

Mindful Mood Balance: A Case Report of Web-Based Treatment of Residual Depressive Symptoms

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Abstract

Residual depressive symptoms are associated with increased risk for relapse and impaired functioning. Although there is no definitive treatment for residual depressive symptoms, Mindfulness-Based Cognitive Therapy has been shown to be effective, but access is limited. Mindful Mood Balance (MMB), a Web-based adaptation of Mindfulness-Based Cognitive Therapy, was designed to address this care gap. In this case study, we describe a *composite case* that is representative of the course of intervention with MMB and its implementation in a large integrated delivery system. Specifically, we describe the content of each of eight weekly sessions, and the self-management skills developed by participating in this program. MMB may be a cost-effective and scalable option in primary care for increasing access to treatments for patients with residual depressive symptoms.

Introduction

Patients treated for depression who continue to experience residual depressive symptoms (RDS) may be at increased risk for relapse¹ and impaired long-term functioning.² RDS are highly prevalent, with research showing that 90% of individuals who remit from depression experience RDS up to 1 year later.³ Although there is no definitive treatment for RDS, the most common approach is antidepressant or psychotherapeutic monotherapy. Sequenced, phase-specific approaches⁴ are less commonly observed in practice but show increased effectiveness for treating RDS compared with monotherapy. These approaches usually involve treating patients to remission with pharmacotherapy and then providing psychotherapy for RDS. Mindfulness-Based Cognitive Therapy (MBCT) has a strong evidence base for prevention of depressive relapse⁵⁻¹⁰ among recurrently depressed patients and has recently been shown to be

effective when sequenced with pharmacotherapy for treating RDS.^{11,12} However, access to MBCT groups is limited owing to a lack of trained clinicians as well as to other barriers impeding dissemination of psychological treatments for mood disorders.^{13,14}

Previous research has demonstrated the efficacy of Web-based cognitive behavioral approaches for preventing depressive relapse among individuals in partially remitted patients¹⁵ and the feasibility of Web-based mindfulness programs.^{16,17} Mindful Mood Balance (MMB) (Dimidjian S, Beck A, Felder JN, Boggs J, Gallop R, Segal ZV, unpublished data, 2014) is an eight-session self-guided, Web-based program that incorporates the core content of in-person MBCT. MMB aims, in part, to address the care gap for patients with RDS. Consistent with MBCT, MMB targets RDS by teaching specific emotion regulation and depression self-management skills. In each session, skill acquisition is enabled via experiential

and didactic eLearning modules that use text, video, interactive programs, and reflection questions. Between weekly Web sessions, skill consolidation is developed from daily home practice of session content, including mindfulness meditation. Program support with a master's level clinical psychology doctoral student who was part of the MMB research team was available via phone, e-mail, or text messaging and was intended to facilitate engagement with MMB as well as to troubleshoot barriers to completing weekly sessions and home practice. MMB patients were invited to contact the support person with any questions or challenges. Furthermore, the MMB support person contacted patients who had not logged on to the program in a week.

Qualitative data provided by MMB patients during a study exit interview suggest that the MMB program is feasible and acceptable.¹⁸ An open trial examination of MMB demonstrated that patients significantly improved in depressive severity, which was sustained over six months; improved on proximal markers of relapse such as rumination and mindfulness; and engaged with program sessions and daily mindfulness practice. MMB also was associated with significant reduction in RDS severity compared with the quasi-experimental propensity-matched control group (Dimidjian S, Beck A, Felder JN, Boggs J, Gallop R, Segal ZV, unpublished data, 2014). Although informative at the group level, these reports provide limited detail about both the nature of the MMB intervention

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and the specific experiences of patients as they complete the program curriculum. Such information may be valuable for primary care physicians considering MMB as an option for patients with RDS either following or combined with maintenance pharmacotherapy.¹⁹ The aim of this case study is to describe a *composite case* that is representative of the course of intervention with MMB and its implementation in a large integrated delivery system.

Case Report

Patient Identification

This report describes a *composite case* that is representative of the course of intervention with MMB and its implementation with patients referred from primary care clinics in a large integrated delivery system. The composite case is based on the experiences of patients enrolled in an open trial study of MMB who were recruited via physician referral and informational materials made available in clinics. All participants in the open trial study of MMB had a history of major depressive disorder and therefore were at elevated risk for depressive relapse. RDS were not an eligibility criterion for the open trial study, but the composite case described in this case report experienced RDS.

