotherapist; and exclusion criteria were: diagnosis of substance use disorders or psychotic disorders. Patients' diagnoses were classified according to the *DSM-5* diagnostic system (American Psychiatric Association, 2013).

Socio-demographic and clinical characteristics of the study participants are shown in Table 1. The non-clinical sample consisted of individuals aged between 18 and 72 years (M_{age} = 26.01 years). Most of these participants were male (52.14%), single (68.04%), and 72.51% had completed high-school.

The clinical sample included patients with ages between 18 and 66 years (*Mdn* = 32.03), most patients were female (63.33%), single (66.15%), and 46.9% had a graduate degree. The most common diagnosed psychopathologies by the psychotherapist were: 27.53% patients classified as having generalized anxiety disorder, 21.73 % of patients with both depression and anxiety disorders, and 18.37% with major depression disorder; and 19.25 % of patients classified as having personality disorders.

Because the study participants were randomly recruited, the non-clinical and clinical samples were unevenly distributed regarding their socio-demographic characteristics. Therefore, we tested the differences in age, gender, marital status and education level between the non-clinical and the clinical samples. We found significant differences in age, gender and education level between the two samples, with the clinical sample having a higher proportion of older, female, and graduated subjects (see Table 1).

Table 1

Socio-demographic and Clinical Characteristics Non-Clinical and Clinical Samples

Characteristic	Non-clinical sample, (*N* = 675)	Clinical sample, (*N* = 120)	*p*
	Mdn (*Range*)		
Age, years	26.01 (18-72)	32.03 (18-66)	**<.001**
	n (%)		
Gender			
Female	323 (47.91)	76 (63.33)	**<.001**
Male	352 (52.14)	44 (36.75)	**<.001**

Table 1. Continued

Characteristic	Non-clinical sample, (*N* = 675)	Clinical sample, (*N* = 120)	*p*
Marital status			
Single	457 (68.04)	78 (66.15)	.693
Married	179 (26.64)	27 (22.93)	.405
Divorced	23 (3.44)	8 (6.81)	.067
Cohabiting	10 (1.53)	3 (2.53)	.257
Widowed	3 (.51)	2 (1.73)	.098
Education level completed			
Less than 4th grade	1 (.21)	—	—
4th grade	20 (3.65)	1 (.93)	.196
6th grade	48 (8.6)	2 (1.81)	**.006**
9th grade	—	13 (11.53)	**<.001**
High School	406 (72.5)	39 (34.52)	**<.001**
Graduate degree	76 (13.62)	53 (46.91)	**<.001**
Postgraduate degree	7 (1.32)	1 (.91)	1.000
Master degree	2 (.41)	3 (2.71)	**.008**
Doctoral degree	—	1 (.93)	—
Psychopathology diagnosis			
General anxiety disorder[a]	-	33 (27.53)	
Comorbid depressive and anxiety disorders	-	26 (21.73)	
Personality disorder[a]	-	23 (19.25)	
Major depressive disorder	-	22 (18.37)	
Other/unknown disorders	-	16 (13.39)	

Note. Differences between non-clinical and clinical samples in age were tested using Wilcoxon rank-sum test with continuity correction, whereas differences in gender, marital status, and education level were tested using an exact binomial test. Significant level at $p < .05$ in boldface.

[a]Alone or comorbid with other disorders.

Regarding Table 1, the median age is significantly different between the non-clinical and clinical samples, but we consider that the magnitude of this difference is small (*Mdn* = 26 years versus *Mdn* = 32 years, respectively) and so is not expected to bias the evaluation of differences in emotional processes between the two samples.

Also, the proportion of participants with high school or higher education levels is similar between the clinical and non-clinical samples and comprises the majority in both samples (87.81% versus 85.90%, respectively), so we assumed that the education imbalance would also not introduce any bias in the analysis.

On the other hand, given the magnitude of the gender imbalance between the non-clinical and clinical samples (47.19% versus 63.34% of females, respectively), we hypothesized that gender could be a source of bias when comparing the two samples regarding their emotional processes.

Indeed, scores on several self-report instruments measuring emotion differentiation (Kang & Shaver, 2004; Machado Vaz, 2009), emotion regulation (Gratz & Roemer, 2004; Gross & John, 2003; Machado Vaz, 2009; Machado Vaz, 2018), emotion intensity (Geuens & De Pelsmacker, 2002; Machado Vaz, 2018) or emotion expression (Kring, Smith & Neale., 1994; Machado Vaz, 2018) have shown gender impact in the results.

Therefore, we hypothesized that the gender imbalance between the two samples might introduce a bias when comparing the levels of psychopathology and emotional processes between the non-clinical and clinical samples. To circumvent this, we first tested the differences in the scores for each instrument between females and males within the same

sample, e.g. females from the non-clinical sample where compared with males from the non-clinical sample. Whenever the differences between females and males from the same sample where statistically significant for a specific scale, we assumed that gender could bias our analysis.

So, when comparing scores on the specific scales where there were gender differences, the results were analyzed separately for each gender, e.g., between females from the non-clinical sample and females from the clinical sample, and between males from the non-clinical sample and males from the clinical sample.

On the other hand, whenever the differences between females and males within the same sample were not significant for a specific scale, we assumed that gender would not introduce bias on our analysis of that scale.

Accordingly, its scores were compared between the total number of participants from each sample, regardless of their gender (i.e., females and males from the non-clinical sample versus females and males from the clinical sample).

Measures

Severity of symptoms of psychopathology

We used the Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983) to assess symptoms of psychopathology of the participants. BSI is a self-report instrument with 53 items that describe a variety of psychological problems and complaints, comprising a shortened form of the revised Symptom Checklist-90.

Patients are asked to rate the extent to which they have been αdisturbed in the past week by several symptoms, using a 5-point Likert-type scale ranging from 0 points ("not at all") to 4 points ("extremely"). Scores are obtained in nine dimensions: Somatization,

Obsessive Compulsion, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism.

Also, we calculated the Global Severity Index (GSI) based on these nine dimensions. This study used the Portuguese version of BSI by Canavarro (1999), which presented good levels of internal consistency for each of the nine subscales (Cronbach's alphas between .62 and .82).

Emotion differentiation

We used the Portuguese validation of the Range and Differentiation of Emotion Experience Scale (RDEES) by Machado Vaz (2009) to assess the emotion differentiation abilities of the patients.

It has two correlated dimensions: Range (i.e., span of different emotions experienced) and Differentiation (i.e., how well an individual can distinguish subtle differences among similar emotions). RDEES includes 14 items rated on a 7-point Likert-type scale, ranging from 1 ("does not describe me at all") to 7 ("describes me extremely well"). Higher RDEES scores indicate greater range and better emotion differentiation abilities, and lower scores are indicative of worst differentiation abilities.

The Portuguese version of RDEES (Machado Vaz, 2009) presents adequate levels of internal consistency for each of the two subscales (Cronbach's α of .63 for Range, and .82 for Differentiation).

Emotion regulation

To measure different aspects of the participants perceived emotion regulation strategies, we used the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) and the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004).

ERQ consists of 10 items rated on a 7-point Likert-type scale, ranging from 1 point ("strongly disagree") to 7 points ("strongly agree"). It comprises two dimensions:

Reappraisal, measuring cognitive change involving the re-evaluation of a potentially evocative situation in a way that alters its forthcoming emotional impact; and Suppression, assessing response modulation strategy that involves inhibiting ongoing emotion-expressive behavior.

Higher scores reflect a greater emotion regulation tendency. We used the Portuguese version of ERQ validated by Machado Vaz (2009), who reported adequate levels of internal consistency for each of the two subscales (Cronbach's α of .76 for Reappraisal, and .61 for Suppression).

DERS is a self-report instrument for assessing the complexities and clinically relevant difficulties of emotion regulation (Gratz & Roemer, 2004).

It includes 36 items rated on a 5-point Likert-type scale, ranging from 1 ("almost never") to 5 ("almost always"). DERS assesses multiple facets of emotion regulation in six dimensions: Non-Acceptance of Emotion Responses; Difficulties Engaging in Goal-Directed Behavior; Impulse Control Difficulties; Lack of Emotional Awareness; Limited Access to Emotion Regulation Strategies; and Lack of Emotional Clarity. Higher scores are indicative of higher difficulties in emotion regulation.

We used the Portuguese version of DERS validated by Machado Vaz (2018), who reported a high internal consistency for the DERS total score (Cronbach's α = .91) and for all subscales (in most cases well over .70 and in many cases even over .80).

Emotion intensity

The Short Affect Intensity Scale (SAIS; Geuens & De Pelsmacker, 2002) was used to measure the perceived emotion intensity of the participants (i.e., "stable individual differences in the strength with which individuals experience their emotions").

It includes 20 items rated on a 5-point Likert-type scale, ranging from 1 point ("strongly disagree") to 5 points ("strongly agree"). SAIS comprises three dimensions:

Positive Intensity; Negative Affectivity; and Serenity. Higher scores are indicative of higher emotion intensity than lower ones.

In this study, we used the Portuguese version of the SAIS validated by Machado Vaz and Vasco (2012) who reported high levels of internal consistency for each of the three subscales (Cronbach's α of .83 for Positive Intensity, of .78 for Negative Affectivity, and .78 for Serenity).

Emotion expression

We used the Emotion Expressivity Scale (EES; Kring, Smith, & Neale, 1994) to evaluate the perceived emotion expression ability of the participants.

EES is a self-report instrument with 17 items rated on a 6-point Likert-type scale, ranging from 1 point ("never true") to 6 points ("always true"). Higher scores on EES indicate greater levels of emotion expressivity.

In this study, we used the Portuguese version of the EES validated by Machado Vaz (2018), which presented a high internal consistency (Cronbach's α = .87).

Procedure

Individuals from the general population were invited to participate in the study by the researchers, who provided them with: (a) formal invitation to participate in the study with a questionnaire, which included questions regarding age, gender, marital and employment status and educational level (Appendix A); (b) five self-report instruments of emotion processes; (c) one instrument of levels of psychopathological symptoms. The questionnaires and self-report instruments were administered by the researcher at the recruitment sites (i.e., universities and technical schools).

Patients with psychopathologies were invited to participate in the study by their psychotherapists, who provided them with the "Patient's Book".

This book included: (a) formal invitation to participate in the study with a questionnaire, which included questions regarding age, gender, marital and employment status, and educational level (Appendix B); (b) five instruments for self-report of emotion processes; (c) one instrument for self-report of levels of psychopathological symptoms; (d) instructions for answering to the self-report instruments (either immediately after the psychotherapy session, or at home); and (e) instructions for the patients to return their answers to the psychotherapist in a sealed envelope (either in the following appointment, or as soon as possible). These instructions stated that only the study researchers, and not the therapists, would have access to the answers.

Psychotherapists were instructed to return the sealed envelopes to the researchers. Scores from the self-report instruments and sociodemographic data from the questionnaires were collected by the researchers.

All participants were informed both verbally and in paper about the purposes of the study and provided informed consent before study inclusion. Confidentially was granted.

Data Analysis

All data were entered in SPSS (Version 17.0), and R (Version 3.3.2) was used for statistical analysis. Descriptive statistics were used for sociodemographic characteristics of the participants and their scores on the self-report instruments.

Categorical variables were summarized as number and percentage, and continuous variables were summarized by median (minimum-maximum). All scores were tested for normality using the Shapiro-Wilk test.

Differences in categorical samples (i.e., gender, marital status, and educational levels) were tested using a binomial test between the non-clinical and clinical samples.

Differences in samples (i.e., age and scores on self-report instruments) were tested using Student's t-test for independent samples (statistical threshold, p = .05), if all scores

were normally distributed, or using Wilcoxon rank-sum test with continuity correction (statistical threshold, $p = .05$), if at least one of the scores was not normally distributed.

As above-mentioned, given the gender imbalance between the two samples, we used a two-step analysis approach to avoid a potential bias induced by gender (e.g., scores measuring emotional processes reflecting differences in the proportion of females instead of differences in emotional processes per se between the non-clinical and clinical samples).

We evaluated the differences in scores on the self-report instruments between females and males within each sample, and whenever the differences between genders where significant for a specific scale or subscale ($p < .05$), at least in one of the samples, its scores were compared separately for each gender between the non-clinical sample and clinical sample.

Differences between females and males within the non-clinical and clinical sample were found in the following subscales: RDEES Range, SAIS Positive Intensity, SAIS Negative Affectivity, ERQ Suppression, DERS Impulse Control Difficulties and Lack of Emotional Clarity.

Results

Differences in levels of symptoms of psychopathology between the non-clinical and clinical samples

To evaluate and compare the level of psychopathological symptoms in the non-clinical and clinical samples, we administered the BSI scale. Table 2 shows scores on all BSI subscales and on global GSI for each sample, along with the *p*-values.

Table 2

Differences between Clinical and Non-Clinical Samples on Brief Symptom Inventory

	Mdn (Range)			
	Non-clinical sample	Clinical sample,		
Psychopathology symptoms	*N* = 675	*N* = 120	*W*	*p*
GSI	.89 (.00-3.62)	1.20 (.09-3.32)	48080	**<.001**
Somatization	.43 (.00-4.00)	.71 (.00-3.14)	41722	.130
Obsessive Compulsion	1.17 (.00-4.00)	1.50 (.00-4.00)	46727	**<.001**
Interpersonal Sensitivity	1.00 (.00-4.00)	1.25 (.00-3.50)	47274	**<.001**
Anxiety	.83 (.00-3.83)	1.33 (.00-3.67)	49359	**<.001**
Hostility	.80 (.00-3.60)	1.00 (.00-4.00)	41464	.181
Phobic Anxiety	.40 (.00-3.80)	.60 (.00-4.00)	44428	**.007**
Paranoid Ideation	1.20 (.00-3.60)	1.40 (.00-4.00)	41228	.219
Psychoticism	.78 (.00-3.40)	1.00 (.00-3.20)	47976	**<.001**
Depression[a]				
Female	1.00 (.00-3.67)	1.50 (.00-3.67)	15238	**<.001**
Male	.83 (.00-3.67)	1.33 (.33-4.00)	9965	**<.001**

Note. Significant levels at $p < .05$ in boldface. BSI = Brief Symptom Inventory, GSI = Global Severity Index.

[a]Scores on this subscale were compared between the non-clinical and clinical samples separately for each gender, e.g. females from the non-clinical sample versus females from the clinical sample.

The results presented in Table 2 show that scores were significantly lower in the non-clinical sample when compared to clinical sample on GSI (0.89 versus 1.20, $W = 48080$, $p < .001$), Obsessive Compulsion (1.17 versus 1.50, $W = 46727$, $p < .001$), Interpersonal Sensitivity (1.00 versus 1.25, $W = 47274$, $p < .001$), Anxiety (.83 versus 1.33, $W = 49359$, $p < .001$), Phobic Anxiety (.40 versus 0.60, $W = 44428$, $p = .007$), Psychoticism (.78 versus 1.00, $W = 47976$, $p < .001$), and Depression, both for female (1.00 versus 1.50, $W = 15238$, $p < .001$) and male participants (.83 versus 1.33, $W = 9965$, $p < .001$).

Scores for Somatization, Hostility and Paranoid Ideation were also lower in the non-clinical sample compared to the clinical sample (.43 versus .71, .80 versus 1.00, 1.20 versus 1.40, respectively), though not significantly (Table 2).

Our findings show that the overall degree of psychological distress and general psychopathology is significantly higher in the clinical sample compared to the non-clinical sample.

Differences in emotional processes between the non-clinical and clinical samples

Table 3 shows the differences in emotional processing abilities between the non-clinical and clinical samples, i.e. emotion differentiation, emotion regulation, emotion intensity and emotion expression.

Table 3

Differences Between the Clinical and the Non-Clinical Samples in each Emotional Processes

Scale	*Mdn* (Range)		*W*	*p*
	Non-clinical sample, *N* = 675	Clinical sample, *N* = 120		
Emotion differentiation				
RDEES Total	59.01 (17-98)	54.01 (15-78)	-[*]	**<.001**
RDEES Differentiation	36.02 (9-56)	32.06 (9-56)	26032	**<.001**
RDEES Range[a]				
Female	22.03 (8-42)	21.05 (6-32)	9683.5	.177
Male	23.0 4(6-42)	20.08 (12-28)	5263	**.005**
Emotion regulation				
ERQ Reappraisal	27.07 (6-42)	26.09 (7-42)	22880	.075
ERQ Suppression[a]				
Female	13.02 (4-28)	16.05 (4-28)	12799	.073
Male	16.05 (4-28)	16.04 (4-25)	6641	.377
DERS Total	76.07 (35-152)	84.07 (49-136)	37416	**<.001**
DERS NAER	13.04 (6-30)	15.06 (6-30)	41151	**.012**
DERS DEGDB	10.03 (4-20)	12.04 (4-20)	48091	**<.001**
DERS LEA	20.04 (6-30)	19.06 (11-30)	37928	.481
DERS LAERS	15.08 (7-35)	17.01 (8-34)	44600	**<.001**
DERS ICD[a]				
Female	9.03 (5-25)	10.02 (5-25)	12134	.124
Male	10.05 (5-22)	10.03 (5-25)	6717	.611
DERS LEC[a]				
Female	9.01 (5-19)	9.05 (6-17)	11778	.619
Male	10.03 (5-19)	9.02 (6-15)	6770.5	.758

Table 3. Continued

Scale	*Mdn* (Range) Non-clinical sample, *N* = 675	Clinical sample, *N* = 120	*W*	*p*
Emotion intensity				
SAIS Serenity	22.01 (6-30)	22.02 (6-30)	36480	.590
SAIS Positive Intensity[a]				
Female	31.03 (11-40)	29.05 (8-40)	9006.5	**.019**
Male	30.03 (11-40)	28.10 (14-38)	6016.5	**.049**
SAIS Negative Affectivity[a]				
Female	23.05 (9-30)	24.06 (10-30)	12098	.136
Male	20.01 (6-29)	21.09 (14-30)	7939.5	.102
Emotion expression				
EES	53.09 (19-90)	55.01 (38-84)	35612	.107

Note. For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed. Significant level at $p < .05$ in boldface. DEGDB = Difficulties Engaging in Goal-Directed Behavior, DERS = Difficulties in Emotion Regulation Scale, EES = Emotion Expressivity Scale, ERQ = Emotion Regulation Questionnaire, ICD = Impulse Control Difficulties, LAERS = Limited Access to Emotion Regulation Strategies, LEA = Lack of Emotional Awareness, LEC = Lack of Emotional Clarity, NAER = Non-Acceptance of Emotional Responses, RDEES = Range and Differentiation of Emotion Experience Scale, SAIS = Short Affect Intensity Scale.

[a]Scores on these subscales were compared between the non-clinical and clinical samples separately for each gender, e.g. females from the non-clinical sample versus females from the clinical sample.

*Differences tested using Student's t test for independent samples: t(144.7) = -4.2847.

First, concerning emotion differentiation, scores on the RDEES Total were significantly higher in the non-clinical sample (*M* = 59.01, *SD* = 11.5) than the sample of patients with psychopathologies (*M* = 54.01, *SD* = 11.3), $t(148) = -4.285$, $p < .001$. Scores on the RDEES Differentiation and RDEES Range (males) were also significantly higher in the non-clinical sample (*Mdn* = 36.02 and *Mdn* = 23.04, respectively) than on the clinical sample (*Mdn* = 32.06 and *Mdn* = 20.08), *W* = 26032, $p < .001$ and *W* = 5263, $p = .005$, respectively.

Conversely, RDEES Range in female participants did not present significant differences between non-clinical (*Mdn* = 22.03) and clinical samples (*Mdn* = 21.05), $W = 9684$, $p = .177$.

Second, we found that the non-clinical and the clinical sample reported significant differences in difficulties in emotion regulation abilities, as indicated by their scores on DERS. Scores on DERS Total (76.07 versus 84.0, $W = 37416$, $p < .001$), Non-Acceptance of Emotional Responses (13.04 versus 15.0, $W = 41151$, $p = .012$), Difficulties Engaging in Goal-Directed Behavior (10.03 versus 12.0, $W = 48091$, $p < .001$), and Limited Access to Emotion Regulation Strategies (15.08 versus 17.0, $W = 44600$, $p < .001$) were significantly higher in the clinical sample when compared to the non-clinical sample.

On the other hand, no differences were found between non-clinical and clinical sample on DERS Lack of Emotional Awareness (20.04 versus 19.06), Impulse Control Difficulties in females (9.0 3versus 10.02) and in males (10.05 versus 10.03), and Lack of Emotional Clarity in females (9.01 versus 9.05) and in males (10.03 versus 9.02) (Table 3).

Concerning the ERQ scale, we did not find significant differences on Reappraisal and Suppression between non-clinical sample and clinical sample (27.07 versus 26.09, 13.02 versus 16.05, and 16.05 versus 16.04, respectively) (Table 3).

Third, scores on emotion intensity were significantly higher on Positive Intensity in the non-clinical sample, for females (31.03 versus 29.05, $W = 9007$, $p = .019$) and for males (30.03 versus 28.10, $W = 6017$, $p = .049$) when compared to the clinical sample. On the contrary, we did not find significant differences between non-clinical and clinical samples in the median scores for Serenity (22.01 versus 22.02) and for Negative Affectivity both for females (23.05 versus 24.06), and for males (20.01 versus 21.09) (Table 3).

Finally, scores on Emotion Expression showed no significant differences between non-clinical sample (*Mdn* = 53.09) and clinical sample (*Mdn* = 55.01), $W = 35612$, $p = .107$.

Discussion

Studies that compare clinical to non-clinical samples and examine the use of a range of several emotional processes (for reviews see Aldao, Nolen-Hoeksema & Schweizer, 2010) are particularly informative and therapeutically important. These comparative studies can unravel the intricacies of emotions and emotional processes on the onset and development of psychopathologies (eg., Gross, 2015). Therefore, our main purpose in this study was to evaluate and compare the differences in four emotion processes, namely emotion differentiation, emotion regulation, emotion intensity and emotion expression, between a clinical sample of patients with psychopathology and individuals without psychopathology. The findings in this study suggest that patients with psychopathologies present differences in several components of emotional processing, namely in emotion differentiation, regulation and intensity, when compared with individuals without psychopathology.

Emotion differentiation

Our findings show that patients with psychopathologies show lower levels on range and emotion differentiation, and show deficits in emotion differentiation compared to individuals from the general population. Specifically, ability to differentiate was lower in patients than the ones of the non-clinical sample. Moreover, scores on range of emotions in male patients were lower than the ones of the non-clinical sample. These results are in accordance with previous studies reporting poorer negative emotion differentiation in depressed individuals compared to healthy controls (Demiralp et al., 2012; Erbas, Ceulemans, Lee Pe, Koval, & Kuppens, 2014; Kashdan & Farmer, 2014), and other reports associating lack of understanding of emotion information with symptoms of depression (Mennin, Holaway, Fresco, Moore, & Heimberg, 2007; Rude & McCarthy, 2003) and anxiety disorders (Baker, Holloway, Thomas, Thomas, & Owens, 2004; McLaughlin, Mennin, & Farach, 2007;

Mennin, Heimberg, Turk, & Fresco, 2005; Parker, Taylor, Bagby, & Acklin, 1993; Tull & Roemer, 2007).

Our results confirm the hypothesis that deficits in emotion differentiation could play a role in the onset of multiple psychopathologies, because not knowing what one feels makes it much harder to use emotions as information about one's current situation (Schwarz & Clore, 1996).

Emotion regulation

Concerning emotion regulation, patients with psychopathology reported the use of non-adaptive emotion regulation strategies, presenting significant higher scores on non-acceptance of emotional responses, difficulties engaging in the goal-directed behaviour, and limited access to emotion regulation strategies compared to the non-clinical sample.

These results were aligned with the ones obtained by D'Avanzato, Joormann, Siemer and Gotlib (2013) and by Ehring, Tuschen-Caffier, Schnulle, Fischer, and Gross (2010), that compared formerly depressed to never-depressed participants. Like D'Avanzato, Joormann, Siemer and Gotlib (2013), our results show that depressed participants report more difficulties in emotion regulation. Indeed, difficulties in regulating emotions have been widely associated with symptoms of depression, general anxiety disorder, social anxiety disorder, panic disorder, and posttraumatic disorder (Campbell-Sills & Barlow, 2007; Ehring & Quack, 2010; Gross & Muñoz, 1995; McLaughlin, Mennin & Farach., 2007; Mennin, Holaway, Fresco, Moore, & Heimberg, 2007; Mennin & Fresco, 2009; Mennin, Heimberg, Turk, & Fresco, 2005; Salters-Pedneault, Roemer, Tull, Rucker, & Mennin, 2006; Tull & Roemer, 2007; Turk, Heimberg, Luterek, Mennin, & Fresco 2005; Weiss et al., 2015).

Overall, our results confirm that emotion regulation plays a crucial role in the main diagnostic categories of psychopathology in the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2013; Barlow, 2000; Kring & Werner, 2004).

In some cases, such as the depression and almost anxiety disorders, difficulties in emotion regulation are so dominant and obvious that the disorders are primarily defined based on disturbed emotional processes (Mineka & Sutton, 1992). Indeed, more than half of mood disorders and all personality disorders envolve difficulties in one or more components emotional responses (American Psychiatric Association, 2013).

Emotion intensity

The scores on emotion intensity showed that patients with psychopathology presented differences in Positive Intensity, compared to the non-clinical sample, but did not present differences in Serenity nor Negative Affectivity. Our clinical sample presented a lower ability for experiencing pleasant emotions with the appropriate intensity. Indeed, experience of excessive unpleasant emotion is common across many different disorders, including depression and anxiety disorders (Mineka, Watson, & Clark, 1998).

Emotion expression

Finally, our clinical sample of patients with psychopathology did not demonstrate differences in emotion expression when compared to individuals from the general population. This might indicate that emotion expression does not strongly impact on the onset of psychopathologies.

Limitations

There are some limitations of our study that should be addressed in future research. In our study, we did not apply sampling methods on our non-clinical sample. Another limitation of this study is the use of self-report instruments to measure patients' emotional processing and levels of psychopathological symptoms. Although this type of measures is commonly used, they depend on the patients' perception of their emotional processing abilities. This could be particularly difficult in some clinical populations who may have a diminished ability to accurately identify and label their emotional experience, especially among patients with

depressive disorders. Future studies should include another type of instruments to measure emotions and emotional processing in everyday life, specifically structured interviews and performance-based instruments.

Conclusions

This is the first study to compare several emotional processes simultaneously between patients with some of the most prevalent psychopathologies in the clinical population (i.e., depressive disorders, anxiety disorders and personality disorders) and individuals from the general population. This is in contrast with most studies, which generally evaluate one emotional process for a specific pathology.

Overall, this study indicates that patients with psychopathologies have higher deficits on emotion differentiation, regulation, and intensity in comparison to individuals from the general population. Our findings may have implications for the future treatment of psychopathologies, as a more comprehensive understanding of the differences in emotional processing abilities, between a non-clinical sample and patients with psychopathologies, may indicate which emotional process should be primarily managed by the psychotherapist. Therefore, it is important to further investigate the role of the emotional experience and other components of the emotional process, namely emotional attention, in the onset, development and treatment of psychopathologies. Future research should also compare the emotional processing abilities of the patients at several moments or stages of their therapeutic process.

