

Metacognitive Therapy in Recurrent and Persistent Depression: A Multiple-Baseline Study of a New Treatment

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Abstract Metacognitive Therapy (MCT) for depression is a formulation-driven treatment grounded in the Wells and Matthews (*Attention and emotion: A clinical perspective*, 1994) self-regulatory model. Unlike traditional CBT it does not focus on challenging the content of depressive thoughts or on increasing mastery and pleasure. Instead it focuses on reducing unhelpful cognitive processes and facilitates metacognitive modes of processing. MCT enables patients to interrupt rumination, reduce unhelpful self-monitoring tendencies, and establish more adaptive styles of responding to thoughts and feelings. An important component of treatment is modification of positive and negative metacognitive beliefs about rumination. MCT was evaluated in 6–8 sessions of up to 1 h each across 4 patients with recurrent and/or chronic major depressive disorder. A non-concurrent multiple-baseline with follow-up at 3 and 6 months was used. Patients were randomly allocated to different length baselines and outcomes were assessed via self-report and assessor ratings. Treatment was associated with large and clinically significant improvements in depressive symptoms, rumination and metacognitive beliefs and gains were maintained over follow-up. The small number of cases limits

generalisability but continued evaluation of this new brief treatment is clearly indicated.

Keywords Depression · Metacognitive therapy · Metacognition · Rumination

Introduction

Cognitive-behavioral therapy is a recommended treatment for depression, with a large number of clinical trials supporting its efficacy (Butler et al. 2006; DeRubeis and Crits-Christoph 1998; National Institute of Clinical Excellence 2004). Recent studies have isolated and tested the effects of the behavioral components of CBT (e.g., Dimidjian et al. 2006) and suggest that these are as effective as treatment using both cognitive and behavioral techniques. Despite the success of CBT relative to other treatments, only approximately 40–58% of patients recover as assessed by the Beck Depression Inventory (e.g., Dimidjian et al. 2006; Gortner et al. 1998). Its long-term effectiveness requires improvement as only between one-third and one quarter of individuals receiving CBT remain recovered at 18 months (Roth and Fonagy 1996).

The high level of relapse has prompted some researchers to develop relapse prevention strategies as add-on techniques to CBT, as exemplified by mindfulness relapse prevention strategies (Teasdale et al. 2000). Preliminary indications are that for some individuals (those with more than 3 episodes of depression), such add-on strategies may reduce relapse rates (Teasdale et al. 2000). Of course this does not address the problem of a modest initial response rate to CBT and other treatments, or the problem of managing more severe or treatment-resistant cases. To this end we are attempting to develop briefer and more effective

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treatments. Our strategy is to focus treatment more specifically on particular psychological mechanisms that directly maintain depressive symptoms as specified by the metacognitive model.

The metacognitive model of emotional disorder (Wells and Matthews 1994, 1996) provides a basis for understanding the persistence and recurrence of depression. According to the model, the maintenance of disturbance is linked to the activation of a particular style of thinking called the Cognitive-Attentional Syndrome (CAS). This consists of repetitive thinking in the form of worry and rumination which is used as a means of coping with threat. It also consists of an attentional strategy of excessively focusing on sources of threat, which are often internal (e.g., thoughts, feelings). It includes coping behaviors (e.g., avoidance, thought suppression) that are unhelpful because they negatively influence the interpersonal environment and prevent the person from testing faulty beliefs.

Where does the CAS come from? According to Wells and Matthews (1994) it arises from the patient's beliefs, but these are not the beliefs emphasized in traditional CBT. Instead the CAS is a product of metacognitive beliefs, and two sub-types are important: (1) positive beliefs about rumination and threat monitoring (e.g., "I must ruminate in order to find an answer to my sadness", "If I analyse what is wrong with me I'll be able to prevent problems in the future"), and (2) negative beliefs about the uncontrollability and significance of thoughts and feelings (e.g., "My depressive thinking is uncontrollable", "Feeling sad is a sign of permanent illness in my brain"). Positive beliefs support the CAS in response to stress and mood changes, and the CAS in turn prolongs and deepens emotional disturbance. Furthermore, negative beliefs about the uncontrollability or threat of depressive experiences such as negative thinking patterns contribute to the persistence of rumination. In many cases the person lacks metacognitive awareness or appropriate knowledge to facilitate effective control. In such cases a recurrent vicious cycle of ruminative responses occurs that the person is unable to terminate. In summary, vulnerability to depression in the metacognitive model can be traced to the ease with which the patient activates the CAS in response to mood disturbances or stress. This in turn is linked to individual differences in metacognitive beliefs and the degree of flexible executive control over processing.

