

Mindfulness-Based Emotional Balance

History of development, curriculum, and research

*Margaret Cullen, Gonzalo Brito-Pons, and
Robert W. Roeser*

History and development

Program background

The Mindfulness-Based Emotional Balance (MBEB) program has evolved under various names (Cultivating-Emotional Balance (CEB), **S**tress-**M**anagement and **R**elaxation **T**raining (SMART)-in-Education Program, M-Power Teacher Program, and the Mindfulness-based Attentional Training (MBAT) for-Spouses Program). Many people, across long periods of time, have contributed to its current form. With each iteration in the development of the MBEB program, we have attempted to bring together the twin themes of mindfulness and emotion in a deeper and more integrated way.

The MBEB program sits squarely in the lineage of Western Buddhist teachers/teachings (Kabat-Zinn, 2003); the Mindfulness-based Stress Reduction (MBSR) program of Jon Kabat-Zinn (1990); and the emergence of secular mindfulness-based interventions (Cullen, 2011). In 2002, at the suggestion of her mentor Jon Kabat-Zinn, Cullen participated as the “emotion trainer” on an intervention-focused research study of the Cultivating Emotional Balance (CEB) program. This study was the brainchild of Dr. Paul Ekman, who developed the idea with others after participating in a Mind and Life dialogue with the Dalai Lama on Destructive Emotions (Goleman, 2003). At this meeting, contemplatives and scientists discussed the different approaches taken in Buddhism and in Western psychology towards the management of difficult emotions. The Dalai Lama challenged the group to combine tools from the contemplative traditions and science and to make them available to a wider audience.

With the help of Buddhist scholar, teacher and translator, Alan Wallace, Ekman began to work on creating a program for teachers that was also based on his research on emotion. The focus on teachers was chosen because, not only do teachers experience high degrees of stress, but their ability to manage their emotions has a direct impact on their students. From the contemplative side, Wallace focused on teaching a meditation approach called Tamatha (focused attention/quieting), as well as a set of practices around prosocial qualities called “The Four Immeasurables.”

In the CEB program, in addition to teaching the didactic emotion component of CEB, Cullen’s role was to address the challenge of integrating the emotion training with the contemplative practice component of the program. This proved challenging for several reasons.

For instance, in Ekman's taxonomy of universal emotions, feelings such as shame, envy and compassion were not considered universal emotions (Ekman, 2003). In addition, Wallace chose to teach the Four Immeasurables (e.g., loving kindness, compassion, sympathetic joy, and equanimity). These immeasurables resemble emotions, but they are not well understood in modern psychological science. Compassion, for example, could be taught from the "contemplative" side, but couldn't be included on the "emotion" side because compassion did not meet the criteria that defined emotions in science at the time (see Ekman, 2008).

Another example of the complexity of integrating emotion into contemplative practices, Wallace also taught the four foundations of mindfulness, a framework and related set of practices that don't specifically include emotions in their purview (Cullen, 2011). Thus, emotions themselves, ironically, were never the object of formal meditation in the CEB program.

Emergence of the Mindfulness-Based Emotional Balance program

The next stage in the development of the MBEB program occurred in 2006 when Ulco Visser (Impact Foundation), a social entrepreneur interested in education, invited Cullen to teach CEB in Denver, Colorado, to teachers. Visser was determined to develop a model that could be both scalable and financially self-sustaining and, in 2007, he invited Cullen to develop her own curriculum integrating emotion training and contemplation.

Having trained in MBSR in 1995 with Kabat-Zinn, Cullen had been aware of the knowledge and skill bank that MBIs were accumulating as more and more programs were offered, specific cohorts were targeted, data was collected, and instructors honed their skills (McCown, Reibel, & Micozzi, 2010). Kabat-Zinn's original vision had been road tested by hundreds of teachers and much had been learned, not only about how to "language" contemplative practices in mainstream settings, but also how to facilitate this type of program (e.g., embodiment of mindfulness, facilitating inquiry, and creating a safe container). The new program Cullen created drew from MBSR and from Ekman's theory and techniques for developing emotional literacy. She also drew on her work with cancer patients and their families to incorporate "forgiveness" because she had learned from this community that forgiveness practice was foundational to emotional balance. Forgiveness was a novel and somewhat radical addition as it didn't have a clear precedent in either emotion training or in contemplative training.

