



## Letter to the Editor

**Recommendations for conducting mindfulness based cognitive therapy trials***To the Editors:*

We read with interest the article “Mindfulness based cognitive therapy for psychiatric disorders: A systematic review and meta-analysis” (Chiesa and Serretti, 2011), which we note is currently ranked as the most downloaded paper in *Psychiatry Research*. The authors used strong and appropriate methodology and concluded that augmentation of Mindfulness-Based Cognitive Therapy (MBCT) to standard care (treatment as usual: TAU) could result in significantly lower relapse/recurrence rates in people experiencing depression when compared with standard care alone. They further concluded that relapse rates at 1 year for MBCT plus gradual discontinuation of maintenance anti-depressants did not differ significantly from the antidepressant continuation control. We wholeheartedly welcome comprehensive reviews such as these in relation to MBCT because (1) the theory and practice of MBCT is still in its infancy and relatively little is known about its efficacy, and (2) empirical examination of MBCT produces very important data of which clinicians, researchers, commissioners of services, and potential MBCT clients should be aware.

However, we do not think that Chiesa and Serretti's (2011) critique of the methodology employed in MBCT trials to date goes far enough, and we would strongly caution against the assumption that third wave therapies like MBCT are unequivocally superior to first or second wave therapies; to do so may be ‘getting ahead of the data’ (Corrigan, 2001, p. 192). Instead, we believe it is important that third wave therapies are held to account and challenged to an equal degree (using the same principles of empirical validation) as the previous two waves, particularly given the fact that the use of MBCT seems to be growing very rapidly, and it is being rolled out across the world to treat an array of psychological problems. For example, in the UK, there already appears to be strong confidence at a national level in the efficacy of MBCT, as MBCT is advocated in the clinical guidelines of the National Institute for Health and Clinical Excellence (NICE) as *the* treatment for individuals who are currently well but who have a history of three or more previous episodes of depression. Clinical experience and peer discussions at international conferences also strongly suggest that clinicians are increasingly turning away from existing empirically supported treatments towards third wave therapy models, presumably assuming that third wave therapies are superior given their more recent inception. With this context in mind, we would like to suggest some additional methodological considerations for future MBCT trials to address.

Chiesa and Serretti (2011) noted that the original MBCT programme has been adapted in some trials. MBCT was developed specifically to try and prevent relapse in depression rather than as

a treatment for acute (first episode) depression (Teasdale et al., 1995). During the developmental phase of MBCT, the authors (particularly John Teasdale) outlined the highly elaborate and sophisticated Interacting Cognitive Subsystems (ICS) information-processing theory that underpins MBCT and purports to specifically explain recurrent episodes of depression (e.g., Teasdale, 1999; Teasdale and Barnard, 1993). Teasdale described in detail why he believed ICS theory to be superior to the clinical cognitive model put forward by Beck's cognitive therapy (Beck et al., 1979), and he made a convincing case for the importance of developing skills in becoming more aware of potentially problematic thoughts, rather than changing their content (Teasdale and Barnard, 1993; Segal et al., 2002). This distinction between changing the content of cognitions or changing the function and process of cognitions represents the key distinction between second wave (e.g. Beck's cognitive therapy) and third wave (e.g. MBCT) therapies, respectively (Hayes, 2004). However, evidence that MBCT has been used to treat a range of acute problems potentially poses a direct challenge to elements of the ICS theory. In fact, because these trials examined MBCT as a treatment for a range of problems and sometimes changed the MBCT protocol, they could be re-interpreted as dismantling studies which provide important evidence regarding shared and unique therapeutic factors. Further research into the efficacy of receiving more of the same therapy (e.g. MBCT), medication continuation, receiving a different therapy (moving from one therapeutic model to another, moving from one wave of therapies to another, or moving from one type of mindfulness-based therapy to another), or some combinations of these, is needed to explore the relative standing of different change and acceptance-based therapies in relation to addressing acute problems as well as remitting and relapsing problems.

Next, as a treatment model, MBCT involves what we would consider to be a very significant commitment of time and effort from clients. The MBCT manual outlines the treatment protocol as eight weekly two hour sessions over approximately two months, and four follow-up sessions over approximately one year (Segal et al., 2002). An all-day practice is scheduled between the sixth and seventh sessions, and forty-sixty minutes of daily mindfulness practice are recommended as homework over the eight weeks, six days a week (Segal et al., 2002). We question how acceptable and possible most clients (and most non-specialist clinical services) would find this commitment, and we are surprised that this degree of time and effort did not lead to substantially greater efficacy in the MBCT group when compared to anti-depressant, TAU or pre-test score control conditions (for reviews, including information on dropouts, see Chiesa and Serretti, 2011; Keng et al., 2011; Piet and Hougaard, 2011; Klainin-Yobas et al., 2012; McCahey et al., 2012).