Consistent with the metacognitive model a large number of influential studies demonstrate reliable relationships between persistent negative thinking in the form of rumination and symptoms of depression in dysphoric subjects (Nolen-Hoeksema 1991; Nolen-Hoeksema et al. 1993). Rumination appears to prolong and worsen negative emotional responses to stressful events (e.g., Nolen-Hoeksema and Morrow 1991; Nolen-Hoeksema et al. 1994) and

predict the onset of depression even when controlling high and low cognitive risk (Just and Alloy 1997).

Predictions of the metacognitive model have been empirically evaluated (see Wells 2000 for review), and the goodness of fit of a clinical representation in depression tested (Papageorgiou and Wells 2003). Metacognitive profiling has demonstrated the presence of positive and negative beliefs about rumination in depressed patients (Papageorgiou and Wells 2001a). Furthermore, metacognitive belief domains correlate positively with depressive symptoms in non-patients and are elevated in depressed patient groups (Papageorgiou and Wells 2001b). The model is also supported by data from structural-equation modeling in depressed individuals and non-patient samples (Papageorgiou and Wells 2003).

Metacognitive therapy is grounded in the metacognitive model and aims to modify the CAS and the psychological factors giving rise to it. Initially, a treatment technique called Attention Training ATT (Wells 1990) was developed which was designed to reduce perseveration (worry/rumination), increase flexible control over attention and thinking processes, and promote metacognitive awareness. The results of preliminary studies were promising. ATT alone appears to produce significant clinical effects in different disorders including recurrent major depressive disorder (Papageorgiou and Wells 2000), panic and social phobia (Wells et al. 1997), and hypochondriasis (Papageorgiou and Wells 1998; Cavanagh and Franklin 2001). However, additional strategies are needed to reduce rumination. Papageorgiou and Wells (2000) reported that some of their patients had difficulty practicing ATT for homework. This was because they felt compelled to engage in ruminative thinking in response to depressive thoughts and sadness. Some individuals approach ATT homework with a view to completing it as quickly as possible so that they can return to the activity of rumination. The next step in developing and evaluating metacognitive therapy for depression was the addition of theoretically grounded techniques that increase compliance and directly modify erroneous metacognitive beliefs driving the ruminative response.

In addition to ATT, MCT for depression trains patients to (i) identify rumination and threat monitoring; (ii) challenge negative metacognitive beliefs about the uncontrollability and significance of depressive thoughts and feelings; and (iii) challenge positive metacognitive beliefs about the need to ruminate and engage in threat monitoring as a means of coping. The end point of treatment is conceptualized as enabling the patient to develop a new set of responses to negative thoughts and feelings that does not involve activation of the CAS. Metacognitive therapy has shown encouraging preliminary results in generalized anxiety disorder (Wells 1995; Wells and King 2006), social phobia (Wells and Papageorgiou 2001), obsessive-compulsive disorder

(Fisher and Wells 2007) and post-traumatic stress disorder (Wells and Sembi 2004), but a complete treatment package has not yet been tested in depression.

In some minor respects MCT resembles other recent attempts to improve on traditional CBT. In particular, Mindfulness Based Cognitive Therapy (MBCT: Segal et al. 2002), Acceptance and Commitment Therapy (ACT: Hayes et al. 1999), and MCT share a focus on reducing judgment and evaluation of personal experience. However, there are major differences in the way this is conceptualized and implemented. For example, MCT specifically aims to reduce the frequency of rumination and worry in response to negative thoughts, whilst MBCT advocates a wider focus on reducing judgment. In MCT some evaluation and judgment is desirable, such as challenging metacognitive beliefs that cause rumination, which is not a feature of MBCT. MCT differentiates between thoughts that should be left-alone and those that should be interrupted, however this is not a feature of MBCT. For example, MCT uses ‘detached mindfulness’ (Wells and Matthews 1994) which consists of a passive awareness of negative thoughts but discontinuation of worry, rumination and other coping responses linked to them. In contrast MBCT does not make such a distinction and also emphasizes coping responses such as breath-awareness, meditation or yoga. Whilst Attention Training is used in MCT for depression, this is not a coping technique that is applied in response to thoughts or emotions. It offers a general training strategy practiced only during a specified daily training period. The goal is not acceptance or greater awareness of the present moment but strengthening of executive control. MCT also eschews conventional CBT techniques, such as disputing automatic thoughts, which are retained in MBCT. MCT also incorporates verbal and behavioral techniques to modify metacognitive beliefs, such as rumination postponement experiments and verbal challenging of the advantages of rumination, which are found neither in MBCT nor ACT.