It was at this juncture that the program was called "Mindfulness-based Emotional Balance" (MBEB) by Cullen and the SMART (Stress Management and Relaxation Training)-in-Education program by Visser and the Impact Foundation. In 2009, Cullen, Linda Wallace, and Betsy Hedberg co-wrote a complete SMART-in-Education teacher manual based on Cullen's program. Visser and the Impact Foundation gave the US rights to the SMART program and manual to Passageworks, located in Colorado and the Canadian rights to University of British Columbia in Kelowna, Canada. In 2015, a workbook based on MBEB was published (Cullen & Brito Pons, 2015), which has also been published in Spanish. In 2017 the first two international MBEB Teacher Training programs are underway through the Center for Mindfulness at UC San Diego and the Australian Psychological Society.

In summary, the MBEB program has been refined and studied over time, a manual has been published, the training of MBEB instructors has begun, and lines of research in education and the military using variants of MBEB are currently underway. Before describing the program and the research on MBEB in slightly more depth, we discuss the nature of this challenge a bit more theoretically.

Central theoretical and practical challenge: integrating mindfulness and emotion

Over the course of the development of the MBEB program, we confronted several challenges when attempting to create a mindfulness program that focused on emotions. First, what we call emotions don't have exact equivalences in Tibetan, Sanskrit, or Pali, the languages in which Buddhist philosophy is mainly written. Most mindfulness trainings draw heavily on the Satipaṭṭhāna Sutta (The Discourses on the Establishing of Mindfulness) from the Pali Canon. These four foundations parse experience into categories that are particularly fruitful places to investigate with mindful awareness into the nature of reality. Traditionally, emotions simply don't fit neatly into any of the four foundations. They are experienced in both the body *and* the mind, yet the Sutta separates the body into the first foundation and the mind into the third foundation. They are sometimes placed in the second foundation which is awareness of *vedana* or feeling tones (Gunaratana, 2012), but many scholars limit this foundation strictly to awareness of the qualities of pleasant, unpleasant, or neutral that accompany all experience (Thera, 1965; Analayo, 2003; Wallace, 2011). Of the two principal Vipassana teachers in the West, Jack Kornfield places emotions in the second foundation (Kornfield, 2013), while Joseph Goldstein places emotions in the third foundation (Goldstein, 2002). The second foundation is intended to bring insight into the tendency of mind to react to these feeling tones of pleasant, unpleasant, and neutral by clinging, pushing away or "checking out," which can lead to liberating insight into the nature of mind but does not necessarily allow for insight into the nature of emotional experience. The third foundation is designed to provide insight into the way mental states affect the nature of mind, but doesn't include awareness of the physical correlates of emotion.

What was clear from the beginning of CEB, was that Ekman's maps of emotions and the Buddhist map of the four foundations could neither fully integrate, nor could they fully address the lived reality of our 21st-century participants. As beautiful as these maps are, they are not, in fact, the territory. Our lived experience of emotions is complex, multi-faceted and defies strict categorization.

Even with the approval and support of highly respected teachers and mentors, it is a bold leap to suggest that the maps provided by two thousand plus years of Buddhist scholars cannot literally be followed if they are to address the emotional lives of 21st-century Westerners. At the same time, if they aren't deeply honored and respected within the contexts in which they evolved, mindfulness programs risk getting reduced to simple "stress reduction." Like all good scientists, Ekman continues to revise and update his theories and his ideas influence new generations of thinkers which, in turn, have influenced MBEB (Davidson, 2012; Barrett, 2017; Gilbert, 2009).

In developing and teaching MBEB, our intention was to remain open to useful contemplative and scientific maps on emotional experience, while remaining aware that not only the map is not the territory, but that an attachment to maps can become an obstacle to communicate the radically experiential nature of the practice in an original and authentic way, an embodiment of the "real curriculum."

Reflecting on the importance of honoring the tradition while keeping an open mind to find new ways to convey the depth of contemplative practices, Kabat-Zinn (2011) wrote:

It can be hugely helpful to have a strong personal grounding in the Buddhadharma and its teachings. . . . Yet little or none of it can be brought into the classroom *except in essence*. And if the essence is absent, then whatever one is doing or thinks one is doing, it is certainly not mindfulness-based in the way we understand the term.

This means that we cannot follow a strict Theravadan approach, nor a strict Mahayana approach, nor a strict Vajrayana approach, although elements of all these great traditions and the sub-lineages within them are relevant and might inform how we, as a unique person with a unique dharma history, approach specific teaching moments in both practice, guided meditations, and dialogue about the experiences that arise in formal and informal practice among the people in our class. But we are never appealing to authority or tradition, only to the richness of the present moment held gently in awareness, and the profound and authentic authority of each person's own experience, equally held with kindness in awareness.

