

The Development of a MBCT Self-Assessment Scale

Puong-Tu D Prowse^{1*}, Tricia Nagel² and Graham N Meadows^{1,3,4}

¹Department of Psychiatry, Monash University, Melbourne, Australia

²Menzies School of Health Research and Charles Darwin University, Australia

³Mental Health Program, Monash Health, Melbourne, Australia

⁴Melbourne School of Population and Global Health, University of Melbourne, Melbourne, Australia

Abstract

Mindfulness Based Cognitive Therapy (MBCT) continues to gain evidential support as an intervention to impact on relapse and recurrence of depression. Researchers and MBCT Clinicians seek higher levels of treatment fidelity to maximise positive outcomes, through the use of treatment manuals, assessment scales and other supporting tools. Semi-structured group interviews with MBCT trained clinicians and subsequent thematic analysis, identified core elements of a new MBCT Self-Assessment scale and benefits, challenges, and enablers to implementation of MBCT training. The study findings support inclusion of an MBCT-Self Assessment Scale in MBCT Program implementation and suggest a range of other practical strategies for improved treatment fidelity.

Keywords: Scale development; Mindfulness based cognitive therapy; Treatment fidelity; Self- assessment; Adherence; Competence; Depression

Introduction

The World Health Organisation 2012 report estimates that by 2030 levels of depression will have risen to be the leading cause of disease burden globally [1]. Mindfulness Based Cognitive Therapy (MBCT) has proven to be an effective psychosocial intervention for assisting clients who suffer from recurrent depression leading to a fifty percent decrease in relapse for patients who experience three or more depressive episodes, when compared to treatment as usual [2-6]. MBCT combines mindfulness techniques from Kabat-Zinn's Mindfulness Based Stress Reduction (MBSR) Program with components of Cognitive Behavioural Therapy [7,8]. MBCT is a group-based program delivered over an eight-week period. Group sizes range from eight to fifteen patients per program. The adoption of a group based structure for treating depression is considered a cost effective treatment within the primary health care setting when compared to individual therapies [9-11]. MBCT includes formal and informal practices. Activities include guided meditation exercises such as 'breathing space' and 'body scan' (simple practical exercises which use the breath and the body as objects of concentration). The therapy integrates mindfulness practice into daily activities. Homework tasks are given to further reinforce session objectives, with recommended practice sessions of 30 minutes, six days per week [12]. A known benefit of the practice of MBCT is its potential to decrease emotional reactivity generated by negative affect-producing stressors [13]. Participants are supported to develop an 'early warning system' to detect depressive thought patterns and to reduce 'elaborative processing' (such as ruminations) through intense focus on the present moment [12]. Mindfulness is defined as bringing one's complete attention to the present moment of experience in a non-judgemental and accepting way [8,14,15] and has been introduced into numerous psychotherapies [16,17]. Patients learn to avoid identification with negative thought patterns and to interrupt the feedback loop from stressor to thought pattern to depressed affect.

Empirical literature increasingly supports the efficacy of mindfulness-based interventions, including Dialectic Behavioural Therapy (DBT) [15], Mindfulness Based Stress Reduction (MBSR) [14,18], MBCT (MBCT) [7,8], and Acceptance and Commitment Therapy (ACT) [19,20]. Implementation of mindfulness-based interventions has seen a reduction of symptoms being reported across a wide range of populations and disorders [21-24].

Treatment fidelity

The degree to which an intervention or program is delivered with high treatment fidelity in a clinical trial [25-29] maximises opportunity to replicate the study [30] improves confidence that any positive changes detected are directly attributable to the intervention, increases statistical power and reduces unintended variability [31,32]. On the other hand inadequate treatment fidelity can lead to the rejection of potentially powerful treatments or conversely to the acceptance of ineffective programs [31,32]. MBCT clinicians are drawn from the disciplines of psychiatry, psychology, social work, and nursing at least, and their training is critical to high fidelity and to the effectiveness of the MBCT Model. The majority of MBCT clinicians within clinical trials are experienced meditators with established meditation practices [33], however this experience does not necessarily translate to their training of others and specific measures of clinician fidelity are needed to support implementation. Although there have been numerous self-assessment instruments designed to measure mindfulness including the mindful Attention Scale (MAAS) [34], the Freiburg Mindfulness Inventory (FMI) [35], the Kentucky Inventory of Mindfulness Skills (KIMS) [36]; the Cognitive and Affective Mindfulness Scale (CAMS) [37], and the Five Facet Mindfulness Questionnaire (FFMQ) [38] such specific scales do not address broader principles of implementation of the MBCT program.

