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The role of self-contempt in borderline personality disorder

(Le rôle de l'auto-mépris dans le trouble de la personnalité borderline)

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Abstract

Context: The borderline personality disorder (BPD) encompasses an unstable self-image, often with excessive self-criticism, emotional instability and excessive anger. Anger can be classified as primary assertive anger and as secondary rejecting anger. This rejecting anger can express itself by accusing another person or by being very critical and harsh with oneself. This can be expressed in the self-criticism via the emotion of contempt directed at the self. Anger prone subjects were found to express high levels self-contempt in their self-criticism. A previous study found that an increase in assertive anger was mediated the decrease in symptoms, while no decrease in rejecting anger was found. But there was no paradigm to measure it.

Objectives: It is expected that BPD patients show high levels of self-contempt. The aim of this study was to explore in the setting of an experimental procedure the change in self-contempt in BPD patients after a brief treatment and its relationship with a possible change in symptoms.

Methodology: 8 female BPD patients were recruited for this study. The treatment consisted in 10 therapy sessions following a manual adapted from the "Good Psychiatric Management" (GPM) over a 3-months period. Assessments took place before and after the treatment. It consisted in a two-chair dialogue with 3 sub-steps; they were first asked to imagine a situation of failure, then to change chair and be self-critical about this situation, then to change back again and respond to this critic. Self-contempt was coded during the second sub-step using a specific coding scheme. Symptoms were assessed before and after treatment.

Results: This study has found that a brief therapy already has an effect on the level of rejecting anger in BPD patients, and more specifically self-contempt. We have showed that a high level of self-contempt before treatment is associated with good outcome concerning the symptomatology and could thus be a possible predictor of good outcome. We have linked the decrease in self-contempt after treatment with the decrease in symptoms.

Conclusions: Our pilot study was vastly limited by the small sample, not permitting us to draw firm conclusions, and it should be repeated in a larger sample to confirm our findings. Its exploratory nature did not allow us to show causality between two variables. The two-chair dialogue could be used to screen for BPD patients showing high levels of self-contempt, and thus be possible good responders to brief treatment. Self-contempt could be an early target for treatment if its decrease is later shown to be a mechanism of symptom change.

Keywords: borderline personality disorder – self-contempt – rejecting anger - two-chair dialogue – brief treatment

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Introduction

Borderline personality disorder

The borderline personality disorder (BPD) is characterized in the DSM-5 by deficits in the personal and interpersonal functioning and by pathological personality traits (American Psychiatric Association, 2013). The deficits in the personal functioning include an unstable self-image, often with excessive self-criticism, while emotional instability, anxiety, fear of separation and tendency to depression are parts of the negative affective traits of this pathology (American Psychiatric Association, 2013). There is also a disinhibition characterized by impulsivity and excessive risk taking, along with an antagonism characterized by hostility expressed by frequent feelings of anger and a tendency to react with excessive anger (American Psychiatric Association, 2013).

Emotions

An emotional dysregulation is a key feature in this personality disorder (Reisch, Ebner-Priemer, Tschacher, Bohus, & Linehan, 2008). Emotionality is one of the three functional systems that compose behaviour (Lezak, 2012). Emotions in general are automated programs of action that can be triggered by any events and cause changes in the body (Damasio, 2012). Different types of emotions can be triggered, and their classification is not unanimous among authors, but it is admitted that some universal emotions that trigger the same reactions in humans exist; fear, anger, sadness, happiness, disgust and surprise (Damasio, 2012). The different theoretical views admit that emotions are characterized by more than one component, five of these being commonly described as expression, action tendency, bodily reaction, feeling and appraisal (Coppin & Sander, 2016). Expression of emotions can be through the face or the voice for example, action tendency can define whether an approach or an avoidance reaction will happen, and bodily reaction can be sympathetic, parasympathetic or a combination of the latter (Coppin & Sander, 2016). The feeling component implies that there is a subjective and more or less conscious way of experiencing emotions, while appraisal defines that the way an emotion is elicited is by the cognitive process that evaluates the event or the stimulus (Coppin & Sander, 2016). In addition to these components, three additional criteria to define emotions exist. The first one is that there is to begin an emotion elicitation mechanism that itself leads to an emotional response (Coppin and Sander, 2016). The second criterion is that emotions can only

occur when evolutionary or idiosyncratic situations are the object of the process, while the third criterion says that an emotion must happen rapidly and be short (Coppin & Sander, 2016).

Following clinical theories of emotional processing, emotions can clinically be classified as primary or secondary, by order of appearance (Greenberg, 2004). Primary emotions are a direct response to an event or a situation, while secondary emotions follow this initial response and can be some sort of defence against these (Greenberg, 2004). Emotions can also be adaptive or maladaptive, the first providing useful information, the second being an automatic response that an individual has created responding to a former traumatic event (Greenberg, 2004). This maladaptive response is not specific to the new situation and cannot help the person and must be replaced or transformed (Greenberg, 2004).