Method

Design

This case series employed a **non-concurrent multiple baseline (MB) design across participants** with follow-up (Watson and Workman 1981), to evaluate the effectiveness of metacognitive therapy (MCT) for depression. This design controls for potential confounds including maturation, exposure to the clinical setting, repeated testing and regression to the mean, increasing confidence that any observable changes are attributable to the intervention. Four patients were randomly assigned to predetermined

baseline lengths of 3–7 weeks; in this case series the baseline lengths randomly selected were 3, 5, 6, and 7 weeks. The plan was to initiate treatment at the designated time if the baseline was stable otherwise extension of the baseline was deemed to be necessary. Stability was defined as an absence of a decreasing trend of at least two consecutive data-points prior to introduction of treatment. Treatment was pre-planned to range from 6 to 8 sessions as this range had been found to be effective in pilot work. Following the screening assessment, patients were sent questionnaires on a weekly basis in order to monitor symptom levels. Overall stable trends in outcome measures were obtained in all cases so treatment was implemented at the predetermined time. Following the baseline period, MCT was delivered weekly, with each treatment session lasting no more than 1 h. After treatment, patients were followed up at 3 and 6 months, no additional treatment was delivered during the follow-up period.

Participants

Patients included in this study were the first four consecutively assessed individuals who met the following criteria: (1) primary diagnosis of a major depressive episode as determined by the Structured Clinical Interview for DSM-IV Axis I Disorders-Patient Edition (SCID-I/P; First et al. 1997), (2) aged 18–65, (3) absence of borderline personality disorder, (4) not in receipt of concurrent psychological treatment, (5) no cognitive behavior therapy in the 2 years preceding referral, (6) no evidence of a psychotic or organic illness and/or a medical or physical condition underlying depression, (7) medication free or stable on medication for at least 6 months (8) not actively suicidal, (9) no current substance abuse. These criteria were determined via independent assessments conducted by Adrian Wells and Peter Fisher.

Patient 1

Patient 1 was a 45-year-old married woman who reported that the current major depressive episode had lasted 3 years. She felt that she had experienced many depressive episodes since her early teenage years but was unable to estimate the number of prior episodes. In addition, she met criteria for dysthymia and had been taking Cipramil, 60 mg for over 2 years. Her only previous contact with the psychiatric services was 2–3 assessment sessions with a clinical psychologist.

Patient 2

Patient 2 was a 47-year-old single woman who reported difficulties with depression since her late teenage years.

The current depressive episode had lasted for 12 months and she had experienced numerous episodes of depression over the previous 3 decades. No concurrent or past Axis I disorders were elicited. Her current medication was Venlafaxine, 225 mg daily and she had received extensive counseling previously.

Patient 3

Patient 3 was a 35-year-old married woman who described being first treated for depression as a teenager, following a suicide attempt. Eight previous depressive episodes were reported and the current episode had lasted 8 months. In terms of comorbidity, she met diagnostic criteria for Generalized Anxiety Disorder and past alcohol abuse/dependence; she had been abstinent for approximately 2 years. At study intake, she was medication free, but she had been prescribed various antidepressants over the last 20 years.

Patient 4

Patient 4 was a 19-year-old female single student. A 3 year history of depression was reported with comorbid social phobia. She was taking 40 mg Fluoxetine daily and had seen a psychologist 2 years previously for depression and anxiety. She reported a single chronic episode of depression.