Measuring the treatment distinctiveness of MBCT allows the unique features and structured program of cognitive therapy and mindfulness skills to be better understood [8]. This information helps provide a clearer picture of whether the implemented treatment was effective in

***Corresponding author:** Puong-Tu Prowse, PhD Student/ Clinical Psychologist, Menzies School of Health Research, Department of Psychiatry, Monash University, Melbourne, Australia, Southern Synergy: Southern Synergy School, Tel: 08 89228196; Fax: 08 89275187; E-mail: ppro4@student.monash.edu

Received April 24, 2015; Accepted August 22, 2015; Published August 25, 2015

Citation: Prowse PD, Nagel T, Meadows GN (2015) The Development of a MBCT Self-Assessment Scale. J Depress Anxiety 4: 201. doi:10.4200/2167-1044.1000201

Copyright: © 2015 Prowse PD, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

supporting the attainment of program goals. In order to support fidelity of program delivery two scales have been developed, one of which measures clinician 'adherence' to MBCT Program (delivery of core principles and activities as intended by the developer) the Mindfulness Based Cognitive Therapy Adherence Scale (MBCT- AS) [7], and the other of which aims to measure clinician competence in delivery of the program (Mindfulness-Based Interventions Teaching Assessment Criteria (MBI-TAC) [39]. These scales have been used in clinical trials to promote treatment fidelity [8]. Both scales are resource intensive and rely on direct observation by an experienced MBCT practitioner, and while useful within research settings they have limited application in day to day practice.

Self-assessment

A strategically structured self-assessment requires minimal resources and is one strategy that can address the need for fidelity tools that are adapted for use in day to day clinical settings. Despite inherent risks in relying solely upon self-assessments (personal bias, uncertain inter-rater reliability, possible over or under reporting, and likelihood of inconsistency) there are also arguments in support of their development and use. A self-assessment scale, although not objective, nevertheless encourages clinicians' self-reflection of personal performance in implementation with potential to enhance mastery [40]. Stefani [41] found in their study on self-assessment and peer-mentoring, that assessment participants held a realistic perception of their own abilities and could make rational judgements of their achievements when there were learning benefits. Moreover, self-assessments is commonly seen as a technique that enhances learning, through personal introspection and reflective practices [42]. The inclusion of a self-assessment scale to support MBCT implementation can potentially better support clinician professional development and delivery quality [26]. Such a tool can act as a standardised guide for MBCT clinicians to critically evaluate personal performance and to improve program fidelity.

Aim

This project aims to develop a Self-Assessment Scale and accompanying manual to support fidelity of MBCT and to explore challenges and barriers to successful implementation of MBCT training.

Method

Scale development

The content and format of the draft self-assessment scale was shaped through literature review and an iterative process of consultation within the research team. This collaborative process involved review of lessons learned from MBCT treatment delivery, consensus on clearly defined program outcomes, review of MBCT Theory, and identification of key community partners. A detailed assessment of MBCT Model protocols and treatment processes was undertaken in order to understand key protocols and structures of the MBCT Model and to conceptualise and measure problems [39]. In constructing the instrument the authors gave consideration to the approach of both the Mindfulness Based Cognitive Therapy-Adherence Scale (MBCT-AS) [8] and the Mindfulness-Based Interventions: Teaching Assessment Criteria (MBI:TAC) [39]. MBCT-AS is a scale that assesses therapist's behaviours specific to (MBCT) as well as therapy practices through observation. It can be used to observe the delivery and assess the competence of teaching integrity of therapist's implementation of Mindfulness-Based Stress Reduction/Mindfulness-Based Cognitive Therapy for evaluation, research and training purposes.

The mindfulness based cognitive therapy- Self assessment scale (MBCT-self assessment scale)

The 12 item MBCT-Self Assessment Scale uses a 9-point Likert-type scale. Items 1 to 5 reflect general MBCT implementation objectives while items 6 to 12 are specific to the particular sessions. Each item requires rating of the clinician's performance in three domains: adherence, competency and confidence. Adherence ratings relate to the frequency of the actual activity being delivered, competence ratings to the quality of the delivery and confidence ratings to how easily it was achieved or the likelihood of achieving a level of competence regularly. Items on the 9-point Likert-Type Scale are scored using the following anchors: "0"= not observed, "1"= slight evidence "5"= minimal acceptable evidence and "9"=fully implemented. The MBCT-Self Assessment Scale is designed to be used either after each MBCT session or at the completion of all eight weekly sessions. An accompanying manual assists clinicians to identify their ratings for each item. It provides an explanation of scoring to support greater accuracy and consistency amongst clinicians.

Participants selection and setting

Sixteen clinicians participated in the user testing phase of this study. Participants were recruited purposively from the MBCT Southern Health Reference Group (MSHRG) in Melbourne, Australia. The MSHRG consists of clinicians experienced in MBCT Research or the facilitation of MBCT Programs. This group meets monthly. At the November 2013 meeting of the Reference Group, an expression of interest to participate was extended to all MSHRG members. Participants were invited to attend a group interview in December 2013 and review the draft Self Assessment Scale. Their input guided subsequent adaptation of the Scale. A feedback session in February 2014 provided opportunity for review of the refined scale and for further adaptation as needed. Participants represented a range of disciplines: Psychiatry, Psychology, Nursing, Social Work, General Medicine and Higher Degree students.