(p. 299)

The program

The eight-week version of MBEB follows the general structure of MBSR and other MBIs, including eight two-and-a-half hour classes and a silent daylong between weeks 6 and 7. Each class in the program focuses on a different theme (see below) following a progression that goes from developing basic mindfulness skills during the first half of the program to applying these skills for enhancing emotional awareness and developing more adaptive emotional patterns during the second half of the program. Throughout the course of the eight weeks, participants are asked to dedicate 30 minutes a day to formal meditation practice using downloadable audio guides. Informal practices ("field observations" and "experiments") are also used to investigate and deepen the understanding of each theme in a way that is immediately relevant in daily life.

Each class in the program includes:

- guided meditation,
- inquiry about the previous week's formal and informal practice,
- experiential and dialogical pedagogy on the theme of the class,
- introduction and practice of the meditation for the coming week, and
- home assignments (formal and informal practices).

The pedagogy of the themes typically involves individual or relational exercises and experiments to explore the topic experientially, after which participants reflect on their experience in small groups or in the large group. The instructor uses the inquiry process to introduce key teaching points based on emotion theory, scientific research, and contemplative wisdom related to the topic of the week.

The themes and practices of the program are designed and organized to enhance participants' nonjudgmental awareness about their emotional processing, emotional patterns, and reactions, and to gain insight about the relationship between emotions and related phenomena such as attention, intention, thoughts, and behavior. From this enhanced awareness, difficult emotional states such as fear, anger, jealousy, envy, and shame are approached from the perspective of mindfulness, normalizing and de-shaming the experience of these emotions, thus preventing the proliferation of these states through self-criticism and aversion. Finally, health-supportive and prosocial emotional states including forgiveness, love, kindness, and compassion are cultivated and strengthened through meditation and informal practices. Table 7.1 presents a summary of the main themes and formal practices of the program week by week.

Table 7.1 Mindfulness-Based Emotional Balance (MBEB) protocol

Week	Mindfulness-Based Emotional Balance (MBEB)
	Introduction to mindfulness
1	<p>What mindfulness is and how it relates to emotional balance. The role of intention in emotional balance is explored and setting intentions is introduced as a practice. Awareness of breath is presented as a foundational practice that helps develop a basis of nonreactivity and equanimity from which to explore emotions.</p> <p>Formal practice: awareness of breath</p>
	Feelings: pleasant, unpleasant, neutral
2	<p>Key aspects of emotion theory from a psychological and evolutionary perspective are introduced (universal and personal triggers, automatic appraisers, refractory period, etc.). Learning to recognize feeling tones (pleasant, unpleasant, and neutral), habitual reactions to them, and the relationship between these reactions and emotional patterns.</p> <p>Formal practice: awareness of breath and feelings</p>
	Mindfulness of thoughts
3	<p>Learning to recognize thoughts as mental events. Understanding the link between thoughts, emotions, and moods, and how different thoughts stimulate different emotional systems (threat, drive, soothing-affiliative) that can generate and feed loops between the body, emotions, and thoughts.</p> <p>Formal practice: mindfulness of breath and thoughts</p>
	Forgiveness
4	<p>Forgiveness is explored as a trainable skill supportive of emotional balance and consisting of letting go of resentment toward self and others without condoning or minimizing harmful actions. Through guided discovery, participants explore blocks and misconceptions about forgiveness and learn a process to practice forgiveness for self, from others, and for others.</p> <p>Formal practice: forgiveness meditation</p>
	Love and kindness
5	<p>Learning to recognize love and kindness when it arises naturally in relation to loved ones, and how this appreciation and commitment to other's wellbeing can be trained and expanded beyond the immediate circle of close ones. Taking joy in other's happiness, versus feeling jealousy and envy affect the body and mind in ways that nourish or undermine emotional balance.</p> <p>Formal practice: loving-kindness meditation</p>
	Defensive emotions: anger and fear
6	<p>Anger and fear are explored as evolutionarily derived emotions that protect us by helping to remove obstacles and avoid threat. Normalizing and de-shaming the experience of having these emotions as normal functions of the human "tricky brain." Participants recognize and do exercises to embody defensive emotions and explore personal anger and fear triggers. Participants learn to identify and map their anger profiles.</p> <p>Formal practice: mindfulness of breath, thoughts, and emotions</p>
	MBEB silent day of practice
	<p>This day of practice is designed to deepen the participants' experience with the core practices and themes of the program in the context of shared silence. The day combines guided mindfulness meditations (mindful breathing, awareness of feelings, awareness of thoughts, and emotions) and guided generative practices (forgiveness, loving-kindness, compassion), along with mindful walking and movement practices.</p>

Week *Mindfulness-Based Emotional Balance (MBEB)*

Compassion

- 7 Learning to develop qualities such as greater self-acceptance, tenderness, nonjudgment, and caring in self-to-self and self-to-other relations. Participants begin to cultivate compassion for all beings by moving from focusing on the self to focusing on a loved one to focusing on a neutral person, then on a difficult person, and finally on all beings.