Study 5 - Differences in Emotional Processing of Patients in Psychotherapy Along Different Phases of the Paradigmatic Complementarity Metamodel

Differences in Emotional Processing of Patients in Psychotherapy Along Different Phases of the Paradigmatic Complementarity Metamodel

Abstract

Objective. Paradigmatic Complementary Metamodel has been developed to orient the decision-making processes in psychotherapy, making a sequential and complementary use of general principles of therapeutic change. However, it is still unclear how known facilitators of therapeutic changes, such as emotional processes, evolve along the seven phases of the PCM. **Design and Methods.** Therefore, we investigated the differences in emotional processing of patients attending psychotherapy sessions in different PCM phases. This cross-sectional study included 108 patients (M = 33.0, SD = 10.5). Patients were evaluated by their therapists using the General Strategies Inventory (GSI) and completed self-report measures of emotional experience and emotional processes, namely: attention, differentiation, regulation, expression, and intensity. **Results.** We found that scores obtained for patients in Phases 4-7 were significantly lower ($p < .05$) than those obtained in Phases 1-3 for Negative Affect "past few days" and "past few weeks", Negative Affectivity intensity, and Emotion Expressivity. Conversely, Clarity and Lack of Emotional Awareness were significantly higher ($p < .05$) for patients in Phases 4-7. **Discussion.** Our results suggest that therapeutic changes from Phases 1-3 to Phases 4-7 are mediated by a decrease of unpleasant emotions felt and by an increase of patients' self-perceived abilities to differentiate and to express emotions. In contrast, evolution along PCM phases not seem to be associated with an increase of self-perceived abilities for emotional attention, regulation, and expression.

Keywords: emotions, emotional processes, paradigmatic complementarity model, psychotherapy

Differences in Emotional Processing of Patients in Psychotherapy Along Different Phases of the Paradigmatic Complementarity Metamodel

Introduction

Different psychotherapies have been shown to be fundamentally equivalent in general effectiveness (Castonguay & Beutler, 2006; Stiles, Shapiro, Elliot, 1986). Therefore, it has been suggested that more research should be done to investigate the common factors (i.e., aspects that are not specific to any of school of psychotherapy, such as working alliance, the extent to which patients can engage in treatment, the opportunity for emotional release, support, advice, and encouragement to try out new perspectives or behaviors), rather than to validate specific psychotherapies (Vasco & Conceição, 2008; Wampold, 2001).

The idea of common factors for the evaluation of psychotherapies started being developed by Rosenzweig (1936) and later on by Frank and Frank (1991), who proposed the following common factors: (1) an emotionally charged and confiding relationship between the healer and the patient; (2) an healer who is given special status and is perceived to have the powers to heal; (3) a convincing and cogent rationale for the healer's actions; (4) a set of treatment actions that are consistent with the rationale.

Since then, although several authors have proposed different common factors (Grencavage & Norcross, 1990; Tracey, 2003), few of them provided useful ways of identifying, studying, and using them more effectively in psychotherapy. Weinberger's explanation for this was that what usually happens is that a proponent of a common factor or a set of common factors reviews the history of the factor, points to its ubiquitous presence in all forms of therapy, cites the relevant research (if there is any) and moves on, confident that his or her case has been proved (Weinberger, 1995).

According to Hill's reaction (Hill, 1995) to Weinberger's paper (Weinberger, 1995), the definition of common factors presented that far was too abstract, global and vague, and a new and objective explanation was necessary, so common factors could be measured separately from other aspects of psychotherapy. Hill also underlined the importance of investigating mechanisms of change in the common factors, because although different factors may have different mechanisms of change, they may all lead to the same outcome (as the equifinality concept suggests). Although common factors have been recently defended by several authors (Duncan, Miller, Wampold, & Hubble, 2010; Hubble, Duncan, & Miller, 1999; Wampold, 2010; Weinberger & Rasco, 2007), their mechanisms of change remain unclear. Therefore, due to their relevance for psychotherapy, these factors should be further investigated.

The contribution of different variables and factors for the efficacy of psychotherapy has been a subject of debate among psychotherapists (Castonguay & Beutler, 2006b). According to the task force created to summarize the main conclusions regarding the efficacy of psychotherapy, and to clarify variables that may contribute to therapeutic change, three main perspectives may be presented for this contribution. Firstly, the empirically supported treatments (ESTs) perspective, which was developed by Diane Chambless in 1998, underlines the importance of defining specific treatments (or technical procedures) that have been empirically proved to be useful for treating each mental disorder, as characterized by the *Diagnostic and Statistical Manual of Mental Disorders* (Chambless & Hollon, 1998; Nathan & Gorman, 2002). Secondly, the empirically supported therapeutic relationships (ESRs) perspective, which was developed by John Norcross in 2002, underlines that the efficacy of psychotherapy depends on the therapeutic relationship between therapist and patients, as well as on their characteristics. Therefore, this perspective defends that the quality of the therapeutic alliance is the primary factor for therapeutic change (Lambert, 1992; Luborsky et

al., 2006; Wampold, 2001), and that it needs to be improved according to patient's clinical necessities, in order to increase therapeutic efficacy (Norcross, 2002). Thirdly, the empirically supported principles (ESPs) perspective, which is being headed by Louis Castonguay and Larry Beutler, underlines the importance of all the variables presented for the previous perspectives: technical procedures, the therapeutic alliance between the therapist and the patient, as well as their own individual characteristics (Castonguay & Beutler, 2006b). This conciliation of perspectives resulted in the development of 61 principles of therapeutic change (Castonguay & Beutler, 2006a).

The relative importance of each of the previous variables on the efficacy of psychotherapy remains unclear. However, it has been suggested that patients' characteristics are a variable of primordial importance. In fact, studies suggest that the efficacy of psychotherapy may be enhanced should patients' characteristic be taken into account, besides of accounting for mental illness characteristics and therapeutic alliance (Beutler, 2002; Beutler & Clarkin, 1990; Beutler & Harwood, 2000; Millon, 1999; Millon & Davis, 1996).

Therefore, one of the challenges of psychotherapy is for the therapist to establish which of the above variables should be more important to each patient, and to include them into heuristic instruments, in order to understand patients' problems and to make decisions regarding the clinical situation of each patient (i.e., case conceptualization) (Vasco, 1994; Vasco, Conceição, Silva, Ferreira & Vaz-Velho; 2018). This conceptualization is also necessary to anticipate potential problems that the patient may have during psychotherapy and to increase the empathy between psychotherapist and patient (Eells, 1997).

Furthermore, case conceptualization is based on the psychotherapeutic theories that each psychotherapist subscribes, depending on their "vison of the world". According to Pepper, there may be presented four different visons of the world (i.e., formism, mechanicism, contextualism, and organicism) (Pepper, 1942):

v. Formism is characterized by a vision of therapeutic models based on the causality of events. For example, the therapist believes that mental illnesses are a consequence of neuro-anatomical, biochemical, or psychological characteristics of the patients. Therefore, there is the need to act on these characteristics to treat the patients.

vi. Mechanicism is characterized by a vision of the therapeutic models that defends behavior and cognitive functional analysis, based on the mechanic or efficient causality. For example, the psychotherapist believes that the cause of the mental illness may be deficient external contingencies (such as reinforcement and punishment), dysfunctional thoughts, self-beliefs, or the world that surrounds the patient.

vii. Contextualism is characterized by a vision of the therapeutic models in which therapists use markers of therapeutic interaction, and genomes and systemic analysis of communication, making decisions based on formal causality, or on complex interactions and meanings “built here and now”.

viii. Organicism is characterized by a vison of the therapeutic models mainly based on final causality (or theological). In this case, mental illness is caused by expectations and abnormal developmental history.

Taking into account the broad spectrum of mental illnesses, although there are some exceptions (Lambert & Barley, 1994), none of the above visions have proved to be significantly and consistently superior to the others (Vasco, Conceição, Silva, Ferreira & Vaz-Velho; 2018). In fact, psychotherapy based on different visions seems to lead to equivalent results, especially when the psychological assessment is carried out a few months past the end of psychotherapy (Frank, 1979; Lambert & Ogles, 2004; Orlinsky & Howard,

1986; Wampold, 2001). The notion that none of the visions of the world is better than the others that is on the genesis of the Paradigmatic Complementary Metamodel (PCM).

PCM authors (Conceição & Vasco, 2002; Gonçalves & Vasco, 2014; Vasco, 2001, 2005; Vasco & Conceição, 2001, 2003; Welling et al., 2003) support that none of the above visions of the world (i.e., formism, mechanicism, contextualism, and organicism) is better than the others. Indeed, they suggest that therapists should be aware of all visions, and that they should be able to use all of them in a coordinated, complementary, and sequential fashion, according to patients' clinical needs.

Also, although each of the above visions may be used explain parts of human functioning, neither of them may be used to explain this fully. In this way, to understand human functioning, it is necessary to in integrate and articulate "constitutive elements" (i.e., characteristics, beliefs and competencies), "functional relationships" among these elements and from complex "structures" that develop and express themselves in complex "contexts" (e.g., meanings, emotions and relations). All these individual units need to have properties and states in common, so the state of each unity may be constrained, conditioned or dependent of the state of other units (Schwartz, Santerre, & Russek, 1999).

The Paradigmatic Complementary Model (PCM, Vasco, Conceição, Silva, Ferreira & Vaz-Velho; 2018) was developed to orient the decision-making processes in psychotherapy, allowing to make a sequential, integrative and complementary use of common factors or general principles of change and of specific techniques derived from various directions (Vasco, 2006). In the same way, the PCM may also be used for guiding exploratory psychotherapy research, as an integrative model of clinical knowledge, including process and mecanisms of change associated with significant therapeutic results, and also to investigate potential associations between putative causes and outcomes (Vasco, Conceição, Silva, Ferreira & Vaz-Velho; 2018).

The PCM is also very important because it allows an integrative and multivariable comprehension of patients, allowing a better understanding and better decisions along psychotherapy.

This model has proven to be very useful with people with high level of regulation of psychological needs, but also with patients where it can be needed an squematic transformation, with comorbility between Axis I and Axis II (Vasco, Conceição, Nunes da Silva, Ferreira & Vaz-Velho, 2018).

For PCM, all therapeutic decisions must consider variables from patients, relationship and process (Vasco, Conceição, Nunes da Silva, Ferreira & Vaz-Velho, 2018).

Patients must have their vital psychological needs satisfied. When difficulties in emotion regulation arise, and the previous schema becomes non-adaptive, difficulties in regulating psychological needs may arise.

According to the main author (Vasco, 2006), psychological needs are states of emotional imbalance caused by a high or a less level of specific psychological nutrients that promote external or internal changes to restore balance.

According to the PCM, psychotherapy is understood as a temporal sequence of phases including four components: (1) the general principles of therapeutic change; (2) the therapeutic alliance; (3) the conceptualization of the patient and the problem; (4) the temporal sequence of phases related to objectives.

Such as in different theoretical orientations (integrative or not), it has been suggested that the sequence of phases structuring strategic therapeutic objectives is a general principle of change in the PCM (Vasco, 2006; Vasco & Conceição, 2001). In this way, the temporal sequencing component of PCM includes progresses both of the psychotherapist and patient, according to seven phases—based on Goldfried's work (Goldfried, 1980)—related to the implementation of strategic objectives:

i. The main goal of Phase 1 is to build trust, motivation, hope, and relationship structuring. For this, the psychotherapist listens to patients' problems, validates them, and negotiates roles, rules and, goals of therapy.

ii. The main aim of Phase 2 is to increase awareness of self and experience. For this, the psychotherapist helps patients to become aware of inner conflicts, translating problematic experiences as a whole (e.g., cognition, emotion, and behavior). This may contribute for patients to increase their awareness about relationships with others, explore or experience the impact of relevant situations, develop curiosity and interest in self-observation.

iii. The main goal of Phase 3 is to develop a meaning related to experience and self. For this, the psychotherapist aims to help patients clarifying and relating feelings and attributions, as well as to increase awareness about how patients' past/present experiences may contribute for the origin and maintenance of the problem. This is important for the psychotherapist and patient to develop a shared understanding of patients' problems.

iv. The main objective of Phase 4 is to promote and regulate responsibility. For this, the psychotherapist aims to increase patients' awareness and differentiation regarding their true needs by promoting: self-efficacy and resources for change; differentiation of patients' (or others') responsibilities regarding problems; responsibility for feelings, thoughts, actions and life choices; compassion for the self.

v. The main aim of Phase 5 is to implement repairing actions. For this, the psychotherapist promotes and implements plans to help patients to express themselves clearly and to handle situations in a way that respects their own needs. At this stage, it is intended to promote patients' assertion, management of internal

and external expressions of identity, choice of lifestyles, and personal development.

vi. The main goal of Phase 6 is to consolidate change. For this, the psychotherapist promotes the patients' ability to deal with intra and interpersonal obstacles to self-consolidation, harmonization of different parts of the self and experience (taking care of the new self and relationships that support it), acceptance of the inevitability of some degree of vulnerability or conflict in the experience and expression of identity.

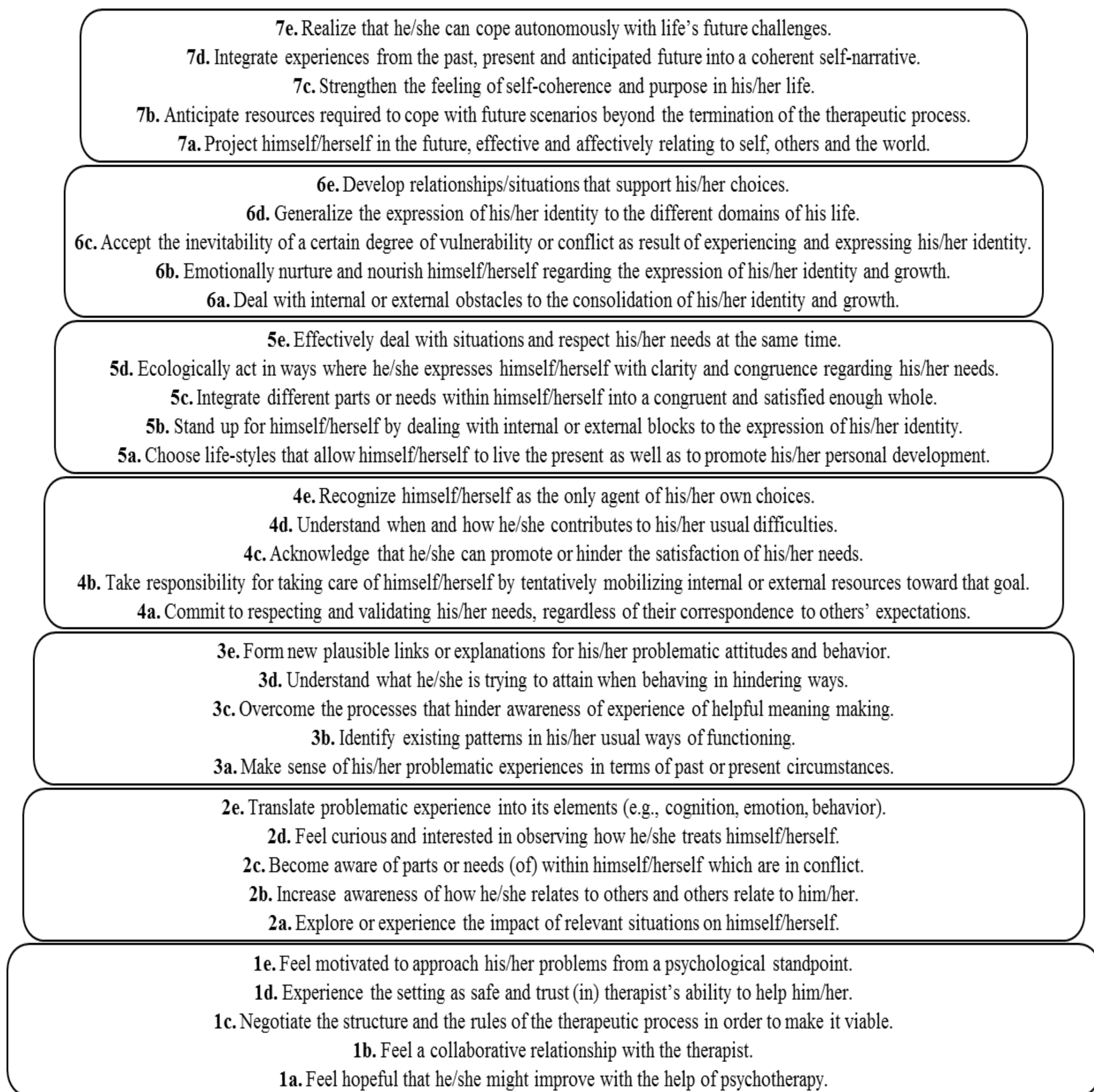
vii. The main objective of Phase 7 is the anticipation of the future and relapse prevention. For this, the psychotherapist helps the patient to: anticipate difficulties, and to develop resources to manage them and potential future gratifications for the new self; interpret future difficulties as opportunities for growth and self-development; strengthen the sense of personal coherence; integrate experiences of the past.

It is important to remind that the above phases may overlap, and that they may oscillate cyclically. Sequence linearity tends to be greater in the patients with lower complexity problems. The main advantage of PCM is that it integrates different visions, allowing the combination of both cognitive and emotional interventions.

To clarify the work that needs to be done in each phase, Vasco and Conceição (2008) defined five general strategies for each phase as presented in Figure 1.

Figure 1.

Sequential components for the seven phases of the Paradigmatic Complementarity Model.



Note: Each phase has the following main goals: (1) trust, motivation, hope building, and structuring; (2) increasing awareness of self and experience; (3) meaning related to self and experience; (4) regulation of responsibility; (5) implementation of repairing actions; (6) consolidation of change; and (7) anticipation of the future and relapse prevention. Adapted from Vasco and Conceição (2008).

According to Ferreira and colleagues (Ferreira, Vasco, Basseches, Santos, & Ferreira, 2015), the sequence of these phases is particular important when working with patients with personality disorders, particularly in those who tend to be sensitive to misattunements and

lack of responsivity from their therapists, needing more time and skills to attain therapeutic objectives.

This sequence also allows the therapist to work with a model and using some creativity, to respond to patient needs (Vasco, Conceição, Nunes da Silva, Ferreira & Vaz-Velho, 2018).

The sequence of the phases of the PCM has been investigated for the past 16 years with cross-sectional and longitudinal studies (Conceição 2010; Ferreira, Vasco, Basseches, Santos, & Ferreira, 2015; Vasco, Conceição, Nunes da Silva, Ferreira & Vaz-Velho, 2018). Such studies have consistently supported the temporal sequence of strategic objectives, and it is potential to improve personality disorders in long-term processes (Conceição 2010), and also to the improvement of emotion regulation abilities (Vasco, Conceição, Nunes da Silva, Ferreira & Vaz-Velho, 2018). Studies have also suggested that the articulation of therapist's promotion with patient's assimilation capacity, contributes to improving psychotherapists' and patients perception of the therapeutic alliance, which could potentially improve patient outcomes (Conceição, 2005, 2010).

For example, a recent study described a good outcome case (i.e., EVA) that developed a more differentiated and integrated sense of self, and how the psychotherapist facilitated this developmental process, using the PCM (Ferreira, Vasco, Basseches, Santos, & Ferreira, 2015). In fact, the results indicated that during one year of psychotherapy, EVA's capacity evolved sequentially and cumulatively from Phase 1 to Phases 2 and 3 and that then she started developing Phase 4 capacities.

Despite the above, the PCM is still under research, and its full potential needs further investigation. Therefore, the objective of the present study was to investigate the differences in emotional processes of psychotherapy patients in different stages of the PCM.

Method

Participants

This cross-sectional study was performed using a convenience sample of 108 adult patients who were attending psychotherapy sessions. Participants were recruited by their psychotherapists between January and November of 2012 in Portugal. Criteria for inclusion were 18 years of age or older and a previous diagnosis of psychopathology by the psychotherapist. Participants were excluded if they presented substance use disorders or psychotic disorders. Socio-demographic and clinical characteristics of the clinical sample are shown in Table 1.

Table 1

Socio-Demographic and Clinical Characteristics of the Clinical Sample

Characteristic	Patients (N = 108)	
	n	%
Gender		
Female	69	63.91
Male	39	36.09
Marital status		
Single	69	63.93
Married	26	24.14
Divorced	7	6.51
Cohabiting	3	2.85
Widowed	2	1.94

Table 1. Continued

Characteristic	Patients (*N* = 108)	
	n	%
Education level completed		
9th grade or less	14	13.02
High School	34	31.51
3-5 years' graduate degree	48	44.45
Postgraduate degree	5	4.65
Professional status		
Employed	68	63.04
Other	40	37.06
Psychopathology diagnosis	*n*	%
Anxiety disorder	31	28.76
Depressive and anxiety disorder	23	21.36
Depressive disorder	21	19.46
Personality disorder	10	9.34
Anxiety and personality disorder	6	5.66
Depressive and personality disorder	6	5.61
Anxiety disorder and other	2	1.94
Depressive, anxiety and personality disorder	1	0.93
Other	5	4.61

The mean age of the participants was 33.0 years (SD = 10.5). The sample was 63.9% female, 63.93% single, and 49% had a university degree. The most prevalent diagnosed psychopathologies were anxiety (28.76%), depression and anxiety (21.36%), depression (19.46%), and personality disorders (9.34%). The median number of psychotherapy sessions at study entry was 16 (Range = 1– 130).

Measures

Emotion

The Portuguese version of the Positive and Negative Affective Schedule (PANAS; Galinha & Pais-Ribeiro, 2005) was used to measure emotional experience. As in the original English version (Watson, Clark, & Tellegen, 1988), the PANAS is a self-report instrument that includes 20 items with two subscales. Ten items measure Positive Affect (e.g., interested, enthusiastic, active), and ten measure Negative Affect (e.g., irritable, upset, scared). Positive Affect reflects a combination of arousal and pleasant valence, and Negative Affect reflects a combination of arousal and unpleasant valence. The patients' responses are measured on a 5-point Likert-type scale, ranging from 1 point ("very slightly or not at all") to 5 points ("extremely"). PANAS was used to assess emotional experience during various time intervals (i.e., at this moment, today, past few days, past few weeks, and past year). The Portuguese version of PANAS has high internal consistency for both Positive Affect (α = .86) and Negative Affect (α = .89), and as the original PANAS, both scales are uncorrelated.

Emotional attention

In this study, we used the Trait Meta-Mood Scale (TMMS; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995) to study the individual perceived ability to deal with emotional states and emotions and to clearly distinguish and regulate them. The original version of TMMS consists of 48 items on which participants are required to rate the extent to which they agreed with each item on a 5-point Likert-type scale, ranging from 1 point ("strongly disagree") to 5 points ("strongly agree"). It includes three subscales Attention, Clarity, and Repair. We used the Attention subscale to evaluate the emotional attention of the patients. This subscale refers to paying close attention to feelings, accepting feelings, valuing them and letting oneself experience them fully and intensively. Clarity evaluates the understanding of one's emotional states. Repair refers to the individuals' beliefs about the ability to regulate their feelings.

Individuals scoring high on the Attention subscale value their feelings and believe in letting them guide their behavior. For this study, we used the Portuguese validation of the TMMS (TMMS-24) developed by Queirós, Fernández-Berrocal, Extremera, Carral, and Queirós (2005) including 24 items with the three original subscales, eight items each. The Attention, Clarity, and Repair subscales of TMMS-24 present an adequate internal consistency (Attention, α = .90; Clarity, α = .90; Repair, α = .86) (Queirós et al., 2005).

Emotion differentiation

The Range and Differentiation of Emotion Experience Scale (RDEES; Kang & Shaver, 2004) is a self-report instrument for assessing psychological significance of individual differences in emotion complexity, which was conceptualized as having two correlated aspects: broad range of emotion experiences (i.e., the range or span of different emotions experienced by a particular person); and a propensity to make subtle distinctions within emotion categories (i.e., how well a person can distinguish subtle differences among similar emotions). It includes 14 items rated on a 7-point Likert-type scale that require participants to indicate how characteristic they feel that the items are, ranging from 1 ("does not describe me very well") to 7 ("describes me very well"). The instrument comprises two subscales: Range, which integrates 7 items (e.g., "I experience a wide range of emotions"); and Differentiation involving 7 items (e.g., "I am aware that each emotion has a completely different meaning"). Higher RDEES scores are indicative of a greater range and better emotion differentiation ability, and lower scores are indicative of worst differentiation. We used the Portuguese version of RDEES, which was validated by Machado Vaz (2009). Internal consistency scores of the Portuguese validation ranged from a Cronbach's α of .63 in the Range subscale to .82 in the Differentiation subscale. Test-retest reliability across six weeks was moderate, meaning that range of emotions and emotion differentiation ability use of these emotion regulation

strategies are was relatively stable over time, which had already been demonstrated by Kang and Shaver (2004).

In this study, we have also used the previously described Clarity subscale of the TMMS-24, and the Toronto Alexithymia Scale 20 (TAS-20) (Taylor et al., 1988) to evaluate the patient's ability to differentiate between emotions. TAS-20 is a self-reporting instrument for assessing alexithymia. It includes 20 items scored on a 5-point Likert-type scale, ranging from 1 point ("strongly agree") to 5 points ("strongly disagree") that measures three factors within the scale: Difficulty Identifying Feelings, Difficulty Describing Feelings and Externally Oriented Thinking. High TAS-20 scores have been associated with negative treatment outcomes (Rufer et al., 2004), and to be associated with anxiety, depression, and somatoform, eating, and personality disorders (Grabe, Spitzer, & Freyberger, 2004; Lipsanen, Saarijarvi, & Lauerma, 2004; Saarijarvi, Salminen, & Toikka, 2006). For this study, we used the Portuguese validation of Verissimo (2001) with good internal consistency ($\alpha = .74$).

Emotion intensity

Short Affect Intensity Scale (SAIS; Geuens & De Pelsmacker, 2002) is a self-reporting instrument for assessing emotion intensity. It includes 20 items that require participants to indicate the extent by which they agree with the statements, measured on a 6-point Likert-type scale, ranging from 1 point ("I never feel like that") to 6 points ("I always feel like that"). Higher scores are indicative of higher affect intensity than lower ones. In this study, we used the Portuguese version of the SAIS, which was validated by (Machado Vaz & Vasco, 2018). The Portuguese version of SAIS presents high internal consistency (Positive Intensity: $\alpha = .83$, Negative Affectivity: $\alpha = .78$, Serenity: $\alpha = .85$).

Emotion regulation

The Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) is one of the most widely used self-report instruments designed to measure emotion regulation strategies. The ERQ consists of 10 items rated on a 7 point Likert-type scale, ranging from 1 point ("strongly disagree") to 7 points ("strongly agree"). Higher scores reflect a greater emotion regulation tendency. The instrument comprises two subscales: Reappraisal, which integrates 6 items, measuring cognitive change involving the re-evaluation of a potentially evocative situation in a way that alters its forthcoming emotional impact, and Suppression, which involves 4 items, measuring response modulation strategy that involves inhibiting ongoing emotion-expressive behavior. In this study, we used the Portuguese validation of Machado Vaz (2009). Internal reliability scores of the Portuguese validation ranged from a Cronbach's α of .76 in the Reappraisal subscale to a Cronbach's α of .61 in the Suppression subscale.

We have also used the Repair subscale of the TMMS-24 and Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) to assess emotion regulation. DERS is a self-report instrument for assessing the complexities and clinically-relevant difficulties of emotion regulation, as described by several of theories of emotion regulation (Gratz & Roemer, 2004). It includes 36 items that require participants to indicate how often each item applies to themselves, with responses ranging from 1 ("almost never") to 5 ("almost always"). Six interpretable factors reflecting the multi-faceted nature of emotion regulation emerged can be identified in DERS: (a) Non-Acceptance of Emotional Responses (non-acceptance); (b) Difficulties Engaging in Goal-Directed Behavior; (c) Impulse Control Difficulties; (d) Lack of Emotional Awareness; (e) Limited Access to Emotion Regulation Strategies; (f) Lack of Emotional Clarity.