Data collection

The draft MBCT-Self Assessment Scale and protocol manual was emailed to members of the MSHRG one month prior to the first of two meetings. The first meeting was conducted face-to-face at the Southern Synergy Adult Research Offices located at Dandenong Hospital, Victoria, Australia, while the second meeting was facilitated from Darwin via teleconference. Both interviews were facilitated by the first author. The interview outline was developed through reference to a Program Logic Model which provides a clearly structured means to evaluate a program's impact [43]. The model allowed exploration of delivery of key program activities and detail of relevant external influences. It assisted in the discussion of the relationship between the elements of the MBCT program: resources needed for conducting MBCT groups and activities that are necessary in implementation of MBCT. Program Logic Model allows establishment of a framework that incorporates quality indicators to determine the overall success of program implementation [43,44]. Key topics for discussion in the first semi-structured group interview were: main assumptions and beliefs of clinicians; inputs, activities, outputs and outcomes for clinicians and patients when implementing MBCT; benefits, improvements and challenges requiring consideration during scale design. Open-ended questions stimulated group discussion about the MBCT-Self Assessment Scale. Discussion content was recorded by the first author with further written notes providing commentary on the scale suggested by eleven of the clinician participants.

The second group interview involved review of the revised MBCT-Self Assessment Scale with five participants. The strengths, weaknesses and suggested changes to the updated scale were discussed.

Analysis

Transcripts for each MSHRG meeting were collated and transcribed by first author. The transcripts were critically analysed by members of the research team using an adapted grounded theory approach [45] to thematic analysis [46]. Two of the research team identified and examined common themes by organising the transcript data into a system of coded patterns, concepts and categories. To enhance the systematic framework and ensure accuracy, interpretation of the data and overlapping themes, relationships and common or divergent perspectives were discussed. Information was cross-checked against transcript and field notes to promote accuracy.

Results

Participants responses within the group discussion were grouped into themes as follows: scale acceptability, scale format, item content, and program barriers and enablers. In addition participants put forward a number of practical strategies to support high quality fidelity of program delivery.

Acceptability

Most participants responded positively to the concept of a Self Assessment Scale for clinicians delivering MBCT. Participants agreed that a self-assessment tool could assist in improving fidelity of the delivery of the MBCT Program. The participants noted that MBCT does not currently have a built-in program evaluation for trainers to monitor program quality. Current measuring tools are resource intensive and require that sessions are audio or video recorded and viewed by an independent observer.

“The benefit of a MBCT-Self Assessment Scale is that it supports self-mastery for clinicians in real time without needing additional MBCT Experts to rate performance as the MBCT-Adherence Scale of the MBI:TAC.”

Scale format

Most participants reported that they found the scale formatting clear and user-friendly. Many of the suggested amendments focussed on further improving the format of the scale, specifically in the areas of wording, headings, use of numbers in scales, provision of examples to highlight requested input data and use of metaphors. Some participants commented that the scale was useful as it picked up specific measurable goals of the eight MBCT sessions; on the other hand, some participants suggested an electronic version such as an Application or Excel Version would improve useability. The MBCT-Self Assessment Manual was seen to be of value, but participants suggested that the examples within the manual should be used as a guide only, and should not be proscriptive in terms of allocation of ratings. A few participants found the scale and manual format “too long” and suggested it be rendered briefer or provided in an electronic format.

“Scale numbers should be changed to a shorter Likert scale of 1 to 4 or 1 to 7 or not all, low, medium and high or absent present definite.”

“Items were wordy and too long, they should be brief and if needed clinicians can refer to the manual.”

One clinician suggested that the scale was not needed and that it

would be preferable to have instead

“open-ended questioning, to allow for flexibility in clinician responses.”

Item content

Most responses from the MSHRG participants related to item content. Of these, the majority focussed on the definition or measurement of items within the scale. Participants strongly supported measuring adherence, competence and confidence against each scale item. Additional strategies were suggested for improving adherence, competence and confidence, such as running sheets.

“I like how the scale divides into areas of adherence, competence and confidence as one can sometimes adhere to the MBCT program but not necessarily have competence or feel confident in delivering.”

“It is difficult sometimes to understand the difference between adherence, competence and confidence..... you have made a good attempt at have clear definitions (eg., page 2 of scale definitions for areas of reflection.... we can refer back for a quick reference.”

Clinician mindfulness practice: The importance of being mindful of the present moment whilst delivering the training was highlighted. This element of MBCT is captured in item 3 and 4 of the scale.

“Item stating clinician’s own mindfulness practice (should be on-going practice)- this is important element of MBCT which improves adherence, competence and confidence.”

“Clinicians need to be balanced with expressing their confidence and knowledge in MBCT and being ‘embodying mindfulness in sessions... difficult balance... need item of this difficulty.”

“Clinicians need to see themselves as the trainer and not the therapist or expert with knowledge. This is core of MBCT- clinicians need to be open to the experiences and not have answers, should have this item with examples. Teacher verses therapist-this may fit with item 2- Core themes.”

“Everything needs to be in place... trainer needs to be mindful before group...equanimity to relax while group is running...should be an item and how clinicians deal with this.”

Clinician insight and concentration: Clinician’s awareness and concentration were also seen as key elements within MBCT Treatment requiring appropriate measurement within the MBCT-Self Assessment Scale. Items of competence allowed clinicians to gauge their insight and awareness. However, one participant suggested reviewing homework requires great insight and memory, whilst another added that this aspect is challenging for most clinicians.

“Clinician reviews homework and is able to convey themes back to participants of the group... this requires great insight and memory (as stated on item 5 in MBCT-Self Assessment Scale).... It may be difficult to gauge self-speech and behaviour”

“Self-assessment is challenging for clinicians who do not possess sufficient levels of insight.”

