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Research paper

The role of affect in predicting depressive symptomatology in remitted recurrently depressed patients☆

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ABSTRACT

Background: Major depressive disorder is an emotional disorder. It is important to improve our understanding of the role of affect in relapse/recurrence of depression. Therefore, this study examines whether affect plays a role in prospectively predicting depressive symptomatology and if there are indications for emotional scarring as a consequence of undergoing depressive episodes.

Methods: In 107 patients remitted from recurrent depression affect was examined in predicting depressive symptomatology as measured with the Inventory of Depressive Symptomatology – Self Report. Affect was measured with the Positive and Negative Affect Schedule and with a one item Visual Analogue Mood Scale. Indication of emotional scarring was examined by comparing number of previous depressive episodes to levels of affect.

Results: Less positive affect as assessed after remission predicted increased depressive symptomatology six months later, even after we controlled for baseline symptomatology. Negative affect also predicted depressive symptomatology six months later, but not after controlling for baseline depressive symptomatology. No relationship was found between affect and number of previous episodes.

Limitations: All participants in this study had two or more previous depressive episodes and received CBT during the acute phase of their depression. The instruments that measured mood and affect were administered within 4 weeks of each other.

Conclusions: Positive affect and negative affect as assessed after remission in recurrent depression can predict depressive symptomatology. Especially positive affect seems to play an independent role in predicting depressive symptomatology. Directly targeting positive affect in relapse prevention during remission might be a way to enhance treatment effects.

1. Introduction

Depression is the most disabling psychiatric disorder worldwide when measured in years lived with disability (Whiteford et al., 2013). According to epidemiological studies, the annual prevalence of major depressive disorder (MDD) in the general population varies from 4–6% (Dekker et al., 2008; Peen et al., 2007), and lifetime prevalence rates are estimated at more than 16% (Kessler et al., 2005). The large majority of individuals with MDD experience more than one episode, and the probability of another episode increases with each relapse or recurrence (Hardeveld et al., 2013; Solomon et al., 2000). The most well-known risk factors for relapse or recurrence are the number of previous episodes and residual symptoms after remission (Fava et al., 2004; Judd et al., 1998). Affect has also been linked to relapse and recurrence of MDD after remission, but it remains unclear whether differentiating between positive and negative affect is helpful in predicting relapse and recurrence (van Rijsbergen et al., 2012). Therefore, this study explored the role of positive affect and negative affect in predicting depressive symptomatology, and by doing so detecting easily assessable markers for relapse and recurrence.

Affect is an umbrella term as it covers both mood and emotion, it refers to valenced (good versus bad) states (Frijda, 1994; Gross, 2010). Mood is a type of affective state which reflects a feeling tone, it is diffuse, and global (Siemer, 2005). Sad mood is one of the key

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symptoms of a depressive episode, but also a risk factor for relapse and recurrence after remission (van Rijsbergen et al., 2012). Affect plays an important role in both the onset of depression and in the course of depression. Positive affect has a protective affect against the onset of depression, whereas negative affect can predict the onset of depressive symptoms up to ten years (Ames et al., 2015; Charles et al., 2013). Depressed patients respond better to treatment when they have more positive affect persistence at baseline and early improvement of positive affect during the first week predicts treatment response better than negative affect (Geschwind et al., 2011; Hohn et al., 2013).

Remitted depressed patients differ from never depressed patients on both positive affect and negative affect. O'Hara et al. (2014) showed that remitted previously depressed students experienced less positive affect than never depressed students when undergoing stress. This was in line with previous research that showed that remitted previously depressed students had more maladaptive responses on positive affect than never depressed students (Werner-Seidler et al., 2013). Negative affect fluctuations predicted depressive symptomatology in remitted previously depressed female patients (Wichers et al., 2010). Moreover, van Rijsbergen et al. (2012, 2015) found that negative affect, as measured by a simple one-item sad-mood scale in patients with two or more previous episodes, could predict recurrence of depression. To our knowledge, the results of van Rijsbergen et al. (2015) have not yet been replicated. Therefore, the current study explored whether affect as measured by a one item sad-mood scale could predict depressive symptomatology over a period of six months. Additionally, we differentiated between positive and negative affect in predicting depressive symptomatology to assess whether it is important to differentiate between the two.