Higher scores are indicative of higher difficulties in emotion regulation, whereas lower scores are indicative of lower difficulties in emotion regulation.

In this study, we used the Portuguese version of the DERS, which was validated by Machado Vaz and Vasco (2018). The Portuguese version of DERS had high internal consistency ($\alpha = .91$).

Emotion expression

The Emotion Expressivity Scale (EES; Kring, Smith, & Neale, 1994) was used to evaluate the emotion expression capabilities of the patients. EES is a self-report instrument for assessing the extent to which an individual outwardly expresses positive and negative emotions. It includes 17 items, requiring respondents to evaluate statements using a 7-point Likert-type scale ranging from 1 point ("never true") to 6 points ("always true"). In this study, we used the Portuguese version of the EES, validated by (Machado Vaz & Vasco, 2018) with high internal consistency ($\alpha = .87$).

Phases of the PCM determined by the therapist's assessment of the patient

To attribute a specific phase of the PCM to each patient, we used the Therapist's Operations Form of the General Strategies Inventory (GSI-Top/t; Vasco & Conceição, 2008). The GSI-Top/t is an instrument of 35 items distributed in 7 subscales, corresponding to the seven phases of the PCM, with 5 items each. Therapists are required to rate the extent to what the items describe the patients' ability to a particular processing at the time (e.g., "The patient is able to understand how he contributes to his own difficulties"), using a 7-point Likert-type scale, ranging from 1 point ("not at all descriptive") to 7 points ("totally descriptive"). The seven subscales present levels of internal consistency with Cronbach's α ranging from .57 to .80 (Conceição, 2010). The answers to the form were aggregated by the phase that they refer to, and the mean scores concerning the different phases of the PCM were calculated. The patient was then assigned to the phase that had the highest score amongst all seven. If two phases had the same highest score, then the lower of the two was selected.

Procedure

We invited the psychotherapists to participate in the study and provided them a summary of the study protocol and objectives. Upon acceptance, the researchers provided the instruments and instructed the psychotherapists for answering immediately after the psychotherapy session.

The clients were invited to participate in the study by their psychotherapists, who provided them the “Patient’s Book”. This book included: a formal invitation to participate in the study; questions regarding age, gender, marital status, employment status and education; eight self-report instruments to measure emotional processes; instructions for answering to these instruments (either immediately after the psychotherapy session, or at home); and instructions for the patients to return their answers to the psychotherapist in a sealed envelope (either in the following appointment, or as soon as possible).

Furthermore, these instructions stated that only the study researchers (and not the psychotherapists) would have access. Psychotherapists were instructed to return the sealed envelopes with the patients’ answers to the study researchers. The socio-demographic data and scores for the self-report instruments completed by the patients were collected by the researchers. All participants provided written informed consent before study inclusion.

Data analysis

We included in our study a convenience sample (i.e., all patients that were available to us and that followed the eligibility criteria), and no sample size calculation was carried out. All data were entered in SPSS (Version 17.0), and statistical analysis was performed in R (Version 3.3.2). The normality of data regarding the self-report instruments used to measure emotional experience and emotional processing was investigated using the Shapiro-Wilk’s test. The scores obtained for PANAS, TMMS-24, RDEES, TAS-20, SAIS, ERQ, DERS, and EES scales were compared between patients in different phases of the PCM using Student’s t-

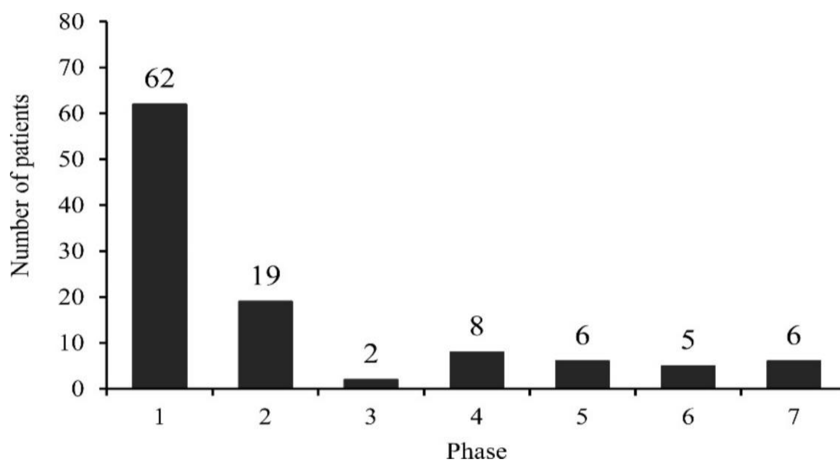
test for independent samples, if both scores were normally distributed, or using Wilcoxon test for independent samples, if at least one of the scores was not normally distributed. Statistical significance was defined by a p value < .05.

Results

Phases of the PCM determined by the therapist's assessment of the patient.

The distribution of the clinical sample according to the patients' phase of the PCM is shown in Figure 2.

Figure 2.
Number of patients assigned to each one of the seven phases of the PCM



Considering the heterogeneous distribution and small size of the sample, patients were grouped into two main clusters: Phases 1-3 and Phases 4-7. The early Phases 1-3 represent the emotion-oriented stages throughout the therapeutic process (relationship building, awareness and meaning making), whereas the later Phases 4-7 depict the action-oriented stages (regulation of responsibility, implementation of repairing actions, consolidating change, and anticipation of the future and relapse prevention). The majority of patients were allocated to Phases 1-3 (n = 83, 76.9%) and 23.1% were assigned to Phases 4-7 (n = 25).

Differences in emotional processes according to different stages of the PCM.

This study examined the differences of emotional experience and emotional processing in patients who were attending psychotherapy sessions in private practice, at different phases of the therapeutic process according to the PCM. Results in Table 2 below.

Table 2

Differences between Emotions as a Function of Phases of the PCM

	Phase 1-3		Phase 4-7			
Instrument	*n*	*Mdn*	*n*	*Mdn*	χ^2	*p*
PANAS						
Positive (moment)	76	23.01 (10-47)	22	26.55 (14-50)	3.44	.06
Positive (today)	77	23.02 (10-47)	20	27.40 (15-45)	3.20	.07
Positive (past few days)	76	26.05 (10-46)	19	28.03 (14-43)	2.35	.13
Positive (past few weeks)	75	27.05 (10-45)	19	31.07 (13-39)	1.25	.26
Positive (past year)	76	27.01 (11-48)	20	18.59 (13-37)	2.75	.10
Negative (moment)	77	14.03 (10-46)	22	13.55 (10-50)	0.26	.61

Table 2. Continued

Instrument	Phase 1-3		Phase 4-7		χ^2	*p*
	n	*Mdn*	*n*	*Mdn*		
Negative (today)	76	16.03 (10-38)	19	13.04 (10-42)	1.28	.23
Negative (past few days)	76	22.53 (10-47)	19	15.01 (10-43)	7.68	**.01**
Negative (past few weeks)	75	25.05 (10-43)	18	16.57 (10-44)	4.88	**.03**
Negative (past year)	76	27.55 (12-50)	19	23.05 (10-45)	0.54	.46

Note. The variation in the subsample size for each scale is due to missing values. PANAS = Positive and Negative Affect Schedule, PCM = Paradigmatic Complementary Metamodel. Significant level at $p < .05$ in boldface.

Regarding emotional experience, patients in Phases 4-7 did not differ significantly ($p > .05$) from patients in Phases 1-3 on PANAS Positive Affect median scores at timeframes “moment”, “today”, “past few days”, “past few weeks”, and “past year”. As for the Negative Affect subscale of the PANAS, patients in Phases 4-7 of the PCM presented significantly lower median scores than those obtained in Phases 1-3 for the timeframes “past few days”, χ^2 $(2, N = 95) = 7.68$, $p = .01$ and “past few weeks”, χ^2 $(2, N = 94) = 4.88$, $p = .03$. Scores on the remaining timeframes for the emotion felted did not differ significantly between Phases 1-3 and 4-7 ($p > .05$).

Regarding emotional attention, median scores on the Attention subscale of the TMMS-24 did not differ significantly between patients in Phases 1-3 and those in Phases 4-7 ($p > .05$, Table 3).

Table 3

Differences between Emotional Attention as a Function of Phases of the PCM

	Phase 1-3		Phase 4-7			
Instrument	*n*	*Mdn*	*n*	*Mdn*	χ^2	*p*
TMMS-24 Attention	82	31.01 (8-40)	22	32.05 (23-40)	.53	.47

Note. The variation in the subsample size for each scale is due to missing values. PCM = Paradigmatic Complementary Metamodel, TMMS-24 = Trait Meta Mood Scale 24. Significant level at $p < .05$.

Patients' abilities of emotion differentiation were assessed using the Clarity subscale of the TMMS-24 and the scales RDEES and TAS-20 (see Table 4).

Table 4

Sample Size, Medians (and Ranges) and Differences between Scores Measuring Emotion Differentiation as a Function of Phases of the PCM

Instrument	Phase 1-3		Phase 4-7			
	n	*Mdn*	*n*	*Mdn*	χ^2	*p*
TMMS-24						
Clarity	79	26.01 (11-39)	23	29.03 (21-40)	4.42	**.04**
RDEES						
Differentiation	74	34.02 (9-56)	21	32.05 (19-52)	0.00	.96
Range	79	20.06 (6-32)	23	21.07 (15-28)	0.10	.75
Total	74	54.0 (15-78)	21	54.01 (34-74)	0.03	.86
TAS-20						
Difficulty Identifying feelings	78	19.03 (7-35)	21	17.04 (8-29)	3.86	.05
Difficulty Describing Feelings	77	15.03 (9-25)	22	14.06 (8-23)	3.10	.08
Externally Oriented Thinking	77	26.04 (17-40)	22	26.03 (18-32)	0.00	.95
Total	71	60.01 (39-100)	21	55.04 (36-84)	2.03	.15

Note. The variation in the subsample size for each scale is due to missing values. RDEES = Range and Differentiation of Emotion Experience Scale, TAS-20 = Toronto Alexithymia Scale, TMMS-24 = Trait Meta Mood Scale. PCM = Paradigmatic Complementary Metamodel. Significant level at $p < .05$ in boldface.

First, median scores on TMMS-24 Clarity subscale were significantly higher for patients in Phases 4-7 of the PCM than those obtained in Phases 1-3, χ^2 (2, N = 102) = 4.42, p = .04. Secondly, patients did not differ significantly on the total RDEES scores, nor on the Differentiation and Range subscales ($p > .05$). Finally, regarding alexithymic symptoms, patients' median scores on the TAS-20 scale were not significantly different between Phases 1-3 and Phases 4-7 ($p > .05$).

Emotion intensity was assessed by the self-report instrument SAIS (see Table 5).

Table 5

Emotion Intensity as a Function of Phases of the PCM

Instrument	Phase 1-3		Phase 4-7			
	n	*Mdn*	*n*	*Mdn*	χ^2	*p*
SAIS						
Positive Intensity	81	28.03 (8-38)	23	32.01 (16-40)	1.53	.22
Negative Affectivity	80	24.05 (10-30)	22	21.03 (15-28)	5.79	**.02**
Serenity	82	21.02 (6-30)	21	22.03 (10-30)	0.25	.52

Note. The variation in the subsample size for each scale is due to missing values. SAIS = Short Affect Intensity Scale, PCM = Paradigmatic Complementary Metamodel. Significant level at p < .05 in boldface.

Median scores on the Negative Affectivity intensity subscale of the SAIS were significantly lower for patients in Phases 4-7 than those in Phases 1-3, χ^2 (2, N = 102) = 5.79, p = .02. However, median scores on the other subscales of the SAIS, Positive Intensity and Serenity, were not significantly different between patients in Phases 1-3 and Phases 4-7 (p > .05). The evaluation of emotion regulation abilities of the patients using DERS, ERQ, and TMMS-24 Repair are shown in Table 6.

Table 6

Differences between Emotion Regulation as a Function of Phases of the PCM

	Phase 1-3		Phase 4-7			
Instrument	*n*	*Mdn*	*n*	*Mdn*	χ^2	*p*
DERS						
Nonacceptance of Emotional Responses	77	16.02 (7-30)	23	13.04 (6-28)	3.07	.08
Difficulties Engaging in Goal-Directed Behavior	80	12.05 (4-20)	23	10.04 (7-20)	3.50	.06
Impulse Control Difficulties	80	10.01 (5-25)	22	9.56 (5-17)	1.28	.26
Lack of Emotional Awareness	80	19.07 (11-29)	22	23.06 (11-30)	7.03	**.01**
Limited Access to Emotion Regulation Strategies	78	19.04 (8-31)	25	15.09 (9-34)	2.81	.09

Table 6. Continued

Instrument	Phase 1-3		Phase 4-7		χ^2	*p*
	n	*Mdn*	*n*	*Mdn*		
Lack of Emotional Clarity	81	9.04 (6-17)	23	9.03 (7-14)	1.59	.21
Total	72	87.54 (55-136)	21	82.04 (49-133)	0.79	.38
ERQ						
Reappraisal	66	25.04 (7-42)	20	28.05 (12-39)	3.60	.06
Suppression	81	16.08 (4-28)	22	15.07 (4-25)	0.91	.34
TMMS-24						
Repair	81	26.03 (8-40)	23	27.01 (17-38)	1.37	.24

Note. The variation in the subsample size for each scale is due to missing values. DERS = Difficulties in Emotion Regulation Scale, ERQ = Emotion Regulation Questionnaire, PCM = Paradigmatic Complementary Metamodel. Significant level at $p < .05$ in boldface.

Median scores for DERS Lack of Emotional Awareness were significantly higher for patients in Phases 4-7, χ^2 (2, N = 102) = 7.03, p = .01, compared to those for patients in Phases 1-3. The median scores on the remaining DERS subscales and on the ERQ were not significantly different between patients in Phases 1-3 and 4-7 ($p > .05$). Moreover, patients'

median scores on the Repair subscale of TMMS-24 were not significantly different between Phases 1-3 and Phases 4-7 ($p > .05$).

Finally, the median total score on the self-report instrument EES to measure emotional expression was significantly lower for patients in Phases 4-7 than those in Phases 1-3, χ^2 (2, $N = 99$) = 4.85, $p = .03$.

Discussion

The aim of the present study was to evaluate emotional processing abilities along psychotherapy according to Paradigmatic Complementarity Model. Several self-report instruments were used to measure both emotional experience and essential components of emotional processing, such as attention, differentiation, intensity, regulation, and expression.

This was the first study investigating the emotional experience and emotional processing of patients with psychotherapy in relation to their phase of the PCM. Regarding emotional experience, scores for Negative Affect in the timelines “past few days” and “past few weeks” were significantly lower in patients at Phases 4-7 than those obtained in patients at Phases 1-3. These results suggest that therapeutic changes from Phases 1-3 to Phases 4-7 are mediated by a decrease of the level of the unpleasant valence of the emotions felt. Indeed, other studies have also reported a decrease of unpleasant affect with a concomitant decrease in depression or anxiety symptoms (Kring, Persons, & Thomas, 2006; Mohr et al., 2005; Schmid, Freid, Hollon, & DeRubeis, 2002; Tomarken, Dichter, Freid, Addington, & Shelton, 2004).

Regarding the self-report scales to measure emotion differentiation, patients with psychopathology in Phases 4-7 reported significantly higher scores for the Clarity subscale. On the other hand, scores for Differentiation, Range, and alexithymic symptoms (i.e., Difficulty Identifying Feeling, Difficulty Describing Feelings, and Externally Oriented

Thinking) did not differ significantly between patients in different phases. Nevertheless, these results suggest that therapeutic changes from Phases 1-3 to Phases 4-7 are mediated by components of emotion differentiation. Indeed, higher scores on the Clarity subscale of the TMMS-24 have been associated with higher levels of mental health and satisfaction with life, whereas lower scores have been associated with lower levels of depression and rumination (Queirós, Fernández-Berrocal, Extremera, Carral & Queirós, 2005).

We also found that patients in Phases 4-7 reported significantly lower scores for Negative Affectivity intensity, suggesting that therapeutic changes from Phases 1-3 to Phases 4-7 reduce the intensity of unpleasant emotions. Experience of excessive unpleasant emotion is common across many different disorders, including depression, anxiety disorders, eating disorders, schizophrenia, substance-related disorders, and a number of personality disorders (Berenbaum et al., 2006; Kassel, Stroud, & Paronis, 2003; Kring, 2001; Mineka, Watson, & Clark, 1998; Putnam & Silk, 2005; Stice, 2001). Therefore, decreasing the intensity of emotion experience during therapy could promote positive outcomes, as previously shown in a variety of treatment approaches (Greenberg, 2002; Hendricks, 2002).

A noteworthy finding in this study is that components of emotional attention, emotion regulation, or emotion expression did not seem to change along PCM. First, median scores for Attention did not differ between patients in Phases 1-3 and Phases 4-7.

Emotion regulation abilities did not differ significantly in Nonacceptance of Emotional Responses, Difficulties Engaging in Goal-Directed Behavior, Impulse Control Difficulties, Limited Access to Emotion Regulation Strategies, Lack of Emotional Clarity, Reappraisal, Suppression, and Repair.

Finally, Emotion Expressivity showed an unexpected decrease in patients at Phases 4-7 of the PCM, as lower levels of this construct have been associated with greater psychological distress (Kring Smith, & Neale, 1994; Schwartz, 1991). Overall, these results are

contradictory with previous studies addressing emotion attention (Greenberg & Korman, 1993; Hilsenroth, Ackerman, Blagys, Baity, & Mooney, 2003; Holzer, Pokorny, Kachele, & Luborsky, 1997; Pos, Greenberg, Goldman, & Korman, 2003; Rosner, 1996), emotion regulation (D'Avanzato, Joormann, Siemer, & Gotlib, 2013; Ehring, Tuschen-Caffier, Schnulle, Fischer, & Gross, 2010; Weinberg & Klonsky, 2009) (Gratz, Lacroce, & Gunderson, 2006), and emotion expression (Marx & Sloan, 2002) in psychotherapy, which have been described as essential processes in facilitating therapeutic change.

Limitations

Limitations may be presented for our study. First, this was an exploratory cross-sectional study of emotional processing, which included all patients that were available to us. Therefore, our results may not necessarily be generalized to other settings, or for patients with different clinical backgrounds. The participants in this study comprised a heterogeneous group regarding to pathologies with low levels of psychopathic traits. In contrast, most published studies of patients with psychopathologies have been conducted in restricted samples (i.e., addressing only one pathology per sample). Indeed, we did not take into account the psychiatric comorbidities in the clinical sample that could modulate the association between deficits in emotional processing and the phase of the PCM, such as anxiety and depressive symptoms. Second, the low discriminant capacity of the self-report measures means that it could not be used to estimate differences in emotional processing in a convenience sample. Indeed, later phases of the PCM were underrepresented in our sample (23.1% of patients in Phases 4-7), which might explain why we did not find an association between these phases and most of the components of emotional processing. Having more patients for the later phases of the PCM would have allowed us to evaluate the differences in emotional processing more accurately. Third, the procedure used to differentiate the patients according to the seven phases of the PCM needs further validation. Phases ratings do not

allow us to assign a particular phase conclusively to a patient. Finally, the use of self-report instruments could also have affected our analysis. While we used instruments shown to be valid in patients with psychopathologies, further studies should also use instruments that rely on patients' performance to describe their actual abilities of emotional processing.

In conclusion, we have shown that increasing the ability to differentiate emotions, and the reduction of unpleasant emotion intensity might help to promote therapeutic changes. Our findings suggest that emotional processes have a role in the therapeutic gain of patients with psychopathologies, which might be useful for further developing and evaluating the transdiagnostic approach of the PCM. The challenge for future research is to fully characterize how emotional experiences and processes change and interact over time along each phase of the PCM.

CHAPTER III

Integrated discussion and Final thoughts

After contemplating the exposed in the five studies, it should be clear that emotion research has been growing with vigor and it is an alive field, where more than ever research is being undertaken all over the world (e.g., Aldao, Gee, De Los Reyes, & Seager, 2016; Barrett, 2018; Ford & Gross, 2018; Gross, 2015; Kring, 2010). Emotion research has been fruitful along all these decades, even though plenty issues praiseworthy for investigation are available and many questions still open. Many questions remain open not only at a level of the development of theoretical models but also at the comprehension of the impact of each emotional process in normal development and psychopathology.

Along the literature review and in each study, we were concerned to deliver a broad outline of what has been the emotion field, nonetheless limited by the focus on emotional process in adults. Maybe the biggest challenge in reviewing this field is to make a summarize review because of the immense amount of existing research.

All studies were developed with the concern to explore emotions and the most essential emotional multidimensional process, namely emotional attention, emotion differentiation, emotion intensity, emotion regulation, and emotion expression. With our research, we also wanted to understand the relationship of emotions and each emotional process with psychopathology and their impact on psychotherapy.

Five studies were developed. Each study and respective results were presented independently in the previous chapters.

In this chapter, it is intended to present the main results and try to perform an integrated discussion. So, the main contributions of the studies are presented, as well as its more relevant limitations. The clinical implications of emotions, the impact of emotions and each emotional process in psychopathology and for psychotherapy and future research in the area are also discussed.

1. Evaluating emotions and emotional processes

Emotions and emotional processes are an emergent research domain in psychology (Barrett, 2018; Gross, 2015) as research increasingly supports the importance of emotions in health (e.g. Craft, Davis & Paulson, 2013; Frattaroli, 2006; Sohl, Dietrich, Wallston & Ridner, 2017), in normal and abnormal development (e.g. Southam-Gerow & Kendall, 2001), in psychopathology (e.g. Kring, 2010; Moran, Mehta & Kring, 2012) and in the course of psychotherapy (Greenberg, 2002a; 2008; Greenberg, Auszara & Herrmann, 2007).

Given the value of emotion and emotional processes, it is crucial that in Portugal we have psychometrically strong, stable and useful measures validated to Portuguese population.

Many measures of different emotional processes have been developed within the last 15 years in Portugal (Machado Vaz, 2009; Queirós, Fernández-Berrocal, Extremera, Carral & Queirós, 2005).

Because there were already measures validated for Portugal that evaluated emotional attention (Queirós, Fernandez-Berroscal, Extremera and Queirós, 2005), emotion differentiation (Machado Vaz, 2009) and emotion regulation (Machado Vaz, 2009), in our study we validated measures of emotion intensity (Geuens & De Pelsmacker, 2002), emotion expression (Kring, Smith, & Neale, 1994) and a measure of difficulties in emotion regulation (Gratz & Roemer, 2004).

Our results replicated in a large Portuguese adult sample, the factor structure that underlies the original versions of the three measures. The results were supported by both an initial exploratory factorial analysis as well as a confirmatory factor analysis whose fit indexes reinforce the model utility of each measure for clinical and research purposes. Temporal stability and gender differences were also evaluated.

With the previously instruments validated to Portugal, together with the new ones validated in our research, we created an integrative evaluation of all the complex processes

underlying each emotion, namely emotional attention, emotion differentiation, emotion intensity, emotion regulation and emotion expression that can be use in Portugal.

These measures can now be use, together or separately, in several studies that may want to explore the impact of each emotional process in any psychological dimension (or even in physical or social variable) and along psychotherapy, to evaluate progression along therapy.

Only with the validation of these three instruments, we were able to proceed with the investigation of the emotional processes in non-clinical and in clinical populations, assessing the relationship of each emotional process with psychopathological symptoms and its impact in psychotherapy.

Considering that all these three instruments are validated in several countries and ages and have been widely used all over the world, transcultural studies may follow.

However, this study was not conducted without limitations. There is an inherent limitation to assess emotions using paper-and-pencil measures. The use of self-raters questionnaires to evaluate emotional processes might raise some problems such as self-protective biases, emotions felt while answering, and, the lack of ability for understanding one's inconsistencies (Spain, Eaton, & Funder, 2000).

Nonetheless, self-raters prove to be an evaluation measure closer to emotional experience than even the evaluation of most well-acquaint peers (Watson & Clark, 1991).

Additionally, to overcome some of these limitations, we choose to select instruments validated using peer reports, observational data, and physiologic parameters.

So, we believe that the use of these three self-report measures in Portugal to evaluate emotional processes might be very usefull to any study.

Furthermore, only the use of this kind of instrument could allow the evaluation of all emotional processes in such a significant sample at the same time.

2. Emotions, emotional process and their relation in patients in psychotherapy

Everyday, people use their emotions to manage the demands of a number of environmental stimuli and challenges, serving important intra and interpersonal functions (Keltner & Kring, 1998).

Emotions are critical in the etiology and maintenance of many forms of psychopathology. Studies on emotion and psychopathology increased dramatically over the past decades (for reviews see Aldao, Nolen-Hoeksema & Schweizer, 2010; Aldao, Gee, De Los Reyes, & Seager, 2016; Kring, 2010; Kring, & Sloan, 2009) and nowadays are a crucial and growing research field, with results showing the impact of different emotional components in the development or maintenance of psychopathology (Kring, 2010; Kring, & Sloan, 2009; Moran, Mehta & Kring, 2012).

So, the most recent research include the evaluation of emotion and emotional components not only for disorders that clearly involve emotion disorders, such as the mood and anxiety disorders (Farach & Mennin, 2007; Kring, 2010; Mennin, Holaway, Fresco, Moore & Heimberg, 2007; Moran, Mehta & Kring, 2012) to behaviors less clearly linked to emotion difficulties, such as insomnia (Harvey, McGlinchey, & Gruber, 2009) and schizophrenia (Kring & Moran, 2008).

Nowadays, with emotions being considered as comprised of multiple processes, including emotional attention, emotion differentiation, expression, regulation, and intensity, investigation showed that the lack of coherence across emotional processes had been observed in different psychological disorders and had been considered an emotion disturbance (Kring, 2001).

So, emotion difficulties in mental disorders span both pleasant and unpleasant emotions, and can be a result of difficulties managing emotion (as in the case of all anxiety disorders, with intense and persistent fear), deficits in feeling certain types of emotions (as in

the case of narcissistic personality disorder, with a lack of empathy), problems expressing emotions to others (for example, as in autism spectrum disorder, with a lack of emotional communication), and emotion regulation problems (as in borderline personality disorder, with difficulties in controlling anger) (Kring, 2008).

So, in our second study, we characterize emotions and emotional processes and their associations among a clinical sample of patients specifically the emotion felt, emotional attention, emotion differentiation, intensity, regulation, and expression.

2.1. Emotions in patients in psychotherapy

According to our preliminary hypothesis, patients in psychotherapy showed differences in emotions. Indeed, our clinical sample showed a relatively low range of pleasant emotions and high range of unpleasant emotions particularly at longer time frames. Our findings are in accordance with previous studies of emotional processes among patients with anxiety and depression, which reported low levels of pleasant emotions as characteristic of depression and social phobia and high levels of unpleasnt emotions as being characteristic of anxiety and depression (Mineka, Watson, & Clark, 1998; Watson, 2005).

These results are very significant for psychotherapeutic interventions because therapists should start evaluating which type of emotion the patient is feeling and has been feeling as a starting point to case formulation and for clinical intervention, according to the most prevalent emotion felt by the patient.

Just like other studies, in our research, female patients obtain significantly higher scores on the unpleasant affect than male patients (Crawford, & Henry, 2004; Watson, Clark & Tellegen, 1988). These findings are supported by several studies about unpleasant emotions being generally reported more by women than by men, including disgust, sadness, vulnerability, fear, anxiety, shame and embarrassment (Fischer, Rodriguez Mosquera, Van Vianen, & Manstead, 2004; Simon & Nath, 2004).

