
Mindfulness-Based Cognitive Therapy's Effect on the Symptoms of Currently Depressed Individuals: A Systematic Review of Existing Meta-Analytic Evidence

Les effets de la thérapie cognitive de pleine conscience sur les symptômes de sujets actuellement déprimés : Une revue systématique des données méta-analytiques existantes

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ABSTRACT

Mindfulness-based therapies have been the recipient of both widespread attention and critique. Meta-analyses have begun to examine the efficacy of specific forms of therapies and in specific populations. However, there have been mixed findings on the effects of mindfulness-based cognitive therapy (MBCT) on acute depressive symptoms. This systematic review will focus on the examination of 6 meta-analyses on MBCT in depressed populations published between 2007 and 2016. The goal of this review is to examine the efficacy of MBCT studies in these meta-analyses for individuals with current depression. Special attention will be paid to the experimental rigour in the quality of studies published. Results of the systematic review found that depressive symptoms significantly decreased following MBCT in individuals with current episodes of depression. Heterogeneities in study design and assessment might have contributed to the mixed findings in previous meta-analyses. These findings support the efficacy of MBCT in acute depression, and implications are discussed.

RÉSUMÉ

Les thérapies fondées sur la pleine conscience suscitent à la fois une attention considérable et de nombreuses critiques. Des méta-analyses ont commencé à examiner l'efficacité de formes précises de thérapie auprès de populations données. Toutefois, les conclusions concernant les effets de la thérapie cognitive de pleine conscience sur les symptômes de dépression aiguë sont mitigées. Cette revue systématique étudie 6 méta-analyses sur la thérapie cognitive de pleine conscience chez des populations déprimées, publiées entre 2007 et 2016. La revue vise à évaluer l'efficacité des études sur la thérapie cognitive de pleine conscience dans ces méta-analyses pour des personnes actuellement en dépression. Une attention particulière est portée à la rigueur expérimentale démontrée dans la qualité des études publiées. Les résultats de la revue systématique ont révélé que les symptômes de dépression avaient diminué considérablement après une thérapie cognitive de pleine conscience chez les sujets présentant des épisodes actuels de dépression. Des hétérogénéités

dans la conception des études et les critères d'évaluation pourraient avoir contribué aux résultats mitigés des méta-analyses antérieures. Ces conclusions confirment l'efficacité de la thérapie cognitive de pleine conscience pour la dépression aiguë. Les implications de ces résultats sont aussi abordées.

The practice of mindfulness, which is a central element of mindfulness-based cognitive therapy (MBCT) and mindfulness-based stress reduction (MBSR), can be traced back to its Zen Buddhism roots (Kabat-Zinn, 2003, 2011; Segal, Williams, & Teasdale, 2002). Although there is no universally agreed-upon definition of mindfulness regarding the interpretation of the word and its operationalization in clinical practice and research, at its core mindfulness refers to our capacity to focus our awareness and attention meaningfully on the present moment without judgment or interference (van Dam et al., 2018). Mindfulness-based interventions (MBIs) are sometimes referred to as the “third wave” of psychotherapy (Wilson, 2008). MBIs are comprised of a wide range of therapies, all incorporating elements of mindfulness, and include MBSR, MBCT, and acceptance and commitment therapy (ACT).

The perceived ease and accessibility of mindfulness portrayed by popular media have given rise to growing skepticism of the research base around MBIs (Charters, 2013). Recent evidence has emerged with an increasingly critical view on MBIs, with some relegating MBIs as uninformative “mindfulness hype” (van Dam et al., 2018, p. 51). The popularity of adoption of MBIs has led to increased scrutiny, with researchers calling for a careful review of the validity of available evidence while examining mechanisms of change (van Dam et al., 2018).