One participant pondered whether the process of training delivery contributed to clinician insight.

“Does clinician learn anything about themselves in running the MBCT group?... need an item for this.”

Clinician’s adherence, competence and confidence: Although the MBCT-Self Assessment Scale is a guide and does not capture the

holistic picture of the trainer's capacity, most MSHRG members agreed the scale allowed the clinician to readily gauge the quality of their delivery and provide prompt feedback if they had deviated from the core intention of a MBCT session or overall program.

"I can see how this scale can be helpful after the delivery of the session... you have a quick checklist and measurement of how you went."

Clinicians reported that the differentiation of the different domains of adherence, competence and confidence can be difficult and a number of recommendations were made to clarify the different domains of the items (see strategies section of the results).

"Values versus assumptions of clinicians- can influence competence and confidence items..."

Question of whether clinician feel that they were "successful or not in running the group."

"How clinician deals with external interruptions (for example participants running late, not having access to building after hours, fire alarms etc.)- need an item (affects adherence, competence, confidence)."

"Adherence to flow of group depends on how easy or difficult the group is ...clinician can spend a lot of time always bringing the group back ... makes it difficult to go through all aspects of that session."

"Some clinicians have a running sheet to assist them with conveying core themes so may adhere much better – not necessarily result of their skills or frequency of running MBCT groups."

Types of barriers

A number of responses focussed specifically on the impact potential barriers could have upon the successful delivery of the MBCT Program. These potential challenges were grouped into three categories; participant factors, clinician factors and outside session factors.

Participant factors: Challenges linked with participant factors included the potential for depression relapse, incomplete homework tasks, absenteeism, and unplanned interruptions. Participant's ideas of mindfulness and different interpretations of MBCT themes or activities were also perceived challenges to the quality of training.

"Uncultured understanding of participants can influence if MBCT is received (item 3), they may not understand the poetry, stories given throughout MBCT course, this may affect clinician's competence or confidence."

"Participants experiencing relapse of depression during group, clinicians need to be skilled psychotherapist to be able to pick this up so that participants can have additional supports outside the group- should be an item for this."

"Groups dynamics affecting clinician's adherence to MBCT protocols and managing the group (item 1- eg in confidence to include this)."

"Participants can come with a sense of idea of what mindfulness is-how do clinician know if it is their impact of MBCT implementation or already "lay ideas of mindfulness" – sometimes it is different to MBCT message (item 2)."

Clinician factors: Perceived challenges to successful MBCT Program delivery included the need for well-developed insight and concentration skills among trainers. In addition the clinicians face challenges of boundary maintenance both during and following delivery of an MBCT course.

"Some items require great insight (eg. thoughts speech and behaviour regarding competence) which is difficult to assess this."

"Item of 'boundaries maintenance' of participants ...during and after group."

"Clinician loss of concentration- people do lose concentration"... in reference to item stating "To what extent did your actions and body language facilitate the cohesive and shared identity of the treatment group?"

"Item for how clinician deals with participant missing session(s)."

"Adherence to flow of group depends on how easy or difficult groups is, clinicians can spend a lot of time always bring the group back makes it difficult to go through all aspects of that session."

Outside factors: Factors that impact on MBCT Program outcomes outside of the sessions include suitability of referrals, organisational support, and interruptions. Noteworthy, was the positive or negative impact the experience and background of a selected clinician could bring to the MBCT Program. The specific inclusion and exclusion criteria and interview pre-MBCT groups is acknowledged as the foundation or a successful MBCT Program [5]. However, whilst the aforementioned barriers can detract from MBCT Program most participants identified a separation between these outside barriers and the self-assessment of clinician's adherence, competence and confidence.

"Feedback of session at six session to GP- for the purpose of Medicare (Medicare is Australia's universal health insurance scheme), how does group continues to 8 session until they get referral back from GP of continued MBCT group... interruptions, how does clinician deal with this...."*

"Item is needed for getting equipment, venues and handouts during each group"

"Should be an item of systematic process prior to running the group- what is need to be put into place- "a lot of things are done behind the scenes" before implementing MBCT"

"Need another person to assist in getting items for the group together"- need item for this, if clinicians ran group on own or have someone assisting in group or preparing for group. Sometimes MBCT group has two clinicians. Affects adherence and confidence."

Enablers

The group reached consensus on a number of key enablers directly supporting adherence and competence within the MBCT Program. Key themes emerged, including selecting clinicians with proven experience, provision of supervision and professional development for the clinician, participant follow-up and support, robust recruitment of participants and the provision of pre-course information packs.

"General background of clinician may affect adherence, competence, confidence (eg. psychiatrist, psychologist, social worker, nurse, mental health worker)."

"...trainer has been trained in MBCT and how long they have been implementing MBCT groups."

"Reputation of the teacher can affect group dynamics."

Strategies

Participants suggested a number of strategies to aid the implementation of the MBCT Program and complement the MBCT-

Self Assessment Scale. Strategies included pre-course preparation, preparing the venue, recording the use of running sheets, use of manual and revision of homework tasks. Participants viewed clinician's mindfulness practice as an essential component of MBCT, which requires measurement within the MBCT-Self Assessment Scale.