These results are very significant for psychotherapy because therapists should consider gender when preparing psychological interventions and along psychotherapy.

As expected, pleasant emotions were more strongly associated with clarity, repair, and positive intensity, whereas unpleasant emotions were more strongly associated with difficulties in emotion regulation. These findings suggest that patients might have increased difficulties to regulate unpleasant emotions. More studies might be needed to clarify the impact of the emotion felt in the regulation strategy used.

Another crucial research question was if that patients undergoing psychotherapy present disturbances in different components of emotional processing.

2.2. Emotional attention in patients in psychotherapy

Models of emotion regulation consider attention as one of the primary mechanisms by which people regulate emotions (Gross & Thompson, 2007; Koole, 2009). As we predicted, in our study, half of the patients in our clinical sample have too high or too low perceived emotional attention.

These deficits in emotional attention won't allow these patients to select appropriate response strategies for dealing with emotional situations (Barrett, Gross, Christensen, & Benvenuto 2001). Indeed, several authors hypothesized that poor emotional attention relates to lower psychological functioning because lacking the ability to turn attention to emotions impairs problem solving or coping abilities and difficulty in communicating emotions to others limits opportunities for gaining social support (Fox, Axelrod, Paliwal, Sleeper & Sinha, 2007; Gratz & Roemer, 2004; Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007). Consistent with this, numerous studies who examined the relation between emotional attention and mental health have found a relation between non-functional emotional attention and poorer psychological functioning (Cloitre, Miranda, Stovall-McClough, & Han., 2005; Fox, Axelrod, Paliwal, Sleeper & Sinha, 2007; Gratz & Roemer, 2004; Salters-Pedneaultt,

Roemer, Tull, Rucker, & Mennin, 2006; Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007; Taylor, Bagby, & Parker, 1997).

2.3. Emotion differentiation in patients in psychotherapy

Regarding different constructs related to emotion differentiation, our findings showed that almost half of our clinical sample should improve their clarity abilities. Previous studies also reported decreased emotional clarity in patients presenting symptoms of general anxiety disorder, social anxiety disorder, and posttraumatic stress disorder (Baker, Holloway, Thomas, Thomas, & Owens, 2004; McLaughlin, Menin, & Farach 2007; Tull & Roemer, 2007; Weiss et al., 2012).

Our findings also showed that our clinical sample presents low levels of range and low ability to differentiate emotional experience. Difficulties in clarifying, labeling and differentiating emotions have an impact in recognizing emotion, not allowing the access to emotion regulation strategies and not expressing effectively the emotion felt, with poor differentiators employing maladaptive regulation' strategies such as substance use (e.g., Haviland, Hendryx, Shaw, & Henry, 1994) and alcohol abuse (Emery, Simons, Clarke, & Gaher, 2014; Kashdan, Ferssizidis, Collins, & Muraven, 2010).

Previous studies showed a similar prevalence of patients with emotional range and diferentiation deficits within clinical populations (Demiralp et al., 2012; Erbas, Ceulemans, Lee, Koval, & Kuppens, 2014; Kashdan & Farmer, 2014). So, difficulties in the capacity to experience (and differentiate) the full range of emotions and respond spontaneously may be as maladaptive as deficiencies in the ability to regulate strong non-adaptive emotions (Cole, Michel, Teti, 1999).

Finally, our clinical sample should present a high prevalence of alexithymia symptoms. Other studies with clinical populations have also shown similar or higher prevalence of patients with alexithymia symptoms, for instance about 33% in outpatient psychiatric

patients, 47% in inpatients (Todarello, Taylor, Parker, & Fanelli, 1995; Wise, Mann & Hill, 1990).

Finally, our results showed a negative association of difficulties identifying feelings with positive affect, clarity, and emotion differentiation. As reported in previous investigations, individuals who have highly differentiated emotional experiences may have activated more highly discrete emotion knowledge (i.e., have lower levels of difficulties identifying feelings) during the representation process than individuals with global emotion experiences (Barrett, 1998).

2.4. Emotion intensity in patients in psychotherapy

Recent research suggests that variations in emotion intensity are related to differences in the selection and implementation of emotion regulation strategies (e.g., Sheppes, 2014; Zimmermann & Iwanski, 2014). Our clinical sample of patients with psychopathologies showed high positive intensity, high negative affectivity, and high serenity. At lower emotion intensities, people prefer to use an adaptive strategy, thereby processing their emotions. Conversely, at higher emotion intensities, people prefer to use avoidance, a putatively maladaptive strategy, thus disengaging from their emotions (Sheppes, 2014; Sheppes & Levin, 2013; Sheppes, Scheibe, Suri, & Gross, 2011).

This is very important for psychotherapy interventions, because research suggests that emotion intensity may play an essential role in the type of regulation process that people carry out. Assess the level of intensity of the emotion felt can, in fact, be a precursor in the construction of therapeutic goals because there will be crucial for promoting adaptive emotion regulation strategies along psychotherapy.

2.5. Emotion regulation in patients in psychotherapy

In our research, patients presented high levels of suppression. Other studies with clinical populations have reported similar prevalence of patients with high suppression

(Richards & Gross, 2006). Suppression is an emotion modulation strategy intended to reduce unwanted emotion experiences and to inhibit the expression of emotion (Gross & Thompson, 2007).

In one study, individuals who tended to naturally suppress their emotions were more likely to be obsessional, anxious, and depressed (Marcks & Woods, 2005). Another study, comparing individuals with anxiety and mood disorders with control group shown that those who use emotion suppression endorsed limitations in emotion regulation (Gross & John, 2003), diminished emotion clarity and ability to modulate emotion (Fernandez-Berrocal, Alcaide, Extremera, & Pizarro, 2006), and difficulties with controlling impulsive behaviors, such as aggression (Nagtegaal & Rassin, 2004).

As expected, in our sample, emotional suppression was associated with difficulties differentiating feelings and with alexithymia. Suppression is an emotion regulation strategy intended to reduce unwanted emotional experiences (Gross & Thompson, 2007). Suppression includes direct attempts to remove any component of an emotional response from conscious experience, including suppression of the experienced feeling of the emotion, inhibition any components of emotion (Richards & Gross, 2006), and inhibition of thoughts associated with emotional reactions. So, individuals who use suppression tend to have more difficulties understanding and labeling their emotions.

High levels of reappraisal were also found in our clinical sample. Although this result might not be the expected, because reappraisal has been shown to be an adaptive emotion regulation strategy, previous investigations found that in other contexts, reappraisal can maintain unpleasant emotional states (Nolen-Hoeksema, 2000). In fact, two categories of reappraisals associated with psychopathology have been described: (a) self-elaboration (e.g., "Others must think poorly of me") (Northoff et al., 2006); and (b) emotional resistance or

nonacceptance of one's current emotional experience (e.g., "I'll do anything to not feel like this") (Hayes, Luoma, Bond, Masuda, & Lillis, 2006).

Also, in our study, patients in psychotherapy reported high levels of non-acceptance of emotional responses, lack of emotional awareness and higher limited access to emotion regulation strategies.

Contrary to what we expected, our clinical sample presented normal levels of impulse control difficulties and lower difficulties engaging in goal-directed behavior.

2.6. Emotion expression in patients in psychotherapy

Finally, patients' perceived emotion expression abilities were also assessed in our research. Our findings suggest that patients in psychotherapy present adequate levels of emotion expression.

Moreover, emotion expression was related to other constructs. The strongest positive association was identified between the score of expression and unpleasant emotions, which might be due to the need of patients in therapy to express more unpleasant emotions because it is the most difficult experience to regulate.

The strongest significant and negative association was identified between emotion expression and emotion suppression. This relationship is obvious because suppression is a response-focused strategy that attempts to inhibit the expression of emotion (Gross & Thompson, 2007). So, the more the patients express, the less they suppress.

Notably, in our study, we did not found differences between men and women for emotion expressivity, as previously described by other authors.

In conclusion, we have shown that a clinical population of patients attending psychotherapy exhibits deficits predominantly in abilities to differentiate and regulate emotions.

However, this study was conducted with some limitations that should be attended. The clinical sample consisted of a relatively heterogeneous population with the most prominent psychopathologies, i.e., depressive, anxiety and personality disorders, thus the results may not be generalizable to other populations with low levels of psychopathic symptoms.

Second, this was a cross-sectional study, which included a convenience sample. Therefore it was only possible to examine only once all the emotional processes in each patient, regardless of their number of previous psychotherapy sessions, the severity of symptoms, or treatment outcomes. Hence, the picture that emerges may not be entirely representative of each patient emotional performance. Third, this performance was examined implicitly, as we used self-report instruments that depend on the patients' perception of their own emotional processing abilities. Finally, it should be noted that there is no control group to assess whether the observed dysregulations of emotional processing are specific for psychotherapy clients versus non-psychotherapy clients.

It is important to further investigate these findings to clarity the role of emotion processes in psychotherapy. Indeed, future work is needed to examine the specific ways in which patients with psychotherapies respond to therapies focused on components of emotional processing.

It would also be informative to include another type of measurements of emotions and emotional processing in everyday life, specifically interviews and explicit performance-based instruments. Additionally, it would be useful to examine every therapy session to evaluate the variability of patients' emotional processing across the entire course of therapy and determine how it relates to other processes or variables of therapy.

Further investigations also should compare normative and clinical samples, to better characterize the active ingredients of adaptive and maladaptive emotional processing.

3. Emotion, emotional process and psychopathology

Everyday, people use their emotions to manage the demands of a number of environmental stimuli and challenges, serving important intra and interpersonal functions (Keltner & Kring, 1998).

Emotions are critical in the etiology and maintenance of many forms of psychopathology.

Studies on emotion and psychopathology increased dramatically over the past decades (for reviews see Aldao, Nolen-Hoeksema & Schweizer, 2010; Aldao, Gee, De Los Reyes, & Seager, 2016; Kring, 2010; Kring, & Sloan, 2009) and nowadays are a crucial and growing research field, with results showing the impact of different emotional components in the development or maintenance of psychopathology (Kring, 2010; Kring, & Sloan, 2009; Moran, Mehta & Kring, 2012).

So, the most recent research include the evaluation of emotion and emotional components not only for disorders that clearly involve emotion disorders, such as the mood and anxiety disorders (Farach & Mennin, 2007; Kring, 2010; Mennin, Holaway, Fresco, Moore & Heimberg, 2007; Moran, Mehta & Kring, 2012) to behaviors less clearly linked to emotion difficulties, such as insomnia (Harvey, McGlinchey, & Gruber, 2009) and schizophrenia (Kring & Moran, 2008).

Nowadays, with emotions being considered as comprised of multiple processes, including emotional attention, emotion differentiation, expression, regulation, and intensity, investigation showed that the lack of coherence across emotional processes had been observed in different psychological disorders and had been considered an emotion disturbance (e.g., Kring, 2001).

So, a multi-emotional process approach to the understanding of psychopathology can have two clear advantages.

First, it will allow investigators to include multiple emotion processes in the same statistical models and, thus, identify which aspects of emotion are more central to the development or maintenance of psychopathology.

Second, by assessing multiple emotional processes, investigators opened the door to the possibility of understanding how different emotional processes might influence one another. For example, recent work suggests that the use of maladaptive emotion differentiation strategies (e.g., non labeling emotions) moderates the association between symptoms of depression, anxiety and the use of adaptive emotion regulation strategies (e.g., acceptance and reappraisal) (e.g., Aldao, Jazaieri, Goldin, & Gross, 2014; Aldao & Nolen-Hoeksema, 2012).

3.1. Emotion felt, components of emotional process and psychopathology

3.1.1. Emotion felt and psychopathology

Results showed that emotion felt and emotion processes can be related to severity of symptoms of psychopathology.

A negative correlation between depression symptoms and positive affect during the past few weeks was found, which indicates a relationship between difficulties in experiencing pleasant emotional experience and levels of depressive symptoms. Indeed, other authors have also observed that depression can reflect difficulties in experiencing pleasant emotions (Bylsma, Morris, & Rottenberg, 2008). Moreover, in studies of anxiety and depression, low levels of Positive Affect were characteristic of depression (Mineka, Watson, & Clark, 1998; Watson, 2005).

Second, our study shows a positive correlation between unpleasant affect and the severity of depression symptoms, indicating that unpleasant emotions have an essential role in the etiology or the maintenance on major depressive disorder.

In fact, unpleasant affect has been shown to predict self-reported depression significantly (Dyck, Jolly, Kramer, 1994; Mineka, Watson & Clark, 1998; Watson, 2005).

Furthermore, in our study, negative affect is positively correlated with anxiety, paranoid ideation, and global severity. Other studies found that the experience of excessive unpleasant emotions is common across many different disorders, including anxiety disorders (Mineka, Watson & Clark, 1998), eating disorders (Stice, 2001), schizophrenia (Kring, 2001), substance-related disorders (Kassel, Stroud, & Paronis, 2003) and personality disorders (Berenbaum, et al., 2006; Huperich, 2005; Putnam & Silk, 2005).

So, the emotion felt should be evaluated along psychotherapy as a measure of good or poor outcomes.

3.1.2. Emotion differentiation and psychopathology

Third, our findings show that symptoms of psychopathology positively correlated with alexithymia, difficulty identifying feelings and difficulty describing feelings, which were used to measure patients' difficulties in emotion differentiation.

Previous studies have shown a significant correlation between difficulties in emotion differentiation and several disorders, including depression, (Grabe, Spitzer, & Freyberger, 2004; Taylor, Bagby & Parker, 1991), anxiety disorders (Frewen, Pain, Dozois, & Lanius, 2006; Parker, Bagby, Taylor, & Acklin, 1993; Turk & Fresco, 2005), eating disorders, (Cochrane, Brewerton, Wilson, & Hodges, 1993), personality disorders (Berenbaum, 1996), substance related disorders (Speranza et al., 2004) and insomnia (Lundh & Broman, 2006). Indeed, alexithymia is the most well-know psychopathological symptom demonstrating the impact of emotion differentiation in psychopathology.

For instance, the positive correlation of alexithymia with obsessive compulsion in our study has been studied previously with decreased emotional clarity being related to symptoms of general anxiety disorder, panic disorder and social anxiety disorder (Baker, Holloway,

Thomas, Thomas, & Owens, 2004; McLaughlin, Mennin & Farach, 2007; Tull & Roemer, 2007; Weiss et al., 2012).

3.1.2. Emotion regulation and psychopathology

Finally, our findings in this study show that difficulties in emotion regulation correlated positively with all symptoms of psychopathology.

This is in accordance with previous studies, which demonstrated that difficulties in emotion regulation are present in most psychopathologies (Werner & Gross, 2010). This might be explained by the fact that many current diagnostic criteria explicitly contain difficulties, disruptions or use of unadaptive emotion regulation strategies (Barlow, 2000; Kring & Werner, 2004).

Several diagnoses in DSM-5 mention difficulties in emotion regulation. For example, “Depressed mood most of the day, nearly every day” in depression, “fear of dying” in Panic Disorder, “difficulty controlling anger” in borderline personality disorder; “fear and worry surronding social situations” in social anxiety disorder; “difficulty controlling worry” in generalized anxiety disorder; “rapidly shifting expressions of emotion” in histrionic personality disorder; “inability to experience and regulate painful emotional memories” in post-traumatic stress disorder (Diagnostic and Statistical Manual of Mental Disorders, fifth edition [DSM-V]; American Psychiatric Association, 2013).

3.2. Emotion, emotional process across patients with major depressive disorder, generalized anxiety disorder and comorbid depression and anxiety disorder

Another aim of our third study was to assess the differences in emotions felt and emotional processes in with major depressive disorder versus patients with generalized anxiety disorder versus patients with comorbid depression and anxiety.

Results showed that patients with these different psychopathologies do not present significant differences in emotional experience as well as in emotional processes, namely emotional attention, differentiation, intensity, regulation, and expression.

So, the non-existence of differences in emotional processes between patients with depression and anxiety has turned clear that many of the observed emotion disturbances may be common across disorders.

Our results are in accordance with the report of the APA planning committee for the *DSM-5* (Kupfer, First, & Regier, 2002) when evaluating the current system for the classification of psychological problems, based on collections of topographically defined co-occurring symptoms: "Epidemiological and clinical studies have shown extremely high rates of comorbidities among disorders, thus undermining the hypothesis that the syndromes represent distinct etiologies" (p.xviii).

A new path for the future of emotion and psychopathology research must be developed to overcome these limitations.

3.2.1. Emotion, emotional process across patients with depressive disorders, anxiety disorders, and personality disorders

The third aim of our third study was to evaluate the differences in emotions felt and emotional processing between patients with personality disorders and those with depressive disorders, anxiety disorders, or both.

Our results show that patients with personality disorders differ significantly in some emotional processing abilities, namely emotion differentiation, emotion regulation and emotion intensity, compared to patients with depressive disorders, anxiety disorders or both.

Patients with personality disorders showed higher scores for pleasant emotions in the shorter timeframes (i.e., moment and today), which was consistent with previous

observations that lower levels of pleasant emotions are characteristic mood disorders such as depression and social phobia (Mineka, Watson, & Clark, 1998; Watson, 2005).

Also, patients with personality disorders presented higher scores on range of emotions, compared to patients with depression and anxiety disorders.

At the same time, patients with personality disorders reported higher intensity of unpleasnt emotions compared to patients with depressive disorders, anxiety disorders or both. In fact, the experience of excessive unpleasant emotion is common across many different disorders, namely on several personality disorders (Berenbaum, Raghavan, Le, Vernon & Gomez, 2006; Huperich, 2005; Putnam & Silk, 2005).

Research also indicates that individual differences in emotion intensity are related to personality disorders, like the risk for borderline personality and passive-aggressive personality (Flett & Hewitt, 1995).

Finally, patients with personality disorders reported significantly higher difficulties in emotion regulation, difficulties engaging in the goal-directed behavior, and impulse control difficulties, compared to patients with depressive disorders or anxiety disorders.

In conclusion, our research analyzed several emotional processes simultaneously in patients with some of the most common psychopathologies (i.e., depressive disorders and anxiety disorders) and in patients with personality disorders.

This is in contrast with most studies, which usually evaluates only one emotion process in a specific psycopathology (Aldao, Nolen-Hoeksema and Schweizer, 2010).

There are some main limitations of our study that should be mentioned and addressed in future research.

First, this study included a smaller number of patients with personality disorders, compared to patients with depressive disorders, anxiety disorders or both. So, it can be

unclear the extent to which our sample is representative of either patients with depressive disorders, anxiety disorders or both and personality disorders.

Second, when therapists rated patients with personality disorder, they did not specify which personality disorder they were referring to.

Although the goal was to compare patients with depressive disorders, anxiety disorders or both and personality disorders, this does not allow the full understanding of which personality disorders they were referring to, not allowing the analysis of emotional processes differences in each personality disorders. Nevertheless, the study provides preliminary evidence of the potential etiologic differences of emotion processes deficits in different psychopathologies.

Third, although we used well established measures of all constructs included in our study these measures all involved retrospective self-report. Although this type of measure is commonly used, it depends on the patients' perception of their emotion processing abilities. This could be particularly relevant in some patients who may have a diminished ability to accurately identify their emotion experience (Lipsanen, Saarijarvi, & Lauerma, 2004).

Notwithstanding the limitations of our study, these findings make new inroads in the role of emotion factors in the psychopathology and highlight many exciting opportunities for future work in this area.

Hence, our results have several notable implications. The first implication concerns the need for a greater understanding of which emotion processes can have a major influence on psychopathological symptoms.

This multiprocess approach allows investigators to identify which aspects of emotion are more central to the development or maintenance of psychopathology. Such findings are especially pertinent given current debates regarding the importance of emotion processes in psychopathology and for psychotherapy' outcomes.

Second, our findings suggest that emotion process may be targets for interventions designed to reduce psychopathology.

Our findings may have implications for the treatment of psychopathologies, as a more comprehensive understanding of disruptions in emotion processing in different disorders may indicate which emotion process should be primarily managed by the psychotherapist. One direction for future research will be to compare the emotion processing abilities of the patients at several moments or stages of the therapeutic process. Such interventions may be especially crucial for individuals with personality disorders.

Overall, this study constitutes an essential initial step in our understanding of the dynamic emotion changes that take place when people suffer from psychopathology. We hope that this work motivates additional research to systematically examine the processes by which individuals suffering from psychopathology can learn to modify their emotion processes over time.

Future research would benefit from assessing emotions and all emotional processes in individuals with psychopathology in real-time, or by using event sampling methods that have been used in previous research (e.g., Buckner, Crosby, Silgado, Wonderlich, & Schmidt, 2012; Lischetzke, Cuccodoro, Gauger, Todeschini, & Eid, 2005).

This would allow an evaluation of relations between moment-by-moment fluctuations in emotion processes.

For future research, it would also be usefull to increase the sample size and to include a control group of the general population, including also another type of instruments to measure emotions and emotion processing in everyday life.

Future research would also benefit from examining causal associations between variables, such as using longitudinal studies.

4. Emotions, emotional processes in non-clinical and clinical populations

The findings in our fourth study suggest that patients with psychopathologies present differences in several components of emotional processing, namely emotional differentiation, regulation, and intensity when compared with individuals from the general population.

4.1. Emotion Differentiation in non-clinical and clinical population

Our findings show that patients with psychopathologies show lower levels on range and emotion differentiation, and show deficits in emotion differentiation compared to individuals from the general population. Specifically, ability to differentiate was lower in patients than the ones of the non-clinical sample. Moreover, scores on range of emotions in male patients were lower than the ones of the non-clinical sample. These results are in accordance with previous studies reporting poorer negative emotion differentiation in depressed individuals compared to healthy controls (Demiralp et al., 2012; Erbas, Ceulemans, Lee Pe, Koval, & Kuppens, 2014; Kashdan & Farmer, 2014), and other reports associating lack of understanding of emotion information with symptoms of depression (Mennin, Holaway, Fresco, Moore, & Heimberg, 2007; Rude & McCarthy, 2003) and anxiety disorders (McLaughlin, Mennin, & Farach, 2007; Mennin, Heimberg, Turk, & Fresco, 2005; Parker, Taylor, Bagby, & Acklin, 1993; Tull & Roemer, 2007).

Our results confirm the hypothesis that deficits in emotion differentiation could play a role in the onset of multiple psychopathologies, because not knowing what one feels makes it much harder to use emotions as information about one's situation (Schwarz & Clore, 1996).

4.2. Emotion Regulation in non-clinical and clinical population

Concerning emotion regulation, patients with psychopathology reported the use of non-adaptive emotion regulation strategies, presenting significant higher scores on non-acceptance of emotional responses, difficulties engaging in the goal-directed behaviour, and limited access to emotion regulation strategies compared to the non-clinical sample.

These results on difficulties in emotion regulation strategies were aligned with the ones obtained by D'Avanzato, Joormann, Siemer, & Gotlib (2013) and by Ehring, Tuschen-Caffier, Schnulle, Fischer, and Gross (2010), that compared formerly depressed to never-depressed participants. Like D'Avanzato et al. (2013), they described that formerly depressed participants reported more emotion non-acceptance. Indeed, difficulties in regulating emotions have been widely associated with symptoms of depression, general anxiety disorder, social anxiety disorder, panic disorder and posttraumatic disorder (Campbell-Sills & Barlow, 2007; Ehring & Quack, 2010; McLaughlin, Mennin, & Farach, 2007; Mennin & Fresco, 2009; Mennin, Holaway, Fresco, Moore & Heimberg, 2007; Salters-Pedneault, Roemer, Tull, Rucker, & Mennin, 2006; Tull & Roemer, 2007).

Overall, our results confirm that emotion regulation plays a crucial role in the main diagnostic categories of psychopathology in the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2013; Barlow, 2000; Kring & Werner, 2004). In some cases, such as the depression and almost anxiety disorders, difficulties in emotion regulation are so dominant and obvious that the disorders are primarily defined based on disturbed emotional processes (Mineka & Sutton, 1992). Indeed, more than half of mood disorders and all personality disorders envolve difficulties in one or more components emotional responses (American Psychiatric Association, 2013).

4.3. Emotion Intensity in non-clinical and clinical population

The scores on emotion intensity showed that patients with psychopathology presented differences in Positive Intensity, compared to the non-clinical sample, but did not present differences in Serenity nor Negative Affectivity. Our clinical sample presented a lower ability for experiencing pleasant emotions with the appropriate intensity. Indeed, experience of excessive unpleasant emotion is common across many different disorders, including depression and anxiety disorders (Mineka, Watson, & Clark, 1998).

4.4, Emotion Expression in non-clinical and clinical population

Finally, our clinical sample of patients with psychopathology did not demonstrate differences in emotion expression when compared to individuals from the general population. There are some limitations in our study that should be addressed in future research. In our study, we did not apply sampling methods on our non-clinical sample. Another limitation of this study is the use of self-report instruments to measure patients' emotional processing and levels of psychopathological symptoms. Although this type of measures is commonly used, they depend on the patients' perception of their emotional processing abilities. This could be particularly difficult in some clinical populations who may have a diminished ability to accurately identify and label their emotional experience, especially among patients with depressive disorders. Future studies should include another type of instruments to measure emotions and emotional processing in everyday life, specifically structured interviews and performance-based instruments.

Overall, this study indicates that patients with psychopathologies have higher deficits on emotion differentiation, regulation, and intensity in comparison to individuals from the general population. Our findings may have implications for the future treatment of psychopathologies, as a more comprehensive understanding of the differences in emotional processing abilities, between a non-clinical sample and patients with psychopathologies, may indicate which emotional process should be primarily managed by the psychotherapist.

Therefore, it is important to further investigate the role of the emotional experience and other components of the emotional process, namely emotional attention, in the onset, development and treatment of psychopathologies. Future research should also compare the emotional processing abilities of the patients at several moments or stages of their therapeutic process.

5. Change process in emotions throughout psychotherapy according to Paradigmatic Complementarity Model

Our last study aimed to evaluate emotional processing abilities along psychotherapy according to Paradigmatic Complementarity Model. This was the first study investigating the emotional experience and emotional processing of patients with psychotherapy in relation to their phase of the PCM.

5.1. Emotion felt along psychotherapy according to PCM

Regarding emotional experience, scores for unpleasant emotions in the timelines "past few days" and "past few weeks" decreased along psychotherapy. These results suggest that therapeutic changes are mediated by a decrease of the level of the unpleasant valence of the emotions felt. Indeed, other studies have also reported a decrease of unpleasant emotions with a concomitant decrease in depression or anxiety symptoms along therapy (Kring, Persons, & Thomas, 2006; Mohr, Hart, Julian, Catledge, Honos-Webb & Vella, 2005; Schmid, Freid, Hollon, & DeRubeis, 2002; Tomarken, Dichter, Freid, Addington, & Shelton, 2004).

5.2. Emotion differentiation along psychotherapy according to PCM

Regarding emotion differentiation, patients with psychopathology reported significantly higher scores for the Clarity in the last phases of therapy. On the other hand, scores for differentiation, range, and alexithymic symptoms did not differ significantly between patients in different phases. Nevertheless, these results suggest that therapeutic changes are mediated by components of emotion differentiation. Indeed, higher scores on the Clarity have been associated with higher levels of mental health and satisfaction with life, whereas lower scores have been associated with lower levels of depression and rumination (Queirós, Fernández-Berrocal, Extremera, Carral, & Queirós, 2005).

More studies should be developed to understand better the impact of PCM in emotion differentiation during psychotherapy.

