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Metacognitive therapy for generalized anxiety disorder: An open trial

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Abstract

Generalized anxiety disorder (GAD) responds only modestly to existing cognitive-behavioural treatments. This study investigated a new treatment based on an empirically supported metacognitive model [Wells, (1995). Metacognition and worry: A cognitive model of generalized anxiety disorder. *Behavioural and Cognitive Psychotherapy*, 23, 301–320; Wells, (1997). *Cognitive therapy of anxiety disorders: A practice manual and conceptual guide*. Chichester, UK: Wiley]. Ten consecutive patients fulfilling DSM-IV criteria for GAD were assessed before and after metacognitive therapy, and at 6, and 12-month follow-up. Patients were significantly improved at post-treatment, with large improvements in worry, anxiety, and depression (ESs ranging from 1.04–2.78). In all but one case these were lasting changes. Recovery rates were 87.5% at post treatment and 75% at 6 and 12 months. The treatment appears promising and controlled evaluation is clearly indicated.

Keywords: Generalized anxiety disorder; Cognitive therapy; Worry; Metacognition; Trait anxiety

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1. Introduction

Generalized anxiety disorder (GAD) appears moderately responsive to cognitive-behavioural treatments (e.g. Durham & Allan, 1993). In a reanalysis of data from six CBT outcome studies, Fisher and Durham (1999) reported a recovery rate across all treatments of 40% overall based on trait-anxiety scores (Speilberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). Two treatments, applied relaxation (AR) and individual cognitive behaviour therapy (CBT), did best with recovery rates at post treatment of 17–59% for AR and 26–71% for CBT. At 6-month follow-up one particular study (Borkovec & Costello, 1993) obtained a recovery rate for AR of 81%.

In two more recent studies, AR appeared less effective (Arntz, 2003; Ost & Breitholtz, 2000). Ost and Brietholtz obtained small improvements in trait anxiety following AR. Arntz (2003) compared cognitive therapy with applied relaxation. At post treatment he reported that 35% of cognitive therapy patients and 44.4% of applied relaxation patients were recovered. At 6-month follow-up this had increased to 55% of cognitive therapy patients and 53.3% of applied relaxation patients on the basis of the trait-anxiety scale.

These data show that the outcomes for AR and CBT show considerable variability, and there is a need for more effective treatments. Recent attempts to improve treatment have combined these treatment elements, and increased the amount of therapy delivered (e.g. Borkovec, Newman, Pincus, & Lytle, 2002; Durham et al., 2004). However, so far treatment outcomes have not improved.

Progress might be made by basing treatment on a model of the mechanisms and factors underlying pathological worry, the hallmark of this disorder. The present study reports an initial evaluation of a new form of cognitive therapy (metacognitive therapy (MCT): Wells, 1995, 1997) that is based on a specific model of GAD. Furthermore, it aims to assess the impact of the treatment on multiple dimensions of worry.

The metacognitive model (Wells, 1995, 1997) asserts that individuals with GAD, like most people, hold positive beliefs about worrying as an effective means of dealing with threat. However, worry is used as an inflexible means of coping, and this becomes a problem when negative beliefs concerning the uncontrollability and the dangers of worrying develop, leading to unhelpful control strategies.

In this model two broad subtypes of worry are distinguished called type 1 and type 2 worry. Type 1 refers to worry about external events and physical symptoms, and can be distinguished from type 2, which concerns negative appraisals of worrying. Essentially type 2 worry is worry about worrying. In the model worrying is used as a means of coping with threat. It persists until the individual achieves an internal/external signal that signifies that it is safe to stop worrying or until the person is distracted from the activity. During the development GAD negative appraisals of worrying and associated negative beliefs about worry develop. Two domains of negative belief/appraisals are important and concern (1) the uncontrollability of worrying, and (2) its dangerous consequences for physical, psychological, and social functioning. When negative metacognitions of this kind develop, the person

experiences an elevation in distress and worry. The co-existence of positive and negative beliefs about worrying lead to unhelpful vacillation in attempts to avoid and engage in worry, and the use of unhelpful mental regulation strategies such as reassurance seeking and thought suppression. Such strategies when they are successful prevent the person from discovering that worrying does not lead to catastrophe. Some strategies do not work and reinforce beliefs in loss of control. For example, attempting to suppress thoughts that trigger worry can backfire and increase preoccupation with these thoughts. Strategies such as seeking reassurance do not allow the person to unambiguously discover that worrying can be controlled by the self. It follows from this model that successful treatment of GAD should focus on modifying several metacognitive factors, including counterproductive thought control strategies, erroneous beliefs about the uncontrollability of worry, negative beliefs about the danger of worrying, and positive beliefs that support the over-reliance on worrying as a coping strategy.