Outcome Measures

Hamilton Rating Scale for Depression-17 (HRSD-17, Hamilton 1960, 1967). The HRSD-17 is a widely used clinician rated measure in treatment outcome research that assesses the severity of depressive symptoms over the past week. Total score ranges from 0 to 52, with higher scores indicating greater severity of depressive symptoms.

Beck Depression Inventory (BDI; Beck et al. 1961). The BDI is 21-item scale designed to assess an individual's current level of depression. Each of the 21-items is scored on a 4-point scale with a maximum possible score of 63. The BDI is a reliable and well validated measure of depressive symptomatology, which is sensitive to treatment effects (Edwards et al. 1984).

Beck Anxiety Inventory (BAI; Beck et al. 1988). The BAI is a 21-item self report measure designed to reflect the severity of somatic and cognitive symptoms over the previous week. Items are scored on a 4-point scale (0–3) with a total score derived by summing the endorsed rating of each item, giving a range of 0–63. The BAI has been shown to have excellent psychometric properties.

Ruminative Response Scale (RRS; Nolen-Hoeksema and Morrow 1991). The RRS is a 22-item self report inventory designed to assess the tendency to ruminate in response to a depressed mood. The items focus on the meaning of rumination and thinking about feelings related to depressed mood, symptoms, consequences and its causes. Items are scored on a 4-point Likert scale from 1 (almost never) to 4 (almost always), and overall scores range from 22 to 88. It has high internal consistency, with Cronbach's alpha ranging from 0.88 to 0.92 (see Luminet 2004, for review), and a test-retest correlation of 0.67 over 12 months (Nolen-Hoeksema et al. 1999).

Positive Beliefs about Rumination Scale (PBRs; Papageorgiou and Wells 2001a, b). The PBRs is a 9-item self-report scale that assesses positive metacognitive beliefs about rumination. Items tap beliefs such as "I need to ruminate about my problems in order to find answers to my depression". All items are scored on a 4-point rating scale, ranging from 1 (do not agree) to 4 (agree very much). Scores range from 9 to 36, with higher scores indicating the conviction with which individuals hold positive metacognitive beliefs. This measure has high internal consistency with a Cronbach alpha of 0.89 and convergent, discriminant, and concurrent validity have been demonstrated (Papageorgiou and Wells 2001a, b).

Negative Beliefs about Rumination Scale (NBRS; Papageorgiou et al. in prep). The NBRS is a 13-item self report inventory designed to assess negative metacognitive beliefs about rumination. Factor analysis of the NBRS revealed 2 factors. The first measures beliefs about the uncontrollability and harmful nature of rumination (NBRS1), for example; "Ruminating about my problems is uncontrollable". The second measures beliefs about the social and interpersonal consequences of ruminating (NBRS2), for example; "people will reject me if I ruminate". Respondents are asked to endorse the extent to which they believe each statement on a 1–4 scale (1 = do not agree, to 4 = agree very much). Total scores are derived by summing each of the items giving a range of 13–52. Preliminary validation of this measure indicates good internal consistency, test-retest reliability and convergent and concurrent validity (Papageorgiou et al. in prep). Cronbach alphas for NBRS1 and NBRS2 were 0.80 and 0.83.

Metacognitions Questionnaire-30 (MCQ-30; Wells and Cartwright-Hatton 2004). The MCQ-30 is a self report questionnaire that assesses a number of aspects of metacognition. It has 5 subscales (1) positive beliefs about worry, (2) negative beliefs about thoughts relating to uncontrollability and danger, (3) cognitive confidence, (4), beliefs about the need to control thoughts, and (5) cognitive self-consciousness (i.e., directing attention to one's thought processes). Each item is scored on a 4-point Likert scale

ranging from 1 (do not agree) to 4 (agree very much). Total scores range from 30 to 120, with subscale scores of 6–24. The MCQ-30 has good psychometric properties (Wells and Cartwright-Hatton 2004). For purposes of this study we were particularly interested in the cognitive self-consciousness subscale, as this can be viewed as an index of unhelpful monitoring of internal mental events (i.e., threat monitoring in depression). The Cronbach alpha for this subscale is reported to be 0.92.