5.3. Emotion intensity along psychotherapy according to PCM

Our study also found that patients reported significantly lower scores for negative affectivity intensity in the last phases of the therapeutic process, suggesting that therapeutic changes reduce the intensity of unpleasant emotions. Experience of excessive unpleasant emotion is common across many different disorders, including depression, anxiety disorders, eating disorders, schizophrenia, substance-related disorders, and a number of personality disorders (Berenbaum et al., 2006; Kassel, Stroud, & Paronis, 2003; Kring, 2001; Mineka, Watson, & Clark, 1998; Putnam & Silk, 2005; Stice, 2001). Therefore, decreasing the intensity of emotional experience during therapy could promote positive outcomes, as previously shown in a variety of treatment approaches (Greenberg, 2002a; Hendricks, 2002).

5.4. Emotion regulation along psychotherapy according to PCM

A noteworthy finding in our study was that results changes in emotion regulation did not seem to along PCM, comparing the beginning to the end of psychotherapy. Emotion regulation abilities did not differ significantly along psychotherapy, namely in Nonacceptance of Emotional Responses, Difficulties Engaging in Goal-Directed Behavior, Impulse Control Difficulties, Limited Access to Emotion Regulation Strategies, Lack of Emotional Clarity, Reappraisal, Suppression, and Repair.

Future investigation should investigate these results.

5.5. Emotion expression along psychotherapy according to PCM

Finally, emotion expressivity showed an unexpected decrease in patients at last phases of the PCM. Overall, these results are contradictory with previous studies addressing emotion expression (Marx & Sloan, 2002) in psychotherapy, which has been described as important processes in facilitating therapeutic change.

Limitations may be presented for this study. First, this was an exploratory cross-sectional study of emotional processing, which included all patients that were available to us.

Therefore, our results may not necessarily be generalized to other settings, or for patients with different clinical backgrounds. The participants in this study comprised a heterogeneous group regarding to pathologies with low levels of psychopathic traits. In contrast, most published studies of patients with psychopathologies have been conducted in restricted samples (i.e., addressing only one pathology per sample). Indeed, we did not take into account the psychiatric comorbidities in the clinical sample that could modulate the association between deficits in emotional processing and the phase of the PCM, such as anxiety and depressive symptoms. Second, the low discriminant capacity of the self-report measures means that it could not be used to estimate differences in emotional processing in a convenience sample. Indeed, later phases of the PCM were underrepresented in our sample (23.1% of patients in Phases 4-7), which might explain why we did not find an association between these phases and most of the components of emotional processing. Having more patients for the later phases of the PCM would have allowed us to evaluate the differences in emotional processing more accurately. Third, the procedure used to differentiate the patients according to the seven phases of the PCM needs further validation. Phases ratings do not allow us to assign a particular phase conclusively to a patient. Finally, the use of self-report instruments could also have affected our analysis. While we used instruments shown to be valid in patients with psychopathologies, further studies should also use instruments that rely on patients' performance to describe their actual abilities of emotional processing.

Our findings suggest that emotional processes have a role in the therapeutic gain of patients with psychopathologies, which might be useful for further developing and evaluating the transdiagnostic approach of the PCM.

The challenge for future research is to fully characterize how emotional experiences and processes change and interact over time along each phase of the PCM.

Indeed, future work is needed to examine the specific ways in which patients with psychotherapies respond to therapies focused on each component of emotional processing. It would be informative to include another type of measurements of emotions and emotional processing in everyday life, specifically interviews and peer evaluation. Also, it would be useful to examine every therapy session to evaluate the variability of patients' emotional processing across the entire course of therapy and determine how it relates to other processes or aspects of therapy. Further examinations also should compare normative and clinical samples, to better characterize the active ingredients of adaptive and maladaptive emotional processing.

Also, this was a cross-sectional study which included a convenience sample. Therefore it was only possible to examine each patient once for their emotional processing abilities, regardless of their number of previous psychotherapy sessions, the severity of symptoms, or treatment outcomes. Hence, the picture that emerges may not be entirely representative of each patients' emotional processing performance. Second, this performance was examined implicitly, as we used self-report instruments that depend on the patients' perception of their emotional processing abilities. Third, it should be noted that there is no control group to assess whether the observed dysregulations of emotional processing are specific for psychotherapy clients versus non-psychotherapy clients.

Considering the research up to this point, it is important to continue developing studies to comprehend which emotional processes are involved in psychopathology and how they evolve along psychotherapy.

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APPENDIX

Appendix A

Protocol for psychometric validation of three instruments for measuring emotional processes in a Portuguese Sample – Study 1

O presente estudo, a decorrer na Universidade de Lisboa, sob a coordenação do Professor Doutor Branco Vasco e do Dr. Leslie Greenberg tem como principal objectivo compreender o modo como os indivíduos lidam com as suas emoções e a sua participação irá contribuir para a validação destes instrumentos para a população portuguesa

Em seguida apresentamos um pequeno inquérito em que são requeridos dados para a caracterização demográfica da amostra e algumas perguntas sobre o modo como lida com as emoções.

A sua participação é fundamental e as suas respostas, absolutamente confidenciais, apenas serão alvo de tratamento estatístico. Por favor, responda com sinceridade a todas as questões

Muito obrigado pela sua colaboração

A investigadora

Dr.ª Filipa Machado Vaz

Sexo: Masculino ☐ Feminino ☐ Idade:_______

Estado Civil: ________________________

Habilitações literárias: __________________________

Está a frequentar o Ensino Superior? Sim ☐ Não ☐

Curso / Pós-graduação:____________________ Ano do curso a frequentar:________

Está Empregado: Sim ☐ Não ☐

Se respondeu sim, Profissão: ____

EAIE

Utilizando a escala como um guia, indique o grau em concorda ou discorda de cada uma das afirmações seguintes.

Assinale apenas uma resposta para cada afirmação.

	Discordo Totalmente	**Discordo em Parte**	**Não Concordo nem Discordo**	**Concordo em Parte**	**Concordo Totalmente**
1. Quando me sinto feliz, sinto-o de forma exuberante					
2. Os meus estados de alegria são tão fortes que é como se estivesse no paraíso					
3. Se completo uma tarefa que pensava impossível, fico eufórico					
4. Quando me estou a sentir bem, é fácil para mim evoluir de um bom humor para estar verdadeiramente contente					
5. Quando estou feliz, sinto que estou a rebentar de alegria					
6. Quando estou feliz, sinto-me com muita energia					
7. Quando as coisas correm bem, sinto-me no topo do mundo					
8. Quando estou feliz, sinto-me pleno de energia					
9. Os filmes tristes comovem-me profundamente					
10. Quando falo em frente a um grupo pela 1ª vez, a minha voz fica trémula e o coração acelera					
11. Quando faço algo errado, tenho sentimentos intensos de vergonha e culpa					
12. Quando sinto ansiedade, é normalmente muito forte					
13. Quando me sinto culpado(a), a emoção é muito forte					
14. Quando estou nervosa(a), tremo por todo o lado					
15. Quando estou feliz, é um sentimento de tranquilidade e contentamento mais do que estar entusiasmado e activado					
16. Quando tenho sucesso em algo, a minha reacção é calma e de contentamento					
17. Quando sei que fiz algo bem, sinto-me relaxado e contente em vez de excitado e exaltado					
18. Quando sinto felicidade, é um tipo de contentamento tranquilo					
19. Eu caracterizaria os meus estados de felicidade mais como contentamento do que como alegria					
20. Quando estou feliz, o sentimento é mais de contentamento e calma interior do que estar					

EAIE

Utilizando a escala como um guia, indique o grau em concorda ou discorda de cada uma das afirmações seguintes.

Assinale apenas uma resposta para cada afirmação.

	Discordo Totalmente	**Discordo em Parte**	**Não Concordo nem Discordo**	**Concordo em Parte**	**Concordo Totalmente**
entusiasmado e excitado					

EEE

As seguintes afirmações referem-se **a si e às suas emoções**.

De acordo com a seguinte escala, por favor seleccione o número que melhor o descreve o que acontece consigo.

	Nunca Verdadeiro	**Raramente Vesdadeiro**	**Verdadeiro**	**Frequentemente**	**Verdadeiro**	**Concordo Totalmente**
1) Eu não expresso as minhas emoções às outras pessoas						
2) Mesmo quando estou a experienciar fortes emoções, não as expresso exteriormente						
3) As outras pessoas crêem que sou muito emocional						
4) As pessoas conseguem "ler" as minhas emoções						
5) Guardo os meus sentimentos para mim						
6) As outras pessoas não são facilmente capazes de observar o que estou a sentir						
7) Exponho as minhas emoções às outras pessoas						
8) As pessoas pensam em mim como uma pessoa não emocional						
9) Eu não gosto de deixar que as outras pessoas percebam a forma como me estou a sentir						
10) Não consigo esconder a forma como me estou a sentir						
11) Não sou muito expressiva emocionalmente						
12) Frequentemente os outros consideram-me como sendo uma pessoa indiferente						
13) Sou capaz de chorar em frente a outras pessoas						

EEE

As seguintes afirmações referem-se **a si e às suas emoções**.

De acordo com a seguinte escala, por favor seleccione o número que melhor o descreve o que acontece consigo.

	Nunca Verdadeiro	Raramente Vesdadeiro	Verdadeiro	Frequentemente	Verdadeiro	Concordo Totalmente
14) Mesmo quando me estou sinto muito emocionado (a), não deixo que os outros percebam os meus sentimentos						
15) Eu considero-me emocionalmente expressivo(a)						
16) A forma como me sinto é diferente de como os outros pensam que eu me sinto						
17) Não expresso os meus sentimentos						

EDRS

Por favor indique **com que frequência** as seguintes afirmações se aplicam a si,.

	Quase Nunca	Algumas Vezes	Cerca de Metade do Tempo	A Maioria do Tempo	Quase Sempre
1. É claro para mim aquilo que estou a sentir					
2. Eu presto atenção a como me sinto					
3. Eu experiencio as minhas emoções como avassaladoras e fora de controlo					
4. Não tenho ideia nenhuma de como me estou a sentir					
5. Tenho dificuldade em atribuir um significado aos meus sentimentos					
6. Sou atento aos meus sentimentos					
7. Sei exactamente como me estou a sentir					
8. Preocupo-me com aquilo que estou a sentir					
9. Estou confuso acerca do que sinto					

EDRS

Por favor indique **com que frequência** as seguintes afirmações se aplicam a si,.

	Quase Nunca	Algumas Vezes	Cerca de Metade do Tempo	A Maioria do Tempo	Quase Sempre
10. Quando estou emocionalmente incomodado, reconheço as minhas emoções					
11. Quando estou emocionalmente incomodado, fico zangado comigo por me sentir assim					
12. Quando estou emocionalmente incomodado, fico envergonhado por me sentir dessa forma					
13. Quando estou emocionalmente incomodado, tenho dificuldade em ter o trabalho feito					
14. Quando estou emocionalmente incomodado, fico fora de controlo					
15. Quando estou emocionalmente incomodado, acredito que me irei manter dessa forma durante muito tempo					
16. Quando estou emocionalmente incomodado, acredito que acabarei por me sentir muito deprimido					
17. Quando estou emocionalmente incomodado, acredito que os meus sentimentos são válidos e importantes					
18. Quando estou emocionalmente incomodado, tenho dificuldade em me focar noutras coisas					
19. Quando estou emocionalmente incomodado, sinto-me fora de controlo					
20. Quando estou emocionalmente incomodado, ainda consigo fazer as coisas					
21. Quando estou emocionalmente incomodado, sinto-me envergonhado comigo mesmo por me sentir dessa forma					
22. Quando estou emocionalmente incomodado, sei que consigo encontrar uma forma para eventualmente me sentir melhor					
23. Quando estou emocionalmente incomodado, sinto que sou fraco					
24. Quando estou emocionalmente incomodado, sinto que consigo manter o controlo dos meus comportamentos					
25. Quando estou emocionalmente incomodado, sinto-me culpado por me sentir dessa forma					
26. Quando estou emocionalmente incomodado, tenho dificuldade em concentrar					

EDRS

Por favor indique **com que frequência** as seguintes afirmações se aplicam a si,.

	Quase Nunca	Algumas Vezes	Cerca de Metade do Tempo	A Maioria do Tempo	Quase Sempre
27. Quando estou emocionalmente incomodado, tenho dificuldade controlar os meus comportamentos					
28. Quando estou emocionalmente incomodado, acredito que não há nada que possa fazer para me fazer sentir melhor					
29. Quando estou emocionalmente incomodado, fico irritado comigo por me sentir dessa forma					
30. Quando estou emocionalmente incomodado, começo a sentir-me mesmo mal comigo próprio					
31. Quando estou emocionalmente incomodado, acredito que permitir o que estou a sentir é tudo o que posso fazer					
32. Quando estou emocionalmente incomodado, perco o controlo sobre os meus comportamentos					
33. Quando estou emocionalmente incomodado, tenho dificuldades em pensar acerca de outra coisa qualquer					
34. Quando estou emocionalmente incomodado, paro para perceber o que estou mesmo a sentir					
35. Quando estou emocionalmente incomodado, demoro muito tempo para me sentir melhor					
36. Quando estou emocionalmente incomodado, as minhas emoções parecem avassaladoras					

Appendix B

Protocol for clinical population – study 2, 3, 4 and 5

O estudo que se segue está actualmente a ser realizado por um grupo de investigadores da Faculdade de Psicologia e de Ciências da Educação da Universidade de Lisboa que tem vindo, desde há uns anos a esta data, a desenvolver investigação no âmbito da psicoterapia.

Em seguida apresentamos alguns questionários sobre si e sobre a última sessão em que esteve com o seu/sua terapeuta.

A sua participação é fundamental e as suas respostas, absolutamente confidenciais, apenas serão alvo de tratamento estatístico. Por favor, responda atentamente a todas as questões.

Obrigado pela sua colaboração,

O Grupo de Investigação

1. Por favor coloque as três primeiras letras do seu primeiro nome no primeiro espaço e as três primeiras letras do seu último nome no último espaço. Estes dados não permitem ao investigador identificar a pessoa e o terapeuta também não terá acesso a estes dados. Desta forma, tudo o que responder é totalmente confidencial.

_________________ / _________________

(Primeiras 3 letras do primeiro nome) (ex. Maria - MAR)

(Primeiras 3 letras do último nome) (ex. Silva - SIL)

3. Sexo: Masculino ☐ Feminino ☐

Idade:_______ Estado Civil: _______________________

Habilitações literárias: _________________________

Está Empregado: Sim ☐ Não ☐

Se respondeu sim, Profissão: ____

PANAS[i] - Esta escala consiste num conjunto de palavras que descrevem diferentes sentimentos e emoções.

Leia cada palavra e indique, com um círculo, em que medida sentiu cada uma das emoções, em cada um dos seguintes momentos: Agora, ou seja, neste momento; Hoje; Durante os últimos dias; Durante as últimas semanas; Durante o último ano.

1	2	3	4	5
Nada ou muito ligeiramente	Um pouco	Moderadamente	Bastante	Extremamente

	Agora, ou seja, neste momento	**Hoje**	**Durante os últimos dias**	**Durante as últimas semanas**	**Durante o último ano**
Interessado	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Orgulhoso	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Perturbado	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Irritado	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Excitado	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Encantado	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Atormentado	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Remorsos	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Agradavelmente surpreendido	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Inspirado	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Culpado	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Nervoso	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Assustado	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Determinado	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Caloroso	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Trémulo	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Repulsa	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Activo	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Entusiasmado	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5
Amedrontado	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5	1 / 2 / 3 / 4 / 5

QAOE (p)[ii] – À medida em que o processo terapêutico vai avançando, é natural que vá acumulando conquistas ou desenvolvendo capacidades e recursos pessoais. Responda às seguintes questões assinalando, numa escala de 1 a 7, a opção que melhor descreve a forma como se vê a si próprio(a) **na fase actual da psicoterapia**.

Neste momento da psicoterapia sinto que...	*Nada Descritivo*	*Muito Pouco Descritivo*	*Pouco Descritivo*	*Moderadamente Descritivo*	*Bastante Descritivo*	*Muito Descritivo*	*Totalmente Descritivo*
1. Estou capaz de reconhecer que consigo lidar de forma autónoma com os futuros desafios da vida	1	2	3	4	5	6	7
2. Estou capaz de perceber as minhas experiências problemáticas à luz das circunstâncias do passado ou do presente	1	2	3	4	5	6	7
3. Estou capaz de me aperceber de partes ou necessidades de mim próprio/a em conflito	1	2	3	4	5	6	7
4. **NÃO ESTOU** capaz de perceber que sou eu que posso promover ou dificultar a satisfação das minhas necessidades	1	2	3	4	5	6	7
5. Estou capaz de antecipar recursos para lidar com cenários futuros para além da conclusão do processo terapêutico	1	2	3	4	5	6	7
6. Estou capaz de generalizar a expressão da minha identidade nas diferentes áreas da minha vida	1	2	3	4	5	6	7
7. Estou capaz de me sentir motivado/a para abordar os meus problemas do ponto de vista psicológico	1	2	3	4	5	6	7
8. Estou capaz de me projectar no futuro efectiva e afectivamente relacionado comigo próprio(a), com os outros e com o mundo	1	2	3	4	5	6	7
9. Estou capaz de traduzir experiências problemáticas nos seus elementos (e.g. pensamentos, emoções, acções)	1	2	3	4	5	6	7
10. **NÃO ESTOU** capaz de integrar diferentes partes ou necessidades de mim próprio/a num todo congruente e suficientemente satisfeito	1	2	3	4	5	6	7
11. Estou capaz de compreender o que procuro alcançar quando ajo de formas que acabam por me criar dificuldades	1	2	3	4	5	6	7
12. Estou capaz de agir no meu quotidiano de forma a exprimir-me com clareza e em congruência com as minhas necessidades	1	2	3	4	5	6	7
13. Estou capaz de compreender quando e como é que eu próprio(a) contribuo para as minhas dificuldades habituais	1	2	3	4	5	6	7
14. Estou capaz de sentir esperança de que posso melhorar com a ajuda da psicoterapia	1	2	3	4	5	6	7
15. Estou capaz de cuidar de mim emocionalmente no que respeita à expressão da minha identidade e crescimento	1	2	3	4	5	6	7
16. Estou capaz de sentir um clima de segurança e confiança na capacidade do/a terapeuta para me ajudar	1	2	3	4	5	6	7
17. Estou capaz de descrever as formas como me relaciono com os outros e os outros se relacionam comigo	1	2	3	4	5	6	7
18. **NÃO ESTOU** capaz de reconhecer e sentir o impacto que situações relevantes têm em mim	1	2	3	4	5	6	7
19. **NÃO ESTOU** capaz de formular novas ligações ou explicações plausíveis para as minhas atitudes ou comportamento problemáticos	1	2	3	4	5	6	7
20. Estou capaz de sentir curiosidade e interesse em observar as formas como me trato a mim mesmo/a	1	2	3	4	5	6	7
21. Estou capaz de aceder às minhas emoções e construir novas formas de entender os meus problemas	1	2	3	4	5	6	7
22. Estou capaz de identificar padrões existentes nos meus modos habituais de funcionamento	1	2	3	4	5	6	7
23. Estou capaz de reconhecer que só eu sou o agente activo das minhas próprias escolhas	1	2	3	4	5	6	7
24. **NÃO ESTOU** capaz de aceitar a inevitabilidade de um certo grau de vulnerabilidade ou conflito na vivência e expressão da minha identidade	1	2	3	4	5	6	7
25. Estou capaz de lidar eficazmente com as situações respeitando simultaneamente as minhas necessidades	1	2	3	4	5	6	7
26. **NÃO ESTOU** capaz de integrar experiências do passado, presente e da antecipação do futuro numa narrativa coerente de mim mesmo/a	1	2	3	4	5	6	7
27. Estou capaz de me afirmar, gerindo obstáculos internos ou externos à expressão da minha identidade	1	2	3	4	5	6	7
28. Estou capaz de escolher estilos de vida que me permitem viver o presente e promover o meu desenvolvimento pessoal	1	2	3	4	5	6	7
29. Estou capaz me sentir numa relação de colaboração com o/a terapeuta	1	2	3	4	5	6	7
30. Estou capaz de assumir o compromisso por respeitar e validar as minhas necessidades, quer elas correspondam, ou não, às expectativas dos outros	1	2	3	4	5	6	7
31. **NÃO ESTOU** capaz de negociar a estrutura e as regras do processo terapêutico no sentido de o tornar possível	1	2	3	4	5	6	7
32. Estou capaz de desenvolver relações ou situações que apoiem as minhas escolhas	1	2	3	4	5	6	7
33. Estou capaz de assumir responsabilidade por cuidar de mim, experimentando mobilizar recursos internos ou externos nesse sentido	1	2	3	4	5	6	7
34. Estou capaz de lidar com obstáculos internos ou externos à progressão da minha identidade e crescimento	1	2	3	4	5	6	7
35. Estou capaz de fortalecer a sensação de coerência pessoal e de que a minha vida tem sentido como um todo	1	2	3	4	5	6	7

WAI-S-ad (p)[iii] - Os itens seguintes reflectem a sua relação de trabalho com o(a) seu(sua) terapeuta baseada na sessão mais recente, isto é, o modo como pode pensar ou sentir acerca do(a) seu(sua) terapeuta. Avalie cada item assinalando o número apropriado, numa escala de 1 a 7, em termos da forma como se sentiu relativamente a **esta sessão**.

	Nunca	*Raramente*	*Ocasionalmente*	*Por vezes*	*Frequentemente*	*Muito Frequentemente*	*Sempre*
1. O(a) meu(minha) terapeuta e eu estamos de acordo acerca das coisas que eu preciso de fazer em terapia para ajudar a melhorar a minha situação	1	2	3	4	5	6	7
2. O que eu faço na terapia permite-me ver o meu problema de novas formas	1	2	3	4	5	6	7
3. Acho que o(a) meu(minha) terapeuta gosta de mim	1	2	3	4	5	6	7
4. O(a) meu(minha) terapeuta não compreende aquilo que eu tento conseguir com a terapia	1	2	3	4	5	6	7
5. Tenho confiança na capacidade do(a) meu(minha) terapeuta para me ajudar	1	2	3	4	5	6	7
6. O(a) meu(minha) terapeuta e eu trabalhamos para objectivos que foram mutuamente acordados	1	2	3	4	5	6	7
7. Sinto que o(a) meu(minha) terapeuta me aprecia	1	2	3	4	5	6	7
8. Estamos de acordo acerca daquilo em que é importante eu trabalhar	1	2	3	4	5	6	7
9. O(a) meu(minha) terapeuta e eu confiamos um no outro	1	2	3	4	5	6	7
10. O(a) meu(minha) terapeuta e eu temos ideias diferentes acerca de quais são os meus problemas	1	2	3	4	5	6	7
11. Estabelecemos um bom entendimento quanto às mudanças que seriam boas para mim	1	2	3	4	5	6	7
12. Acredito que o modo como estamos a trabalhar com o meu problema é correcto	1	2	3	4	5	6	7

EEM (p[iv]***)*** - Responda às seguintes questões assinalando a opção, numa escala de 1 a 5, que melhor descreve as suas mudanças ao **longo da psicoterapia**.

	Nada	*Pouco*	*Moderadamente*	*Muito*	*Totalmente*
1. Em que medida sente que as suas queixas e sintomas iniciais melhoraram ao longo da psicoterapia?	1	2	3	4	5
2. Em que medida sente que as suas relações pessoais melhoraram ao longo da psicoterapia?	1	2	3	4	5
3. Em que medida sente que a sua vida social melhorou ao longo da psicoterapia?	1	2	3	4	5
4. Em que medida sente que o seu trabalho/estudo melhorou ao longo da psicoterapia?	1	2	3	4	5
5. Em que medida acha que a forma como se sente consigo próprio(a) melhorou ao longo da psicoterapia?	1	2	3	4	5
6. Em que medida sente que mudou ao longo da psicoterapia?	1	2	3	4	5

EReS (p) [v]- Responda às seguintes questões assinalando, numa escala de 1 a 5, a opção que melhor descreve a sua opinião sobre **esta sessão**

	Discordo Totalmente	*Concordo Um Pouco*	*Concordo Moderadamente*	*Concordo Muito*	*Concordo Totalmente*
1. Sinto que valeu a pena ter vindo a esta sessão	1	2	3	4	5
2. **NÃO** fiquei satisfeito com aquilo que recebi desta sessão	1	2	3	4	5
3. Penso que esta sessão foi produtiva	1	2	3	4	5
4. **NÃO** creio que esta sessão tenha sido importante	1	2	3	4	5
5. Penso que estivemos num impasse na nossa relação	1	2	3	4	5
6. Sinto que esta sessão foi útil	1	2	3	4	5

QSA[vi] - Por favor, avalie as seguintes afirmações em termos da **frequência** com que cada uma delas acontece. Avalie cada item independentemente da opinião que outras pessoas tenham de si.

	Frequência				
	Nunca	*Pouco Frequente*	*Frequente*	*Muito Frequente*	*Sempre*
1. Existe consistência entre aquilo que penso, sinto e faço	1	2	3	4	5
2. Existe consistência entre aquilo que faço e penso	1	2	3	4	5
3. Existe consistência entre aquilo que sinto e faço	1	2	3	4	5
4. Existe consistência entre aquilo que penso e sinto	1	2	3	4	5
5. **NÃO** existe coerência entre aquilo que eu penso, sinto e faço	1	2	3	4	5

QSA - Por favor, avalie a **importância** que cada uma das seguintes experiências tem para si. Avalie também o **grau de satisfação** que tem sentido recentemente em relação à vivência de cada uma delas.

Avalie cada item independentemente da opinião que outras pessoas tenham de si.

	Importância					Satisfação				
	Nada Importante	*Pouco Importante*	*Importante*	*Muito Importante*	*Totalmente Importante*	*Nada Satisfeito*	*Pouco Satisfeito*	*Satisfeito*	*Muito Satisfeito*	*Totalmente Satisfeito*
1. Manter o auto-controlo	1	2	3	4	5	1	2	3	4	5
2. Ser produtivo	1	2	3	4	5	1	2	3	4	5
3. Ter confiança em mim próprio	1	2	3	4	5	1	2	3	4	5
4. Ser aceite pelos outros	1	2	3	4	5	1	2	3	4	5
5. Sentir que possuo saber	1	2	3	4	5	1	2	3	4	5
6. Sentir que consigo desfrutar da minha vida	1	2	3	4	5	1	2	3	4	5
7. Praticar a minha fé/espiritualidade	1	2	3	4	5	1	2	3	4	5
8. Ser admirado por outros	1	2	3	4	5	1	2	3	4	5
9. Ter o meu espaço ou liberdade	1	2	3	4	5	1	2	3	4	5
10. Conseguir fazer as coisas melhor que outros	1	2	3	4	5	1	2	3	4	5
11. Conquistar a aprovação dos outros	1	2	3	4	5	1	2	3	4	5
12. Experimentar entusiasmo	1	2	3	4	5	1	2	3	4	5
13. Ter contacto com bastantes conhecidos	1	2	3	4	5	1	2	3	4	5
14. Ter oportunidades para relaxar	1	2	3	4	5	1	2	3	4	5
15. Ter uma vida sexual satisfatória	1	2	3	4	5	1	2	3	4	5
16. Conseguir resolver situações complicadas	1	2	3	4	5	1	2	3	4	5
17. Ser independente	1	2	3	4	5	1	2	3	4	5
18. Conseguir perceber os aspectos importantes da vida	1	2	3	4	5	1	2	3	4	5
19. Ter ajuda quando necessito dela	1	2	3	4	5	1	2	3	4	5
20. Ter uma relação saudável com outra pessoa	1	2	3	4	5	1	2	3	4	5
21. Conseguir proteger as pessoas que de mim necessitam	1	2	3	4	5	1	2	3	4	5

QSA - Por favor, avalie a **importância** que cada uma das seguintes experiências tem para si. Avalie também o **grau de satisfação** que tem sentido recentemente em relação à vivência de cada uma delas.