Within the range of MBIs, MBCT has received particular attention, especially in the management of depression. MBCT was conceived as a way to prevent depression relapse in patients in remission by integrating elements of CBT with mindfulness approaches (Segal et al., 2002). In particular, its conception resulted from the acknowledged limitations in providing short-term, acute-treatments to prevent the recurrence of major depressive disorder (MDD), in conjunction with the lack of willingness for patients to rely on pharmacotherapy to maintain functioning and prevent relapse (Dimidjian, Kleiber, & Segal, 2009). The therapy consists of an 8-week program, totalling 20–26 hours of meditation in group formats, lasting 1.5 to 2.5 hours per session in addition to full-day training and home practice (Segal et al., 2002). The proposed mechanism of change is to help individuals develop the skills to shift from a mental state plagued by irrational and ruminative thoughts to one of acceptance and being in the present (Segal et al., 2002).

Although originally devised as a method to prevent relapse, there is a recent assertion that MBCT may also be efficacious in decreasing symptoms during acute episodes of depression (Gu, Strauss, Bond, & Cavanagh, 2015; Kuyken et al., 2016; Mackenzie & Kocovski, 2016). Empirical support for this is mixed, and previous meta-analyses have emphasized the lack of efficacy in MBCT in treating active symptoms of depression (Toneatto & Nguyen, 2007). Importantly, these meta-analyses are often drawn upon to determine whether MBCT is deemed useful for the treatment of depressive disorders in constructing clinical guidelines

(Canadian Network for Mood and Anxiety Treatments [CANMAT]; Parikh et al., 2016). However, the existing meta-analyses lump together MBIs such as MBCT and MBSR¹, use a remitted sample combined with populations currently depressed, or study populations with multiple comorbid disorders such as anxiety and obsessive-compulsive disorders. This is problematic as it increases the number of possible confounds, making it difficult to extract and evaluate the specific evidence regarding the efficacy of MBCT to treat acute depressive symptoms.

In a review of MBIs, Mackenzie and Kocovski (2016) highlighted discrepant findings in the examination of the efficacy of MBCT in treating depression when compared with alternative forms of psychotherapies. The opinion of Mackenzie and Kocovski is also echoed by other reviews calling for more research on mindfulness-based practices as there is not enough evidence to conclusively evaluate the efficacy of MBCT (van Dam et al., 2018). Indeed, under the CANMAT guidelines for the management of depression, MBCT is listed as the second line of treatment options with insufficient evidence supporting its efficacy (Parikh et al., 2016).

Meta-analyses that include a wide range of heterogeneous studies often fall short in contextualizing study findings necessary to clarify discrepancies. The study design and features of interventions, such as depressive episode characteristics, side effects, and comorbidities may all affect the overall efficacy of an intervention (van Dam et al., 2018). Past research has highlighted the differential response rate to drug trials across various depressive episode characteristics (Schacht, Gorwood, Boyce, Schaffer, & Picard, 2014). Further, the documentation and management of side effects largely contribute to the decision to participate, adhere, and complete various therapies in depression (Kelly, Posternak, & Jonathan, 2008). Finally, the presence of specific comorbidities may affect treatment response, treatment efficacy, and dropout rate across different types of psychotherapies in depression (van Bronswijk, Lemmens, Huibers, Arntz, & Peeters, 2018). Indeed, Gordon Paul (1967) had determined five specific factors that contextualize findings in outcome research with psychotherapy, including “*what treatment... by whom... for this individual... with that specific problem... and under which set of circumstances*” (p. 111). These characteristics provide a comprehensive framework to organize information that may be key in delineating the efficacy of any intervention for a particular target group or population.

Rationale

The lumping together of evidence of multiple MBIs across diverse populations offers little insight into the overall efficacy of MBCT alone on populations currently coping with acute symptoms of depression. To provide a more nuanced understanding, a systematic review will be conducted to extract studies within existing meta-analyses that used MBCT for individuals with current depression to examine the efficacy of MBCT. Methodological factors that may contribute to ambiguities or limitations in the existing evidence base will be explored to inform future directions in both research and clinical application of MBCT.

METHODS

The focus of the current systematic review is to synthesize findings from existing published meta-analytic studies that examined the effects of MBCT on depressive symptoms. As such no keyword searches are conducted. Instead, evidence will be extracted from studies already present in six existing meta-analyses from the last decade (Coelho, Canter, & Ernst, 2007; Dimidjian & Segal, 2015; Hofmann, Sawyer, Witt, & Oh, 2010; Goyal et al., 2014; Lenz, Hall, & Smith, 2016; Strauss, Cavanagh, Oliver, & Pettman, 2014).