When working with emotions, the secondary emotion needs to be acknowledged in order to get to the primary emotion (Pascual-Leone & Greenberg, 2007). Only this kind of emotion provides useful resources to solve the initial problem (L.S. Greenberg, 2004). This can be achieved via an emotional transformation that involves one emotion to be replaced with another (L.S. Greenberg, 2015). After an event, a person would instantly feel a primary emotion and then a secondary emotion in response to the initial reaction. This person would have to get past this secondary emotion to be able to get to the core of his reaction and solve it. A four-level emotional processing pathway has been proposed, going from a low degree of processing to a high degree (Pascual-Leone & Greenberg, 2007). In this model, the lower level is global distress, a state of low specificity of meaning and of high arousal, while the second level, although more specific, includes maladaptive fear or shame and rejecting anger. From maladaptive shame and fear, the third level can be achieved via a dynamic process of negative self-evaluation and the identification of an existential need leading to the creation of a new more positive self-evaluation leading to assertive anger or self-soothing, both highlighting a healthy need. A path going from shame or fear to rejecting anger and to assertive anger is also possible. With the emergence of grief and hurt in parallel to assertive anger and self-soothing, a second positive evaluation is possible and leads to a state of acceptance and agency about the original distressing experience.

The emotion dysregulation in the BPD is characterized by a higher emotion sensitivity, higher experienced levels of negative affects with higher instability and inadequate and maladaptive emotion regulation strategies (Carpenter & Trull, 2013). BPD patients show a high mood reactivity, switching frequently from

one mood state to another (Lieb, Zanarini, Schmahl, Linehan, & Bohus, 2004). Compared to a healthy population, patients with BPD more often persist in anxiety and sadness and switch more often between these two emotions and from anxiety to anger (Reisch et al., 2008). The process of change in personality disorders can be divided into change in socio-cognitive and emotional processing, the later through processes as emotion awareness, regulation and transformation (Kramer, 2017).

Anger

Problematic anger is a feature and part of the diagnostic criteria of the Borderline Personality Disorder (American Psychiatric Association, 2013). A ten-years follow-up study showed that anger was one of the most stable symptoms of BPD, with 45% of patients still showing intense anger (Zanarini et al., 2007). Anger is an emotion that occurs normally when one's goals are frustrated and will induce a behaviour directed towards the achievement of the goals (Magai, 1996). Other authors define anger as the emotion that follows a situation where a threat is perceived and can be directed at various items and can persist after this threat has ended (DiGiuseppe & Tafrate, 2007). The difference between anger as a state and anger as a trait is also made, the later meaning that an individual will experience the state of anger more often and in a more intense way (DiGiuseppe and Tafrate, 2007). Dysfunctional levels of anger have been linked with diverse adverse effects on physical and mental health (Fernandez & Johnson, 2016).

To identify when anger is healthy and when it is not, it is important to classify it. Different types of anger can be identified using the clinical theories of emotional processing. Assertive anger is the primary form of this emotion and can be seen has helping the person fighting for his needs (Pascual-Leone, Gilles, Singh, & Andreescu, 2013; Pascual-Leone & Greenberg, 2007). It allows the patient to make a positive self-evaluation (Pascual-Leone & Greenberg, 2007). Secondary forms of anger include self-hate or rejecting anger (Pascual-Leone et al., 2013; Pascual-Leone & Greenberg, 2007). They can be seen as defence mechanisms against primary emotions such as fear, shame or guilt (Pascual-Leone et al., 2013). Rejecting anger is usually accompanied by a high level of arousal in its expression and frequently involves actions or thoughts of distancing (Pascual-Leone & Greenberg, 2007). Rejecting anger can reveal itself by accusing someone else or by being very self-critical and harsh with oneself (Kramer et al., 2016). Self-hate can be defined as angry and hostile expressions toward the self through contempt-and-disgust-loaded self-criticism (Pascual-Leone et al., 2013). Self-hate is the extreme affective part of self-criticism and one possible pathway described

leading to it begins with a situation that produces low self-esteem and then induces a primary maladaptive response of shame followed by secondary self-hate in the absence of enough resilience (Pascual-Leone et al., 2013).

Hostility, aggressiveness and interpersonal opposition in the BPD can be classified under rejecting anger (Kramer et al., 2016). A study showed a pathway going from shame to BPD features via anger and anger-rumination (Peters, Geiger, Smart, & Baer, 2014). This pathway can be paralleled with the one cited previously, where primary maladaptive shame leads to secondary self-hate (Pascual-Leone et al., 2013). A study explored the effect of treatment with Dialectical Behaviour Therapy (DBT) on rejecting and assertive anger in BPD patients and showed an increase in assertive anger that mediated the decrease in symptoms, while no decrease in rejecting anger was found (Kramer et al., 2016). But there was no paradigm in this previous study to measure the rejecting anger.

Self-criticism

Self-criticism is a feature associated with the diagnostic criteria of "impairment in self-functioning" in the DSM-5 classification of BPD (American Psychiatric Association, 2013). BPD patients showed more self-criticism compared to a healthy population, while depressed patients with BPD also showed more self-criticism than depressed patients without BPD (Kopala-Sibley, Zuroff, Russell, Moskowitz, & Paris, 2012; Southwick, Yehuda, & Giller, 1995). Self-criticism can be seen as a conscious evaluation of oneself that can both be healthy, helping the patient to be reflexive, and harmful and maladaptive with various consequences (Kannan & Levitt, 2013). Self-criticism was found to be linked with several psychiatric disorders, including depression and personality disorders (Kannan & Levitt, 2013).