Avalie cada item independentemente da opinião que outras pessoas tenham de si.

	Importância					**Satisfação**				
	Nada Importante	*Pouco Importante*	*Importante*	*Muito Importante*	*Totalmente Importante*	*Nada Satisfeito*	*Pouco Satisfeito*	*Satisfeito*	*Muito Satisfeito*	*Totalmente Satisfeito*
22. Ser empenhado e ser persistente	1	2	3	4	5	1	2	3	4	5
23. Fazer coisas boas para mim próprio	1	2	3	4	5	1	2	3	4	5
24. Acreditar em mim próprio	1	2	3	4	5	1	2	3	4	5
25. Sentir que possuo um lugar no mundo	1	2	3	4	5	1	2	3	4	5
26. Viver uma vida entusiasmante	1	2	3	4	5	1	2	3	4	5
27. Sentir-me afectivamente ligado a alguém	1	2	3	4	5	1	2	3	4	5
28. Sentir-me bem comigo mesmo	1	2	3	4	5	1	2	3	4	5
29. Ter muitos amigos	1	2	3	4	5	1	2	3	4	5
30. Ter oportunidades de prosseguir a minha educação	1	2	3	4	5	1	2	3	4	5
31. Viver a minha vida intensamente	1	2	3	4	5	1	2	3	4	5
32. Conseguir impressionar os outros	1	2	3	4	5	1	2	3	4	5
33. Conseguir ajudar os outros	1	2	3	4	5	1	2	3	4	5
34. Ser respeitado por outros	1	2	3	4	5	1	2	3	4	5
35. Ter contacto com muitas pessoas	1	2	3	4	5	1	2	3	4	5
36. Ser eficiente	1	2	3	4	5	1	2	3	4	5
37. Proporcionar-me mimos	1	2	3	4	5	1	2	3	4	5
38. Ser auto-suficiente	1	2	3	4	5	1	2	3	4	5
39. Ter controlo sobre mim próprio	1	2	3	4	5	1	2	3	4	5
40. Envolver-me numa relação íntima	1	2	3	4	5	1	2	3	4	5
41. Sentir-me uma pessoa capaz e competente	1	2	3	4	5	1	2	3	4	5
42. Ter a experiência de amar e ser amado	1	2	3	4	5	1	2	3	4	5
43. Ser cuidado por alguém	1	2	3	4	5	1	2	3	4	5
44. Tomar as minhas próprias decisões	1	2	3	4	5	1	2	3	4	5
45. Sentir-me superior aos outros	1	2	3	4	5	1	2	3	4	5
46. Prosseguir interesses variados	1	2	3	4	5	1	2	3	4	5
47. Sentir-me valorizado por outros	1	2	3	4	5	1	2	3	4	5
48. Partilhar muitas actividades com outros	1	2	3	4	5	1	2	3	4	5
49. Sentir-me protegido por outros	1	2	3	4	5	1	2	3	4	5
50. Encontrar sentido na vida	1	2	3	4	5	1	2	3	4	5
51. Defender aqueles que de mim necessitam	1	2	3	4	5	1	2	3	4	5
52. Sentir-me em conexão com os outros e com o mundo	1	2	3	4	5	1	2	3	4	5
53. Conseguir ter uma perspectiva clara sobre o que se passa na minha vida	1	2	3	4	5	1	2	3	4	5
54. Ter pessoas com quem partilho as minhas angústias	1	2	3	4	5	1	2	3	4	5

QSA - Por favor, avalie a **importância** que cada uma das seguintes experiências tem para si. Avalie também o **grau de satisfação** que tem sentido recentemente em relação à vivência de cada uma delas. Avalie cada item independentemente da opinião que outras pessoas tenham de si.	**Importância**					**Satisfação**				
	Nada Importante	*Pouco Importante*	*Importante*	*Muito Importante*	*Totalmente Importante*	*Nada Satisfeito*	*Pouco Satisfeito*	*Satisfeito*	*Muito Satisfeito*	*Totalmente Satisfeito*
55. Viver uma vida muito variada	1	2	3	4	5	1	2	3	4	5
56. Dar apoio a outros	1	2	3	4	5	1	2	3	4	5
57. Ter consciência do meu valor enquanto pessoa.	1	2	3	4	5	1	2	3	4	5

QSA - Por favor, avalie o **quão perturbador** é para si cada uma das seguintes experiências Avalie também a **frequência** com que tem passado por cada uma delas recentemente.	**Frequência**					**Perturbador**				
	Nunca	*Pouco Frequente*	*Frequente*	*Muito Frequente*	*Sempre*	*Nada Perturbador*	*Pouco Perturbador*	*Perturbador*	*Muito Perturbador*	*Totalmente Perturbador*
1. Serem-me feitas acusações	1	2	3	4	5	1	2	3	4	5
2. Receber amor e afecto insuficiente	1	2	3	4	5	1	2	3	4	5
3. Mostrar as minhas fragilidades a outras pessoas	1	2	3	4	5	1	2	3	4	5
4. Sentir-me desamparado	1	2	3	4	5	1	2	3	4	5
5. Sentir-me sozinho	1	2	3	4	5	1	2	3	4	5
6. Ter que seguir as regras de outros	1	2	3	4	5	1	2	3	4	5
7. Discutir com outros	1	2	3	4	5	1	2	3	4	5
8. Envolver-me em situações embaraçosas	1	2	3	4	5	1	2	3	4	5
9. Sentir que falhei nalguma coisa	1	2	3	4	5	1	2	3	4	5
10. Magoar outros	1	2	3	4	5	1	2	3	4	5
11. Depender de outros	1	2	3	4	5	1	2	3	4	5
12. Ser inadequado	1	2	3	4	5	1	2	3	4	5
13. Ser criticado	1	2	3	4	5	1	2	3	4	5
14. Sentir-me constrangido em muitas acções	1	2	3	4	5	1	2	3	4	5
15. Ser separado de outros que me são importantes	1	2	3	4	5	1	2	3	4	5
16. Ser atacado por outros	1	2	3	4	5	1	2	3	4	5
17. Sentir-me inundado por emoções	1	2	3	4	5	1	2	3	4	5
18. Ser punido	1	2	3	4	5	1	2	3	4	5
19. Não ser respeitado	1	2	3	4	5	1	2	3	4	5
20. Não ser capaz de tomar as minhas próprias decisões	1	2	3	4	5	1	2	3	4	5
21. Não ser aceite por outros	1	2	3	4	5	1	2	3	4	5

QSA - Por favor, avalie o **quão perturbador** é para si cada uma das seguintes experiências Avalie também a **frequência** com que tem passado por cada uma delas recentemente.

	Frequência					Perturbador				
	Nunca	*Pouco Frequente*	*Frequente*	*Muito Frequente*	*Sempre*	*Nada Perturbador*	*Pouco Perturbador*	*Perturbador*	*Muito Perturbador*	*Totalmente Perturbador*
22. Sentir-me sem poder	1	2	3	4	5	1	2	3	4	5
23. Humilhar-me	1	2	3	4	5	1	2	3	4	5
24. Perder a minha independência	1	2	3	4	5	1	2	3	4	5
25. Ser apanhado a fazer alguma coisa mal ou errada	1	2	3	4	5	1	2	3	4	5
26. Não ser valorizado por outros	1	2	3	4	5	1	2	3	4	5
27. Tratar outros de um modo agressivo	1	2	3	4	5	1	2	3	4	5
28. Agir de um modo incompetente	1	2	3	4	5	1	2	3	4	5
29. Ser abandonado por um(a) esposo(a), companheiro(a) ou outro significativo	1	2	3	4	5	1	2	3	4	5
30. Não ser reconhecido ou validado	1	2	3	4	5	1	2	3	4	5
31. Não ter conseguido alcançar determinado patamar ou expectativa	1	2	3	4	5	1	2	3	4	5
32. Ter que mostrar as minhas necessidades e desejos	1	2	3	4	5	1	2	3	4	5
33. Ter provocado raiva a alguém	1	2	3	4	5	1	2	3	4	5
34. Estar à mercê de alguém ou de alguma situação	1	2	3	4	5	1	2	3	4	5
35. Não ter compreendido algo de importante	1	2	3	4	5	1	2	3	4	5
36. Ter perdido relacionamentos	1	2	3	4	5	1	2	3	4	5
37. Não ter recebido reconhecimento	1	2	3	4	5	1	2	3	4	5

TMMS-24[vii] - Neste questionário encontrará algumas afirmações sobre as suas **emoções e sentimentos**. Leia atentamente cada frase e indique, por favor, o grau em que está de acordo ou desacordo com cada uma delas marcando com X o número que mais se aproxima das suas preferências.

Tenha sempre presente que não há respostas certas ou erradas, nem respostas boas ou más. Não gaste muito tempo a pensar em cada resposta.

	Discordo Totalmente	*Discordo em Parte*	*Não Concordo nem Discordo*	*Concordo em Parte*	*Concordo Totalmente*
1. Presto muita atenção aos meus sentimentos	1	2	3	4	5
2. Preocupo-me muito com os meus sentimentos	1	2	3	4	5
3. Acho que é útil pensar nas minhas emoções	1	2	3	4	5
4. Vale a pena prestar atenção às minhas emoções e estados de espírito	1	2	3	4	5
5. Deixo que os meus sentimentos se intrometam com os meus pensamentos	1	2	3	4	5
6. Penso constantemente no meu estado de espírito	1	2	3	4	5
7. Penso muitas vezes nos meus sentimentos	1	2	3	4	5
8. Presto muita atenção àquilo que sinto	1	2	3	4	5
9. Normalmente sei o que estou a sentir	1	2	3	4	5

TMMS-24[vii] - Neste questionário encontrará algumas afirmações sobre as suas **emoções e sentimentos**. Leia atentamente cada frase e indique, por favor, o grau em que está de acordo ou desacordo com cada uma delas marcando com X o número que mais se aproxima das suas preferências. Tenha sempre presente que não há respostas certas ou erradas, nem respostas boas ou más. Não gaste muito tempo a pensar em cada resposta.	*Discordo Totalmente*	*Discordo em Parte*	*Não Concordo nem Discordo*	*Concordo em Parte*	*Concordo Totalmente*
10. Muitas vezes consigo saber aquilo que sinto	1	2	3	4	5
11. Quase sempre sei exactamente aquilo que sinto	1	2	3	4	5
12. Normalmente conheço os meus sentimentos sobre as pessoas ou qualquer assunto	1	2	3	4	5
13. Tenho, muitas vezes, consciência do que sinto sobre qualquer assunto	1	2	3	4	5
14. Consigo dizer sempre o que sinto	1	2	3	4	5
15. Às vezes consigo dizer o que sinto	1	2	3	4	5
16. Consigo perceber aquilo que sinto	1	2	3	4	5
17. Embora, por vezes, esteja triste tenho, quase sempre, uma atitude optimista	1	2	3	4	5
18. Mesmo que me sinta mal, tento pensar em coisas agradáveis	1	2	3	4	5
19. Quando me aborreço, penso nas coisas agradáveis da vida	1	2	3	4	5
20. Tento ter pensamentos positivos mesmo que me sinta mal	1	2	3	4	5
21. Se sinto que estou a perder a cabeça, tento acalmar-me	1	2	3	4	5
22. Preocupo-me em manter um bom estado de espírito	1	2	3	4	5
23. Tenho sempre muita energia quando estou feliz	1	2	3	4	5
24. Quando estou zangado procuro mudar a minha disposição	1	2	3	4	5

EARCDE[viii] - Utilizando a escala fornecida, por favor indique até que ponto cada afirmação o caracteriza. Por favor seja sincero a responder.	*Nada Característico*	*Ligeiramente Característico*	*Um pouco Característico*	*Moderadamente Característico*	*Bastante Característico*	*Muito Característico*	*Totalmente Característico*
1. Não experiencio muitos sentimentos diferentes no meu dia a dia	1	2	3	4	5	6	7
2. Costumo estabelecer distinções minuciosas entre sentimentos semelhantes (ex. deprimido e triste; aborrecido e irritado)	1	2	3	4	5	6	7
3. Durante a minha vida, experienciei uma grande variedade de emoções	1	2	3	4	5	6	7
4. Tenho consciência das diferentes nuances ou subtilezas de uma determinada emoção (ex. deprimido e triste; aborrecido e irritado)	1	2	3	4	5	6	7
5. Normalmente experiencio uma variedade limitada de emoções	1	2	3	4	5	6	7
6. Considero que cada emoção tem um significado muito distinto e único para mim	1	2	3	4	5	6	7
7. Experiencio uma grande variedade de emoções	1	2	3	4	5	6	7
8. Estou consciente que cada emoção tem um significado completamente diferente	1	2	3	4	5	6	7
9. Eu não experiencio uma variedade de sentimentos no meu dia-a-dia	1	2	3	4	5	6	7
10. Sou bom a distinguir diferenças subtis no significado de palavras emocionais muito relacionadas	1	2	3	4	5	6	7
11. Sentir-me bem ou mal – estes termos são suficientes para descrever a maioria dos meus sentimentos no dia-a-dia	1	2	3	4	5	6	7
12. Se as emoções fossem cores, eu era capaz de notar até pequenas variações dentro de cada cor (emoção)	1	2	3	4	5	6	7

EARCDE[viii] - Utilizando a escala fornecida, por favor indique até que ponto cada afirmação o caracteriza.

Por favor seja sincero a responder.

	Nada Característico	*Ligeiramente Característico*	*Um pouco Característico*	*Moderadamente Característico*	*Bastante Característico*	*Muito Característico*	*Totalmente Característico*
13. Costumo experienciar uma grande variedade de diferentes sentimentos	1	2	3	4	5	6	7
14. Tenho consciência das subtilezas entre os sentimentos que experiencio	1	2	3	4	5	6	7

TAS-20[ix] - Usando a escala fornecida como guia, indique o seu **grau de concordância** com cada uma das seguintes afirmações, fazendo um círculo à volta do número correspondente.

Dê só uma resposta por cada afirmação.

	Discordo Totalmente	*Discordo em Parte*	*Não Concordo nem Discordo*	*Concordo em Parte*	*Concordo Totalmente*
1. Fico muitas vezes confuso sobre qual a emoção que estou a sentir	1	2	3	4	5
2. Tenho dificuldade em encontrar as palavras certas para descrever os meus sentimentos	1	2	3	4	5
3. Tenho sensações físicas que nem os médicos compreendem	1	2	3	4	5
4. Sou capaz de descrever facilmente os meus sentimentos	1	2	3	4	5
5. Prefiro analisar os problemas a descrevê-los apenas	1	2	3	4	5
6. Quando estou aborrecido, não sei se me sinto triste, assustado ou zangado	1	2	3	4	5
7. Fico muitas vezes intrigado com sensações no meu corpo	1	2	3	4	5
8. Prefiro simplesmente deixar as coisas acontecer a compreender porque aconteceram assim	1	2	3	4	5
9. Tenho sentimentos que não consigo identificar bem	1	2	3	4	5
10. É essencial estar em contacto com as emoções	1	2	3	4	5
11. Acho difícil descrever o que sinto em relação às pessoas	1	2	3	4	5
12. As pessoas dizem-me para falar mais dos meus sentimentos	1	2	3	4	5
13. Não sei o que se passa dentro de mim	1	2	3	4	5
14. Muitas vezes não sei porque estou zangado	1	2	3	4	5
15. Prefiro conversar com as pessoas sobre as suas actividades diárias do que sobre os seus sentimentos	1	2	3	4	5
16. Prefiro assistir a espectáculos ligeiros do que a dramas psicológicos	1	2	3	4	5
17. É-me difícil revelar os sentimentos mais íntimos mesmo a amigos mais próximos	1	2	3	4	5
18. Posso sentir-me próximo de uma pessoa, mesmo em momentos de silêncio	1	2	3	4	5
19. Considero o exame dos meus sentimentos útil na resolução de problemas pessoais	1	2	3	4	5
20. Procurar significados ocultos nos filmes e peças de teatro distrai do prazer que proporcionam	1	2	3	4	5

EAIE (r)[x] - Utilizando a escala como um guia, indique o grau em concorda ou discorda de cada uma das afirmações seguintes. Assinale apenas uma resposta para cada afirmação.	*Discordo Totalmente*	*Discordo em Parte*	*Não Concordo nem Discordo*	*Concordo em Parte*	*Concordo Totalmente*
1. Quando me sinto feliz, sinto-o de forma exuberante	1	2	3	4	5
2. Os meus estados de alegria são tão fortes que é como se estivesse no paraíso	1	2	3	4	5
3. Se completo uma tarefa que pensava impossível, fico eufórico	1	2	3	4	5
4. Quando me estou a sentir bem, é fácil para mim evoluir de um bom humor para estar verdadeiramente contente	1	2	3	4	5
5. Quando estou feliz, sinto que estou a rebentar de alegria	1	2	3	4	5
6. Quando estou feliz, sinto-me com muita energia	1	2	3	4	5
7. Quando as coisas correm bem, sinto-me no topo do mundo	1	2	3	4	5
8. Quando estou feliz, sinto-me pleno de energia	1	2	3	4	5
9. Os filmes tristes comovem-me profundamente	1	2	3	4	5
10. Quando falo em frente a um grupo pela primeira vez, a minha voz fica trémula e o meu coração acelera	1	2	3	4	5
11. Quando faço algo errado, tenho sentimentos intensos de vergonha e culpa	1	2	3	4	5
12. Quando sinto ansiedade, é normalmente muito forte	1	2	3	4	5
13. Quando me sinto culpado(a), a emoção é muito forte	1	2	3	4	5
14. Quando estou nervosa(a), tremo por todo o lado	1	2	3	4	5
15. Quando estou feliz, é um sentimento de tranquilidade e contentamento mais do que estar entusiasmado e activado	1	2	3	4	5
16. Quando tenho sucesso em algo, a minha reacção é calma e de contentamento	1	2	3	4	5
17. Quando sei que fiz algo muito bem, sinto-me relaxado e contente em vez de excitado e exaltado	1	2	3	4	5
18. Quando sinto felicidade, é um tipo de contentamento tranquilo	1	2	3	4	5
19. Eu caracterizaria os meus estados de felicidade mais como contentamento do que como alegria	1	2	3	4	5
20. Quando estou feliz, o sentimento é mais de contentamento e calma interior do que estar entusiasmado e excitado	1	2	3	4	5

EEE[xi] - As seguintes afirmações referem-se **a si e às suas emoções**. De acordo com a seguinte escala, por favor seleccione o número que melhor o descreve o que acontece consigo.	*Nunca Verdadeiro*	*Raramente Vesdadeiro*	*De Vez em Quando Verdadeiro*	*Frequentemente Verdadeiro*	*Quase Sempre Verdadeiro*	*Concordo Totalmente*
1. Eu não expresso as minhas emoções às outras pessoas	1	2	3	4	5	6
2. Mesmo quando estou a experienciar fortes emoções, não as expresso exteriormente	1	2	3	4	5	6
3. As outras pessoas crêem que sou muito emocional	1	2	3	4	5	6
4. As pessoas conseguem "ler" as minhas emoções	1	2	3	4	5	6
5. Guardo os meus sentimentos para mim	1	2	3	4	5	6
6. As outras pessoas não são facilmente capazes de observar o que estou a sentir	1	2	3	4	5	6
7. Exponho as minhas emoções às outras pessoas	1	2	3	4	5	6
8. As pessoas pensam em mim como uma pessoa não emocional	1	2	3	4	5	6
9. Eu não gosto de deixar que as outras pessoas percebam a forma como me estou a sentir	1	2	3	4	5	6
10. Não consigo esconder a forma como me estou a sentir	1	2	3	4	5	6
11. Não sou muito expressiva emocionalmente	1	2	3	4	5	6
12. Frequentemente os outros consideram-me como sendo uma pessoa indiferente	1	2	3	4	5	6

EEE [xi] - As seguintes afirmações referem-se **a si e às suas emoções**. De acordo com a seguinte escala, por favor seleccione o número que melhor o descreve o que acontece consigo.	*Nunca Verdadeiro*	*Raramente Vesdadeiro*	*De Vez em Quando Verdadeiro*	*Frequentemente Verdadeiro*	*Quase Sempre Verdadeiro*	*Concordo Totalmente*
13. Sou capaz de chorar em frente a outras pessoas	1	2	3	4	5	6
14. Mesmo quando me estou sinto muito emocionado (a), não deixo que os outros percebam os meus sentimentos	1	2	3	4	5	6
15. Eu considero-me emocionalmente expressivo(a)	1	2	3	4	5	6
16. A forma como me sinto é diferente de como os outros pensam que eu me sinto	1	2	3	4	5	6
17. Não expresso os meus sentimentos	1	2	3	4	5	6

QRE [xii] - Gostaríamos de lhe colocar algumas questões acerca da sua vida emocional, em particular sobre a forma como controla (isto é, como regula e gere) as suas emoções. As questões seguintes são relativas a dois componentes distintos da sua vida emocional. Um é sobre a sua **experiência emocional**, isto é, a forma como se sente. O outro componente é a **expressão emocional**, ou seja, a forma como demonstra as suas emoções quando fala, faz determinados gestos ou actua. Apesar de algumas questões poderem parecer semelhantes, diferem nalguns componentes.	*Discordo Totalmente*			*Não Concordo Nem Discordo*			*Concordo Totalmente*
1. Quando quero sentir emoções mais positivas (como alegria ou contentamento), mudo o que estou a pensar	1	2	3	4	5	6	7
2. Guardo as minhas emoções para mim próprio	1	2	3	4	5	6	7
3. Quando quero sentir menos emoções negativas (como tristeza ou raiva) mudo o que estou a pensar	1	2	3	4	5	6	7
4. Quando estou a sentir emoções positivas, tenho cuidado para não as expressar	1	2	3	4	5	6	7
5. Quando estou perante uma situação difícil, obrigo-me a pensar sobre essa mesma situação, de uma forma que me ajude a ficar calmo	1	2	3	4	5	6	7
6. Eu controlo as minhas emoções não as expressando	1	2	3	4	5	6	7
7. Quando quero experienciar emoções mais positivas, eu mudo o meu pensamento acerca da situação	1	2	3	4	5	6	7
8. Eu controlo as minhas emoções através da modificação do meu pensamento acerca da situação em que me encontro	1	2	3	4	5	6	7
9. Quando estou a experienciar emoções negativas, faço tudo para não as expressar	1	2	3	4	5	6	7
10. Quando quero sentir emoções menos negativas, mudo o que estou a pensar acerca da situação							

EDRS[xiii] - Por favor indique **com que frequência** as seguintes afirmações se aplicam a si, com base na seguinte escala de 1 a 5, fazendo um circulo, no valor seleccionado, na linha ao lado de cada item.

	Quase Nunca	*Algumas Vezes*	*Cerca de Metade do Tempo*	*A Maioria do Tempo*	*Quase Sempre*
1. É claro para mim aquilo que estou a sentir	1	2	3	4	5
2. Eu presto atenção a como me sinto	1	2	3	4	5
3. Eu experiencio as minhas emoções como avassaladoras e fora de controlo	1	2	3	4	5
4. Não tenho ideia nenhuma de como me estou a sentir	1	2	3	4	5
5. Tenho dificuldade em atribuir um significado aos meus sentimentos	1	2	3	4	5
6. Sou atento aos meus sentimentos	1	2	3	4	5
7. Sei exactamente como me estou a sentir	1	2	3	4	5
8. Preocupo-me com aquilo que estou a sentir	1	2	3	4	5
9. Estou confuso acerca do que sinto	1	2	3	4	5
10. Quando estou emocionalmente incomodado, reconheço as minhas emoções	1	2	3	4	5
11. Quando estou emocionalmente incomodado, fico zangado comigo próprio por me sentir dessa forma	1	2	3	4	5
12. Quando estou emocionalmente incomodado, fico envergonhado por me sentir dessa forma	1	2	3	4	5
13. Quando estou emocionalmente incomodado, tenho dificuldade em ter o trabalho feito	1	2	3	4	5
14. Quando estou emocionalmente incomodado, fico fora de controlo	1	2	3	4	5
15. Quando estou emocionalmente incomodado, acredito que me irei manter dessa forma durante muito tempo	1	2	3	4	5
16. Quando estou emocionalmente incomodado, acredito que acabarei por me sentir muito deprimido	1	2	3	4	5
17. Quando estou emocionalmente incomodado, acredito que os meus sentimentos são válidos e importantes	1	2	3	4	5
18. Quando estou emocionalmente incomodado, tenho dificuldade em me focar noutras coisas	1	2	3	4	5
19. Quando estou emocionalmente incomodado, sinto-me fora de controlo	1	2	3	4	5
20. Quando estou emocionalmente incomodado, ainda consigo fazer as coisas	1	2	3	4	5
21. Quando estou emocionalmente incomodado, sinto-me envergonhado comigo mesmo por me sentir dessa forma	1	2	3	4	5
22. Quando estou emocionalmente incomodado, sei que consigo encontrar uma forma para eventualmente me sentir melhor	1	2	3	4	5
23. Quando estou emocionalmente incomodado, sinto que sou fraco	1	2	3	4	5
24. Quando estou emocionalmente incomodado, sinto que consigo manter o controlo dos meus comportamentos	1	2	3	4	5
25. Quando estou emocionalmente incomodado, sinto-me culpado por me sentir dessa forma	1	2	3	4	5
26. Quando estou emocionalmente incomodado, tenho dificuldade em concentrar	1	2	3	4	5
27. Quando estou emocionalmente incomodado, tenho dificuldade controlar os meus comportamentos	1	2	3	4	5
28. Quando estou emocionalmente incomodado, acredito que não há nada que possa fazer para me fazer sentir melhor	1	2	3	4	5
29. Quando estou emocionalmente incomodado, fico irritado comigo próprio por me sentir dessa forma	1	2	3	4	5
30. Quando estou emocionalmente incomodado, começo a sentir-me mesmo mal comigo próprio	1	2	3	4	5
31. Quando estou emocionalmente incomodado, acredito que permitir o que estou a sentir é tudo o que posso fazer	1	2	3	4	5
32. Quando estou emocionalmente incomodado, perco o controlo sobre os meus comportamentos	1	2	3	4	5
33. Quando estou emocionalmente incomodado, tenho dificuldades em pensar acerca de outra coisa qualquer	1	2	3	4	5
34. Quando estou emocionalmente incomodado, paro um tempo, para perceber o que estou mesmo a sentir	1	2	3	4	5
35. Quando estou emocionalmente incomodado, demoro muito tempo para me sentir melhor	1	2	3	4	5
36. Quando estou emocionalmente incomodado, as minhas emoções parecem avassaladoras	1	2	3	4	5

BSI[xiv] - A seguir encontra-se uma lista de problemas ou sintomas que por vezes as pessoas apresentam. Assinale, num dos espaços à direita de cada sintoma, aquele que melhor descreve o **grau em que cada problema o incomodou durante a última semana**. Para cada problema ou sintoma, marque apenas um espaço com uma cruz. Não deixe nenhuma pergunta por responder.