Before participation in the MMB program, the patient, a woman in her late 40s, was treated for her third episode of major depression by her primary care physician. Antidepressant medication was prescribed (citalopram, 40 mg/day),

guided by the Sequenced Treatment Alternatives to Relieve Depression algorithm for sequential pharmacotherapy.²⁰ When the patient continued to experience symptoms of insomnia, anhedonia, guilt, and functional impairment, her physician referred her to the study for augmentation because no in-person MBCT group was available. The patient reported that she was interested in MMB because she was an “introvert” and the opportunity to access treatment at home appealed to her more than attending a group with other patients.

Patient Use of Mindful Mood Balance

See Table 1 for a brief description of the objectives for each MMB session. In the first session of MMB, titled “Finding Your Place Beyond Blue,” the participant started by watching an introductory video from one of the two MMB facilitators that is featured throughout the program. She responded to a list of difficulties she hoped MMB would help, such as “being caught in my mind” and “taking things too personally,” and viewed video clips of participants from an in-person MBCT group discussing their experience with the MBCT program. The primary focus in this session was differentiating between “automatic pilot,” described as acting without awareness, and mindfulness. These concepts were conveyed through text, illustrations, videos, and mindfulness practices. For example, the patient streamed an audio recording of her first

mindfulness practice, mindful eating, during which she was encouraged to direct her attention first to the sensations of sight, texture, smell, sound, and taste of eating a raisin. For all audio recordings, the patient chose to download the recording as an mp3 file to save on her phone, which she found more convenient than logging on to the program to listen to recordings. She often listened to the recordings while traveling on the bus to work. After this practice and all others, the participant answered reflection questions in a text box. These questions asked about what she noticed during the practice and how she thought the practice related to preventing depression and staying well. The patient reported that this was a helpful way to concretize what she had experienced in the practice and that it was useful to be able to return to her notes later. The session ended with a video of one of the MMB facilitators discussing the home practice for the week.

In session 2, “The Body Scan,” the patient watched a “welcome back” video and was provided brief instructions about how to prepare for her first formal meditation practice. The patient participated in a 30-minute body scan practice, during which she moved her attention to specific foci in her body. After the practice, she was invited to describe what she noticed during her body scan and to reflect on how intentional deployment of attention contrasted to automatic pilot. She was also presented with a list of videos of

Table 1. Mindful Mood Balance session objectives

| # | Session topic | Session objectives |
|---|--|---|
| 1 | <i>Finding Your Place Beyond Blue</i> | What is mindfulness; recognizing automatic patterns of reactivity associated with sad mood; integrating brief informal mindfulness practice into daily life. |
| 2 | <i>The Body Scan</i> | Paying attention to specific regions in the body to develop a foundation of mindfulness skill; identifying links between interpretations of interpersonal events and emotional responses. |
| 3 | <i>The Breath</i> | Increasing awareness of how often the mind is busy/scattered. |
| 4 | <i>Exploring the Landscape of Depression</i> | Recognizing experiential avoidance; practicing ways to stay present and attentive in the face of difficulty; identifying depression's early warning signs. |
| 5 | <i>Facing Difficulties</i> | Using mindful awareness as the first step in responding effectively to difficult experiences; increasing awareness of the experience of emotions in the body. |
| 6 | <i>Thoughts Are Not Facts</i> | Learning to “de-center” from difficult thoughts; recognizing one's personal patterns of recurring thoughts. |
| 7 | <i>Building Your Plan of Action</i> | Identifying activities that improve or deteriorate mood; developing action plans to implement during periods of high risk; using mindfulness practice explicitly to guide taking action. |
| 8 | <i>Supporting Your Practice in the World</i> | Emphasizing the importance of regular self-care routines; reinforcing links between mindfulness practices, well-being, and mood balance. |

MMB aims to help patients move from a pattern of getting “sucked into” negative thoughts and emotions to stepping back from and observing them.

the group participants responding to the same questions. The patient found it reassuring that group members experienced many of the same challenges as she did during the practice, such as feeling sleepy, or judging herself when her mind wandered from the practice to thinking about what to make for dinner that night. Next, the patient completed an exercise that highlighted the relationship between thoughts and feelings. She listened to a scenario in which she imagined seeing a friend, waving at the friend, and getting no response. The patient generated interpretations, such as “she’s mad at me” or “she didn’t notice me,” and resulting emotions, including sadness or feeling neutral. This practice was reinforced with a home practice assignment that involved noting one pleasant event each day and the accompanying thoughts, feelings, and sensations. The following week, the patient reported that she enjoyed bringing her attention to pleasant events because she noticed

things she would usually miss, and it helped her stay present in the moment of her experiences. She planned to continue this practice, although it was not assigned for home practice again.