Weekly Measure of Rumination. A self rating scale was constructed to assess 4 dimensions of rumination; (1) time spent ruminating, (2) degree of life interference from rumination, (3) perceived levels of uncontrollability of rumination, (4) distress associated with rumination. All dimensions were rated for the past week on 0–100 scales. The psychometric properties of this instrument have not been evaluated.

Procedure

Assessment

Patients referred to the local clinical psychology service by their GP or psychiatrist for treatment of depression were invited to attend an assessment interview for possible participation in the current treatment study. All patients were assessed independently by Adrian Wells and Peter Fisher who each administered the Structured Clinical Interview for DSM-IV (SCID) and checked the study's inclusion/exclusion criteria. Agreement in diagnosis was found in all 4 cases and subsequently consent was obtained and all self report measures were administered at this initial assessment. Weekly ratings were taken of the BDI, BAI and the weekly measure of rumination over the baseline period. The self-report questionnaires were sent by post and patients returned each completed set on a week by week basis. Once the predetermined baseline length was reached, a post-baseline assessment was conducted, which involved administration of all clinician rated and self-report measures. During treatment, the BAI, BDI, and weekly measure of rumination were completed at the beginning of each session. A complete set of questionnaires and interviewer-rated measures were administered at post-treatment, and at the 3 and 6 months follow-up. The SCID and the HRSD17 was administered at pre-treatment, post-treatment and at follow-up by Adrian Wells who acted as assessor. Adrian Wells has received training in use of both the SCID and HRSD17.

Treatment

MCT consisted of 6–8 weekly sessions of 45–60 min duration, (total treatment time ranged from 4 to 7.5 h).

Within this range treatment was ended when therapist and patient agreed. Treatment followed the treatment as set out in two sources: a chapter (Wells and Papageorgiou 2004), and a treatment manual (see Wells 2008) which acted as the main session by session manual.

In the first treatment session an idiosyncratic case formulation based on the metacognitive model of depression was presented to each patient. Socialization to the model followed, which emphasized how rumination and a high level of self focus (e.g., focusing on negative thoughts and feelings) maintain depression. At the end of the first treatment session, attention training (ATT) was introduced as a method of counteracting excessive self-focus and to help the patients switch to a metacognitive mode of processing. ATT is an auditory attention task and consists of three stages, selective attention, attention switching and divided attention. The task takes approximately 10 min and once practiced in session, patients were asked to implement ATT daily as a homework assignment. In-session practice of ATT was given throughout treatment.

In the next 3 sessions, treatment focused on careful identification of rumination and modifying positive and negative beliefs about it. Verbal reattribution strategies were used to modify negative beliefs concerning the uncontrollable nature of rumination. This was followed by training patients in 'detached mindfulness' (Wells and Matthews 1994; Wells 2005) coupled with rumination postponement experiments which challenge the belief that rumination is uncontrollable. Patients are asked whether they have ever chosen to notice their negative thoughts and not engage with them. In this context engagement means, rumination, analysis of the thought, cognitive avoidance or any form of further processing of the thought. Several strategies are used in session to clearly convey the concept of 'Detached Mindfulness'. One strategy is a free-association task in which the therapist reads aloud a series of everyday words and asks the patient to passively observe what happens in their mind. Subsequently, patients were encouraged to use detached mindfulness in response to negative thoughts that previously trigger rumination. Patients may still be motivated to use rumination as a coping strategy if positive beliefs about rumination remain. To counteract positive beliefs an analysis of the advantages and disadvantages of rumination was undertaken to demonstrate that rumination maintains depression and is not an effective method of coping.

The final two treatment sessions focused on relapse prevention and further modification of positive and negative metacognitive beliefs which included erroneous beliefs about the recurrence of emotion and deviations in mood. Relapse prevention involved the development of a therapy-blueprint which includes a written and diagrammatic formulation of the metacognitive model of depression. A

Table 1 Descriptive statistics on the main outcome measures across the 4 cases at pre-treatment, post-treatment and follow-up