2. Method

2.1. Participants and design

Patients were drawn from consecutive referrals made by general practitioners and psychiatrists to two NHS clinical psychology departments. Diagnosis was established using the structured clinical interview for DSM-IV. Patients were included if GAD was their primary problem. Patients who had received previous cognitive-behavioural treatment for GAD were excluded. Ten patients were recruited, six of these were female and four were male, and the ages of subjects ranged from 25 to 76 years. None of the patients were currently taking psychotropic medication (two patients had previously taken benzodiazepines, and four patients had previously used medications that they were unable to specify). One of the patients was a student and four were professional workers, employed in white-collar work. The remaining five patients were retired or unemployed.

The duration of GAD ranged from 2 to 60 years. Fifty per cent of patients had a single diagnosis of GAD, and 50% had additional diagnoses. Three patients (30%) met criteria for additional major depressive disorder, one patient (10%) met criteria for social phobia, and one patient (10%) had depression not otherwise specified and social phobia. We did not screen for axis II disorders. Once the presence of DSM-IV GAD was established using the SCID, patients were asked: "If treatment was successful in alleviating your worry and associated anxiety would you require treatment for any other problems?" If patients responded "No" they were included in the study. Only one patient was excluded on this basis.

2.2. Measures

The following outcome measures were completed at the beginning and end of baseline, end of treatment and at follow-up: Beck anxiety inventory (BAI; Beck,

Epstein, Brown, & Steer, 1988), Beck depression inventory BDI (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), trait-anxiety subscale of the state trait-anxiety inventory (Speilberger et al., 1983), and anxious thoughts inventory (AnTI: Wells, 1994, 2000). The AnTI is a multidimensional measure of proneness to subtypes of worry. It has three subscales: social worry, health worry, and meta-worry (worry about worry).

Patients received individual weekly sessions of metacognitive therapy (MCT) of 45–60 min duration. Homework was a component of treatment, and treatment followed the manual by Wells (1997, pp. 200–235).

3. Results

We had initially aimed to offer 4–12 treatment sessions, since this was the range effective in previous work. However, the minimum number of sessions received by one patient was three. This patient reported significant improvement in symptoms after the third session, and she requested treatment termination prior to attending session 4. Therefore, the range of treatment sessions offered was 3–12. Two patients returned incomplete trait-anxiety measures at pre-treatment and so pre-treatment data on this measure are missing for these two cases; consequently all analysis of trait-anxiety scores is based on the remaining eight cases.

Examination of pre-treatment scores shows that the patients in this trial had marginally lower mean trait-anxiety scores than those reported by Borkovec et al. (2002). However, trait-anxiety levels were similar to the levels reported by Ost and Breitholtz (2000) and Arntz (2003) in their applied relaxation treatment conditions, and by Borkovec and Costello (1993) in CBT. Furthermore, pre-treatment worry scores assessed by the AnTI in the present study were similar to those reported by Durham et al. (2004) in their treatment study. Thus, the current sample appears to consist of patients comparable with patients treated in other trials.

All patients improved during the course of treatment. Table 1 presents mean scores on each outcome measure at pre-treatment, post-treatment, and at follow-up. Paired samples *t*-tests showed significant improvements in all measures at post-treatment, and gains remained significant at follow-up assessments.

Post-treatment effect sizes (Cohen's *d*, 1977: M1–M2/sd M1) were very large: BAI = 1.82, trait-anxiety = 2.78, meta-worry = 1.47,social worry = 1.13, health worry = 1.12, BDI = 1.41. At 6 and 12-month follow-up the *E*s were: BAI = 1.63, 1.69, trait-anxiety = 2.46, 2.58, meta-worry = 1.30, 1.61, social worry = 1.10, 1.11, health worry = 1.12, 1.04, BDI = 1.22, 1.28.

Of particular theoretical interest, the results appear to show that treatment directed specifically at modifying metacognitions leads to substantial decreases in all dimensions of worry (social and health), as well as worry about worry (meta-worry).

Treatment also seems to have significantly impacted on the more somatic manifestations of anxiety as indexed by scores on the BAI. Similar effects were observed for depressed mood (BDI).