In addition to inclusion in the previous meta-analysis, inclusion criteria for the current systematic review also included the following: (a) studies using an adult population; (b) studies that used MBCT; (c) studies that used populations with a *current* diagnosis of depression/MDD, or above-clinical cut-off score with assessment of acute depressive symptoms; and (d) studies that assessed for depressive symptoms pre- and post-intervention. Exclusion criteria for studies included: (a) studies that did not specifically assess for changes in depressive symptoms, (b) studies that included remitted individuals with only residual depressive symptoms and have shown improvements prior to remission, and (c) studies reporting protocols and/or testing procedures as part of an on-going trial that has not yet been completed.

Of the six meta-analyses reviewed a total of 452 studies were identified. Study titles and abstracts were then identified and evaluated for inclusion. Of these studies, 390 articles were excluded. Of the remaining 62 studies that met the inclusion criteria, 28 were identified as duplicates and removed. In total, 34 full-text articles were reviewed, with 23 excluded at this stage. The final sample of systematic review included 11 studies ($k = 11$). A breakdown of the search process is identified in Figure 1 below.

Data Extraction and Coding

Study variables were extracted from each article retained for the systematic review. Isolated study characteristics of interest to the current systematic review include the following: sample size, age, length of intervention, setting of intervention (e.g., hospital), study design (e.g., randomized clinical trial), depressive episode characteristics (i.e., “specifiers”), possible side effects, assessment of co-morbidity, depression response rate measures, and overall response to intervention across measure of depressive symptoms pre- to post-MBCT. However, there was little variability in some of the study variables; for example, all studies included an intervention eight-weeks in length. As a result, these redundant variables were not considered in subsequent analyses. Study characteristics can be found in Table 1 below.

Study Rigour

To assess the quality of the methodologies employed, each study’s rigour was evaluated based on an evaluation of five categories of information (Liu, Ein,

Gervasio, & Vickers, 2019; Wong, Greenhalgh, Westhorp, Buckingham, & Pawson, 2013):

1. Sample size.
2. Sample selection or recruitment (treatment-seeking, self-referred, convenience sampling).
3. The validity of measurements used to diagnose for eligibility of study (clinician-backed diagnoses or self-report ratings).
4. Adherence to protocol (fidelity checked) and clinician/therapist training.
5. Appropriateness of statistical tests.

Numerical values were assigned to each of the above categories. Respectively, a score of zero (0) was assigned if the study: (a) had a sample size of less than 10, (b) relied only on self-report measures with no formal assessment conducted to determine clinical diagnosis, (c) did not discuss following protocols outlined for MBCT (Segal et al., 2002), (d) did not report clinician and/or therapist training and background, and (e) did not conduct a power analysis or account for dropout with an intent-to-treat analysis. A score of one (1) was assigned if the study: (a) had a sample size between 11 to 19, (b) used clinical assessment tools without verification of medical records, (c) mentioned the use of protocol