Measure	Pre-treatment		Post-treatment		3 months follow-up		6 months follow-up	
	M	SD	M	SD	M	SD	M	SD
BDI	24.30	5.77	6.50	3.87	5.00	4.10	7.50	6.45
HRSD-17	20.63	6.63	2.50	2.10	4.50	4.20	3.30	3.77
BAI	13.15	9.24	1.75	2.10	5.75	6.90	6.50	7.00
Rumination-time	74.80	6.40	12.50	5.00	12.50	5.00	8.80	8.54
Rumination-uncontrollability	70.31	10.68	12.50	12.58	5.00	5.77	3.75	4.79
Rumination-distress	61.37	11.73	12.50	12.58	5.00	5.77	6.25	9.46
Rumination-interference	60.69	7.04	7.50	9.57	7.50	5.00	3.75	4.79

Note: descriptives for uncontrollability and distress at post-treatment and 3 months follow-up are the same—not in error

detailed account of the main therapeutic strategies used during treatment was also provided, along with a specific plan for the patient to implement in guiding their thinking and behavioral style in responses to future negative moods. Patients were encouraged to implement these strategies to maintain and strengthen the gains made over the course of treatment.

Training

All patients were treated by Peter Fisher who received appropriate training and ongoing supervision in MCT from Adrian Wells. Weekly supervision was provided throughout the duration of the case series, and the content of each treatment session was reviewed to ensure that it followed the protocol.

Data Analysis

The main aim of single case research is to determine if there is a clear treatment effect following the introduction of the intervention. Accordingly, visual examination of graphed data provides a stringent test of the treatment effect as only unambiguous effects will be apparent (Parsonson and Baer 1992). Therefore, session by session scores across baseline, treatment and follow-up on the BDI and time spent ruminating are illustrated. In addition, pre-treatment (mean of baseline scores) post-treatment and follow up scores on standardized measures for each of the 4 patients are presented in Table 1.

Results

Each patient’s score on the Beck Depression Inventory (BDI) and time spent ruminating during the baseline, treatment and follow-up phases are illustrated in Fig. 1. It

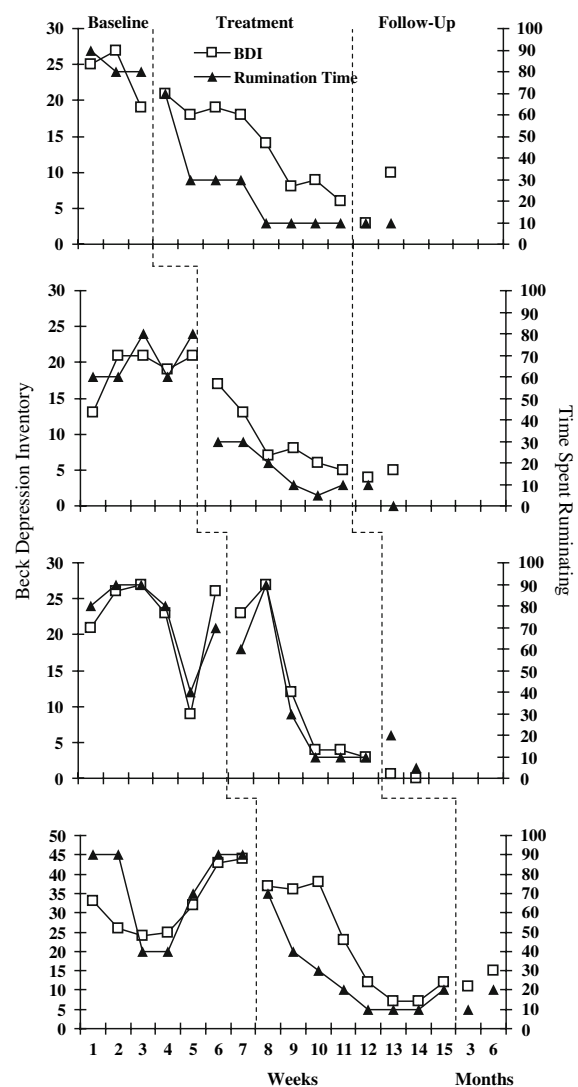
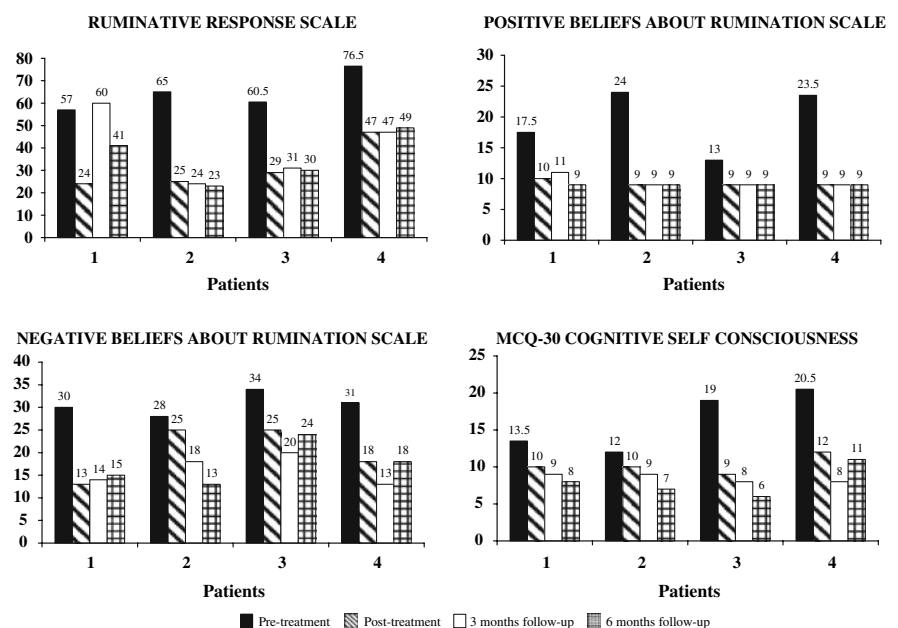