Session 3, “The Breath,” began with a video of a group leader describing the breath as another door to awareness. The patient reported feeling connected to the MMB facilitators, whom she described as warm and compassionate. In this session, the patient listened to an audio recording of a sitting meditation practice. She noted the physical sensations that were present during her practice and how busy her mind was. The patient participated in 2 additional mindfulness practices, including a mindful stretching exercise and a brief breathing practice called the 3-Minute Breathing Space (3MBS). The 3MBS was described as a “mini-meditation” to be used at any point during the day and as a first step in dealing with difficult situations. While reviewing the previous week’s home practice, the patient noted that it was difficult to make time

to complete the Body Scan each day and that she was looking forward to having a briefer meditation option. Additionally, she responded to an e-mail check-in from the program support person to let her know that she was struggling to complete the daily home practice. The program support person explained that home practice is often difficult for program participants, especially in the first few sessions of the program. Together, the patient and program support person identified some ideas to support her practice, including adding her practice time to her calendar to protect the time, recruiting her spouse’s assistance with childcare during her practice times, and adopting a compassionate attitude with herself when unexpected challenges arose. She also experimented with completing the longer practices on the weekends and briefer practices during busy workdays.

In session 4, “Exploring the Landscape of Depression,” the patient learned that understanding depression is a vital step in learning how to recognize it and to prevent it from gathering momentum. The patient interacted with a “playlist” of negative automatic thoughts frequently reported by individuals with depression and, she created a personalized playlist of thoughts that accompany her depressive episodes, such as “I’m a loser.” She noticed that the mindfulness practices increased her ability to observe the presence of these thoughts without getting pulled into disputing them.

Over sessions 5 and 6, the patient practiced applying her mindfulness skills to face painful thoughts, emotions, and bodily sensations as they arose throughout the day. Session 5, “Facing Difficulties,” cultivated this practice in several ways, including a sitting meditation during which she invited a difficulty into the practice, the presentation of a poem, and the use of the 3MBS in reaction to a negative event. At first, the patient reported to the program support person that she was concerned that focusing on negative events might hasten the onset of depression. Over time, she found that they actually helped her feel prepared to deal with negative events in the mo-

ment. She also reported greater awareness of the patterns of her thoughts and emotions and an ability to notice that they ebb and flow. She described moments when she was able to stand back a bit from her thoughts and emotions instead of reacting to them, and say, “Oh, there’s sadness again, and thinking I am inadequate. Interesting that I am feeling that.” She contrasted this to times in the past where she would instead say, “I can’t handle this! I’m never going to feel better!” and her thoughts would spiral out of control from there, worsening her mood.

In session 6, “Thoughts Are Not Facts,” she learned how emotions affect thoughts—for example, by seeing the world “through rose-colored glasses” when happy and as “the glass half empty” when sad. This session described mindful attention as a first step in responding to difficulties. An animation of four doors illustrated potential options for when she notices negative thoughts, emotions, or sensations. The first door, “re-entry,” was described as the door to take when simply bringing awareness to a difficulty makes it less troubling. The “body door” invited her to attend to the ways in which difficult emotions and experiences can show up as physical sensations. The “thought door” suggested bringing fine-tuned awareness to observing her negative thoughts versus getting pulled into them. The “door of skillful action” highlighted that mindful awareness of difficult experiences does not require passivity. Instead, sometimes it is important to take action in ways that bring a sense of pleasure, nourishment, or accomplishment. The patient reported to the program support person that she was surprised to notice that sometimes a 3MBS was all she needed to deal with difficulties, such as a disagreement with a coworker. Other times, taking a bath, folding laundry, or watching a favorite movie at the end of a tough workday was needed.

In sessions 7 (“Building Your Plan of Action”) and 8 (“Supporting Your Practice in the World”), the patient reflected on actions she could take to look after herself in the areas of energy, pleasure, and mastery. She identified her personal

relapse signatures and wrote a letter to herself to catalog the strategies she learned in the program. Specific activities she included as part of her wellness plan were as follows: "Call your sister if you notice your mood is starting to drop," "Do one nice thing for yourself each day like buying a magazine you'll enjoy reading during lunch," or "Make plans to go for dinner after work with a friend." The patient kept her wellness plan in a file on her computer to revisit easily and reviewed it with her spouse so he could support her wellness plan. The patient reported really enjoying the practical suggestions in the last three sessions of the program.