Different forms of self-criticism are believed to exist, including forms that aim at improving the self and forms that aim at harming and persecuting the self, the latter being more pathogenic (Gilbert, Clarke, Hempel, Miles, & Irons, 2004). Different emotions are part of this self-hate, including self-contempt and self-disgust (Pascual-Leone et al., 2013). These two emotions, disgust and contempt, although sharing similar components, are distinct from each other. Both contempt and disgust are considered "moral emotions" appearing when moral codes are violated, and involve rejection, disapproval and hostility, but while disgust can concern inanimate objects, contempt is always directed toward a person (Aleman & Swart, 2008). While disgust is elicited when physical purity is violated, contempt appears when there is a breach

of moral codes involving disrespect, hierarchy or duty and involves a feeling of superiority, viewing the other person in a negative way (Aleman & Swart, 2008). Disgust has a protective function and aims primarily at avoiding diseases (Viar-Paxton & Olatunji, 2016). Contempt was found to be the emotion the most felt with incompetent actions, when moral disgust was felt in response to violation of the ethic of community (Hutcherson & Gross, 2011). When directed towards the self, these two emotions are also distinct. Self-disgust could have the function of control mechanism over social acceptance and interpersonal attractiveness (Ille et al., 2014). Self-disgust was found to be elevated in BPD patients and hostility was found to be a predictor of self-disgust (Ille et al., 2014). Self-contempt can be seen as one way that anger is expressed toward the self in the self-criticism (Kramer & Pascual-Leone, 2016). Anger-prone subjects express more self-contempt during their self-criticism (Kramer & Pascual-Leone, 2016). The same study also found that the intensity of self-contemptuousness can predict the problems related with anger-rumination (Kramer & Pascual-Leone, 2016). Compared to controls, highly self-critical patients expressed more-self contempt when being self-critical (Whelton & Greenberg, 2005). Self-contempt can reveal itself in a verbal way, taking the forms of insults toward the self, or in para-verbal and non-verbal ways. Non-verbal manifestations of self-contempt include curled lips or dismissive waving. Para-verbal contents include a sarcastic voice tone or a disruption of the vocal pattern.

Studies have been using the “two-chair dialogue”, borrowed from emotion focused-therapy (EFT) as treatment and assessment of excessive and problematic self-criticism (Kannan & Levitt, 2013). EFT sees self-criticism as a concept where two-aspects of the self are in conflict; one part of the self criticizing and blocking the healthy needs of another more submissive part of the self (Shahar et al., 2012). The two-chair dialogue is a dialogue between these two parts of the self, where the patient is first encouraged to take a self-critical voice towards himself and then is encouraged to respond to the critics and to describe their impact. Then the patient is encouraged to identify and elaborate difficult feelings and needs from each side of the self (Kannan & Levitt, 2013; Shahar et al., 2012). It is awaited that the patients undergo emotional transformation and integration; transforming feelings of anger or contempt from the inner-critic to compassion or empathy towards the self and transforming shame into resilient assertiveness via assertive anger (Shahar et al., 2012). In patients showing high levels of self-criticism, the two-chair dialogue decreased the level of self-criticism along with anxiety and depressive symptoms, while self-compassion and self-reassuring increased (Shahar et al., 2012).

Treatment

Several specific psychotherapies have been found to be effective in treating BPD (Stoffers-Winterling et al., 2012). Among them, "Dialectical Behaviour Therapy" (DBT) has been found to decrease inappropriate anger and improve the general functioning of the patients (Stoffers-Winterling et al., 2012). More recently, less intensive and specialized treatments have appeared and have proven to be as effective (J. Gunderson, Masland, & Choi-Kain, 2018). Among them is the "Good Psychiatric Management" (GPM), a guideline-based treatment designed to fit most BPD patients (J. G. Gunderson & Links, 2014). GPM involves medicalizing the disorder, questioning the usefulness of the treatment with the patient, encouraging social activities and long-term goals (J. Gunderson et al., 2018). GPM was found to be as effective as DBT after 1 year of treatment concerning multiple outcomes, including BPD symptoms and anger, and this remained true 2 years after treatment (McMain, Guimond, Streiner, Cardish, & Links, 2012; McMain et al., 2009).

The outcomes of shorter treatments are now investigated. A short treatment of 12 weeks using evidence-based therapies including DBT components was shown to have the same outcome on emotion regulation and symptoms when compared with a 24 months treatment (Laporte, Paris, Bergevin, Fraser, & Cardin, 2018). Brief therapy following a variant of GPM was shown to be effective already after 10 sessions (Kramer et al., 2014). This study by Kramer et al explored the effect of a 10 sessions treatment of a variant of GPM compared with the same treatment with the addition of "motive-oriented therapeutic relationship" (MOTR). It showed a decrease in symptoms in both groups, with no difference concerning the specific BPD symptoms.

Current study and hypothesis

Excessive anger and self-criticism seem to play an important role in the BPD symptomatology. In our study we want to focus on the self-contempt as a specific form of rejecting anger in BPD patients and how it relates to the evolution of the symptomatology. To do so the settings of the two-chair dialogue were used, not in the perspective of treating self-criticism, but with the aim of exploring it like shown in a previous experimental study (Kramer & Pascual-Leone, 2016). A full description of the method used in this previous study and adapted for the current study will be available in the methodology section.

Following the literature, it is expected that BPD patients present a high level of self-contempt in their self-criticism. We assume that the self-contempt, as a form of specific rejecting anger, is an emotion that can

potentially go through emotional change and thus, decrease after treatment, even if brief. We will try to link this potential change with the potential change in symptoms in BPD patients. We will also try to link behavioural data, collected with the aim of being manipulation-checks, with the self-contempt.

