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Group Metacognitive Therapy vs. Mindfulness Meditation Therapy in a Transdiagnostic Patient Sample: A Randomised Feasibility Trial

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ABSTRACT

Two transdiagnostic therapies for treating psychological disorder are Metacognitive Therapy (MCT) and Mindfulness Based Stress Reduction (MBSR). These two approaches have yet to be compared and therefore the current study aimed to evaluate the feasibility of a study of group MCT and MBSR in treating anxiety and depression. A feasibility trial with 40 participants (aged 19–56) was conducted. Patients were randomly assigned to receive either eight weeks of group MCT or MBSR. The primary outcome was feasibility which included recruitment rates, retention and treatment acceptability. The primary symptom outcome was the Hospital Anxiety and Depression Scale (HADS) total score, which provided an overall measure of distress. Both treatments were found to be acceptable with low attrition and similar ratings of acceptability. Changes in outcomes were analyzed based on the intention-to-treat principle using mixed effect models. Preliminary analyses revealed that MCT was more effective in treating anxiety and depression in comparison to MBSR, and in reducing both positive and negative metacognitive beliefs. Reliable improvement rates favoured MCT at post-treatment and 6-month follow up. Both treatments appeared to be feasible and acceptable in treating transdiagnostic samples; however, a larger, definitive trial is required. The limitations and directions for future research are discussed.

1. Introduction

The co-occurrence of depression and anxiety is common, with more than 75% of patients diagnosed with depression in primary care also having a diagnosable anxiety disorder (Olfson et al., 1997). The most common treatment for anxiety or a mood disorder is cognitive behavioural therapy (CBT); however, treatment effects in adults show inconsistent recovery rates. In CBT trials of anxiety, recovery rates range from 25% to 53% at post treatment and 25–56% at follow-up (Fisher and Durham, 1999; Durham et al., 2003), similarly for depression, only approximately 40–58% of patients are classified as recovered at post treatment, with only 20–30% remaining recovered at 18 months follow up (Dimidjian et al., 2006; Gortner et al., 1998; Roth and Fonagy, 1996). Thus, more effective treatments are required. Recently there has been a focus on transdiagnostic treatment approaches, which focus on the common psychological and behavioural processes underlying psychological disorders. Transdiagnostic approaches allow for a shift away from disorder specific approaches that have become incongruent with our understanding of the underlying maintenance factors in anxious and depressive disorders (Barlow et al., 2013; Craske, 2012;). One of the limitations of disorder specific treatments is that they struggle to effectively treat comorbid disorders resulting in clinicians not only using multiple treatment modules and manuals but they are required to treat the most pressing single disorder first. Given the high commodity amongst disorders such as anxiety and depression (Kessler et al., 2005) effective transdiagnostic approaches are required.

One form of treatment which has become increasingly popular is mindfulness meditation which stems from Buddhist practices. Mindfulness has various definitions; however, it is most commonly defined as, “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 1994, p 4.). Mindfulness-based therapies (MBT) such as mindfulness based stress reduction (MBSR; Kabat-Zinn, 1994) and mindfulness-based cognitive therapy (MBCT; Segal et al., 2002) have been applied to a range of psychological disorders; however, MBCT has been used primarily with depression.

Kabat-Zinn et al. (1992) conducted a pilot study to evaluate the effectiveness of MBSR for anxiety disorders and demonstrated a large effect size (Cohens d = 0.89) for anxiety symptoms from pre to post-treatment. Vollestad, Sivertsen and Nielsen (2011) compared MBSR to a

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wait-list control in patients with anxiety disorders and found medium effects (Cohens d = 0.55–0.76) between groups on measures of anxiety, whilst for depression a medium between-group effect size was found (Cohens d = 0.58). Hofmann et al. (2010) conducted a meta-analysis on the effect of mindfulness-based therapies for anxiety and depression, and found a moderate effect on anxiety (Hedges's g = 0.63; 95% Confidence Interval [0.53–0.73])) and a moderate effect in reducing depression symptoms (Hedges' g = 0.59; 95% Confidence Interval [0.51–0.66]) from pre to post treatment.

Another approach to treatment that is proving effective is Metacognitive Therapy (MCT), which is a transdiagnostic treatment based on the self-regulatory executive function model (S-REF; Wells and Matthews, 1994, 1996). According to the S-REF model psychological disorder is maintained by a type of thinking that is called the cognitive attentional syndrome (CAS). The CAS is dominated by thinking styles such as worry, rumination and maladaptive coping behaviors that delay the down-regulation of negative emotion, thus prolonging distress. The CAS is thought to arise from an individual's positive and negative metacognitive beliefs. Positive metacognitive beliefs concern the usefulness of worry, threat monitoring and unhelpful coping strategies (e.g., "*If I worry I'll be prepared*"), while negative metacognitive beliefs concern the uncontrollability, dangerousness, or importance of thoughts and feelings (e.g., "*I can't control my worry*") (Wells, 2009).