The patient logged on to the program 73 times in 61 days over the course of completing the 8 sessions of MMB. In addition to online completion of each weekly program session, the patient logged on to submit logs that recorded the frequency and duration of each daily home practice assignment. The patient submitted 38 daily home practice logs, and reported completing brief informal mindfulness practices 54 times (194 minutes) and formal meditation practices 32 times (755 minutes) over the course of 9 weeks. The program support person provided an average of 55 minutes of phone, e-mail, and text support time per patient over the 9 weeks of enrollment.

Discussion

This case study, based on a composite of representative experiences of patients who have completed the MMB program, describes the specific learning goals, interventions, and trajectory of patients who use MMB as a component of a treatment approach to RDS. The case study illustrates that skills are learned over the course of the program that focus on new ways of relating to negative thoughts, emotions, and sensations. MMB aims to help patients move from a pattern of getting "sucked into" negative thoughts and emotions to stepping back from and observing them. Both the mindfulness meditation and the cognitive and behavioral techniques support this important learning.

Additionally, the MMB program includes key elements that are designed to strengthen a sense of interpersonal

connection with the learning context; these include both the videotaped group participants and group facilitators and the access to a phone coach. As described in the composite case here, patients often find their personal concerns, questions, and challenges during the practices reflected in the experiences of members of the videotaped group. This both is validating and provides an opportunity to learn via modeling from how others coped with the challenge. The live phone coach also augments such asynchronous support through providing concrete feedback about technical questions and troubleshooting challenges with the home practice. Future research may seek to establish the appropriate training threshold for the program support person. For example, could trained health educators be effective in this role? Finally, the program includes an anonymous forum to post questions and receive responses from the group facilitators; although not all patients use this feature, it represents an additional option for patients to receive program support.

RDS represent an important intervention target to prevent relapse for at-risk individuals following treatment for acute depression. Physicians may find that MMB is a useful clinical adjunct for RDS that could be used sequentially with pharmacotherapy. Physicians might elect to refer patients who have been treated either pharmacologically or with psychotherapy for an acute episode of major depression and who are showing signs of treatment response, or patients with residual symptoms.

At present there are insufficient data to indicate which patients would be most suited for MMB, but an open trial described elsewhere¹⁸ indicated a relationship between the number of sessions completed and the amount of benefit experienced. The question of suitability merits further study. One possibility is the MMB might be viewed positively by patients for whom in-person MBCT is not available, for those who cannot travel regularly or do not feel comfortable attending in-person groups or individual psychotherapy, or for those who would prefer non-pharmacologic options to long-term depression care management. Because

MMB can be easily sequenced with ongoing antidepressant treatment, it may be a cost-effective and scalable option in primary care for increasing access to comprehensive care for RDS. ♦

Disclosure Statement

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References

1. Paykel ES, Ramana R, Cooper Z, Hayhurst H, Kerr J, Barocka A. Residual symptoms after partial remission: an important outcome in depression. *Psychol Med* 1995 Nov;25(6):1171-80. DOI: <http://dx.doi.org/10.1017/S0033291700033146>.
2. Kennedy N, Paykel ES. Residual symptoms at remission from depression: impact on long-term outcome. *J Affect Disord* 2004 Jun;80(2-3):135-44. DOI: [http://dx.doi.org/10.1016/S0165-0327\(03\)00054-5](http://dx.doi.org/10.1016/S0165-0327(03)00054-5).
3. Nierenberg AA, Husain MM, Trivedi MH, et al. Residual symptoms after remission of major depressive disorder with citalopram and risk of relapse: a STAR*D report. *Psychol Med* 2010 Jan;40(1):41-50. DOI: <http://dx.doi.org/10.1017/S0033291709006011>.
4. Fava GA, Ruini C, Belaise C. The concept of recovery in major depression. *Psychol Med* 2007 Mar;37(3):307-17. DOI: <http://dx.doi.org/10.1017/S0033291706008981>.
5. Kuyken W, Byford S, Taylor RS, et al. Mindfulness-based cognitive therapy to prevent relapse in recurrent depression. *J Consult Clin Psychol* 2008 Dec;76(6):966-78. DOI: <http://dx.doi.org/10.1037/a0013786>.
6. Segal ZV, Bieling P, Young T, et al. Antidepressant monotherapy vs sequential pharmacotherapy and mindfulness-based cognitive therapy, or placebo, for relapse prophylaxis in recurrent depression. *Arch Gen Psychiatry* 2010 Dec;67(12):1256-64. DOI: <http://dx.doi.org/10.1001/archgenpsychiatry.2010.168>.
7. Bondolfi G, Jermann F, der Linden MV, et al. Depression relapse prophylaxis with Mindfulness-Based Cognitive Therapy: replication and extension in the Swiss health care system. *J Affect Disord* 2010 May;122(3):224-31. DOI: <http://dx.doi.org/10.1016/j.jad.2009.07.007>.
8. Godfrin KA, van Heeringen C. The effects of mindfulness-based cognitive therapy on recurrence of depressive episodes, mental health and quality of life: a randomized controlled study. *Behav Res Ther* 2010 Aug;48(8):738-46. DOI: <http://dx.doi.org/10.1016/j.brat.2010.04.006>.
9. Ma SH, Teasdale JD. Mindfulness-based cognitive therapy for depression: replication and exploration of differential relapse prevention effects. *J Consult Clin Psychol* 2004 Feb;72(1):31-40. DOI: <http://dx.doi.org/10.1037/0022-006X.72.1.31>.
10. Teasdale JD, Segal ZV, Williams JM, Ridgeway VA, Soulsby JM, Lau MA. Prevention of relapse/recurrence in major depression by mindfulness-