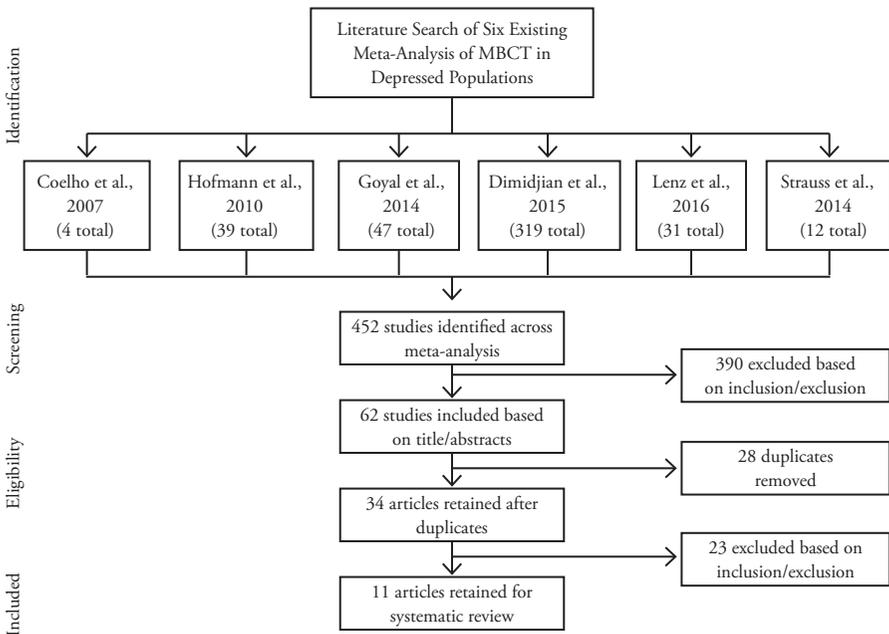


Figure 1. Preferred reporting items for systematic reviews and meta-analysis (PRISMA) flowchart of the procedure used in article selection.

Table 1
Study Characteristics in Systematic Review

Study Name	Study Rigour	Sample Size (n)	Depressive Episode Specifier(s)	Side Effects	Co-Morbidity	Responses in Depressive Symptoms Measure(s)
Barnhofer et al. (2009)	Strong	16	Protracted disorder, high rates of chronicity	---	Yes – multiple comorbid	BDI-II ↓
Chiesa et al. (2012)	Strong	23	---	---	---	HAM-D ↓ BDI-II ≈** BDI-II ↓
Finucane & Mercer (2006)	Weak	13	Mild to severe depression w./w.o anxiety	Agitation with sitting for a long period	Anxiety	BDI ↓
Kaviani, Hatami, & Javaheri (2012)	Weak	15	---	---	---	BDI ↓
Kenny & Williams (2007)	Moderate	50	Moderate to severe depression, loss of energy/interest/concentration	“Mood fluctuations” resulted in a worse score in 2 participants	Yes – Bipolar; Manic Depression; Dysthymia	BDI ↓
Kingston, Dooley, Bates, Lawlor, & Malone (2007)	Weak	8	---	---	Yes – bipolar	BDI ↓
Manicavasagar, Parker, & Perich (2011)	Moderate	19	---	---	---	BDI-II ↓
Omid, Mohammadkhani, Mohammadi, & Zargar (2013)	Weak	30	---	---	---	BSI-Depression ↓
Pots et al. (2014)	Strong	76	Mild to moderate depressive symptoms	Time-consuming	---	CES-D ↓
Strauss, Cavanagh, Oliver, & Pettman (2014)	Weak	14	Chronic depression	---	---	BDI-II ↓
van Aalderen et al. (2012)*	Moderate	34	---	Increasing tension; social phobia	---	HAM-D ↓ BDI ↓

*selected a sub-group that was currently depressed as the overall sample (N = 103) included both currently depressed and non-depressed patients. **group-comparisons was trending immediately post-intervention (p = .07).

Note. DSM = *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., rev., American Psychiatric Association, 1987); BDI = Beck Depression Inventory (Beck & Steer, 1990); TAU = treatment-as-usual; ICD = 10th revision of the International Statistical Classification of Diseases and Related Health Problems; CIDI = The World Health Organization *Composite International Diagnostic Interview* (CIDI; 1997); CBT = cognitive behavioral therapy; SCID = structured clinical interview; BSI = Brief Symptoms Inventory (Derogatis & Melisaratos, 1983); CES-D = Center for Epidemiologic Studies Depression Scale (Radloff, 1977); MDD = major depressive disorder; MINI = Mini-International Neuropsychiatric Interview (Sheehan et al., 1998); HAM-D = The Hamilton Depression Scale (Hamilton, 1960).

but made no effort to assess fidelity, (d) provided little information on clinician therapist training and supervisions, and (d) conducted a power analysis but did not account for dropout with an intent-to-treat analysis or vice versa. Finally, a score of two (2) was assigned, if the study: (a) had a sample size larger than 20, (b) assessed depression status with clinical assessment tools administered by clinicians with verification of medical history, (c) implemented fidelity check to evaluate implementation of intervention protocol, (d) detailed training and backgrounds of all involved in the implementation of study, and (e) conducted a power analysis and accounted for dropouts with an intent-to-treat analysis. The rigour of each study was calculated based on the sum of ratings across the five categories. Studies received a weak rigour rating if the overall scores fell between 0 to 5, a moderate rating if the overall scores fell between 6 to 7, and a strong rigour rating if the total added up to 8 or more (see Table 2).