In this study, we hypothesize that the brief treatment is linked with the level of self-contempt. It is expected that the level of self-contempt decreases after the treatment. We can formulate our first hypothesis as following:

1. *The level of self-contempt is lower after the treatment when compared with the level before.*

It is expected that there is a link between the self-contempt and the symptoms. We assume that the treatment decreases the level of symptoms. We will confirm this in our preliminary analysis. As a form of rejecting anger, self-contempt is expected to be related with the BPD symptomatology. We want to explore if there is a link between the self-contempt before the treatment and the possible change in symptoms after treatment. We want to explore the level of self-contempt both as a predictor of outcome after therapy and as a potential mechanism of change.

We first want to explore self-criticism as a predictor of outcome after therapy. Self-contempt could be a predictor of good or bad outcome after therapy. We can formulate our second hypothesis as following:

2. *The level of self-contempt before the treatment is correlated with the change in symptoms after the treatment.*

It is also expected that the change in self-contempt after the treatment is linked with the change in symptoms after the treatment. We will explore the change in self-contempt as a possible mechanism of change leading to a better outcome after treatment. We can formulate our third hypothesis as following:

3. *The change in the level of self-contempt after the treatment is correlated with the change in symptoms after the treatment.*

As parts of manipulation-checks, data concerning arousal on the moment and problems in self-esteem are available. As shown in a previous study, it is expected that these two variables peak at the second time-point of the manipulation-check assessments (Kramer & Pascual-Leone, 2016). This will have to be verified in preliminary analysis. We hypothesize that there is a link between the peak in problems of self-esteem

and in arousal on the moment and the change in self-contempt. We can formulate our fourth hypothesis as following:

4. *The initial levels of arousal and problems of self-esteem at peak levels before treatment are correlated with the change in the level of self-contempt after treatment.*

We also assume that the brief treatment has an effect on these two variables. This will be verified in preliminary analysis. We expect that the possible decrease in these two variables is linked with the change in the level of self-contempt. We can formulate our fifth hypothesis as following:

5. *The changes in the levels of arousal and problems of self-esteem at peak level after treatment are correlated with the change in the level of self-contempt after treatment.*

Methodology

Data

This experimental study is set in the context of another study (Kramer et al., in press) and exploits data previously collected for it. All the patients included in this study accepted to have their data used for research and the trial was approved by the competent institutional ethics board.

Patients

8 female patients with a mean age of 23.1 (SD=2.6) were included in this experimental study. They all had Borderline Personality Disorder and were assessed by clinicians using the SCID-II (First et al., 2004). They had an average of 6.4 DSM-5 criteria of Borderline Personality Disorder and were not on medication during the 10 therapy sessions. Patients who were diagnosed with neurological disorders, bipolar disorder I or schizophrenia were excluded from the study.

Treatment

The treatment was administered by four board-certified therapists, three medical doctors and a psychologist, who each had two patients. All the therapists had had some training in “Good Psychiatric Management” following described guidelines (Keuroghlian et al., 2016). The treatment consisted in 10 therapy sessions following a manual adapted from the GPM over a 3-months period (Kolly et al., 2010).

Instruments

Self-contempt

A coding scheme developed specifically to measure the degree of self-contempt in the self-critical dialogue was used (Kramer & Pascual-Leone, 2014). The degree of self-contempt is graded on a 3-point Likert-type scale ranging from 0 (absent), over 1 (moderately present), to 2 (fully present). To code a "2", the self-critical content has to be considered an "insult" and can be accompanied or not by a non/para-verbal manifestation. To code a "1", there must be either a negative cognition accompanied by a non/para-verbal manifestation or two non/para-verbal manifestations in the absence of a verbal statement. The coding of a "0" is possible if there is an isolated negative cognition, an isolated non/para-verbal manifestation or none of the previous.

Symptoms

The Borderline Symptom List 23 (BSL-23) is a 23-items self-reported questionnaire assessing the Borderline Personality Disorder symptomatology (Bohus et al., 2009). It uses a 5-point Likert scale, ranging from 0 (absent) to 4 (always). A French version that was approved by the authors of the scale was used and was validated as having the same psychometric proprieties as the original version (Nicastro et al., 2016).

The Outcome-Questionnaire (OQ-45) is a 45-items self-reported questionnaire assessing the effects of psychotherapy treatment measuring the symptomatic level, interpersonal relationships and social role (Lambert et al., 2004). It uses a 4-point Likert scale, ranging from 1 (never) to 4 (always). A validated French version was used (Emond et al., 2004).

The Inventory of Interpersonal Problems (IIP) is a 127-items self-report questionnaire measuring the level of interpersonal problems (Horowitz, Rosenberg, Baer, Ureño, & Villaseñor, 1988). It uses a 5-point Likert scale, ranging from 0 (absent) to 4 (extremely).

The Zanarini Rating Scale for Borderline Personality Disorder (ZAN-BPD) is a 9-item clinician reported questionnaire designed to measure the change in the DSM-IV criteria for Borderline Personality Disorder (Zanarini et al., 2003). It uses a 5-point anchored-scale and measures affective, cognitive and relational problems as well as impulsivity.

Manipulation-checks

The State Self-Esteem Scale (SSES) is a self-report questionnaire measuring self-esteem on the moment (Heatherton & Polivy, 1991). It uses a 5-point Likert scale measuring 20 items. It was used to verify that the imagination task had the desired effect on the patient; that is to say the remembrance of a past failure that should have a negative impact on the state self-esteem of the patient (Kramer & Pascual-Leone, 2016).

The Self-Assessment Manikin (SAM) is a single-item self-reported questionnaire that measures the momentary arousal (Bradley & Lang, 1994). It uses a 9-point Likert scale, ranging from 1 (not excited at all) to 9 (very excited). It is used in this study to ensure that the patients where emotionally engaged in the task (Kramer & Pascual-Leone, 2016).