	Nunca	*Poucas Vezes*	*Algumas Vezes*	*Muitas Vezes*	*Muitíssimas Vezes*
1. Nervosismo ou tensão interior	0	1	2	3	4
2. Desmaios ou tonturas	0	1	2	3	4
3. Ter a impressão que as outras pessoas podem controlar os seus pensamentos	0	1	2	3	4
4. Ter a ideia que os outros são culpados pela maioria dos seus problemas	0	1	2	3	4
5. Dificuldade em se lembrar de coisas passadas ou recentes	0	1	2	3	4
6. Aborrecer-se ou irritar-se facilmente	0	1	2	3	4
7. Dores sobre o coração ou no peito	0	1	2	3	4
8. Medo na rua ou praças públicas	0	1	2	3	4
9. Pensamentos de acabar com a vida	0	1	2	3	4
10. Sentir que não pode confiar na maioria das pessoas	0	1	2	3	4
11. Perder o apetite	0	1	2	3	4
12. Ter um medo súbito sem razão para isso	0	1	2	3	4
13. Ter impulsos que não se podem controlar	0	1	2	3	4
14. Sentir-se sozinho mesmo quando está com mais pessoas	0	1	2	3	4
15. Dificuldade em fazer qualquer trabalho	0	1	2	3	4
16. Sentir-se sozinho	0	1	2	3	4
17. Sentir-se triste	0	1	2	3	4
18. Não ter interesse por nada	0	1	2	3	4
19. Sentir-se atemorizado	0	1	2	3	4
20. Sentir-se facilmente ofendido nos seus sentimentos	0	1	2	3	4
21. Sentir que as outras pessoas não são amigas ou não gostam de si	0	1	2	3	4
22. Sentir-se inferior aos outros	0	1	2	3	4
23. Vontade de vomitar ou mal-estar do estômago	0	1	2	3	4
24. Impressão de que os outros o costumam observar ou falar de si	0	1	2	3	4
25. Dificuldade em adormecer	0	1	2	3	4
26. Sentir necessidade de verificar várias vezes o que faz	0	1	2	3	4
27. Dificuldade em tomar decisões	0	1	2	3	4
28. Medo de viajar de autocarro, de comboio ou de metro	0	1	2	3	4
29. Sensação de que lhe falta o ar	0	1	2	3	4
30. Calafrios ou afrontamentos	0	1	2	3	4
31. Ter de evitar certas coisas, lugares ou actividades por lhe causarem medo	0	1	2	3	4
32. Sensação de vazio na cabeça	0	1	2	3	4
33. Sensação de anestesia (encortiçamento ou formigueiro) no corpo	0	1	2	3	4
34. Ter a ideia que deveria ser castigado pelos seus pecados	0	1	2	3	4
35. Sentir-se sem esperança perante o futuro	0	1	2	3	4
36. Ter dificuldade em se concentrar	0	1	2	3	4
37. Falta de forças em partes do corpo	0	1	2	3	4
38. Sentir-se em estado de tensão ou aflição	0	1	2	3	4
39. Pensamentos sobre a morte ou que vai morrer	0	1	2	3	4
40. Ter impulsos de bater, ofender ou ferir alguém	0	1	2	3	4
41. Ter vontade de destruir ou partir coisas	0	1	2	3	4
42. Sentir-se embaraçado junto de outras pessoas	0	1	2	3	4
43. Sentir-se mal no meio das multidões como lojas, cinemas ou assembleias	0	1	2	3	4
44. Grande dificuldade em sentir-se próximo de outra pessoa	0	1	2	3	4
45. Ter ataques de terror ou pânico	0	1	2	3	4
46. Entrar facilmente em discussão	0	1	2	3	4
47. Sentir-se nervoso quando tem que ficar sozinho	0	1	2	3	4
48. Sentir que as outras pessoas não dão o devido valor ao seu trabalho ou às suas capacidades	0	1	2	3	4

BSI[xiv] - A seguir encontra-se uma lista de problemas ou sintomas que por vezes as pessoas apresentam. Assinale, num dos espaços à direita de cada sintoma, aquele que melhor descreve o **grau em que cada problema o incomodou durante a última semana**. Para cada problema ou sintoma, marque apenas um espaço com uma cruz. Não deixe nenhuma pergunta por responder.	*Nunca*	*Poucas Vezes*	*Algumas Vezes*	*Muitas Vezes*	*Muitíssimas Vezes*
49. Sentir-se tão desassossegado que não consegue manter-se sentado quieto	0	1	2	3	4
50. Sentir que não tem valor	0	1	2	3	4
51. A impressão de que, se deixasse, as outras pessoas se aproveitariam de si	0	1	2	3	4
52. Ter sentimentos de culpa	0	1	2	3	4
53. Ter a impressão de que alguma coisa não regula bem na sua cabeça	0	1	2	3	4

Appendix C

Protocol for non-clinical population – study 4

O presente estudo, a decorrer na Universidade de Lisboa, sob a coordenação do Professor Doutor Branco Vasco e do Dr. Leslie Greenberg tem como principal objectivo compreender o modo como os indivíduos lidam com as suas emoções e a sua participação irá contribuir para a validação destes instrumentos para a população portuguesa

Em seguida apresentamos um pequeno inquérito em que são requeridos dados para a caracterização demográfica da amostra e algumas perguntas sobre o modo como lida com as emoções.

A sua participação é fundamental e as suas respostas, absolutamente confidenciais, apenas serão alvo de tratamento estatístico. Por favor, responda com sinceridade a todas as questões

Muito obrigado pela sua colaboração

A investigadora

Dr.ª Filipa Machado Vaz

Sexo: Masculino ☐ Feminino ☐ Idade:_______

Estado Civil: ________________________

Habilitações literárias: __________________________

Está a frequentar o Ensino Superior? Sim ☐ Não ☐

Curso / Pós-graduação:____________________ Ano do curso a frequentar:________

Está Empregado: Sim ☐ Não ☐

Se respondeu sim, Profissão: ____

EAIE

Utilizando a escala como um guia, indique o grau em concorda ou discorda de cada uma das afirmações seguintes.

Assinale apenas uma resposta para cada afirmação.

	Discordo Totalmente	Discordo em Parte	Não Concordo nem Discordo	Concordo em Parte	Concordo Totalmente
1. Quando me sinto feliz, sinto-o de forma exuberante					
2. Os meus estados de alegria são tão fortes que é como se estivesse no paraíso					
3. Se completo uma tarefa que pensava impossível, fico eufórico					
4. Quando me estou a sentir bem, é fácil para mim evoluir de um bom humor para estar verdadeiramente contente					
5. Quando estou feliz, sinto que estou a rebentar de alegria					
6. Quando estou feliz, sinto-me com muita energia					
7. Quando as coisas correm bem, sinto-me no topo do mundo					
8. Quando estou feliz, sinto-me pleno de energia					
9. Os filmes tristes comovem-me profundamente					
10. Quando falo em frente a um grupo pela 1ª vez, a minha voz fica trémula e o coração acelera					
11. Quando faço algo errado, tenho sentimentos intensos de vergonha e culpa					
12. Quando sinto ansiedade, é normalmente muito forte					
13. Quando me sinto culpado(a), a emoção é muito forte					
14. Quando estou nervosa(a), tremo por todo o lado					
15. Quando estou feliz, é um sentimento de tranquilidade e contentamento mais do que estar entusiasmado e activado					
16. Quando tenho sucesso em algo, a minha reacção é calma e de contentamento					
17. Quando sei que fiz algo muito bem, sinto-me relaxado e contente em vez de excitado e exaltado					
18. Quando sinto felicidade, é um tipo de contentamento tranquilo					
19. Eu caracterizaria os meus estados de felicidade mais como contentamento do que como alegria					
20. Quando estou feliz, o sentimento é mais de contentamento e calma interior do que estar entusiasmado e excitado					

QRE

Gostaríamos de lhe colocar algumas questões acerca da sua vida emocional, em particular sobre a forma como regula e gere as suas emoções.

As questões seguintes são relativas a dois componentes distintos da sua vida emocional. Um é sobre a sua **experiência emocional**, isto é, a forma como se sente. O outro componente é a **expressão emocional**, ou seja, a forma como demonstra as suas emoções quando fala, faz determinados gestos ou actua.

Apesar de algumas questões poderem parecer semelhantes, diferem nalguns componentes.

	Discordo Totalmente			Não Concordo Nem Discordo			Concordo Totalmente
1. Quando quero sentir emoções mais positivas (como alegria ou contentamento) mudo o que estou a pensar	1	2	3	4	5	6	7
2. Guardo as minhas emoções para mim próprio	1	2	3	4	5	6	7
3. Quando quero sentir menos emoções negativas (como tristeza ou raiva) mudo o que estou a pensar	1	2	3	4	5	6	7
4. Quando estou a sentir emoções positivas, tenho cuidado para não as expressar	1	2	3	4	5	6	7
5. Quando estou perante uma situação difícil, obrigo-me a pensar sobre essa mesma situação, de uma forma que me ajude a ficar calmo	1	2	3	4	5	6	7
6. Eu controlo as minhas emoções não as expressando	1	2	3	4	5	6	7
7. Quando quero experienciar emoções mais positivas mudo o meu pensamento acerca da situação	1	2	3	4	5	6	7
8. Eu controlo as minhas emoções através da modificação do meu pensamento acerca da situação em que me encontro	1	2	3	4	5	6	7
9. Quando estou a experienciar emoções negativas, faço tudo para não as expressar	1	2	3	4	5	6	7
10. Quando quero sentir emoções menos negativas, mudo o que estou a pensar acerca da situação							

EARCDE

Utilizando a escala fornecida, por favor indique até que ponto cada afirmação o caracteriza.

Por favor seja sincero a responder.

	Nada Característico	Característico	Característico	Característico	Bastante	Muito Característico	Característico
1. Não experiencio muitos sentimentos diferentes no meu dia a dia	1	2	3	4	5	6	7
2. Costumo estabelecer distinções minuciosas entre sentimentos semelhantes (ex. deprimido e triste; aborrecido e irritado)	1	2	3	4	5	6	7
3. Durante a minha vida, experienciei uma grande variedade de emoções	1	2	3	4	5	6	7
4. Tenho consciência das diferentes nuances ou subtilezas de uma determinada emoção (ex. deprimido e triste; aborrecido e irritado)	1	2	3	4	5	6	7
5. Normalmente experiencio uma variedade limitada de emoções	1	2	3	4	5	6	7
6. Considero que cada emoção tem um significado muito distinto e único para mim	1	2	3	4	5	6	7
7. Experiencio uma grande variedade de emoções	1	2	3	4	5	6	7
8. Estou consciente que cada emoção tem um significado completamente diferente	1	2	3	4	5	6	7
9. Eu não experiencio uma variedade de sentimentos no meu dia-a-dia	1	2	3	4	5	6	7
10. Sou bom a distinguir diferenças subtis no significado de palavras emocionais muito relacionadas	1	2	3	4	5	6	7
11. Sentir-me bem ou mal – estes termos são suficientes para descrever a maioria dos meus sentimentos no dia-a-dia	1	2	3	4	5	6	7
12. Se as emoções fossem cores, eu era capaz de notar até pequenas variações dentro de cada cor (emoção)	1	2	3	4	5	6	7
13. Costumo experienciar uma grande variedade de diferentes sentimentos	1	2	3	4	5	6	7
14. Tenho consciência das subtilezas entre os sentimentos que experiencio	1	2	3	4	5	6	7

EEE

As seguintes afirmações referem-se **<u>a si e às suas emoções</u>**.

De acordo com a seguinte escala, por favor seleccione o número que melhor o descreve o que acontece consigo.

	Nunca Verdadeiro	Raramente Vesdadeiro	Verdadeiro	Frequentemente	Verdadeiro	Concordo Totalmente
1) Eu não expresso as minhas emoções às outras pessoas						
2) Mesmo quando estou a experienciar fortes emoções, não as expresso exteriormente						
3) As outras pessoas crêem que sou muito emocional						
4) As pessoas conseguem “ler” as minhas emoções						
5) Guardo os meus sentimentos para mim						
6) As outras pessoas não são facilmente capazes de observar o que estou a sentir						
7) Exponho as minhas emoções às outras pessoas						
8) As pessoas pensam em mim como uma pessoa não emocional						
9) Eu não gosto de deixar que as outras pessoas percebam a forma como me estou a sentir						
10) Não consigo esconder a forma como me estou a sentir						
11) Não sou muito expressiva emocionalmente						
12) Frequentemente os outros consideram-me como sendo uma pessoa indiferente						
13) Sou capaz de chorar em frente a outras pessoas						
14) Mesmo quando me estou sinto muito emocionado (a), não deixo que os outros percebam os meus sentimentos						
15) Eu considero-me emocionalmente expressivo(a)						
16) A forma como me sinto é diferente de como os outros pensam que eu me sinto						
17) Não expresso os meus sentimentos						

EDRS

Por favor indique **com que frequência** as seguintes afirmações se aplicam a si,.

	Quase Nunca	Algumas Vezes	Cerca de Metade do Tempo	A Maioria do Tempo	Quase Sempre
1. É claro para mim aquilo que estou a sentir					
2. Eu presto atenção a como me sinto					
3. Eu experiencio as minhas emoções como avassaladoras e fora de controlo					
4. Não tenho ideia nenhuma de como me estou a sentir					
5. Tenho dificuldade em atribuir um significado aos meus sentimentos					
6. Sou atento aos meus sentimentos					
7. Sei exactamente como me estou a sentir					
8. Preocupo-me com aquilo que estou a sentir					
9. Estou confuso acerca do que sinto					
10. Quando estou emocionalmente incomodado, reconheço as minhas emoções					
11. Quando estou emocionalmente incomodado, fico zangado comigo por me sentir assim					
12. Quando estou emocionalmente incomodado, fico envergonhado por me sentir dessa forma					
13. Quando estou emocionalmente incomodado, tenho dificuldade em ter o trabalho feito					
14. Quando estou emocionalmente incomodado, fico fora de controlo					
15. Quando estou emocionalmente incomodado, acredito que me irei manter dessa forma durante muito tempo					
16. Quando estou emocionalmente incomodado, acredito que acabarei por me sentir muito deprimido					
17. Quando estou emocionalmente incomodado, acredito que os meus sentimentos são válidos e importantes					
18. Quando estou emocionalmente incomodado, tenho dificuldade em me focar noutras coisas					
19. Quando estou emocionalmente incomodado, sinto-me fora de controlo					
20. Quando estou emocionalmente incomodado, ainda consigo fazer as coisas					
21. Quando estou emocionalmente incomodado, sinto-me envergonhado comigo mesmo por me					

EDRS Por favor indique **com que frequência** as seguintes afirmações se aplicam a si,.	Quase Nunca	Algumas Vezes	Cerca de Metade do Tempo	A Maioria do Tempo	Quase Sempre
sentir dessa forma					
22. Quando estou emocionalmente incomodado, sei que consigo encontrar uma forma para eventualmente me sentir melhor					
23. Quando estou emocionalmente incomodado, sinto que sou fraco					
24. Quando estou emocionalmente incomodado, sinto que consigo manter o controlo dos meus comportamentos					
25. Quando estou emocionalmente incomodado, sinto-me culpado por me sentir dessa forma					
26. Quando estou emocionalmente incomodado, tenho dificuldade em concentrar					
27. Quando estou emocionalmente incomodado, tenho dificuldade controlar os meus comportamentos					
28. Quando estou emocionalmente incomodado, acredito que não há nada que possa fazer para me fazer sentir melhor					
29. Quando estou emocionalmente incomodado, fico irritado comigo por me sentir dessa forma					
30. Quando estou emocionalmente incomodado, começo a sentir-me mesmo mal comigo próprio					
31. Quando estou emocionalmente incomodado, acredito que permitir o que estou a sentir é tudo o que posso fazer					
32. Quando estou emocionalmente incomodado, perco o controlo sobre os meus comportamentos					
33. Quando estou emocionalmente incomodado, tenho dificuldades em pensar acerca de outra coisa qualquer					
34. Quando estou emocionalmente incomodado, paro para perceber o que estou mesmo a sentir					
35. Quando estou emocionalmente incomodado, demoro muito tempo para me sentir melhor					
36. Quando estou emocionalmente incomodado, as minhas emoções parecem avassaladoras					

BSI - A seguir encontra-se uma lista de problemas ou sintomas que por vezes as pessoas apresentam. Assinale, num dos espaços à direita de cada sintoma, aquele que melhor descreve o **grau em que cada problema o incomodou durante a última semana**. Não deixe nenhuma pergunta por responder.

	Nunca	**Poucas Vezes**	**Algumas Vezes**	**Muitas Vezes**	**Muitíssimas Vezes**
1. Nervosismo ou tensão interior					
2. Desmaios ou tonturas					
3. Ter a impressão que as outras pessoas podem controlar os seus pensamentos					
4. Ter a ideia que os outros são culpados pela maioria dos seus problemas					
5. Dificuldade em se lembrar de coisas passadas ou recentes					
6. Aborrecer-se ou irritar-se facilmente					
7. Dores sobre o coração ou no peito					
8. Medo na rua ou praças públicas					
9. Pensamentos de acabar com a vida					
10. Sentir que não pode confiar na maioria das pessoas					
11. Perder o apetite					
12. Ter um medo súbito sem razão para isso					
13. Ter impulsos que não se podem controlar					
14. Sentir-se sozinho mesmo quando está com mais pessoas					
15. Dificuldade em fazer qualquer trabalho					
16. Sentir-se sozinho					
17. Sentir-se triste					
18. Não ter interesse por nada					
19. Sentir-se atemorizado					
20. Sentir-se facilmente ofendido nos seus sentimentos					
21. Sentir que as outras pessoas não são amigas ou não gostam de si					

BSI - A seguir encontra-se uma lista de problemas ou sintomas que por vezes as pessoas apresentam. Assinale, num dos espaços à direita de cada sintoma, aquele que melhor descreve o **grau em que cada problema o incomodou durante a última semana**. Não deixe nenhuma pergunta por responder.	**Nunca**	**Poucas Vezes**	**Algumas Vezes**	**Muitas Vezes**	**Muitíssimas Vezes**
22. Sentir-se inferior aos outros					
23. Vontade de vomitar ou mal-estar do estômago					
24. Impressão de que os outros o costumam observar ou falar de si					
25. Dificuldade em adormecer					
26. Sentir necessidade de verificar várias vezes o que faz					
27. Dificuldade em tomar decisões					
28. Medo de viajar de autocarro, de comboio ou de metro					
29. Sensação de que lhe falta o ar					
30. Calafrios ou afrontamentos					
31. Ter de evitar certas coisas, lugares ou actividades por lhe causarem medo					
32. Sensação de vazio na cabeça					
33. Sensação de anestesia (encortiçamento ou formigueiro) no corpo					
34. Ter a ideia que deveria ser castigado pelos seus pecados					
35. Sentir-se sem esperança perante o futuro					
36. Ter dificuldade em se concentrar					
37. Falta de forças em partes do corpo					
38. Sentir-se em estado de tensão ou aflição					
39. Pensamentos sobre a morte ou que vai morrer					
40. Ter impulsos de bater, ofender ou ferir alguém					
41. Ter vontade de destruir ou partir coisas					
42. Sentir-se embaraçado junto de outras pessoas					
43. Sentir-se mal no meio das multidões como lojas, cinemas ou assembleias					

BSI - A seguir encontra-se uma lista de problemas ou sintomas que por vezes as pessoas apresentam. Assinale, num dos espaços à direita de cada sintoma, aquele que melhor descreve o **grau em que cada problema o incomodou durante a última semana**. Não deixe nenhuma pergunta por responder.

	Nunca	Poucas Vezes	Algumas Vezes	Muitas Vezes	Muitíssimas Vezes
44. Grande dificuldade em sentir-se próximo de outra pessoa					
45. Ter ataques de terror ou pânico					
46. Entrar facilmente em discussão					
47. Sentir-se nervoso quando tem que ficar sozinho					
48. Sentir que as outras pessoas não dão o devido valor ao seu trabalho ou às suas capacidades					
49. Sentir-se tão desassossegado que não consegue manter-se sentado quieto					
50. Sentir que não tem valor					
51. A impressão de que, se deixasse, as outras pessoas se aproveitariam de si					
52. Ter sentimentos de culpa					
53. Ter a impressão de que alguma coisa não regula bem na sua cabeça					

Appendix D

Protocol for therapist – study 5

Caro colega:

Somos um grupo de investigadores da Faculdade de Psicologia e de Ciências da Educação da Universidade de Lisboa que tem vindo, desde há uns anos a esta data, a desenvolver investigação relativa ao processo terapêutico.

Actualmente estamos a desenvolver vários projectos de investigação no âmbito da Mudança e Desenvolvimento em Psicoterapia, para uma melhor compreensão da psicoterapia, com a colaboração da Fundação para a Ciência e Tecnologia e parceria com diversos investigadores nacionais e internacionais.

Para obtermos dados representativos sobre factores relevantes para a evolução do processo terapêutico e desta forma contribuirmos para melhor compreender e potencialmente optimizar a prática clínica de todos os psicoterapeutas, necessitamos da sua colaboração.

Deste modo, vimos por este meio pedir a sua colaboração de duas formas:
(1) Como participante, preenchendo o *Caderno do Terapeuta 1* e *Caderno do Terapeuta 2*
(2) Como mediador, entre nós e os seus pacientes, entregando e recolhendo o *Caderno do Paciente.*

Na eventualidade de surgir alguma dúvida sobre a colaboração ou preenchimento dos questionários, ou necessitar de esclarecimentos adicionais, poderá contactar-nos através do seguinte e-mail: investigação.psicoterapia@gmail.com

Agradecendo a sua colaboração

O Grupo de investigação

Resumo do protocolo de investigação

Decidindo colaborar connosco, será necessário:

1. Colaboração do terapeuta

1.1. O preenchimento de dois grupos de questionários:

1. *Caderno do Terapeuta 1* – Grupo de questionários dentro do envelope A4, que deve ser respondido por si apenas **uma vez**, relativamente à sua prática em geral.

2. *Caderno do Terapeuta* 2 – Grupo de questionários dentro do envelope pequeno, que deve ser preenchido por si relativamente **a cada sessão psicoterapêutica**, sem repetir o mesmo paciente. Este conjunto de questionários deve ser respondido o maior número de vezes possível. Contudo, se tiver pouca disponibilidade, deverá ser preenchido **pelo menos três vezes**. Desses três, se puder, escolha pelo menos um processo que considere que está a correr de acordo com as suas expectativas e outro em que sente mais dificuldades.

Se estiver disponível para o preenchimento de mais cadernos do terapeuta 2, solicite-nos através do e-mail: investigacao.psicoterapia@gmail.com

2. Pedir a Colaboração do paciente:

2.1. Convidar o paciente a participar na investigação, entregando-lhe o *Caderno do Paciente*, com as seguintes instruções:

"Gostaria agora de pedir a sua colaboração para o preenchimento de questionários relativos à sessão terapêutica que acabou de ocorrer. Os dados obtidos com estes questionários serão utilizados apenas para investigação e a sua colaboração é fundamental. Tudo o que responder é totalmente confidencial e eu, seu terapeuta, não terei acesso ao que responder

Se aceitar participar, encontra neste envelope (entregar envelope com os questionários), *os questionários, que poderá responder no final desta consulta, ou levar consigo para casa. Ao preencher, siga as instruções, feche-o e entregue-mo já na próxima sessão ou assim que puder".*

2.2. É conveniente que, face à mesma sessão, terapeuta e cliente preencham cada um o seu *Caderno.* Contudo, se algum paciente não aceitar colaborar, pedimos-lhe que, ainda assim, preencha o *Caderno do Terapeuta 2,* para cada sessão, de pacientes diferentes, tantas vezes quanto possível, na medida em que cada sessão é analisada como independente e única.

2.3. São **critérios de exclusão** o(a) paciente: 1) Não possuir ainda o 11º ano de escolaridade; 2) Ter como problema central o "abuso de substâncias" e 3) Situar-se no agrupamento das "psicoses".

2.4. Quando o paciente lhe entregar o envelope do *Caderno do Paciente*, agradecemos-lhe que escreva no envelope, o código que atribuiu a esse mesmo paciente.

Caderno do Terapeuta

Data: ___ / ____/ ________

1. Dados relativos à <u>Sessão</u>

1.1. Código do paciente:

__________________ / _________________

(Primeiras 3 letras do primeiro nome do paciente) (ex. Maria - MAR)

(Primeiras 3 letras do último nome do paciente) (ex. Silva - SIL)

Nota: no caso de ter dois pacientes com o mesmo primeiro e último nome, atribua outro código.

1.2. Número da sessão (estimada): ______

1.3. Indique em quais das seguintes categorias genéricas se inserem as dificuldades do(a) paciente (pode seleccionar mais que uma):

1. Depressiva ☐
2. Ansiosa ☐
3. Perturbação da personalidade ☐
4. Outra? Se Sim, qual? : ___________________________
5. Se souber, indique o diagnóstico de acordo com o DSM-IV: ___________________

1.4. A consulta decorreu num contexto de trabalho público ou privado? __________________

2. Dados relativos ao <u>Psicoterapeuta</u>

Idade: ___________ Sexo: Masculino ☐ / Feminino ☐

Anos de prática clínica: ____

O seu local de trabalho é num contexto público ou privado? ________________________

Formação:

1. Licenciatura
2. Formação em Prática Psicoterapêutica (se sim, Qual? _______________________)
3. Pós-graduação
4. Mestrado
5. Doutoramento

***CCQ-P (P)* -** Até que ponto orienta a sua prática terapêutica actual por cada uma das perspectivas teóricas seguintes?	*Nada*					*Muito*
Psicanalítica/Psicodinâmica	0	1	2	3	4	5
Comportamental	0	1	2	3	4	5
Cognitiva	0	1	2	3	4	5
Humanista	0	1	2	3	4	5
Teoria dos Sistemas	0	1	2	3	4	5
Outra:____		1	2	3	4	5

EPD (t[i]) - Responda às seguintes questões assinalando, numa escala de 1 a 5, a opção que melhor descreve a sua opinião sobre **este processo psicoterapêutico no momento presente**	*Discordo Totalmente*	*Concordo Um Pouco*	*Concordo Moderadamente*	*Concordo Muito*	*Concordo Totalmente*
1. Sinto dificuldades na condução deste processo	1	2	3	4	5
2. Sinto que este processo está a fluir naturalmente	1	2	3	4	5
3. Sinto que beneficiaria de supervisão para este caso	1	2	3	4	5
4. Sinto-me algo perdido na condução deste processo	1	2	3	4	5
5. **NÃO** estou a sentir necessidade de apoio para conduzir este processo	1	2	3	4	5
6. **NÃO** estou a sentir este processo como produtivo	1	2	3	4	5

WAIS-s (t)[ii] - Os itens seguintes reflectem a sua relação de trabalho com o(a) seu(sua) paciente baseada na sessão mais recente, isto é, o modo como pode pensar ou sentir acerca do(a) seu(sua) paciente. Avalie cada item assinalando o número apropriado, numa escala de 1 a 7, em termos **da forma como se sentiu relativamente a esta sessão.**	*Nunca*	*Raramente*	*Ocasionalmente*	*Por vezes*	*Frequentemente*	*Muito Frequentemente*	*Sempre*
1. O(a) meu(minha) paciente e eu estamos de acordo acerca das coisas que ele(a) precisa de fazer em terapia para ajudar a melhorar a sua situação	1	2	3	4	5	6	7
2. O que o meu(minha) paciente faz na terapia permite-lhe ver o seu problema de novas formas	1	2	3	4	5	6	7
3. Acho que o(a) meu(minha) paciente gosta de mim	1	2	3	4	5	6	7
4. Eu não compreendo aquilo que o(a) meu(minha) paciente tenta conseguir com a terapia	1	2	3	4	5	6	7
5. Tenho confiança na minha capacidade para ajudar o(a) meu(minha) paciente	1	2	3	4	5	6	7
6. O(a) meu(minha) paciente e eu trabalhamos para objectivos que foram mutuamente acordados	1	2	3	4	5	6	7
7. Aprecio o(a) meu(minha) paciente enquanto pessoa	1	2	3	4	5	6	7
8. Estamos de acordo acerca daquilo em que é importante ele(a) trabalhar	1	2	3	4	5	6	7
9. O(a) meu(minha) paciente e eu confiamos um no outro	1	2	3	4	5	6	7
10. O(a) meu(minha) paciente e eu temos ideias diferentes acerca de quais são os seus problemas	1	2	3	4	5	6	7
11. Estabelecemos um bom entendimento quanto às mudanças que seriam boas para o(a) meu(minha) paciente	1	2	3	4	5	6	7
12. Acredito que o modo como estamos a trabalhar com o seu problema é correcto	1	2	3	4	5	6	7

EEM (t)[iii] - Responda às seguintes questões assinalando a opção que melhor descreve as mudanças do(a) seu(sua) paciente ao **longo da psicoterapia**.	*Nada*	*Pouco*	*Moderadamente*	*Muito*	*Muitíssimo*
1. Em que medida sente que o trabalho/estudo do(a) seu(sua) paciente melhorou ao longo da psicoterapia?	1	2	3	4	5
2. Em que medida acha que a forma como o(a) seu(sua) paciente se sente consigo próprio(a) melhorou ao longo da psicoterapia?	1	2	3	4	5
3. Em que medida sente que as queixas e sintomas iniciais do(a) seu(sua) paciente melhoraram ao longo da psicoterapia?	1	2	3	4	5
4. Em que medida sente que as relações pessoais do(a) seu(sua) paciente melhoraram ao longo da psicoterapia?	1	2	3	4	5
5. Em que medida sente que a vida social do(a) seu(sua) paciente melhorou ao longo da psicoterapia?	1	2	3	4	5
6. Em que medida sente que o(a) seu(sua) paciente mudou ao longo da psicoterapia?	1	2	3	4	5

QAOE (t)[iv] – À medida em que o processo terapêutico vai avançando, é possível que o/a seu/sua paciente vá acumulando conquistas ou desenvolvendo capacidades e recursos pessoais. Responda às seguintes questões assinalando, numa escala de 1 a 7, a opção que melhor descreve a forma como entende o(a) seu(sua) paciente **na fase actual da psicoterapia**.