RESULTS

Study Characteristics

A total of 11 studies were extracted from the six published meta-analyses examining the efficacy of MBIs. All 11 studies used adult populations, with mean ages ranging from 22 to 51 across samples. Studies were conducted across multiple settings, including universities ($k = 7$), hospital ($k = 1$), and other clinical settings not otherwise specified ($k = 3$). The study design included randomized clinical trials ($k = 3$), clinical trials ($k = 1$), and CCS/open studies ($k = 7$). The final population included a total of 295 individuals. Concerning study rigour, 3 were rated as strong, 3 were rated as moderate, and 5 were rated as weak.

Summary of Evidence

Of the 11 samples, 8 samples measured depressive symptoms with self-reports only and 3 samples measured depressive symptoms with self-reports and clinician-administered measures. To assess the results we used the statistical directional findings (whether depressive symptoms significantly decreased, increased, or did not change from pre- to post-MBCT) stated in the article. For example, the results were classified as decreased if the study found depressive symptoms significantly decreased post-MBCT when compared to pre-MBCT. Additionally, moderators and study rigour ratings were examined.

A total of 10 of 11 samples reported significantly lower depressive symptoms scores pre- to post-MBCT on the self-report measures. These samples ranged from weak to strong in rigour. One study found depressive symptoms did not change pre- to post-MBCT. This study was rated as strong in rigour. For the 3 samples that used clinician-administered measures, all found depressive symptoms significantly decreased post-MBCT, and 2 of these samples were rated as strong in rigour, suggesting that they should be weighted more.

We also examined potential factors that might shape the observed results (e.g., whether sampling of depressive episodes of specific characteristics, or side effects, or

Table 2
Study Rigour Table

Study	Sample Size	Recruitment Method	Inclusion/ Clinical Assessment	Protocol Identification / Clinician Training	Power Analysis / Intent-To-Treat	Rigour Rating
Barnhofer et al. (2009)	1	2	1	2	2	8 (strong)
Chiesa et al. (2012)	2	2	2	2	2	10 (strong)
Finucane & Mercer (2006)	1	1	1	2	0	5 (weak)
Kaviani et al. (2012)	1	0	0	0	0	1 (weak)
Kenny & Williams (2007)	2	1	2	1	0	6 (moderate)
Kingston et al. (2007)	0	0	1	0	0	1 (weak)
Manicavasagar et al. (2012)	1	2	1	2	0	6 (moderate)
Omidi et al. (2012)	2	0	1	0	0	3 (weak)
Pots et al. (2014)	2	0	2	2	2	8 (strong)
Strauss, Hayward, & Chadwick (2012)	1	1	1	1	1	5 (weak)
van Aalderen et al. (2012)	2	1	1	2	1	7 (moderate)
Total	15	10	13	14	8	

Notes: Weak = 5 studies; Moderate = 3 studies; Strong = 3 studies

comorbidities accounted for some of the effects). However, a lot of this information was missing from each study. In particular, only 5 out of 11 gave information regarding depressive episode specifiers, while 4 out of 11 reported potential side effects. Finally, 4 out of 11 provided information regarding comorbidities in the sampled population.

DISCUSSION

The purpose of the current systematic review was to extract studies within existing meta-analyses to contextualize findings presented on the efficacy of MBCT on depressive symptoms. Evidence reviewed across the studies echoes past findings and suggests that MBCT may be a robust therapy in reducing depressive symptoms in populations currently depressed. Significant reductions in depressive symptoms were found post-intervention across all studies employing self-report measures, except for one. Further, significant reductions in depressive symptoms were reported in all studies using clinician-administered measures.