Fig. 1 Scores on the Beck depression inventory (left y-axis) and percentage of time spent ruminating over the previous week (right y-axis) across baseline, metacognitive therapy, and follow-up for each participant

can be seen in this MB design that the staggered baselines were 3, 5, 6, and 7 weeks. All patients showed stability in rumination across the baseline phase and only changed with the introduction of treatment, when rapid and substantial reductions in time spent ruminating can be observed. Three patients showed stability in the BDI during baseline with no sustained decreasing trend. However, as Fig. 1 illustrates patient 1 showed a single decrease in BDI at the end of baseline necessitating caution in the interpretation of this measure in this case. Gains made during treatment were maintained through to the 6 months follow-up point, with all patients having lower BDI scores at 6 months compared to baseline. Scores on the HRSD-17 (Table 1) confirm substantial reductions in depressive symptoms, which were maintained at 3 and 6 months follow-up assessments.

Each patients' pre-treatment, post treatment and follow-up scores on the RRS, PBRS, NBRS and the cognitive self-consciousness subscale of the MCQ are illustrated in Fig. 2. In each case, post-treatment and follow-up scores were substantially lower than pre-treatment on all measures. These data are consistent with effects of MCT on underlying thinking style (rumination) adding support to findings from the weekly ratings of rumination. In addition these changes support the effects of treatment on metacognitions. Both positive and negative metacognitive beliefs decreased substantially during treatment, and the unhelpful attentional style of focusing excessively on thoughts also decreased. These results are consistent with the hypothesized effect of MCT on underlying metacognitive and process-related variables. In each case treatment gains appear to be maintained across the post-treatment follow-up interval.

Fig. 2 Scores on standardized measures at pre-treatment, post-treatment and follow-up for each patient



At the end of treatment and at each follow-up none of the patients met diagnostic criteria for major depressive disorder, as determined by assessor administered SCID. Change in co-morbid axis I disorders was also assessed. One patient had social phobia, one had dysthymic disorder, and the other generalized anxiety at pre-treatment. At 3 and 6 months follow-up the patient with dysthymic disorder no longer met this diagnosis. The patient with GAD no longer met GAD criteria at 6 months follow-up. The patient with social phobia did not meet criteria for this disorder at post-treatment but did at 3 and 6 months follow-up. Medication status changed in one case, as patient 4 decided that she wanted to discontinue medication between the 3 and 6 months follow-up. There were no other medication changes during treatment or follow-up.