Normann et al. (2014) report a meta-analysis of the efficacy of MCT in treating anxiety and depression. The pre to post treatment effect size for anxiety reduction was g = 1.54, 95% Confidence Interval [1.23–1.84], whilst for depression it was, g = 1.39, 95% Confidence Interval [1.12–1.66]. The comparison of MCT with CBT showed a between groups effect size of 0.97, 95% Confidence Interval [0.59–1.35] favouring MCT. Metacognitive therapy was also found to lead to substantial reductions in secondary symptoms of anxiety and depression, which highlights the ability of MCT to reduce co-morbid symptoms related to the primary diagnosis. More recently, MCT has begun to be evaluated in group therapy format. Van der Heiden et al. (2013) evaluated group MCT for individuals with GAD and found very large effect sizes at post treatment based on the Penn State Worry Questionnaire, Cohens d = 1.86. Additionally, McEvoy et al. (2015) investigated group MCT in adults suffering from primary or secondary GAD, and found large effect sizes from pre to post treatment on the BDI-II, d = 0.86, and a medium effect size from pre to post treatment on measure of anxiety, d = 0.58. Based on Jacobson and Truax's (1991) criteria for reliable and clinically significant change, at post-treatment 86% of patients had reliably improved and 74% of patients had recovered.

Although previous studies have demonstrated that both MCT and MBSR are effective treatments for individuals with GAD or MDD few studies have evaluated the suitability of these treatments in transdiagnostic groups. This is important because these therapies differ substantially in their focus and techniques which may be manifest in different levels of efficacy. In particular MCT formulates and challenges metacognitive beliefs but MBSR does not. Whilst both incorporate the concept of learning to stand back from thoughts and not get hooked up in them the techniques for achieving this and the goal in doing so differs markedly. The current study investigated the acceptability and feasibility of delivering MCT and MBSR in a group format consisting of patients with a mix of anxiety and depression disorders. This is the first time these treatments have been compared as transdiagnostic group interventions. The principal aim was to examine and compare the feasibility and acceptability of both treatments but also explore symptom outcomes with a view to providing preliminary estimates of plausible treatment effects to inform sample sizes for subsequent definitive studies.

2. Methods

2.1. Study Design

The study was approved by the National Research Ethics Service of the UK's National Health Service (ref 14/NW/1010) and registered with a clinical trial data base (NCT02096484) prior to starting the study. Participants were assessed for suitability using the GAD-7 and PHQ-9 screening measures, and were required to score five or greater on one or both measures. A score of five was selected as the cut off as it is indicative of mild anxiety or depression (Kroenke et al., 2001; Spitzer et al., 2006). On the PHQ-9 the MCT group had two participants with mild depression, two with moderate depression, six with moderately severe depression and seven with severe depression, whereas the MBSR condition had eight with moderate depression, six with moderately severe depression, and five with severe depression. For the GAD-7 the MCT group had one participant with mild anxiety, two with moderate anxiety, six with moderately severe anxiety, and nine with severe anxiety, whereas the MBSR group had five with moderate anxiety, 10 with moderately severe anxiety, and four with severe anxiety. Participants were recruited from a waiting list for the Manchester Mental Health and Social Care NHS Trust as well as from the University of Manchester Counselling services. 10 participants were recruited from the NHS, while 30 were recruited from the University of Manchester counselling services. Patients were excluded if:(1) they reported any suicidality, (2) had a brain injury or neurological insult, (3) were currently engaging in substance abuse, or (4) had bipolar disorder. Additionally, individuals with psychotic symptoms and individuals who could not converse or read English were excluded. All other psychological problems were permitted. Patients were screened for eligibility by therapists at the University of Manchester counselling services and Manchester Mental Health and Social Care NHS Trust. The study reports two deviations from protocol.[1]

2.2. Participants

The Consort diagram indicating patient flow is depicted in Fig. 1. Patients were consecutive referrals to the project of which 40 participants were eligible and randomized to receive either group MCT or MBSR; however, three participants did not attend treatment after being randomized. Of the three non-starters, two of the participants were randomized to the Mindfulness treatment group and one participant was randomized to the Metacognitive therapy group. As these participants did not begin treatment they had no formal assessments and could not be included in the analyses. Additionally, two participants randomized to the MCT condition no longer met the inclusion criteria as one participant was engaging in substance abuse and one participant disclosed a recent bipolar diagnosis, therefore meeting the exclusion criteria. Thus, there were 35 participants (10 males, 25 females) included in the analyses. There were four groups per treatment arm with an average of 4 participants. The average age among participants was 28.48 years (SD = 10.62), and a total of 18 participants were taking psychotropic medications (i.e. Pregabalin, Citalopram, Sertraline, Propranolol, Venlafaxine, and Mitrazapine).

2.3. Randomization and sample size

Following informed consent randomization with minimization was

[1] The study was originally titled as a pilot study however after further review of the likely sample size a feasibility study was deemed more appropriate. In addition, the measures were changed prior to the start of recruitment. The STAI, BAI, BDI and MCQ-30 were initially proposed for use however the HADS and CAS were used instead as they are shorter measures that assess similar constructs. Whilst this change was updated on the clinical trials registry there was some delay in logging this. There were no other deviations from protocol.