"A lot of things are done behind the scene... need to get equipment, venues and handouts ready for each MBCT session."

"Supervision and mentoring during and after the completed group is needed."

"Clinician's own mindfulness practice (should be on-going practice) ... this is an important element of MBCT that improves adherence, competence and confidence."

"Some clinicians have a running sheet to assist them with conveying core themes so they may adhere much better... this is not necessary the result of their skills or the frequency of them implementing MBCT groups."

Participants recommended that MBCT clinicians attend each session one hour prior to the group. This additional time would allow the clinician to establish a mindfulness state of readiness prior to participants attendance, greet participants, answer queries and accept completed homework tasks.

Adaptation of scale

The feedback led to the creation of a new section within the MBCT-Self Assessment Scale Manual, a check-list (Figure 1). This checklist provides a user friendly prompt list for clinicians delivering MBCT.

Discussion

This study aimed to develop an MBCT Self-Assessment Scale and accompanying manual. In general, the feedback from participants in the development of the self assessment scale was positive. Designing a self-assessment scale was considered to make a positive contribution to treatment fidelity research for MBCT. Although there are clear limitations of assessor bias with self-assessment scales, DeVellis [40] recognised many variables cannot be directly observed. Participants recognized the designed scale suitably supported reflection on the areas of adherence, competence and confidence. Such a scale can provide a medium for clinicians to improve self mastery in the delivery of MBCT,

and to capture pertinent information required for mentoring and supervision purposes.

Scale refinement

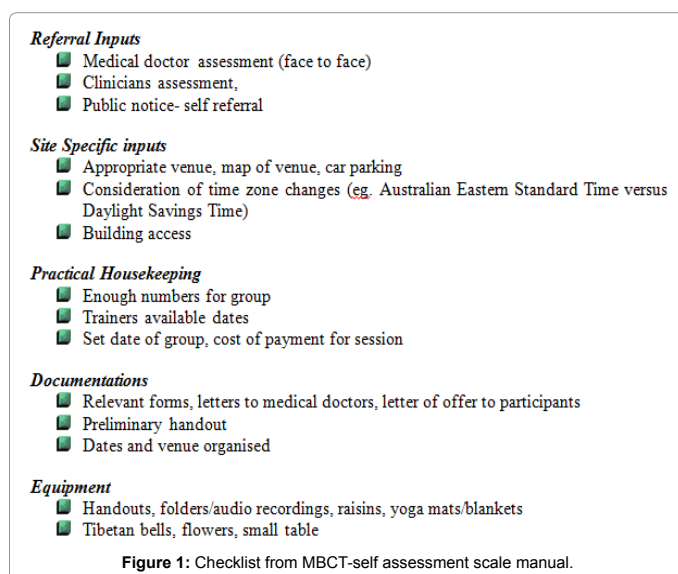
The self-assessment scale was divided into the three domains of adherence, competence and confidence. The benefits of in building adherence and competence domains is explained by Waltz [47] and Pereplechikova [28] who argued that despite the importance of contextual variables in treatment, many research studies have failed to emphasise the significance of measuring adherence and competence of clinicians' performances, which in turn influences treatment implementations and outcomes. It was envisioned the inclusion of a third domain concentrating on confidence would best support self regulation and mastery in learning; such an approach is in line with clinicians' identifying their weaknesses and strengths to realise learning goals [48] and "Self Regulations Learning" Theory [49]. Suggested amendments related to clarity of definitions and inclusions of practical examples to promote improved consistency. Although participant factors may impact on clinicians' self-assessment scores, the majority of clinicians acknowledged the MBCT-Self Assessment Scale allowed scoring of their skills both separate to and inclusive of participants' response to training. For example, high adherence scores are possible even though competence and confidence scores may be low. The self-assessment scale provides clinicians with a central point of reference to improve their skill in implementing MBCT training.

The current study led to modifications of the self assessment scale including a single page definition for adherence, competence and confidence to assist clinicians in the accurate completion of the scale. The inclusion of practical examples to complement the definitions provided further clarity.

MBCT-Self assessment scale manual

The manual accompanying the MBCT-Self Assessment Scale was adapted to include more detailed prompts about the equipment linked with specific activities. Manipulation checks (adherence and competence) used in psychotherapy trials to confirm therapists followed the treatment manual in delivery of the therapy has been linked to enhanced treatment fidelity [47,50-52]. A user-friendly Check List (shaped in part by the Program Logic Model Framework) was incorporated to aid in the order of activity delivery. The use of the Program Logic Model allowed insight into relevant context and processes outside of the MBCT sessions. In recognition that the quality of implementation is impacted upon by such outside processes the accompanying MBCT self-assessment manual incorporates a check list to maximise clinician/trainers' awareness of these outside factors. In contrast the existing fidelity tools MBCT-AS and MBI: TAC focus on implementation within sessions only.

Allowing sufficient preparation time for the implementation of MBCT ensures: robust participant recruitment, careful clinician selection, sourcing of appropriate venue, and the collation of teaching resources; essential to the successful implementation of MBCT Groups. Physical resources are considered central to the learning of many individual sessions of MBCT (such as handouts, mats, video recording and homework tasks). Many MBCT Programs have a checklist and running sheets for individual sessions to support clinicians' to attain high adherence levels. The suite of preparation activities required prior to the delivery of a course was included in the MBCT-Self Assessment Scale Manual. This emphasis on preparation needs and the impact of external processes reflects the view of Kuyken, et al., who advocated



for a set of guiding principles for MBCT implementation in a checklist table for identifying implementation barriers (pg. 11) [53].