Table 1
Means, standard deviations and t statistics for outcome measures at pre-treatment (Pre), post-treatment (Post), and follow-up assessments

Measure	Pre		Post		Follow-up				t-values					
					6-month		12-month		Pre/Post		Pre/6 m		Pre/12 m	
	M	(SD)	M	(SD)	M	(SD)	M	(SD)	t	p	t	p	t	p
BAI	21.00	(9.67)	3.40	(4.12)	5.20	(5.16)	4.70	(5.29)	6.14	<0.0005	4.30	0.002	4.38	0.002
AnTI-S	19.60	(6.20)	12.60	(4.33)	12.80	(3.82)	12.70	(4.03)	5.22	0.001	5.42	<0.0005	4.08	0.003
AnTI-H	12.10	(3.57)	8.10	(1.79)	8.10	(1.91)	8.40	(2.80)	3.83	0.004	4.00	0.003	2.68	0.03
AnTI-M	18.10	(5.09)	10.60	(3.10)	11.50	(3.21)	9.90	(2.92)	6.83	<0.0005	4.94	0.001	4.92	0.001
BDI	13.90	(7.72)	3.00	(3.59)	4.50	(4.90)	4.00	(5.23)	6.87	<0.0005	4.09	0.003	4.31	0.002
STAI-T	52.50	(7.07)	32.88	(6.64)	35.13	(12.36)	34.29	(14.38)	5.37	0.001	3.94	0.006	3.42	0.01

Note: BAI = Beck anxiety inventory; AnTI = anxious thoughts inventory; (S = Social worry, H = health worry; M = meta-worry), BDI = Beck depression inventory; STAI-T = trait anxiety.

The mean improvement in trait-anxiety at post-treatment was 19.63. Fisher and Durham (1999) used Jacobsen criteria for defining clinically significant change parameters in trait-anxiety. Using these criteria it is possible to classify patients as worse, improved, or recovered. From the eight patients who returned unspoiled STAI-T scales, 87.5% of patients met criteria for recovery at post-treatment and all of them met the criterion of clinically significant improvement. At 6-month follow-up one patient's STAI-T score had returned to pre-treatment levels whilst the scores of each of the other patients retained the recovery status. Thus, 75% of patients remained recovered at 6 and 12-month follow-up. These results compare well against the six CBT trials analyzed by Fisher and Durham (1999) in which a recovery rate of 40% was found for the sample overall at 6-month follow-up, and for the best examples involving individual applied relaxation or cognitive-behaviour therapy this was 81% and 65%, respectively. More recent studies have produced lower figures (Arntz, 2003; Durham et al., 2004).

4. Discussion

All patients were improved on self-report measures at post-treatment, and effects were maintained at follow-up in all but one case. The degree of improvement across measures suggests that treatment was highly effective. The range of sessions offered was 3–12 with a mean of 7.4, suggesting that MCT is economical to use.

Effect sizes were very large at post-treatment and at follow-up. The effect sizes were larger than those typically obtained in evaluations of treatment for GAD. Similarly, recovery rates appeared much higher at post-treatment (87.5%) than obtained in each of the six studies analyzed by Fisher and Durham (1999), or reported in more recent studies (Arntz, 2003; Durham et al., 2004). Recovery rates were also much higher at follow-up (75%), with the exception of one study reporting

recovery rates of 81% at 6-month follow-up (59% post-treatment) after applied relaxation (Borkovec & Costello, 1993).

Examination of the effects of treatment on different dimensions of worry suggests that a specific focus on metacognitions has a general impact across components of worry. In particular, social and health concerns decreased significantly. This is interesting because at no stage in treatment was the content of worry, outside of the domain of metacognition, the focus of modification. Such an approach has the advantage of avoiding the difficulty encountered by therapists of having to repeatedly pursue the patient's latest worry.

There are limitations with the present study that must be borne in mind. The results are based on a relatively small number of cases and so caution should be used in interpreting the data. Patients were asked if they might require treatment for additional problems as a treatment exclusion criterion. Although only one patient was excluded on this basis, this could produce a biased sample of patients who do not have secondary problems. However, this is not likely to be a threat to external validity in the present case since half of the sample had additional axis I diagnoses. Furthermore, patients appeared similar in trait-anxiety, worry levels, and medication status to patients treated in several other studies reported in the literature.

A reliance strictly on self-report measures of treatment outcome is a limitation for interpreting the present treatment effects. The absence of a no-treatment control group means spontaneous fluctuation in symptoms cannot be ruled out; however, analysis of wait-list patients from other trials suggests very little evidence of spontaneous recovery (5%) in untreated patients (Fisher & Durham, 1999).

The results of this preliminary study appear encouraging and support the continued evaluation of MCT, which should now be compared with active treatments such as applied relaxation or standard cognitive behaviour therapy.

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