Relevant psychological blocks and obstacles to self- and other- compassion are explored, including shame, guilt, grief, and self-criticism.

Formal practice: compassion meditation

Integrated practice and continuation

- 8 The essential elements of the program are combined into an integrated meditation practice that can continue to be done daily by participants. The group explores strategies to develop habits of the heart, mind, and body that support emotional balance and resilience after the program.

Formal practice: integrated meditation

For a detailed idea of the contents and strategies used in MBEB, you can explore the workbook and the audio guided meditations in the accessories webpage for the workbook version of this program (Cullen & Brito Pons, 2015) at www.newharbinger.com/mindfulness-based-emotional-balance-workbook/accessories.

Finally, we would like to share two exercises that are used in the program:

- 1 **Exploring forgiveness.** A key pedagogical strategy in MBEB consists in exploring the (often unconscious) beliefs and assumptions that participants hold about specific emotional processes. One example of this is the use of Socratic dialogue and guided discovery in class four to explore participants' beliefs and assumptions about what forgiveness is. Please write your responses to each question in your journal, taking a moment to reflect on what you truly believe.
 - Who benefits from forgiveness?
 - Is forgiveness the same as reconciliation? If not, what's the difference?
 - Does the act of forgiveness condone or minimize behavior? Why or why not?
 - Is forgiveness a sign of weakness or strength? Why or why not?
 - Does forgiveness require an apology?
 - Is forgiveness a process, or does it happen in a moment? Can it be forced?
 - What's the difference between forgiving and forgetting?
- 2 **Exploring envy and empathetic joy.** In this guided visualization used in week five (love and kindness) participants use an imaginary situation to explore the physiological, mental, and emotional correlates of joy versus envy as possible responses to others' happiness. Read the following instructions to try this exercise on your own, taking some time with each bullet point before moving to the next (and try to resist the temptation to read ahead):
 - Sit in meditation posture, in a comfortable yet alert position, with your hands resting calmly and your eyes gently closed. Check in with your body, feeling the places where it contacts the chair or floor.

- Take some deep breaths, completely filling the torso with air, then completely releasing the breath.
- Now, imagine or remember a time when something wonderful happened to a loved one, perhaps a dear friend or a family member. Envision and experience what happened, and notice the bodily sensations, the thoughts, and emotions that arise when you imagine or remember this. For a few moments, allow the feeling to get as strong as possible.
- Now, imagine a competitor making a great accomplishment, receiving acknowledgment, and enjoying success. Again, notice how that feels in the body and in your mind, allowing yourself to feel whatever arises.
- Compare the sensations, emotions, and thoughts that arose in these two scenarios. If you felt envy arising, how did it feel in the body? What kind of thoughts came up?
- After acknowledging the envy as a very human emotional reaction, try this thought experiment in which you choose to do something rather unusual: imagine how would it feel to choose to be happy for this person.
- Just for a few minutes, consider this thought: "What if their happiness posed no threat to me?" Knowing that you can return to envy at any time, see if it is possible to participate in and celebrate their happiness for even just one minute.

If you followed the previous steps, reflect on this exercise. From your own experience, what did you observe?

It is important to remember that these two exercises are embedded in an eight-week program that intentionally and systematically supports both an inner and outer environment in which to safely experiment with potentially triggering subjects like forgiveness and envy.

For participants as well as institutions, the growing body of research validating this program as "evidence-based" plays a key role in the intellectual "buy-in" that is necessary before engaging with challenging and potentially transforming programs such as MBEB.

Research on the program

Beginning in 2009, Dr. Robert Roeser, with many collaborators and colleagues, began to undertake a systematic line of research on the teacher and classroom effects of the MBEB program (under the name SMART-in-Education program) in primary and secondary school settings (see Roeser et al., 2013). The work began in Vancouver, British Columbia, Canada, with Drs. Kimberley Schonert-Reichl and Amishi Jha as collaborators. MBEB was first piloted in Vancouver with district staff, principals, and administrators, and then with groups of primary and secondary school teachers in a randomized-control scientific trial. The program was then implemented and studied in successive cohorts of parents and educators in Boulder, Colorado; Ann Arbor, Michigan; Berkeley, California; and Portland, Oregon, with various collaborators (see research summary below). Although the program was initially offered to educators, it was designed to be readily and easily translated for any sector: education, health care, parenting, business, sports, and so forth. The program is viewed as transferrable in this way because, we posit, it has both a non-directive approach to "outcomes," and, due to the nature of each group served, a structured approach that allows for the organic emergence of shared experience and dialogue around how the transfer of mindfulness skills to one's various life settings (e.g., the classroom) can occur in the service of various ends (e.g., better relationships with students). Indeed, studying the processes of transfer from this

kind of non-directive teacher program to changes in teachers' classroom practice has been a main focus of this entire line of research (see Roeser, 2016).