The demand for e-mental health resources continues to grow worldwide [54]. E-mental health provides a conduit for promoting health resources among primary health care service providers across Australia [55]. The need for an electronic version of the MBCT Self Assessment Scale to allow portability and reduced cost was identified in participant feedback. An electronic version of the MBCT Self Assessment Scale has been designed for future inclusion as an e-mental health resource.

Challenges

Participants identified clear obstacles to delivery of high fidelity MBCT training. Participant feedback identified a plethora of complex factors that must be addressed to ensure efficient and effective MBCT delivery. It was noted that clinicians require expertise in the areas of teaching mindfulness meditation practice, yoga, cognitive behavioural strategies, facilitating groups; advanced understanding in the psychotherapy of depression and familiarity of the theoretical model underpinning MBCT. Ruths et al., [56] highlighted that in implementing MBCT program, the clinician's role is quite distinct compared to that of conventional psychotherapy. Other researchers have found that the selection of clinicians with a consolidated mindfulness practice [4,11] is essential for delivering MBCT training. Crane et al., [39] highlighted that experienced MBCT clinicians are better skilled to lead by example to embed key practices through live feedback to participants. Ensuring selected clinicians had suitable experience in supporting participants if they experienced a relapse of depression during the eight weekly session was emphasised in the MBCT Training Model [57,58]. Participant feedback within this study is in accord with these findings and recommendations with participants suggesting that MBCT clinicians' own mindfulness practice is an essential component of successful training, as is adoption of the stance of 'leading enquirer' rather than 'expert'. This emphasis is reflected in the content of the Self Assessment Scale. Boud [42] further highlighted that self-assessment tools are not something to be added to the repertoire of teaching activities, but rather a key consideration in learning. The clear benefits of self assessment in a learning sphere is that it supports the attainment of greater insight through clinicians taking responsibility for learning, enhanced communicating of knowledge and superior understanding of self-appraisal / peer feedback [40,42]. The conceptual model of "Self-regulation Learning" by Butler and Winne [49] suggests that learners are actively involved in monitoring and regulating their own performance in relation to strategies used to reach specific goals [49,59]. Having access to a self-assessment tool potentially supports clinician self-learning. Given the limited number of MBCT experts available for teaching and supervision within the Australian setting this is of particular relevance.

Participants recognised three additional barriers to successful implementation: flawed selection criteria for participants, lack of a suitable venue, and deficiencies in pre-course preparation (subsequently addressed within the manual as a check list).

Limitations

The MBCT-Self Assessment Scale was reviewed by a small number of clinicians on two occasions. Its utility will be revealed through further research which gains input from a larger sample of clinicians through pilot testing. However, participants in this study came from

a variety of disciplines, and collectively have the potential to promote the inclusion of the scale for future pilot testing within Psychiatry, Psychology, Nursing, Social Work and General Medicine.

Conclusion and Recommendations

The study reports development of a user friendly MBCT-Self Assessment Scale to promote higher levels of clinician treatment fidelity. The MBCT-Self Assessment Scale potentially provides a low cost practical measure of clinician adherence and competence in delivering MBCT sessions to enhance self-learning. Future trials of the MBCT-Self Assessment Scale within a live environment of MBCT Program delivery will further inform its utility.