The Vividness of Visual Imagery Questionnaire (VVIQ) is a 16-item self-report questionnaire that measures the vividness of an imagery (Marks, 1973). It uses a 5-point Likert scale, ranging from 1 (not at all) to 5 (very vivid). It is used in this study to verify that the patient had had a sufficiently vivid mental re-enactment of one of his past failure experiences during the imagination task (Kramer & Pascual-Leone, 2016).

Assessments

Assessments took place before and after treatment. The assessment was based on a previous experimental study (Kramer & Pascual-Leone, 2016). The assessment was a “two-chair” dialogue divided into three sub-steps. During the first sub-step, the patient was asked to silently imagine a situation where he had been in a state of failure. He was given about five minutes for this task. The patient was then asked during the second sub-step to change chair and become the self-critical voice inside his head and to be self-critical about the previous imagined situation. The interviewer was encouraging the patients to be self-critical by starting phrases such as “I am..”. The patient then changed chair again during the third sub-step that involved commenting on his emotional response to the self-critical voice. These two last sub-steps were repeated twice during each assessment.

Manipulation checks were performed to ensure that each task had the desired effect on the patient. They took place before and after sub-step 1, and at the end of the assessment after sub-step 3. Two items were measured at each time point. These were the State Self-Esteem Scale (SSES) and the Self-Assessment Manikin (SAM) used here specifically to measure arousal. It is expected to see an intra-task increase in these

two variables after the imagination task (Kramer & Pascual-Leone, 2016). After the imagination task, a third manipulation check was used, the vividness of visual imagery (VVIQ).

Self-contempt coding

The coding of the self-contempt takes part during the second sub-step of the study, the "self-critical voice". Using a coding scheme previously created for this purpose (Kramer and Pascual-Leon, 2016), the self-contempt was coded on video-recorded sessions of the assessments before and after therapy. A total of 16 sessions, 2 per patient, were recorded. The entire sessions were available on video, but only the "self-critical voice" sub-step was used for the coding. The self-critical content was first reported second-by-second into an excel data-base, including the para-verbal content. Each reported self-critical content was then coded using the coding scheme. The level of self-contempt was then calculated in two different ways. A mean level of self-contempt was first calculated for each patient during each session. This mean level of self-contempt was weighted by the total number of coding, as the exact length of the self-critical part of the assessment was not exactly controlled. We also calculated the percentage of the coding "2" among the total number of coding for each patient during each session. This represents the amount of verbal insults among the entire self-critical content.

Symptoms

The level of symptoms was measured for each patient at the beginning and at the end of the treatment. Four different questionnaires were used, the BSL-23, the OQ-45, the IIP and the ZAN-BPD. Three were self-reported questionnaires and one was clinician-reported.

Results

Preliminary analysis

Inter-judge reliability for coding self-contempt

Inter-judge reliability for the coding of the self-contempt was assessed by calculating Pearson's correlation using an additional coding of the data by an expert. There was a total of n=162 coding. A correlation of r=0.88 was found, showing a high degree of correlation in the coding.

Symptoms

It is expected that the brief treatment is linked with the level of symptoms. A decrease in symptoms is expected after therapy. To verify this, we performed paired two-sample Student's t-test on the four different symptom scales available.

For the ZAN-BPD, we find a trend in reduction in the level of symptoms ($t(7)=1.897$, $p=.10$; $d=0.67$) without any statistical significance, but with a moderate effect size.

For the BSL-23, we find a trend in reduction in the level of symptoms ($t(7)=1.94$, $p=.09$; $d=0.69$) without any statistical significance, but with a moderate effect size.

For the OQ-45 we find a trend in reduction in the level of symptoms ($t(7)=1.87$, $p=.10$; $d=0.66$) without any statistical significance, but with a moderate effect size.

For the IIP, we find no reduction in the level of symptoms ($t(7)=0.002$, $p=0.99$; $d=0.00$).

With these results we can say that brief therapy may already have an effect on the level of symptoms. We can also see that interpersonal symptoms change the least among the symptoms measured.

Manipulation-check

It is expected that the level of arousal (SAM) and problems in self-esteem on the moment (SEQ) both peak after the imagination task.

Before treatment, we find a slight, but non-significant intra-task increase in SAM after the imagination task ($t(7)=-1.528$, $p=.17$, $d=0.36$), while the SAM at the end of the assessment is similar to the one at the beginning of the assessment ($t(6)=1.00$, $p=.356$, $d=0.19$).

After treatment, we find no intra-task increase in SAM ($t(7)=0.424$, $p=.685$, $d=0.10$), while the SAM at then end of the assessment is similar to the one at baseline ($t(7)=0.158$, $p=.879$, $d=0.05$).

Before treatment, we find a slight, but non-significant intra-task increase in SEQ ($t(7)=1.94$, $p=.093$, $d=0.33$), while the SEQ at the end of the assessment is similar to the one at baseline ($t(6)=0.33$, $p=.755$, $d=0.09$).

After treatment, we find no intra-task increase in SEQ ($t(7)=0.548$, $p=.60$, $d=0.08$), while the SEQ at the end of the assessment is similar to the one at baseline ($t(7)=0.081$, $p=.938$, $d=0.02$).

We can confirm that the arousal and problems in self-esteem both peak after the imagination task before the treatment, as predicted. But this is not the case after treatment. The imagination task seems to only have the expected effect on these two variables before the treatment.