Concerning the single study that did not find a significant reduction in scores of BDI post-intervention, the clinician-administered measure of HAM-D was observed to show a significant reduction in depressive symptoms following treatment (Chiesa, Mandelli, & Serreti, 2012). Further, the MBCT group was observed to have a significant reduction in depressive symptoms as measured by the BDI at the long-term follow-up (Chiesa et al., 2012). This result may have been due to individual variations in time to respond to treatment, as well as the study being possibly underpowered to detect significant differences. Indeed, post-intervention subjective outcomes on the BDI was trending and eventually reached significance after long-term follow-up.

Previous meta-analyses have often combined various forms of MBIs across different populations, including different types of depression and at various stages of illness trajectory. Of the prior research that has found inconsistent or weak effect sizes for MBCT for acute depression, this may be attributed to the pooling of evidence from remitted depressed individuals in combination with individuals experiencing acute depressive symptoms (Dimidjian & Segal, 2015). Patients in remission are already further along the trajectory of recovery, and therefore may report fewer depressive symptoms even before the intervention. As they are already in recovery and the room for improvement is low, it may be harder to detect any meaningful intervention effect (Hofmann et al., 2010).

This systematic review also examined the extent to which depressive episode characteristics, side effects, and co-morbidities may have affected the overall efficacy of MBCT. Together, the evidence suggests that MBCT may be effective regardless of population heterogeneity for episode specifiers, side effects, and co-morbidities such as anxiety and bipolar disorders. On the other hand, it is important to note that during the review of this information, many studies neither disclosed any information on episode specifiers or possible side effects associated with MBCT, nor assessed for co-morbidities. Further, important information relating to the

efficacy of interventions, such as the use of medication (type and duration), and the contexts of depression (frequency of occurrence and duration) were generally absent. This draws attention to the need for further research to examine how these moderating factors may impact on the efficacy of MBCT.

Further examination of these factors is instrumental to our understanding of the therapeutic outcomes (Paul, 1967). For example, less than half of the reviewed studies examined depressive episode specifiers of their sampled population. These differences may offer important insight into the underlining mechanisms of MBCT for particular symptoms or clusters of depression, and thus should be an area of focus for future studies. Additionally, of the 11 studies reviewed, only 4 studies documented any potential side effects or adverse experiences during MBCT, such as agitation with sitting for long periods of time (Finucane & Mercer, 2006) and increase in tension as a result of social phobia (likely due to the group format setting of the therapy; van Aalderen et al., 2012).

The documentation of adverse effects and the co-morbidities of the sampled population offer key insights into the delivery and implementation of any intervention, and are important in informing recommendations and future guidelines for psychotherapies, such as the Canadian Network for Mood and Anxiety Treatments (CANMAT; Kennedy et al., 2016). Furthermore, information on attrition, possibly due to either the presence of adverse side effects or to the drastic improvements in quality of life as a result of the intervention, were also mostly missing in the studies reviewed. This information may be important as they can influence individual motivations and adherence to intervention protocols, inform the interpretation of the effects, and contribute to changes in the general conclusions that can be drawn from findings.

Indeed, assessment of the study rigour determined that of the 11 studies included in the current systematic review, nearly half (5 out of 11) were rated as weak, while 3 were moderate and 3 were strong. While MBCT may appear to be effective in reducing depressive symptoms across studies, there were many observed heterogeneities in the design and methodologies employed across studies. Further, the definitions of what may be considered as significant reductions of depressive symptoms varied across studies. Indeed, our results reinforce the findings of past reviews, which highlighted the “haphazard variability across MBIs,” with particular emphasis in the intervention strategy implemented and the measurement of efficacy (van Dam et al., 2018, p. 45).