The question as to what constitutes an adequate control condition to pit MBCT against is a fundamental one. We would suggest that various control conditions appear to be suitable for

rigorously evaluating the efficacy of MBCT (or any other psychological therapy) in future trials, as well as the underlying ICS theoretical model: (1) comparison to purely mindfulness-based interventions such as Mindfulness-Based Stress Reduction (MBSR) would test the particular contribution of mindfulness; (2) comparison to therapies which incorporate elements of CBT and mindfulness (such as Acceptance and Commitment Therapy or Metacognitive Therapy) would test the particular contribution of changing the content of cognitions versus changing the function and process of cognitions (although it is very feasible that all empirically supported treatments in fact operate via change in the same underlying cognitive mechanisms and processes; see Brewin, 2006; Wampold, 2007; Kashdan and Rottenberg, 2010; Carey, 2011; Webb et al., 2012); (3) comparison to relaxation would test the particular contribution of low arousal affective states; (4) comparison to empirically supported second wave treatments such as specific Cognitive Behavioural Therapy protocols would test the particular contribution of purportedly active ingredients in both therapies, as well as different emotion regulation strategies that are promoted in each treatment model (cf. Webb et al., 2012); (5) comparison to physical exercise and interventions from other professions (e.g., Dietitians, Massage Therapists) would test the particular contribution of physiological mechanisms; and (6) comparison to positive psychology interventions, such as gratitude inductions (Geraghty et al., 2010a,b), would compare alleviating distress (MBCT and other psychological therapies) versus promoting well-being (positive psychology interventions) (cf. Joseph and Wood, 2010; Wood and Tarrier, 2010; Wood et al., 2010).

It is worth further clarifying that testing the efficacy of MBCT's purported active ingredients requires random allocation to an active control that is structurally equivalent and counter-balanced across conditions, but which does not contain mindfulness as an active ingredient (MacCoon et al., 2012). Some of the factors that might make two therapies structurally equivalent, and which would need to be measured and balanced across conditions are: number, length and duration of sessions; contact time with therapists; contact time with other group members; therapeutic alliance; therapy format (group or individual); researcher, client and therapist allegiance to the model and expectations for intervention success; the ability of participants to discuss their particular problems; therapist training and qualifications; and equally skilled provision of common therapeutic elements.

The finding that MBCT is only helpful for individuals with a history of three or more episodes of depression is intriguing, and needs replication and further exploration. Both of the Teasdale trials revealed that there was no evidence of benefit (and lower relapse rates) for individuals with two previous episodes of depression (as indicated by a non-significantly greater tendency to relapse following MBCT than TAU for these individuals) (Teasdale et al., 2000; Ma and Teasdale, 2004). Teasdale stated that the effectiveness of MBCT in the group with three or more episodes only, supports the notion that MBCT is specifically effective in reducing autonomous ruminative thinking cycles that are reactivated by dysphoric mood (Ma and Teasdale, 2004). Teasdale also suggests that the two groups may have originated from different populations and were therefore not simply members of the same population at different points in their depressive experiences. This was explained by the fact that people with two previous episodes of depression reported a later onset of their first episode, a significantly lower age on entering the trial and significantly lower scores on adverse early (parenting) experiences, than did people with three or more episodes of depression (Teasdale et al., 2000; Ma and Teasdale, 2004). Further analyses by Ma and Teasdale (2004) revealed that the differential treatment response of the three-or-more-episodes group could not be

accounted for by the differences between the groups in age of first onset or age at entry to the trial. However, 'the small sample size of patients with only two episodes makes it difficult to know whether the non-significant treatment effects observed for that group reflect an absolute lack of effectiveness of MBCT, a relative ineffectiveness of MBCT, or actual harmful effects of MBCT' (Ma and Teasdale, 2004, p. 38). These seem theoretically and clinically vital questions to explore, both in relation to MBCT and in relation to other therapies. However, we would suggest that the number of previous episodes of depression may be a somewhat arbitrary and not particularly specific cut-off to explain differential treatment responses. Moreover, to our knowledge, other mindfulness-based therapy trials (e.g., MBSR) have not uncovered differential effectiveness depending on the number of previous episodes of problems. Future trials might further explore this issue by employing a prospective-longitudinal design that incorporates a period of regular pre-treatment monitoring on a range of variables. Comparison to an active control (with an adequate sample size) would then enable examination of moderators and mediators of change and may shed further light on the specificity of MBCT's treatment effects. The ICS theory of depression could be directly tested if changes in mood, ruminative thinking and life events were monitored in real-time during the period of pre-treatment monitoring. For example, electronic diaries or ambulatory physiological monitoring methods could be used to measure these variables and explore their potential interaction in predicting depression in individuals with differing histories of depression. We also note here that there has recently been some preliminary examination of the mindful concentration aspect of MBCT using event-related brain potentials. Bostanov and colleagues conducted an RCT comparing a waitlist control to those receiving MBCT. Their results revealed that MBCT patients had developed an improved ability to withdraw their attention from thinking (doing mode) and redeploy it to mindful perception (being mode), offering favourable support to both MBCT and ICS (Bostanov et al., 2012). We would strongly endorse further brain function investigations of MBCT and other psychological therapies.

Examining the efficacy of the third wave therapies appears to be a 'hot topic', as evidenced by numerous recent meta-analyses of MBCT and other third wave mindfulness and acceptance-based therapies (e.g., Ost, 2008; Hofmann et al., 2010; Keng et al., 2011; Piet and Hougaard, 2011; Klainin-Yobas et al., 2012; McCarney et al., 2012). We conclude by saying that we have very high hopes for MBCT's second decade. It is clearly very popular across the world and if only some of these methodological changes are heeded in future trials, then MBCT can expect to continue growing (and possibly evolving) for the foreseeable future.

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