It is expected that the brief therapy has an effect on the peak levels of arousal (SAM) and problems in self-esteem (SEQ). A decrease is expected.

The peak level of arousal decreases after treatment compared to before, with an almost large, albeit non-significant, effect size ($t(7)=1.42$, $p=.197$, $d=0.79$).

The peak level of problems in self-esteem decreases after treatment compared to before ($t(7)=2.18$, $p=0.065$, $d=0.53$).

With these results, although not statistically significant but with medium to large effect sizes, we can say that the brief treatment has an effect on the peak levels of arousal and problems in self-esteem.

Hypothesis 1

Our first hypothesis is that the level of self-contempt is lower after the 10 therapy sessions administered in between the two measures when compared to the level of self-contempt before. To verify our first hypothesis, we wanted to compare if the levels of self-contempt before and after the treatment were significantly different. To do so, we performed paired t-tests on different calculated levels of self-contempt. Because of the small sample, we also calculated the effect size.

We first used the weighted mean level of self-contempt, as described above. We find weighted means of $m1=0.066$ ($s=0,070$) before treatment and $m2=0.035$ ($s=0.037$) after treatment. There is a trend showing a lower weighted mean of the level of self-contempt during the second sessions. There is a non-significant difference with a medium effect size ($t(7)=1.52$, $p=0.173$; $d=0.5358$).

We also used the percentage of the coding “2” among the total of coding as another form of level of self-contempt. We find means of $m1=20.82$ ($s=27.46$) before treatment and $m2=14.21$ ($s=22.75$) after treatment. Once again, the trend shows a lower mean during the second session. There is a non-significant difference with a small effect size ($t(7)=1.24$, $p=0.256$; $d=0.4378$).

We can confirm with precautions our first hypothesis. There is indeed a trend showing that the level of self-contempt after therapy is lower than before, but with no statistical significance, though there is a small to medium effect size. The brief therapy has an effect on this aspect of the pathology.

Hypothesis 2

The second hypothesis that we make is that there may be a correlation between the initial level of self-contempt and the change in symptoms after therapy. To verify this hypothesis, Spearman's rank correlations were performed between the initial level of self-contempt variables and the change in symptoms after treatment variables.

The change in symptoms was obtained via four different scales, three of them being auto-evaluations. We used the ZAN-BPD, the OQ-45, the BSL-23 and the IIP. These measures where obtained before and after the 10 therapy sessions, and the change in each of them was calculated as the difference between the score the before the therapy sessions and after the 10 therapy sessions. The preliminary analysis showed a decrease in symptoms in the ZAN-BPD, the OQ-45 and the BSL-23, but not in the IIP. Therefore, the IIP scale will not be used in this hypothesis.

The change in BSL-23 is negatively correlated with the initial weighted mean with statistical significance ($r_s(6)=-.833$, p=0.010). There is a negative correlation with the initial percentage of the coding "2" without any statistical significance ($r_s(6)=-.330$, p=0.425).

The change in OQ-45 is negatively correlated with the initial weighted mean without any statistical significance ($r_s(6)=-.491$, p=0.217). There is a weak positive correlation with the initial percentage of the coding "2" ($r_s(6)=.147$, p=0.729).

The change in ZAN-BPD is negatively correlated with the initial weighted mean without statistical significance, but with a trend ($r_s(6)=-.687$, p=0.060). There is a negative correlation with the percentage of "2" without any statistical significance, but with a trend ($r_s(6)=-.642$, p=0.086).

These negative correlations imply that the higher the initial level of self-contempt, the more important the change in symptoms.

Hypothesis 3

The third hypothesis that we make is that the change in the level of self-contempt after treatment is correlated with the change in symptoms after treatment. To verify this hypothesis, Spearman's rank correlations were performed between the change in the level of self-contempt after treatment and the change in symptoms after treatment.

The difference in self-contempt before and after the 10 therapy sessions was calculated using the two previously described "means". The change in symptoms was again calculated using the three different scales being the ZAN-BPD, the OQ-45 and the BSL-23.

The change in BSL-23 is correlated with the change in the weighted mean with statistical significance ($r_s(6)=.881$, p=0.004). There is a statistically non-significant correlation with the change in percentage of the coding "2" ($r_s(6)=.583$, p=0.129).

The change in OQ-45 is correlated with the change in the weighted mean without any statistical significance ($r_s(6)=.599$, p=0.117). There is no correlation with the change in percentage of the coding "2" ($r_s(6)=-.057$, p=0.893).

The change in ZAN-BPD is correlated with the change in the weighted mean without any statistical significance ($r_s(6)=.422$, p=0.298). There is a correlation with the change in percentage of the coding "2" ($r_s(6)=.488$, p=0.220).

These mostly positive correlations between the changes in symptoms and in the level of self-contempt suggest that there is a link between these changes. The greater the change in self-contempt, the greater the change in symptoms.

Hypothesis 4

Our fourth hypothesis states that the initial peak in arousal (SAM) and problems in self-esteem (SEQ) are correlated with the change in self-contempt after treatment. Spearman's rank order correlations were performed to see if there was any relation between the SEQ and the SAM before treatment and the change in the level of self-contempt after treatment. The SEQ and SAM were measured before and after the 10 therapy sessions, as part of the manipulation checks, at the beginning of the assessment, after the

imagination task just before the two-chair dialogue task, and after the two-chair dialogue at the end of the assessment. As shown in the preliminary analysis, the SEQ and SAM both peaked after the imagination task before treatment.

