Web-Based Strategies to Increase Access to Mindfulness-Based Cognitive Therapy for the Prevention of Depressive Relapse

Sona Dimidjian, Ph.D.
Department of Psychology and Neuroscience
University of Colorado Boulder

December 8, 2016

Presented at the Global Consortium for Depression Prevention
Department of Psychiatry and Behavioral Sciences
Stanford University School of Medicine
Collaborators

Arne Beck, Ph.D.
Kaiser Permanente-Institute for Health Research

Jennifer Felder, Ph.D.
University of California San Francisco

Jennifer Boggs, M.S.W.
Kaiser Permanente-Institute for Health Research

Robert Gallop, Ph.D.
West Chester University

Zindel Segal, Ph.D.
University of Toronto Scarborough

Acknowledgements & Disclosures

Funding provided by the National Institute of Mental Health of the National Institutes of Health (R34MH087723; R01MH102229)

Drs. Dimidjian and Segal receive royalties from Guilford Press for work related to Mindfulness-Based Cognitive Therapy and are on the advisory board of MindfulNoggin, which is part of NogginLabs, a private company specializing in customized web based learning.
“The most important thing to remember about depression is this: you do not get the time back... Whatever time is eaten by a depression is gone forever. The minutes that are ticking by as you experience the illness are minutes you will not know again.”

Andrew Solomon, *The Noonday Demon: An Atlas of Depression*
Mindfulness-Based Cognitive Therapy (MBCT)

- 8 week group treatment combining training in mindfulness meditation with cognitive therapy skills for preventing depression and promoting well-being

- Based on Mindfulness Based Stress Reduction (Kabat-Zinn, 1990) with specific tailoring for people with histories of depression
Mindfulness-Based Cognitive Therapy (MBCT): Gradient of Attentional Focus

More tangible, sensory focused

• Eating, daily activities
• Body Scan
• Mindful Walking or Stretching
• Breath, sounds, thoughts
• Difficult thoughts

Less tangible; more emotion/thought focused
Core Elements of MBCT

Relationship with instructor and group

Inquiry and CBT practices

Mindfulness Practices
What is the efficacy of MBCT relative to the standard of care?

Effectiveness and cost-effectiveness of mindfulness-based cognitive therapy compared with maintenance antidepressant treatment in the prevention of depressive relapse or recurrence (PREVENT): a randomised controlled trial


Summary
Background Individuals with a history of recurrent depression have a high risk of repeated depressive relapse or recurrence. Maintenance antidepressants for at least 2 years is the current recommended treatment, but many individuals are interested in alternatives to medication. Mindfulness-based cognitive therapy (MBCT) has been shown to reduce risk of relapse or recurrence compared with usual care, but has not yet been compared with maintenance antidepressant treatment in a definitive trial. We aimed to see whether MBCT with support to taper or discontinue antidepressant treatment (MBCT-TS) was superior to maintenance antidepressants for prevention of depressive relapse or recurrence over 24 months.

Figure 2: Survival curves (of not relapse or recurrence) over a 24-month follow-up period for the intention-to-treat population
Figure 1
Evidence Base for Mindfulness-Based Interventions (i.e., Mindfulness-Based Stress Reduction and Mindfulness-Based Cognitive Therapy) Mapped According to the Adapted National Institutes of Health Stage Model

Note. Recommended pathways between stages are represented with solid arrows; pathways that should be undertaken with caution are represented with dotted arrows. Color saturation represents the proportion of the total number of published studies of mindfulness-based interventions mapped at a given stage, with the specific percentage indicated at each stage.

Depression
Vulnerability

Knowledge and skills for enduring well-being
Depression and vulnerability

Technology

Task sharing

Knowledge and skills for enduring well-being
Web-based MBCT program (MMB)
What are the key components of MMB?

• Sequential tripartite learning cycle
  – Experiential practice
  – Video-based vicarious learning
  – Didactic information

• Guided by instructors and connected to asynchronous group

• Daily practice with tools for scaffolding

• Phone and text-based coaching

Dimidjian et al., 2014, *Behav Res and Therapy*
Summary

For this week's home practice:

- As the formal daily mindfulness practice for this week choose the practice you are most likely to continue using once the course is over (e.g. the sitting practice, the Body Scan, mindful stretching, or mindful walking).

- Practice using the 3-Minute Breathing Space three times a day.

- Use the 3-Minute Coping Breathing Space as a way of coping with difficulties as they come up.

- Write an action plan letter to yourself.

Please remember to record your home practice daily.
Open trial (N = 100)

8 session MMB

Intake  Post-
Intervention  10 week follow-up  6 month follow-up
Open trial (N = 100)

Propensity Matched Control (N=100)

8 session MMB

Usual Depression Care

Intake  Post-Intervention  10 week follow-up  6 month follow-up
Mental Health Research Network
Is MMB associated with a reduction in residual depressive symptoms?

Observed means and confidence bounds by session for patients with RDS; 
$t(165) = 3.54, p \leq 0.003, r = 0.48$

Dimidjian et al., 2014, *Behav Res and Therapy*
Does MMB offer benefit compared to matched usual care comparison group?

![Graph showing comparison between Baseline and Post-Treatment PHQ-9 scores for UDC and MMB groups.]

- Baseline: UDC and MMB scores are close.
- Post-Treatment: MMB shows a significant decrease compared to UDC.