"Nesta fase da psicoterapia, considero que o(a) meu(minha) paciente... "

	Nada Descritivo	*Muito Pouco Descritivo*	*Pouco Descritivo*	*Moderadamente*	*Bastante Descritivo*	*Muito Descritivo*	*Totalmente Descritivo*
1. Está capaz de reconhecer que consegue lidar de forma autónoma com os futuros desafios da vida	1	2	3	4	5	6	7
2. Está capaz de perceber as suas experiências problemáticas à luz das circunstâncias do passado ou do presente	1	2	3	4	5	6	7
3. Está capaz de tomar consciência de partes ou necessidades de si próprio/a em conflito	1	2	3	4	5	6	7
4. **NÃO ESTÁ** capaz de perceber que é ele/a que pode promover ou dificultar a satisfação das suas necessidades	1	2	3	4	5	6	7
5. Está capaz de antecipar recursos para lidar com cenários futuros para além da conclusão do processo terapêutico	1	2	3	4	5	6	7
6. Está capaz de generalizar a expressão da sua identidade nas diferentes áreas da sua vida	1	2	3	4	5	6	7
7. Está capaz de se sentir motivado/a para abordar os seus problemas do ponto de vista psicológico	1	2	3	4	5	6	7
8. Está capaz de projectar-se no futuro efectiva e afectivamente relacionado consigo próprio(a), com os outros e com o mundo	1	2	3	4	5	6	7
9. Está capaz de traduzir experiências problemáticas nos seus elementos (e.g. cognição, emoção, comportamento)	1	2	3	4	5	6	7
10. **NÃO ESTÁ** capaz de integrar diferentes partes ou necessidades de si próprio/a num todo congruente e suficientemente satisfeito	1	2	3	4	5	6	7
11. Está capaz de compreender o que procura alcançar quando age de formas que acabam por lhe criar dificuldades	1	2	3	4	5	6	7
12. Está capaz de agir no seu quotidiano de forma a exprimir-se com clareza e em congruência com as suas necessidades	1	2	3	4	5	6	7
13. Está capaz de compreender quando e como é que ele(a) próprio(a) contribui para as suas dificuldades habituais	1	2	3	4	5	6	7
14. Está capaz de sentir esperança de que pode melhorar com a ajuda da psicoterapia	1	2	3	4	5	6	7
15. Está capaz de cuidar-se emocionalmente no que respeita à expressão da sua identidade e crescimento	1	2	3	4	5	6	7
16. Está capaz de sentir um clima de segurança e confiança na minha capacidade para o/a ajudar	1	2	3	4	5	6	7
17. Está capaz de ampliar a consciência da forma como ele(a) se relaciona com os outros e os outros com ele(a)	1	2	3	4	5	6	7
18. **NÃO ESTÁ** capaz de explorar ou experienciar o impacto que situações relevantes têm em si próprio/a	1	2	3	4	5	6	7
19. **NÃO ESTÁ** capaz de formular novas ligações ou explicações plausíveis para as suas atitudes ou comportamento problemáticos	1	2	3	4	5	6	7
20. Está capaz de sentir curiosidade e interesse em observar as formas como se trata a si mesmo/a	1	2	3	4	5	6	7
21. Está capaz de superar os processos que dificultam a consciência da experiência e a construção de significados reparadores	1	2	3	4	5	6	7
22. Está capaz de identificar padrões existentes nos seus modos habituais de funcionamento	1	2	3	4	5	6	7
23. Está capaz de reconhecer que só ele/a é o agente activo das suas próprias escolhas	1	2	3	4	5	6	7
24. **NÃO ESTÁ** capaz de aceitar a inevitabilidade de um certo grau de vulnerabilidade ou conflito na vivência e expressão da sua identidade	1	2	3	4	5	6	7
25. Está capaz de lidar eficazmente com as situações e simultaneamente respeitar as suas necessidades	1	2	3	4	5	6	7
26. **NÃO ESTÁ** capaz de integrar experiências do passado, presente e da antecipação do futuro numa narrativa coerente de si mesmo/a	1	2	3	4	5	6	7
27. Está capaz de afirmar-se, gerindo obstáculos internos ou externos à expressão da sua identidade	1	2	3	4	5	6	7
28. Está capaz de escolher estilos de vida que lhe permitam viver o presente e promover o seu desenvolvimento pessoal	1	2	3	4	5	6	7
29. Está capaz se sentir numa relação de colaboração comigo	1	2	3	4	5	6	7
30. Está capaz de assumir o compromisso por respeitar e validar as suas necessidades, quer elas correspondam, ou não, às expectativas dos outros	1	2	3	4	5	6	7
31. **NÃO ESTÁ** capaz de negociar a estrutura e as regras do processo terapêutico no sentido de o tornar possível	1	2	3	4	5	6	7
32. Está capaz de desenvolver ou fortalecer relações/situações que apoiem as suas escolhas	1	2	3	4	5	6	7
33. Está capaz de assumir responsabilidade por cuidar de si experimentando mobilizar recursos internos ou externos nesse sentido	1	2	3	4	5	6	7
34. Está capaz de lidar com obstáculos internos ou externos à consolidação da sua identidade e crescimento	1	2	3	4	5	6	7
35. Está capaz de fortalecer a sensação de coerência pessoal e de que a sua vida tem sentido como um todo	1	2	3	4	5	6	7

ERES (t[v]) - Responda às seguintes questões assinalando, numa escala de 1 a 5, a opção que melhor descreve a sua opinião sobre **esta sessão**	*Discordo Totalmente*	*Concordo Um Pouco*	*Concordo Moderadamente*	*Concordo Muito*	*Concordo Totalmente*
1. **NÃO** creio que esta sessão tenha sido importante	1	2	3	4	5
2. Penso que estivemos num impasse na nossa relação	1	2	3	4	5
3. Sinto que esta sessão foi útil	1	2	3	4	5
4. Sinto que esta sessão valeu a pena	1	2	3	4	5
5. **NÃO** fiquei satisfeito(a) com o resultado desta sessão	1	2	3	4	5
6. Penso que esta sessão foi produtiva	1	2	3	4	5

QPOE[vi] - O presente questionário destina-se a identificar o tipo de trabalho **predominante** realizado durante **esta última sessão**. Avalie, numa escala de 1 a 7, até que ponto cada uma das afirmações descreve aquilo em que **tentou predominantemente ajudar o seu (a sua) paciente**. Note que, numa única sessão, não é realizado todo o tipo de trabalho descrito nas afirmações seguintes. Os(as) terapeutas fazem escolhas diferenciadas para responder às necessidades do(a) paciente em cada sessão, incidindo o foco mais predominantemente num ou noutro tipo de trabalho. **"Ao pensar nesta última sessão, reparo agora que, predominantemente…"**	*Nada Descritivo*	*Muito Pouco Descritivo*	*Pouco Descritivo*	*Moderadamente Descritivo*	*Bastante Descritivo*	*Muito Descritivo*	*Totalmente Descritivo*
1. Procurei ajudá-lo(a) a reconhecer que é capaz de lidar de forma autónoma com os futuros desafios da vida	1	2	3	4	5	6	7
2. Procurei ajudá-lo(a) a perceber as suas experiências problemáticas à luz das circunstâncias do passado ou do presente	1	2	3	4	5	6	7
3. Procurei ajudá-lo(a) a tomar consciência de partes ou necessidades de si próprio/a em conflito	1	2	3	4	5	6	7
4. **NÃO PROCUREI** ajudá-lo(a) a perceber que é ele/a que pode promover ou dificultar a satisfação das suas necessidades	1	2	3	4	5	6	7
5. Procurei ajudá-lo(a) a antecipar recursos para lidar com cenários futuros para além da conclusão do processo terapêutico	1	2	3	4	5	6	7
6. Procurei ajudá-lo(a) a generalizar a expressão da sua identidade nas diferentes áreas da sua vida	1	2	3	4	5	6	7
7. Procurei ajudá-lo(a) a sentir-se motivado/a para abordar os seus problemas do ponto de vista psicológico	1	2	3	4	5	6	7
8. Procurei ajudá-lo(a) a projectar-se no futuro efectiva e afectivamente relacionado consigo próprio(a), com os outros e com o mundo	1	2	3	4	5	6	7
9. Procurei ajudá-lo(a) a traduzir experiências problemáticas nos seus elementos (e.g. cognição, emoção, comportamento)	1	2	3	4	5	6	7
10. **NÃO PROCUREI** ajudá-lo(a) a integrar diferentes partes ou necessidades de si próprio/a num todo congruente e suficientemente satisfeito	1	2	3	4	5	6	7
11. Procurei ajudá-lo(a) a compreender o que procura alcançar quando age de formas que acabam por lhe criar dificuldades	1	2	3	4	5	6	7
12. Procurei ajudá-lo(a) a agir no seu quotidiano de forma a exprimir-se com clareza e em congruência com as suas necessidades	1	2	3	4	5	6	7
13. Procurei ajudá-lo(a) a compreender quando e como é que ele(a) próprio(a) contribui para as suas dificuldades habituais	1	2	3	4	5	6	7
14. Procurei ajudá-lo(a) a sentir esperança de que pode melhorar com a ajuda da psicoterapia	1	2	3	4	5	6	7
15. Procurei ajudá-lo(a) a cuidar-se emocionalmente no que respeita à expressão da sua identidade e crescimento	1	2	3	4	5	6	7
16. Procurei ajudá-lo(a) a sentir um clima de segurança e confiança na minha capacidade para o/a ajudar	1	2	3	4	5	6	7
17. Procurei ajudá-lo(a) a ampliar a consciência das formas como ele(a) se relaciona com os outros e os outros com ele(a)	1	2	3	4	5	6	7
18. **NÃO PROCUREI** ajudá-lo(a) a explorar ou experienciar o impacto que situações relevantes têm em si próprio/a	1	2	3	4	5	6	7
19. **NÃO PROCUREI** ajudá-lo(a) a formular novas ligações ou explicações plausíveis para as suas atitudes ou comportamento problemáticos	1	2	3	4	5	6	7

QPOE[vi] - O presente questionário destina-se a identificar o tipo de trabalho **predominante** realizado durante **esta última sessão**. Avalie, numa escala de 1 a 7, até que ponto cada uma das afirmações descreve aquilo em que **tentou predominantemente ajudar o seu (a sua) paciente**. Note que, numa única sessão, não é realizado todo o tipo de trabalho descrito nas afirmações seguintes. Os(as) terapeutas fazem escolhas diferenciadas para responder às necessidades do(a) paciente em cada sessão, incidindo o foco mais predominantemente num ou noutro tipo de trabalho. **"Ao pensar nesta última sessão, reparo agora que, predominantemente…"**	*Nada Descritivo*	*Muito Pouco Descritivo*	*Pouco Descritivo*	*Moderadamente Descritivo*	*Bastante Descritivo*	*Muito Descritivo*	*Totalmente Descritivo*
20. Procurei ajudá-lo(a) a sentir curiosidade e interesse em observar as formas como se trata a si mesmo/a	1	2	3	4	5	6	7
21. Procurei ajudá-lo(a) a superar os processos que dificultam a consciência da experiência e a construção de significados reparadores	1	2	3	4	5	6	7
22. Procurei ajudá-lo(a) a identificar padrões existentes nos seus modos habituais de funcionamento	1	2	3	4	5	6	7
23. Procurei ajudá-lo(a) a reconhecer que só ele/a é o agente activo das suas próprias escolhas	1	2	3	4	5	6	7
24. **NÃO PROCUREI** ajudá-lo(a) a aceitar a inevitabilidade de um certo grau de vulnerabilidade ou conflito na vivência e expressão da sua identidade	1	2	3	4	5	6	7
25. Procurei ajudá-lo(a) a lidar eficazmente com as situações e simultaneamente respeitar as suas necessidades	1	2	3	4	5	6	7
26. **NÃO PROCUREI** ajudá-lo(a) a integrar experiências do passado, presente e da antecipação do futuro numa narrativa coerente de si mesmo/a	1	2	3	4	5	6	7
27. Procurei ajudá-lo(a) a afirmar-se, gerindo obstáculos internos ou externos à expressão da sua identidade	1	2	3	4	5	6	7
28. Procurei ajudá-lo(a) a escolher estilos de vida que lhe permitam viver o presente e promover o seu desenvolvimento pessoal	1	2	3	4	5	6	7
29. Procurei ajudá-lo(a) a sentir-se numa relação de colaboração comigo	1	2	3	4	5	6	7
30. Procurei ajudá-lo(a) a assumir o compromisso por respeitar e validar as suas necessidades, quer elas correspondam, ou não, às expectativas dos outros	1	2	3	4	5	6	7
31. **NÃO PROCUREI** ajudá-lo(a) a negociar a estrutura e as regras do processo terapêutico no sentido de o tornar possível	1	2	3	4	5	6	7
32. Procurei ajudá-lo(a) a desenvolver ou fortalecer relações/situações que apoiem as suas escolhas	1	2	3	4	5	6	7
33. Procurei ajudá-lo(a) a assumir responsabilidade por cuidar de si, experimentando mobilizar recursos internos ou externos nesse sentido	1	2	3	4	5	6	7
34. Procurei ajudá-lo(a) a lidar com obstáculos internos ou externos à consolidação da sua identidade e crescimento	1	2	3	4	5	6	7
35. Procurei ajudá-lo(a) a fortalecer a sensação de coerência pessoal e de que a sua vida tem sentido como um todo	1	2	3	4	5	6	7

EACEP[vii] - Em seguida, encontram-se algumas afirmações relativas ao paciente em que acabou de intervir. Leia atentamente e indique, por favor, se cada afirmação se aplica sempre, a maioria das vezes, algumas vezes, raramente ou sempre ao seu paciente	*Nunca*	*Raramente*	*Algumas vezes*	*A maioria das vezes*	*Sempre*
1. O paciente é flexível na experienciação das suas emoções, utilizando a emoção mais adequada consoante a situação	1	2	3	4	5
2. O paciente diferencia as emoções que experiencia	1	2	3	4	5
3. O paciente consegue regular as suas emoções de forma adaptativa	1	2	3	4	5
4. O paciente considera-se um agente activo no processo emocional e não uma vítima	1	2	3	4	5
5. A maioria das emoções experienciadas pelo paciente ajudam-no a desenvolver um comportamento adaptativo às situações	1	2	3	4	5
6. O paciente sente que não tem qualquer controlo sobre as suas emoções	1	2	3	4	5
7. O paciente expressa as suas emoções de forma adaptativa	1	2	3	4	5
8. O paciente tem vontade de experienciar as suas emoções	1	2	3	4	5
9. O paciente descreve-se como vítima das emoções, que não consegue controlar	1	2	3	4	5
10. O paciente evidencia emoções com o objectivo de conseguir alcançar algo que pretende (ex. o paciente exibe tristeza porque consegue com isso obter a atenção)	1	2	3	4	5

11. O paciente descreve as suas emoções com base em definições pré-estabelecidas em vez de utilizar as suas próprias palavras (ex. o que senti quando a vi foi fogo que arde sem se ver)	1	2	3	4	5
12. O paciente descreve as suas emoções de forma global e não diferenciada (ex. sinto-me mal; sinto-me cansado)	1	2	3	4	5
13. Aquilo que o paciente sente é congruente com aquilo que pensa	1	2	3	4	5
14. O paciente actua de forma contrária aquilo que sente	1	2	3	4	5
15. O paciente é flexível na experienciação das suas emoções, utilizando a emoção mais adequada consoante a situação	1	2	3	4	5
16. O paciente consegue integrar o que sente com o que pensa, atribuindo novos significados ao que sente	1	2	3	4	5
17. O paciente consegue reflectir sobre aquilo que sente	1	2	3	4	5
18. As emoções experienciadas pelo paciente são adequadas às situações que as activaram	1	2	3	4	5
19. O paciente expressa as suas emoções de forma adaptativa	1	2	3	4	5
20. O paciente atribui a origem das suas emoções a acontecimentos externos	1	2	3	4	5
21. O paciente atribui a origem das suas emoções a outros	1	2	3	4	5
22. O paciente não consegue reflectir sobre as suas emoções	1	2	3	4	5
23. O paciente é distante em relação ao terapeuta	1	2	3	4	5
24. O paciente demonstra dificuldade em encontrar palavras para descrever as suas emoções	1	2	3	4	5
25. O paciente tem sensações físicas que não consegue perceber	1	2	3	4	5
26. O paciente reflecte frequentemente acerca das suas emoções, de uma forma adaptativa	1	2	3	4	5
27. O paciente descreve com facilidade o que está a sentir	1	2	3	4	5
28. O paciente não fala sobre as suas emoções	1	2	3	4	5
29. O paciente não compreende a etiologia das suas emoções	1	2	3	4	5
30. O paciente aceita as suas emoções mesmo que dolorosas	1	2	3	4	5
31. O paciente experiencia as suas emoções de forma exacerbada	1	2	3	4	5
32. O paciente tem emoções que o impedem de ter um comportamento adaptativo	1	2	3	4	5
33. O paciente comporta-se de modo a não ter que lidar com as emoções (ex. evita situações para não se sentir ansioso)	1	2	3	4	5
34. O paciente está zangado por experienciar emoções dolorosas	1	2	3	4	5
35. O paciente consegue reflectir sobre aquilo que sente	1	2	3	4	5

EAPEP [viii] - Em seguida, encontram-se algumas afirmações relativas à sessão que acabou de implementar. Para cada afirmação, responda Sim, Não ou Não Sei, se não consegue responder ao item, colocando um círculo na resposta seleccionada.	*Sim*	*Não*	*Não sei*
1. O paciente experienciou uma das seguintes emoções durante a sessão: sofrimento; dor; tristeza; desespero; solidão; raiva; ressentimento; medo; ansiedade; amor; alegria; excitação; contentamento; calma; vergonha; culpa; orgulho; auto-confiança; surpresa; choque; raiva; tristeza; orgulho	Sim	Não	Não sei
2. O paciente relatou estar a experienciar uma emoção naquele momento (ex. estou a sentir-me triste)	Sim	Não	Não sei
3. O paciente descreveu a emoção na consulta mas referindo-se a acontecimentos passados onde a experienciou (ex. senti-me triste quando a minha mãe morreu)	Sim	Não	Não sei
4. A emoção dominante experienciada pelo paciente foi uma reacção a outra emoção (ex. sentir vergonha por estar zangado; sentir-se triste por ter raiva)	Sim	Não	Não sei
5. A emoção dominante experienciada pelo paciente surgiu como reacção a um pensamento (ex. reacção a um pensamento ruminativo)	Sim	Não	Não sei
6. A emoção dominante experienciada pelo paciente ajudou-o a planear as suas acções	Sim	Não	Não sei
7. O paciente actuou de forma contrária aquilo que estava a sentir	Sim	Não	Não sei
8. O paciente conseguiu integrar o que estava a sentir com o que estava a pensar	Sim	Não	Não sei
9. O paciente desenvolveu novas formas de regulação emocional	Sim	Não	Não sei
10. O paciente diferenciou as emoções que estava a experienciar	Sim	Não	Não sei
11. O paciente conseguiu regular as suas emoções de forma adaptativa	Sim	Não	Não sei

12. O paciente experienciou as suas emoções de forma exacerbada (ex. medo exacerbado ou raiva destrutiva)	Sim	Não	Não sei
13. O paciente relatou arrependimento ou culpa por sentir o que estava a sentir	Sim	Não	Não sei
14. A emoção dominante experienciada pelo paciente teve origem em um pensamento	Sim	Não	Não sei
15. As emoções que o paciente experienciou foram acompanhadas por pensamentos destrutivos ou bloqueadores de um comportamento adaptativo	Sim	Não	Não sei
16. A emoção dominante do paciente gerou-lhe um elevado mal-estar	Sim	Não	Não sei
17. A emoção dominante experienciada pelo paciente surge como resultado de outras emoções	Sim	Não	Não sei
18. O paciente tentou controlar o que estava a sentir	Sim	Não	Não sei
19. As tentativas que o paciente fez para controlar o que estava a sentir, estão na origem do seu problema	Sim	Não	Não sei
20. O paciente evitou experienciar uma determinada emoção	Sim	Não	Não sei
21. O paciente descreveu-se como vítima da emoção, que não conseguiu controlar	Sim	Não	Não sei
22. O paciente demonstrou sinais de activação decorrentes da emoção que estava a experienciar	Sim	Não	Não sei
23. O paciente demonstrou um evitamento da activação emocional	Sim	Não	Não sei
24. Quando o paciente experienciou uma emoção, a activação emocional foi adaptativa e não desorganizadora (ex. chorar se está triste)	Sim	Não	Não sei
25. O paciente conseguiu atribuir um significado ao que estava a sentir	Sim	Não	Não sei
26. O paciente não conseguiu reconhecer a emoção que estava a sentir	Sim	Não	Não sei
27. O paciente conseguiu experienciar uma emoção como auto-referente (relativa a si próprio) em vez de centralizada em acontecimentos externos	Sim	Não	Não sei
28. O paciente relatou as suas emoções com base no que estava a experienciar em vez de se basear em abstracções	Sim	Não	Não sei
29. O paciente descreveu o que estava a sentir com base em definições pré-estabelecidas em vez de utilizar as suas próprias palavras (ex. o que senti quando a vi foi fogo que arde sem se ver)	Sim	Não	Não sei
30. O paciente descreveu as suas emoções de forma global e não diferenciada (ex. sinto-me mal; sinto-me cansado)	Sim	Não	Não sei
31. O paciente verbalizou a emoção que estava a sentir durante a consulta	Sim	Não	Não sei
32. O paciente não expressou qualquer emoção	Sim	Não	Não sei
33. A expressão emocional dominante do paciente envolveu emoções que estão fundidas (ex. o sofrimento engloba raiva e tristeza)	Sim	Não	Não sei
34. O paciente integrou aquilo que estava a sentir com aquilo q estava a pensar e com a forma como se comportou	Sim	Não	Não sei
35. O paciente não demonstrou qualquer sinal de activação quando falava da emoção que estava a experienciar	Sim	Não	Não sei
36. O paciente atribuiu a origem das suas emoções a acontecimentos externos	Sim	Não	Não sei
37. O paciente atribuiu a origem das suas emoções a outros	Sim	Não	Não sei
38. O paciente não conseguiu reflectir sobre as suas emoções	Sim	Não	Não sei
39. O paciente foi distante em relação ao terapeuta	Sim	Não	Não sei
40. O paciente não colaborou com o terapeuta	Sim	Não	Não sei
41. O paciente não conseguiu tolerar as suas emoções	Sim	Não	Não sei
42. O paciente aceita as emoções, mesmo que dolorosa	Sim	Não	Não sei
43. O paciente estava zangado por experienciar emoções dolorosas	Sim	Não	Não sei
44. O paciente aceitou as emoções, como parte da sua experiência	Sim	Não	Não sei
45. O paciente evitou experienciar emoções	Sim	Não	Não sei
46. O paciente utilizou a emoção que experienciou como fonte de informação (ex. fonte de informação acerca de si próprio ou acerca da situação que activou a emoção)	Sim	Não	Não sei
47. O paciente não conseguiu reconhecer a emoção que estava a sentir	Sim	Não	Não sei
48. O paciente verbalizou a emoção que estava a sentir	Sim	Não	Não sei
49. O paciente apresentou uma postura corporal tensa	Sim	Não	Não sei
50. O paciente expressou a emoção através de comportamento não-verbal	Sim	Não	Não sei
51. O paciente demonstrou através da sua expressão facial que estava a experienciar uma emoção no momento	Sim	Não	Não sei
52. O paciente centra-se mais na descrição dos acontecimentos do que na descrição dos seus sentimentos	Sim	Não	Não sei
53. O paciente expressou a emoção através de comportamento não-verbal	Sim	Não	Não sei
54. O paciente demonstrou através da sua postura corporal que estava a experienciar uma emoção no momento	Sim	Não	Não sei
55. A emoção dominante experienciada durante a sessão foi activada como reacção a um tema significativo para o paciente	Sim	Não	Não sei
56. O paciente experienciou uma emoção mas não a conseguiu utilizar como fonte de informação (ex. fonte de informação acerca de si próprio ou acerca da situação que activou a emoção)	Sim	Não	Não sei

57. Implementei estratégias para modificar as emoções do paciente de forma a tornar essas emoções mais adaptativas	Sim	Não	Não sei
58. Depois do paciente estar emocionalmente activo, implementei estratégias para o ajudar a atribuir um significado ao que estava a sentir	Sim	Não	Não sei
59. Desenvolvi técnicas que fizeram o paciente não só activar as suas emoções, mas também atribuir um significado ao que estava a sentir	Sim	Não	Não sei
60. Não implementei nenhuma estratégia para activar as emoções do paciente	Sim	Não	Não sei
61. Promovi estratégias de diferenciação emocional com o paciente	Sim	Não	Não sei
62. Promovi estratégias de diferenciação emocional com o paciente	Sim	Não	Não sei
63. Não considerei os significados que o paciente atribui às suas emoções	Sim	Não	Não sei
64. Implementei estratégias que ajudaram o paciente a regular de forma mais adaptada as suas emoções	Sim	Não	Não sei