The peak SEQ before treatment is negatively correlated with the change in the weighted mean with statistical significance ($r_s(6)=-.826$, p=0.011). There is a negative correlation with the change in percentage of the coding "2" without any statistical significance ($r_s(6)=-.561$, p=0.148).

The peak SAM before treatment is negatively correlated with the change in the weighted mean with statistical significance ($r_s(6)=-.783$, p=0.022). There is a negative correlation with the change in percentage of the coding "2" without any statistical significance ($r_s(6)=-.372$, p=0.364).

These results suggest that there is a link between the initial peak problems in self-esteem and arousal and the change in self-contempt. The greater the initial peak levels of problems in self-esteem and of arousal, the greater the change in self-contempt after treatment.

Hypothesis 5

Our fifth hypothesis states that the change in peak arousal and self-esteem after treatment is correlated with the change in the level of self-contempt after treatment. The preliminary analysis showed that the problems in self-esteem (SEQ) and level of arousal (SAM) did not peak as predicted after the imagination task after the treatment. We see a decrease in the predicted peak of these two variables after treatment. Therefore, we will try to link the change in the peak level and the change in the level of self-contempt. We ran Spearman's rank order correlations between the change in peak SEQ and peak SAM and the change in self-contempt after the 10 therapy sessions.

The change in peak SEQ after treatment is positively correlated with the change in the weighted mean without any statistical significance ($r_s(6)=.310$, p=0.456). There is a positive correlation with the change in percentage of the coding "2" without any statistical significance ($r_s(6)=.317$, p=0.444).

The change in peak SAM after treatment is positively correlated with the change in the weighted mean without any statistical significance ($r_s(6)=.527$, p=0.180). There is a positive correlation with the change in percentage of the coding "2" without any statistical significance ($r_s(6)=.472$, p=0.238).

These results suggest that there is a link between the change in the peak levels of problems in self-esteem and of arousal and the change in self-contempt after treatment. The greater the change in peak problems of self-esteem and in arousal, the greater the change in self-contempt.

Discussion

This study aimed at understanding to role of self-contempt in the BPD, how it evolves after treatment and its relationship with the symptomatology. The small sample size included in our study is a major limitation that does not allow us to draw firm conclusions. All of our findings will have to be reproduced in a larger sample in order to be confirmed. This small sample of 8 patients has led us to interpret both the p-value and the effect size. Given the small power of this study (N=8) and the number of different tests we have done on the data-set, we should have divided the alpha level of significance by the total amount of tests. This study being a pilot study, we have renounced to do this.

Concerning our first hypothesis, although not significant, the medium effect size let us cautiously say that there is a decrease after the brief treatment in the self-contempt expressed during the self-critical dialogue. There is also a decrease, reported with the same precautions, in insults among the self-critical content. With these results, we can confirm with caution our first hypothesis; the brief therapy is linked with a decrease in the level of self-contempt in BPD patients. We see here a decrease in rejecting anger that had not been specifically objectified before. While we have observed a decrease of rejecting anger over the treatment course, measured as self-contempt in the self-critical dialogue, we have not measured the potential increase or emergence of another emotion. Change in emotional processing implies that the patient transforms one emotion to another in order to resolve these maladaptive emotions. In our case this would mean that the rejecting anger is transformed into another emotion.

Our findings are in line with the literature concerning self-contempt in BPD patients. Self-contempt was expressed during the self-critical dialogue in all our patients in a high degree. The level of self-contempt and self-criticism was found to decrease after a two-chair dialogue intervention. In our case, we show that it can also decrease with psychotherapy.

Concerning the second hypothesis, the higher the initial level of self-contempt, the greater the decrease in symptoms after therapy. This means an initial high level of self-contempt may be a good predictor of

positive outcome after brief therapy. This could mean that the patients who express more self-contempt during the two-chair dialogue are the ones that are the more able to express it, and thus are more conscious of their self-criticism and more able to work through it. Self-criticism has been found to undermine the therapeutic relationship and could thus be an obstacle to good outcome after therapy (Whelton, Paulson, & Marusiak, 2007). In our study, self-contempt, that can be considered the "unhealthy" part of self-criticism, doesn't seem to be an obstacle to better outcome. Identifying BPD patients expressing high self-contempt could be an interesting way to select patients that will respond to brief therapy. The relationship between an initial high level of self-contempt and a better outcome can also be explained by a greater potential for change. The severity of symptoms before treatment has been shown to be a predictor of greater symptom outcome, without being just a statistical artefact (Barnicot et al., 2012). It is not possible to say if this is the case in our study, as it could also be explained by a statistical regression to the mean.

The only statistically significant correlation when considering self-contempt as a potential predictor of outcome is between the change in BSL-23, a self-reported questionnaire specific to the BPD, and the initial weighted mean of self-contempt. The correlations with the change in ZAN-BPD, the only clinician-reported questionnaire used in our study and also specific to the BPD, was on the edge of statistical significance. These differences can mean that the patient and clinician have different views about the symptomatology. The suggestive symptom change could be affected by the self-contempt. The change in the OQ-45 was only correlated with the initial weighted mean of self-contempt, but not with the percentage of the coded insults. The specificity of this aspect of self-contempt to the BPD and not to other psychiatric diseases could be an explanation. The OQ-45 was indeed not specifically created for the BPD. Being in a state of rage toward the self is maybe specific and more accountable for the symptomatology of this specific disorder.