References

1. Marcus M, Yasamy TM, van Ommeren M, Chisholm D, Shekhar S (2012) Depression: A Global Public Health Concern World Health Organization, Sixty-fifth world health assembly.
2. Britton JC, Lissek S, Grillon C, Norcross MA, Pine DS (2011) Development of anxiety: the role of threat appraisal and fear learning. *Depress Anxiety* 28: 5-17.
3. Idusohan-Moizer H, Sawicka A, Dendle J, Albany M (2015) Mindfulness-based cognitive therapy for adults with intellectual disabilities: an evaluation of the effectiveness of mindfulness in reducing symptoms of depression and anxiety. *J Intellect Disabil Res* 59: 93-104.
4. Ma S, Teasdale JD (2004) Mindfulness-Based Cognitive Therapy for depression: Replication and exploration of differential relapse prevention effects. *Journal of Consulting and Clinical Psychology* 72: 31-40.
5. Segal ZV, Teasdale JD, Williams JM, Gemar MC (2002) The mindfulness-based cognitive therapy adherence scale: inter-rater reliability, adherence to protocol and treatment distinctiveness. *Clinical Psychology & Psychotherapy* 9: 131-138.
6. Shawyer F, Meadows GN, Judd F, Martin PR, Segal Z, et al. (2012) The DARE study of relapse prevention in depression: design for a phase 1/2 translational randomised controlled trial involving mindfulness-based cognitive therapy and supported self monitoring. *BMC Psychiatry* 12: 3.
7. Teasdale JD, Segal ZV, Williams JMG, Ridgeway VA, Soulsby JM, et al. (2000) Prevention of relapse /reoccurrence in major depression by mindfulness based cognitive therapy. *Journal of Consulting and Clinical Psychology* 68: 615-623.
8. Segal ZV, Teasdale JD, Williams JM, Gemar MC (2002) The mindfulness-based cognitive therapy adherence scale: inter-rater reliability, adherence to protocol and treatment distinctiveness. *Clinical Psychology & Psychotherapy* 9:131-138.
9. Kuyken W, Byford S, Taylor RS, Watkins E, Holden E, et al. (2008) Mindfulness-based cognitive therapy to prevent relapse in recurrent depression. *J Consult Clin Psychol* 76: 966-978.
10. Kuyken W, Watkins E, Holden E, White K, Taylor RS, et al. (2010) How does mindfulness-based cognitive therapy work? *Behav Res Ther* 48: 1105-1112.
11. Lau MA, McMain SF (2005) Integrating mindfulness meditation with cognitive and behavioural therapies: The challenge of combining acceptance- and change-based strategies. *Can J Psychiatry / La Revue canadienne de psychiatrie* 50: 863-869.
12. de Zoysa N, Ruths F, Walsh J, Hutton J (2014) Mindfulness Based Cognitive Therapy for Mental Health Professionals: A Long-Term Qualitative Follow-up Study. *Mindfulness* 5: 10-17.
13. Britton WB, Shahar B, Szepsenwol O, Jacobs WJ (2012) Mindfulness-Based Cognitive Therapy Improves Emotional Reactivity to Social Stress: Results from a Randomized Controlled Trial. *Behavior Therapy* 43: 365-80.
14. Kabat-Zinn J (2003) Mindfulness-Based Interventions in Context: Past, Present, and Future. *Clinical Psychology: Science and Practice* 10: 144-156.
15. Ebner-Priemer UW, Welch SS, Grossman P, Reisch T, Linehan MM, et al. (2007) Psychophysiological ambulatory assessment of affective dysregulation in borderline personality disorder. *Psychiatry Res* 150: 265-275.
16. Merchant LV (2013) A Review of "Mindfulness in Clinical Practice". *Journal of Couple & Relationship Therapy* 12: 294-295.