- based cognitive therapy. *J Consult Clin Psychol* 2000 Aug;68(4):615-23. DOI: <http://dx.doi.org/10.1037/0022-006X.68.4.615>.
11. Kingston T, Dooley B, Bates A, Lawlor E, Malone K. Mindfulness-based cognitive therapy for residual depressive symptoms. *Psychol Psychother* 2007 Jun;80(Pt 2):193-203. DOI: <http://dx.doi.org/10.1348/147608306X116016>.
 12. Geschwind N, Peeters F, Huibers M, van Os J, Wichers M. Efficacy of mindfulness-based cognitive therapy in relation to prior history of depression: randomised controlled trial. *Br J Psychiatry* 2012 Oct;201(4):320-5. DOI: <http://dx.doi.org/10.1192/bjp.bp.111.104851>.
 13. Butler M, Kane RL, McAlpine D, et al. Integration of mental health/substance abuse and primary care. *Evid Rep Technol Assess (Full Rep)* 2008 Nov;(173):1-362.
 14. Patten SB, Meadows GM. Population-based service planning for implementation of MBCT: linking epidemiologic data to practice. *Psychiatr Serv* 2009 Nov;60(11):1540-2. DOI: <http://dx.doi.org/10.1176/appi.ps.60.11.1540>.
 15. Holländare F, Johnsson S, Randestad M, et al. Randomized trial of Internet-based relapse prevention for partially remitted depression. *Acta Psychiatr Scand* 2011 Oct;124(4):285-94. DOI: <http://dx.doi.org/10.1111/j.1600-0447.2011.01698.x>.
 16. Morledge TJ, Alexandre D, Fox E, et al. Feasibility of an online mindfulness program for stress management—a randomized, controlled trial. *Ann Behav Med* 2013 Oct;46(2):137-48. DOI: <http://dx.doi.org/10.1007/s12160-013-9490-x>.
 17. Cavanagh K, Strauss C, Cicconi F, Griffiths N, Wyper A, Jones F. A randomised controlled trial of a brief online mindfulness-based intervention. *Behav Res Ther* 2013 Sep;51(9):573-8. DOI: <http://dx.doi.org/10.1016/j.brat.2013.06.003>.
 18. Boggs JM, Beck A, Felder JN, Dimidjian S, Metcalf CA, Segal ZV. Web-based intervention in mindfulness meditation for reducing residual depressive symptoms and relapse prophylaxis: a qualitative study. *J Med Internet Res* 2014 Mar 24;16(3):e87. DOI: <http://dx.doi.org/10.2196/jmir.3129>.
 19. Guidi J, Fava GA, Fava M, Papakostas GI. Efficacy of the sequential integration of psychotherapy and pharmacotherapy in major depressive disorder: a preliminary meta-analysis. *Psychol Med* 2011 Feb;41(2):321-31. DOI: <http://dx.doi.org/10.1017/S0033291710000826>.
 20. Trivedi MH, Kleiber BA. Algorithm for the treatment of chronic depression. *J Clin Psychiatry* 2001;62 Suppl 6:22-9.

The Storm of Murk

The madness of depression is ... the antithesis of violence. It is a storm indeed, but a storm of murk. Soon evident are the slowed-down responses, near paralysis, psychic energy throttled back close to zero.

Ultimately, the body is affected and feels sapped, drained.

— *Darkness Visible*, William Styron, 1925-2006, American novelist and essayist