The relationship between affect and the number of depressive episodes is largely unknown. To our knowledge, only one study has explored this. van Rijsbergen et al. (2015) found that remitted patients with more previous depressive episodes experienced higher levels of negative affect. This might be indicative of scarring, as a result of one or more previous major depressive episodes (MDEs). Scarring means that experiencing an episode of depression is considered to produce a change in underlying causal factors that increase the risk of future episodes (Bockting et al., 2015; Burcusa and Iacono, 2007). Although, given that there was no assessment before the first onset of depression, it might also be accounted for by individual differences in premorbid vulnerability. Suggesting that individuals at high risk for multiple episodes already possess certain characteristics before their first episode that make them prone to recurrent depression (Bockting et al., 2015).

This study examined, I) whether lower levels of positive affect, higher levels of negative affect and affect measured by a one item sad-mood scale can predict return of depressive symptomatology individually and combined over a period of six months, II) whether these results remain the same after controlling for baseline depressive symptomatology, III) whether specific affect items can predict depressive symptomatology over a period of six months, IV) whether a higher number of previous MDEs is associated with higher levels of negative affect, higher levels of sad mood and lower levels of positive affect.

2. Method

2.1. Design

This study uses data from a randomized controlled trial examining the effectiveness of Preventive Cognitive Therapy (PCT) in the prevention of relapse in recurrent depression (de Jonge et al., 2015). Patients received standard Acute Cognitive Therapy before entering the study. To prevent any interaction from the intervention, only the control group was used. When relapse or recurrence occurred during the course of the study, treatment was provided if necessary at one of our outpatient clinics. The study protocol was approved by the Medical Ethical Committee, Stichting Medische-Ethische Toetsingscommissie Instellingen Geestelijke Gezondheidszorg (METiGG), and all patients provided informed consent prior to participation. The trail was conducted in compliance with the Declaration of Helsinki (World Medical Association, 2013). More detailed information about the study can be found elsewhere (de Jonge et al., 2015).

2.2. Participants

Inclusion criteria were patients, a) who had at least two previous MDEs, b) who were currently in remission according to DSM-IV criteria, for at least two months as assessed by the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) (Spitzer et al., 1992), c) who had none too mild depressive symptoms defined as a current score of < 14 on the 17 item Hamilton Depression rating scale, d) who have received prior cognitive therapy, with a minimum of eight sessions, e) who are fluent in Dutch. Exclusion criteria were patients with, a) mania or hypomania, a history of bipolar illness or any psychotic disorder (current and previous), b) current alcohol or drugs misuse, c) acute predominant anxiety disorder.

2.3. Measures

2.3.1. Remission status and depressive symptomatology

Remission status was determined using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) (Spitzer et al., 1992). In addition, the severity of depressive symptomatology/level of residual symptoms was measured by using the Inventory of Depressive Symptomatology – Self Report (IDS-SR). The Dutch translation of the 30-item IDS-SR was used to assess levels of depressive symptomatology. The IDS-SR is a self-report measure on which patients rate their symptoms on a scale of zero to three. The IDS-SR rates all DSM-IV core symptom domains including mood, cognitive and psychomotor symptoms, but also commonly associated symptoms including anxiety. The IDS-SR has excellent psychometric properties with a Cronbach's alpha of .94 (Rush et al., 1996).

2.3.2. Previous MDEs

Number of previous MDEs was determined using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) and the life-chart (Spitzer etal., 1992). The assessments where done by trained assessors who attended regular consensus meetings to enhance inter-rater agreement.

2.3.3. Sad mood

Sad mood was assessed by a one item Visual Analogue Mood Scale (VAMS). Patients were asked to rate their current mood on a digital version of a Visual Analogue Mood Scale (VAMS) administered online (van Rijsbergen etal., 2012). Patients received the following instruction: 'please rate your current mood.' The scale consisted of a line, with 'happy' on the left side, and 'sad' on the right side. Patients rated their current mood state on the scale, therefore a higher score implied more current sad mood. The VAMS was used in previous research examining the effect of sad mood on relapse and recurrence (van Rijsbergen et al., 2012, 2015).

2.3.4. Positive affect and negative affect

Positive affect and negative affect were assessed by using the Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988). Patients were asked to rate their current mood on a 5 point Likert scale. The PANAS consist of 10 positive items that represent PA and 10 negative items that represent NA. PA consists of; enthusiastic, interested, determined, excited, inspired, alert, active, strong, proud and attentive. NA consists of; scared, afraid, upset, distressed, jittery, nervous, ashamed, guilty, irritable and hostile. The Dutch version was used, which has reasonable psychometric properties with a