17. Baer RA, Smith GT, Hopkins J, Krietemeyer J, Toney L (2006) Using self-report assessment methods to explore facets of mindfulness. *Assessment* 13: 27-45.
18. Fjorback LO, Arendt M, Ornbøl E, Fink P, Walach H (2011) Mindfulness-based stress reduction and mindfulness-based cognitive therapy: a systematic review of randomized controlled trials. *Acta Psychiatr Scand* 124: 102-119.
19. Avdagic E, Morrissey SA, Boschen MJ (2014) A Randomised Controlled Trial of Acceptance and Commitment Therapy and Cognitive-Behaviour Therapy for Generalised Anxiety Disorder. *Behaviour Change* 31: 110-130.
20. McCall J (2014) A Review of "ACT Made Simple: An Easy-to-Read Primer on Acceptance and Commitment Therapy". *Journal of Couple & Relationship Therapy* 13: 264-265.
21. Evans S, Ferrando S, Findler M, Stowell C, Smart C, et al. (2008) Mindfulness-based cognitive therapy for generalized anxiety disorder. *J Anxiety Disord* 22: 716-721.
22. Chadwick P, Hughes S, Russell D, Russell I, Dagnan D (2009) Mindfulness groups for distressing voices and paranoia: a replication and randomized feasibility trial. *Behav Cogn Psychother* 37: 403-412.
23. Williams JMG, Alatiq Y, Crane C, Barnhofer T, Fennell MJV, et al. (2008) Mindfulness-based Cognitive Therapy (MBCT) in bipolar disorder: Preliminary evaluation of immediate effects on between-episode functioning. *Journal of Affective Disorders* 107: 275-279.
24. Williams JM, Duggan DS, Crane C, Fennell MJ (2006) Mindfulness-based cognitive therapy for prevention of recurrence of suicidal behavior. *J Clin Psychol* 62: 201-210.
25. Bond GR, Evans L, Salyers MP, Williams J, Kim HW (2000) Measurement of fidelity in psychiatric rehabilitation. *Ment Health Serv Res* 2: 75-87.
26. Carroll C, Patterson M, Wood S, Booth A, Rick J, et al. (2007) A conceptual framework for implementation fidelity. *Implement Sci* 2: 40.
27. Dusenbury L, Brannigan R, Falco M, Hansen WB (2003) A review of research on fidelity of implementation: implications for drug abuse prevention in school settings. *Health Educ Res* 18: 237-256.
28. Perepletchikova F, Treat TA, Kazdin AE (2007) Treatment integrity in psychotherapy research: analysis of the studies and examination of the associated factors. *J Consult Clin Psychol* 75: 829-841.
29. Schulte AC, Easton JE, Parker J (2009) Advances in Treatment Integrity Research: Multidisciplinary Perspectives on the Conceptualization, Measurement, and Enhancement of Treatment Integrity. *School Psychology Review* 38: 460-475.
30. Chlan LL, Guttormson JL, Savik K (2011) Tailoring a treatment fidelity framework for an intensive care unit clinical trial. *Nurs Res* 60: 348-353.
31. Borrelli B (2011) The assessment, monitoring, and enhancement of treatment fidelity in public health clinical trials. *Journal of public health dentistry* 71: S52-S63.
32. Collins SE, Eck S, Kick E, Schröter M, Torchalla I, et al. (2009) Implementation of a smoking cessation treatment integrity protocol: treatment discriminability, potency and manual adherence. *Addict Behav* 34: 477-480.
33. van Aalderen JR, Breukers WJ, Reuzel RPB, Speckens AEM (2012) The Role of the Teacher in Mindfulness-Based Approaches: A Qualitative Study. *Mindfulness* 1-9.
34. Brown KW, Ryan RM (2003) The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology* 84: 822-848.
35. Buchheld N, Grossman P, Walach H (2001) Measuring mindfulness in insight mediation (Vipassana) and meditation-based psychotherapy: The development of the Freiburg Mindfulness Inventory (FMI). *Journal of Meditation and Meditation Research* 1:11-34.
36. Baer RA, Smith GT, Allen KB (2004) Assessment of mindfulness by self-report: the Kentucky inventory of mindfulness skills. *Assessment* 11: 191-206.
37. Hayes AM, Feldman G (2004) Clarifying the construct of mindfulness in the context of emotion regulation and the process of change in therapy. *Clinical Psychology: Science and Practice* 11: 255-262.
38. Baer RA, Smith GT, Lykins E, Button D, Krietemeyer J, et al. (2008) Construct validity of the five facet mindfulness questionnaire in meditating and nonmeditating samples. *Assessment* 15: 329-342.
39. Crane RS, Kuyken W, Williams JM, Hastings RP, Cooper L, et al. (2012) Competence in Teaching Mindfulness-Based Courses: Concepts, Development and Assessment. *Mindfulness (N Y)* 3: 76-84.
40. DeVellis RF (1994) Scale development: theory and applications. Newbury Park: Sage.
41. Stefani LAJ (1994) Peer, self and tutor assessment: Relative reliabilities. *Studies in Higher Education* 19: 69-75.
42. Boud D (2005) Enhancing learnign through Self-Assessment. NY: Routledge, Falmer.
43. Dwyer JJ, Makin S (1997) Using a program logic model that focuses on performance measurement to develop a program. *Can J Public Health* 88: 421-425.
44. Dykeman M, MacIntosh J, Seaman P, Davidson P (2003) Development of a program logic model to measure the processes and outcomes of a nurse-managed community health clinic. *J Prof Nurs* 19: 197-203.
45. Corbin J, Strauss A (1990) Grounded theory research: Procedures, canons, and evaluative criteria. *Qual Social* 13: 3-21.
46. Braun V, Clarke V (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology* 3: 77-101.
47. Waltz J, Addis ME, Koerner K, Jacobson NS (1993) Testing the integrity of a psychotherapy protocol: Assessment of adherence and competence. *J Consult Clin Psychol* 61: 620-630.
48. Eva KW, Regehr G (2005) Self-assessment in the health professions: a reformulation and research agenda. *Acad Med* 80: S46-54.
49. Butler DL, Winne PH (1995) Feedback and Self-Regulated Learning: A Theoretical Synthesis. *Review of Educational Research* 65: 245-281.
50. Prowse PT, Nagel T, Meadows GN, Enticott JC (2015) Treatment fidelity over the last decade in psychosocial clinical trials outcome studies: a systematic review. *J Psychiatry* 18: 258.
51. Goense P, Boendermaker L, van Yperen T, Stams G-J, van Laar J (2014) Implementation of Treatment Integrity Procedures. *Zeitschrift für Psychologie* 222: 12-21.
52. Kendall PC, Chu BC (2000) Retrospective self-reports of therapist flexibility in a manual-based treatment for youths with anxiety disorders. *J Clin Child Psychol* 29: 209-220.
53. Kuyken W, Crane R, Williams M (2012) Mindfulness-Based Cognitive Therapy (MBCT): Implementation Resources. Exeter, Bangor and Oxford Universities.
54. Bauer S, Golkaramnay V, Kordy H. E (2005) Mental-Health. *Psychotherapeut* 50: 7-15.
55. Reynold J, Griffiths K, Cunningham J, Bennett K, Bennett A (2015) Clinical practice model for the use of E-Mentia Health Resources in primary health care by health professional and peer workers: A conceptual framework. *JMIR Mentia Health* 2: e6.
56. Ruths FA, de Zoysa N, Frearson SJ, Hutton J, Williams JMG, Walsh J (2013) Mindfulness-Based Cognitive Therapy for mental health professionals-A pilot study. *Mindfulness* 4: 289-95.
57. Barnhofer T, Crane C, Hargus E, Amarasinghe M, Winder R, et al. (2009) Mindfulness-based cognitive therapy as a treatment for chronic depression: A preliminary study. *Behav Res Ther* 47: 366-373.
58. Chiesa A, Serretti A (2011) Mindfulness based cognitive therapy for psychiatric disorders: a systematic review and meta-analysis. *Psychiatry Res* 187: 441-453.
59. Nicol D, Macfarlane-Dick D (2006) Formative assessment and self-regulated learning: a model and seven principles of good feedback practice. *Studies in Higher Education* 31: 199-218.