Clinically Significant Change

Jacobson methodology (Jacobson et al. 1999) for determining clinically significant change was applied to the patients BDI scores. At post-treatment and at 3 months follow-up, all 4 patients met Segger et al. (2002) standardized recovery criteria (cut-off point = 14, reliable change index = 8.46) on the BDI. Patient 4 fell just outside the cut-off point at 6 months follow-up with a BDI score of 15 so failed to meet the recovery criteria, but continued to show reliable improvement. The other 3 patients remained recovered at 6 months follow-up. A more stringent method of defining recovery is a two fold criterion whereby patients must no longer meet diagnostic criteria and score ≤ 8 on the BDI (Frank et al. 1991). Patients are therefore defined as improved if they no longer meet diagnostic criteria at post-treatment, but have BDI

scores >8. At post-treatment and at both follow-up points, none of the patients met diagnostic criteria for Major Depressive Disorder, therefore all patients had improved at all time points. In addition, 3 patients were recovered at post-treatment and at 3 months follow-up, with 2 patients continuing to meet the twofold criterion at 6 months follow-up.

Remission and Recovery Based on HRSD17

A commonly used criterion for establishing remission is a score of ≤ 7 on HRSD17 (Rush et al. 2006). The ACNP task force specify 3 consecutive weeks meeting this criterion to define remission. Although we do not have 3 consecutive weekly measures taken using the HRSD17, we can apply the cut-off more permissively to our end of treatment, 3 and 6 months follow-up assessments. This gives 4 patients (100%) in remission at post treatment, 3 patients (75%) in remission at 3 months, and 4 patients (100%) in remission at 6 months. Rush et al. (2006) define recovery as 4 months with a HRSD17 score of ≤ 7 when patients are assessed every 2-weeks. Applying a more permissive version of this criterion to our three data-points spanning post treatment and follow-up, 3 out of 4 patients (75%) appear to show consistent remission and may reasonably be assumed to be recovered.

Discussion

The results of this study are encouraging and suggest that MCT might be an effective brief treatment for depression. The results support the idea that MCT could act on underlying cognitive style (rumination and cognitive self-consciousness) and metacognitive beliefs that are implicated in the cause and maintenance of depression. The outcome provides support for the continued evaluation of MCT. Moreover the cases treated presented with recurrent or persistent depression, and in three cases taking psychotropic medication there was evidence of non-responsiveness to the pharmacological treatment. Cases like this often have a poor prognosis in CBT but they each improved markedly during MCT. For example, Coffman et al. (2007) characterized treatment non-responders as severely depressed on self-report and suffering from lifelong depression. In comparison, the patients in the present case-series had moderate to severe depression assessed by the BDI and three out of four had lifelong depressions that had started in teenage years. These patients were now aged 35–47 years. In the remaining case depression had lasted for 3 years.

Overall the treatment was well tolerated and none of the patients reported a worsening of symptoms or distress

during the course of treatment. In addition treatment was short and could be delivered in 6–8 sessions. We did not encounter the difficulties in compliance with ATT practice reported in earlier work. Furthermore, homework consisted of a wider range of strategies other than ATT providing greater opportunity to target specific factors. We demonstrated for the first time that treatment was associated with the desired effect on measures of metacognitive beliefs about rumination.

Despite the encouraging results, this study is based on only four cases which limit inferences about the generalisability of treatment effects. Whilst the multiple baseline design controls for effects such as time, we are unable to partial-out the effects specifically due to metacognitive treatment techniques as opposed to non-specific factors. Patients did not have therapist contact during the baseline and so we cannot determine the extent to which results reflect the efficacy of treatment or this non-specific factor. The use of only one therapist means that it is not possible to determine the influence of therapist factors such as skill level. Whilst adherence to treatment was monitored throughout supervision there was no formal assessment of adherence to the treatment manual which is a limitation of the present case-series. The assessor was not blind to the presence or absence of treatment which may have influenced the assessor ratings. Finally, we do not know the impact that therapist expectations might have had on rumination measures as the measures have not been validated in this regard.

Despite these limitations, consistent with the strategy of targeting treatment more specifically on maintaining processes as implicated in the metacognitive model, MCT was associated with substantial improvements in depression symptoms measured by self-report and assessor ratings. Moreover, these effects occurred in a short period of time. MCT appears to produce changes in underlying causal mechanisms and processes that are important in the model from which it is derived. In view of these encouraging results larger studies and controlled evaluations of the potential effects of MCT in single episode and more complex depression are clearly indicated.

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