Statistical analysis:
- $t(81) = 8.22$, $p = 0.005$, $d = 1.79$

Dimidjian et al., 2014, *Behav Res and Therapy*
Engagement

• Session completion
  – 50% completed ≥ 4 sessions
  – Session completion was significantly associated with change in PHQ9 (r(36) = 0.37, p < 0.03)

• Home practice
  – Mean formal meditation practice per week:
    • 46.93 min (SD = 44.04)
  – Mean 3-minute breathing spaces per week:
    • 6.73 times (SD = 6.34)

Dimidjian et al., 2014, *Behav Res and Therapy*
Is reduction in depressive symptoms associated with session completion?

*PHQ9 (r(36) = 0.37, p < 0.03)*

Dimidjian et al., 2014, *Behav Res and Therapy*
Putative Targets
Self-Reported Rumination & Mindfulness

**RRS**

<table>
<thead>
<tr>
<th>Intake</th>
<th>Time</th>
<th>Post</th>
</tr>
</thead>
</table>

- **p < 0.03**

**FFMQ**

<table>
<thead>
<tr>
<th>Intake</th>
<th>Time</th>
<th>Post</th>
</tr>
</thead>
</table>

- **p = 0.37**

Dimidjian et al., 2014, *Behav Res and Therapy*
Ongoing RCT (N = 460)

MMB vs. Usual Depression Care

SOAR - Strategies for Overcoming Residual Depressive Symptoms

Thank you for visiting our study website. This website provides information on a research study that is being conducted by researchers from Kaiser Permanente of Colorado, University of Colorado Boulder, in partnership with the University of Toronto Scarborough.
Staying Well During Pregnancy and the Postpartum: A Pilot Randomized Trial of Mindfulness-Based Cognitive Therapy for the Prevention of Depressive Relapse/Recurrence

Sona Dimidjian  
University of Colorado Boulder  
Jennifer N. Felder  
University of Colorado Boulder  
Amanda P. Brown  
Emory University

Sherryl H. Goodman  
Emory University  
Robert Gallop  
West Chester University  
Arne Beck  
Kaiser Permanente Colorado–Institute for Health Research

Objective: Clinical decision-making regarding the prevention of depression is complex for pregnant women with histories of depression and their health care providers. Pregnant women with histories of depression report preference for nonpharmacological care, but few evidence-based options exist. Mindfulness-based cognitive therapy has strong evidence in the prevention of depressive relapse/recurrence among general populations and indications of promise as adapted for perinatal depression (MBCT-PD). With a pilot randomized clinical trial, our aim was to evaluate treatment acceptability and efficacy of MBCT-PD relative to treatment as usual (TAU). Method: Pregnant adult women with depression histories were recruited from obstetric clinics at 2 sites and randomized to MBCT-PD (N = 43) or TAU (N = 43). Treatment acceptability was measured by assessing completion of sessions, at-home practice, and satisfaction. Clinical outcomes were interview-based depression relapse/recurrence status and self-reported depressive symptoms through 6 months postpartum. Results: Consistent with predictions, MBCT-PD for at-risk pregnant women was acceptable based on rates of completion of sessions and at-home practice assignments, and satisfaction with services was significantly higher for MBCT-PD than TAU. Moreover, at-risk women randomly assigned to MBCT-PD reported significantly improved depressive outcomes compared with participants receiving TAU, including significantly lower rates of depressive relapse/recurrence and lower depressive symptom severity during the course of the study. Conclusions: MBCT-PD is an acceptable and clinically beneficial program for pregnant women with histories of depression; teaching the skills and practices of mindfulness meditation and cognitive-behavioral therapy during pregnancy may help to reduce the risk of depression during an important transition in many women’s lives.

What is the public health significance of this article?  
This study’s findings support MBCT-PD as a viable nonpharmacological approach to preventing depressive relapse/recurrence among pregnant women with histories of depression.

Keywords: pregnancy, depression, prevention, mindfulness, cognitive–behavioral therapy

Sona Dimidjian, Department of Psychology and Neuroscience, University of Colorado Boulder; Sherryl H. Goodman, Department of Psychology, Emory University; Jennifer N. Felder, Department of Psychology and Neuroscience, University of Colorado Boulder; Robert Gallop, Department of Mathematics, Applied Statistics Program, West Chester University; Amanda P. Brown, Department of Psychology, Emory University; Arne Beck, Kaiser Permanente Colorado–Institute for Health Research.

Menglian McCallum, Matthew Rouse, and Courtney Stevens), and research assistants (Tess Atteberry, Kathryn Brazeale, Lucas Bermudez, Michaela Cuneo, Elizabeth Eastis, Anna Pye, Dhwani Kothari, Nicholas Webb, Jennifer Wooldridge, Nasseem Zanganeh, and Capella Zhuang). We would like to express special appreciation for Sharon Salzberg, who collaborated on the writing and recording of the meditation instructions; Nancy Barducka, who contributed consultation and the “Being With Baby” meditation practice; De West, who recorded the yoga DVD; and Zindel Segal. We also express our gratitude to the members of our Data Safety and Monitoring Board who contributed time and expertise to the oversight of the study. Sona Dimidjian
Does MBCT provide benefit with respect to relapse prevention for perinatal women?

Time to relapse/recurrence by condition. $\chi^2(1) = 6.92, p = 0.008$

Median time to birth for study participants was study week 26.

Dimidjian et al., *JCCP*, 2015
Perinatal Customization
Summary

- MMB associated with high engagement, significant reduction in depressive severity, and improvement on putative target of self-reported rumination
- Limited by lack of randomization and follow-up, reliance on self-reported putative targets
- High potential for customization and dissemination in routine care