Another observation is the reliance on self-report measures across studies. All studies reviewed used some form of self-report outcome measure to evaluate the efficacy of MBCT, and 9 out of 11 studies used the Beck's Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). The over-reliance of self-report measures without the accompaniment of clinician reports may over-inflate findings or result in potential biases. Although the BDI is one of the most commonly-used measures of depressive symptoms, a caveat of this and many other self-report measures is the lack of somatic symptoms assessed (Kerr & Kerr, 2001). Somatic symptoms often present alongside depressive episodes. Therefore,

the lack of their inclusion may over-inflate the efficacy of the intervention, while overlooking somatic symptoms that may or may not have been affected by the course of the intervention. On the other hand, it is also possible that participants experience benefits as a result of participation in MBCT that was not captured by self-report measures of depression, or positive changes in other domains that are not measured by depressive symptoms ratings.

Finally, in the evaluation of study rigour, only three studies reported whether they had sufficient power to detect experimental differences across conditions (Barnhofer et al., 2009; Chiesa et al., 2012; Pots, Meulenbeek, Veehof, Klungers, & Bohlmeijer, 2014). Although all studies reported a significant decrease in depressive symptoms post-MBCT, the lack of power analysis in many of the studies may have resulted in underpowered studies with small samples. Small samples may inherently have more instability and low reproducibility, with analyses being more susceptible to the detection and overestimation of true intervention effects (Button et al., 2013). Thus, given the number of small studies of weak to moderate rigour included in our review, the seemingly robust findings should still be further scrutinized and cautiously interpreted as evidence for the use of MBCT.

As MBCT is a relatively new intervention, future research may address the methodological limitations identified above over time. Key areas for future may include identifying *for which sub-groups* of depressed patients MBCT may be the most benefit, as well as the consideration and exploration of side effects or adverse effects as a result of this therapy. Clinical practice guidelines, such as the CANMAT, are continually being refined to reflect advances and availabilities of evidence in psychotherapies. The notable limitations notwithstanding, it is still important to highlight the current state of evidence for alternative therapies, such as the use of MBCT for acute depression, when traditional and commonly-used ones fail to produce desirable effects or may not be preferred by patients.

The findings presented in the current systematic review should be considered in light of its limitations. The review was restricted to the immediate post-intervention outcomes of MBCT. Given the variability in follow-up assessments, no information on the long-term efficacy of MBCT can be determined based on the current analysis. Also, most studies sought recruitment through self-referral with treatment-seeking patients experiencing current symptoms of depression. As such, sampled populations may have been more motivated to partake in this study, amplifying potential experimental effects of the intervention itself. Overall, the studies reviewed did not assess for adherence to the “homework” assigned as part of the MBCT, which may affect both short-term and long-term outcomes, and thus merits further study. Finally, although we had insufficient data to examine the relative efficacy of MBCT for different types of depression (e.g., melancholic vs atypical vs seasonal), severity (e.g., mild vs. moderate vs. severe), and chronicity, clinical reasoning would suggest that at least psychotic depression may need adjustments in how mindfulness is conducted, and thus warrant further study and better reporting of study protocols in future research.

SUMMARY AND FUTURE DIRECTIONS

Findings from this systematic review highlight MBCT as a viable form of psychotherapy with promising evidence in its efficacy in reducing depressive symptoms in populations currently suffering from depression. Future research on the efficacy of MBCT in depressed populations, as well as other intervention studies, should address areas that are typically underreported in existing studies, including reporting effect sizes, depressive episode specifiers, assessment of any side effects, and co-morbidities in the target population. Additionally, research should continue to examine the efficacy of alternative therapies, provided that care is taken to maintain a high standard of quality in methodology and reporting. Evidence for the use of alternative therapies does not undermine previous research of traditional therapies such as CBT, but instead, adds to the toolbox of clinicians that can better formulate treatment plans on a case-by-case basis, given the needs and preferences of clients in mind (Kennedy et al., 2016). Finally, research could move to identify potential mechanisms and pathways for the efficacy of MBCT across various types of depression.

Notes

- 1 It should be noted that MBCT and MBSR are very similar in nature, with the exception of MBCT focusing on questioning the validity of one's thoughts, while MBSR does not focus much on attentional control of thoughts and thus may not be useful in challenging difficult and intense emotions often occurring as part of one's depression (Dimidjian et al., 2009).

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