Concerning our third hypothesis, the greater the change in self-contempt after treatment, the greater the change in symptoms. The change in self-contempt could be understood as a possible mechanism of change in the BPD. To explore this, a study with a larger sample will have to be conducted in order to see if this change in self-contempt has a mediating effect on the change in symptoms. The decrease in rejecting anger could be at the core of the decrease in symptoms, and thus its presence could be responsible for some of the symptoms. As self-contempt was found to be mediating the anger ruminations, a decrease in it can be a possible cause to reduced symptomatology (Kramer & Pascual-Leone, 2016). A better regulation of anger, and less maladaptive anger that is rejecting anger could directly account for a decrease in BPD

symptomatology. In parallel, the possible emergence of other more useful emotions, such as assertive anger, could explain the decrease in symptomatology. Less problematic self-criticism along with a more stable self-image could also explain the symptomatology decrease. The decrease in self-contempt could allow other aspects of the pathology to resolve.

Interestingly, the correlations between the change in self-contempt and the change in symptoms in the BPD specific scales are stronger with the self-reported questionnaire. The correlation between the change in the weighted mean of self-contempt and the change in BSL-23 is the only one with statistical significance. A bias from either one of the patients or the clinicians is possible. The patients may have a more subjective view than the clinicians. The decrease in self-contempt could lead the patients in having a more positive view about their situation and symptomatology.

Our fourth and fifth hypothesis were introduced in order to have a more in-depth understanding of the processes underlying the changes in self-contempt. With these behavioural data we have a more detailed view on what changes occur on an emotional level.

Concerning our fourth hypothesis, the greater the peak level of arousal and problems in self-esteem on the moment before treatment, the greater the change in the level of self-contempt after treatment. These two behavioural variables are strongly linked with the change in the weighted mean of self-contempt with statistical significance. Such a strong correlation can imply a very close process. It can also be that there is more place for change in patients showing more arousal and self-esteem problems before treatment. It can of course also be a statistical artefact, a simple regression to the mean.

Concerning our fifth hypothesis, the greater the change in peak level of arousal and problems in self-esteem on the moment, the greater the change in the level of self-contempt. This reveals a close process between emotional arousal, self-esteem and self-contempt. When the patients imagine a situation of past failure before treatment, we see an increase in arousal and problems in self-esteem leading to a high degree of self-contempt during the self-critical dialogue. After the brief therapy, we do not see this increase in arousal and problems in self-esteem after the imagination task, as shown in the preliminary analysis. The remembrance of a past failure does not have the same effect anymore. We can argue that this is the mechanism linked with the decrease in self-contempt. After the imagination task, the emotional arousal and the low self-esteem that were maybe leading to self-contempt are not present anymore. The situation

before treatment, where high arousal, low self-esteem and high self-contempt are present, can be paralleled with the path were a situation producing low self-esteem leads to primary maladaptive shame and then to secondary rejecting anger in a state of high arousal (Pascual-Leone et al., 2013). Not entering this pathological pathway by not reacting with low self-esteem when confronted with failure could explain why after treatment we see no increase in arousal and self-esteem after the imagination task and a decrease in self-contempt during the self-critical dialogue. Self-esteem was found to be linked with stronger emotional reactivity (Winter, Bohus, & Lis, 2017). A better emotional regulation could be the cause for such difference in behavioural reaction after the imagination task. Less emotional reactivity and more emotional regulation could account for the decrease in arousal and self-esteem problems.

Conclusion

This study has found that a brief therapy already has an effect on the level of rejecting anger, and more specifically self-contempt, in BPD patients. We have showed that a high level of self-contempt before treatment is associated with good outcome concerning the symptomatology and could thus be a possible predictor of good outcome. We have linked the decrease in self-contempt after treatment with the decrease in symptoms. We have set in evidence that emotional arousal and low self-esteem following an imagined situation of failure are closely related to the level of self-contempt shown in response.

Limitations of this study include a small sample. Only 8 patients were indeed included in this study. Given the size of the sample, it is evidently harder to find statistically significant results, but it is also riskier to extrapolate conclusions from the results. It is crucial to repeat the settings of this study with a larger sample in order to confirm our findings. As all our patients included are females, it is not possible to generalize our results to male BPD patients. The exploratory analysis conducted don't let us directly show causality between two variables. We can only draw conclusions in parallel with the theory, thus letting space for interpretation. Our study only includes two measures of the different variables, before and after treatment. Having more repeated measures in-between the assessments would have been interesting to better understand the mechanisms behind the decrease in self-contempt and symptoms. Having a control group would allow us to ensure that the self-critical dialogue task itself as well as passing time don't account for

some of the change measured, both in symptoms and self-contempt. Measures at different time-points after the end of the treatment would be useful to see if the brief treatment has an effect on the long term.

In our study we only measure rejecting anger when it is directed at the self. It would be interesting to see if the rejecting anger directed towards other people also decreases. While the experimental procedure to explore self-criticism encourages the patient to be self-critical, it doesn't allow us to see how critical and contemptuous the patient is in a spontaneous way in a non-experimental setting. As well as measuring rejecting anger, it would be interesting to measure other potential emerging emotions, such as assertive anger or self-compassion.

The results of our study can be translated into clinical implications in different ways. If self-contempt in the self-critical dialogue is in further studies shown to be a predictor of good outcome after brief therapy, it could be used to screen which patients could benefit the most of this therapy. A short two-chair dialogue could be used to do this in order to identify which patients will respond to this kind of brief therapy. If it is later shown that the change in self-contempt drives the change in symptoms, specific interventions, such as the two-chair dialogue, could be useful in targeting this specific part of the symptomatology.

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