For a series of research projects beginning in 2013 in the Northwest United States called Empowering Educators through Mindfulness Training, Roeser enlisted Cullen to continue offering the MBEB program for his research projects under the name "M-Power Program for Teachers." More recently, neuroscientist Amishi Jha at University of Miami hired Cullen to adapt MBEB for military spouses. Under the name Mindfulness-Based Attention Training (MBAT)-Spouse, Cullen and colleagues delivered several iterations of MBEB to military spouses at army and air force bases around the US and a teacher training at Joint Special Operations Command. These military setting programs have been studied by Jha's lab. We briefly review this work below.

Research and theory of change on MBEB in education

Several randomized-control research trials using mixed methods of investigation have been conducted on the MBEB program in education with parents and teachers of special needs students (e.g., Benn, Akiva, Arel, & Roeser, 2012) and with primary and secondary school teachers (Crain, Schonert-Reichl, & Roeser, 2016; Taylor et al., 2016; Roeser, 2016; Roeser, Mashburn, & Skinner, in preparation; Roeser et al., 2013). These studies are summarized in Table 7.2.

Table 7.2 Study modalities or findings for MBEB program in education with parents and teachers of special needs students

<i>Treatment modality</i>	<i>Explanation</i>
Self-care and home therapies	Self care techniques; Psychoeducation; CAM; massage, yoga, placental encapsulation.
Individual psychotherapy	Proven therapies include Interpersonal therapy, Cognitive therapies, Psychoanalytic therapy. Limited to AD only in military facilities.
Pharmacotherapy	Medications including antidepressants, mood stabilizers or antipsychotics. Studies have shown many women prefer non-medication treatments and perceive medication as "giving up."
Community support: network	MOPS international; PSI support groups in community, PSI international warm-line.
Partner or dyadic therapies	Marriage therapies and parent-infant therapies not generally available to military. Referred to network or obtains marital counseling from chaplains.
Home-health therapies	Home-visiting programs such as New Parents support/civilian equivalent. NPSP is only model available to military families.
Group therapies	Found to be overall beneficial in civilian communities. Usually consist of support groups/education groups. Only group study in military is Mothers in Transition Program at Camp Pendleton. Two studies presented at APA conference on postpartum support group or mother-infant group therapy.
Parent-infant therapies	Mother-infant therapy, usually in conjunction with visit to therapist. NPSP has parent-child interaction therapy.

The research studies on the MBEB program in education have been guided by a theory of change of intended program effects on teachers, classrooms, and students (see Figure 7.1 – Roeser, Skinner, Beers, & Jennings, 2012). The theory begins with the **fidelity of implementation** of the MBEB program in terms of adherence to the curriculum and the acceptability and feasibility of the program to teacher participants. Given high quality implementation of MBEB, we hypothesized that the MBEB program would have **teacher effects**, first in terms of teachers’ strengthening of mindfulness-related skills and dispositions (e.g., self-compassion); and then secondly, in terms of increasing teachers’ occupational health, wellbeing and prosocial dispositions (e.g., forgiveness, compassion). By helping teachers to be less exhausted, more engaged, and more prosocial, the MBEB program is hypothesized to have **classroom effects**. Specifically, teachers who feel less stress, greater wellbeing, and greater prosociality are hypothesized to create more emotionally-supportive and well-managed classrooms. Finally, the theory of change postulates **student effects** – specifically that students will be more motivated and engaged in classrooms that they perceive as emotionally-supportive, safe, and well-managed; and where they have emotionally closer relationships with their teachers, because such classrooms address their needs for autonomy, belonging, and competence (Eccles & Roeser, 2016). To date, research studies provide empirical support for the hypothesized teacher and classroom effects of MBEB in education, though more research is needed to further establish the validity of these findings.

Summary of research studies in education

In 2009 and 2010, Roeser and colleagues conducted the first randomized control trials of a nine-week, 36-hour version of MBEB for public school teachers in Western Canada and in the Western United States (see Crain, Schonert-Reichl, & Roeser, 2016; Roeser et al., 2013; Taylor et al., 2016). The sample included 113 public elementary (50%) and secondary school teachers. Results published in several papers document that teachers found the program feasible and acceptable, were able to attend most program sessions, and completed the

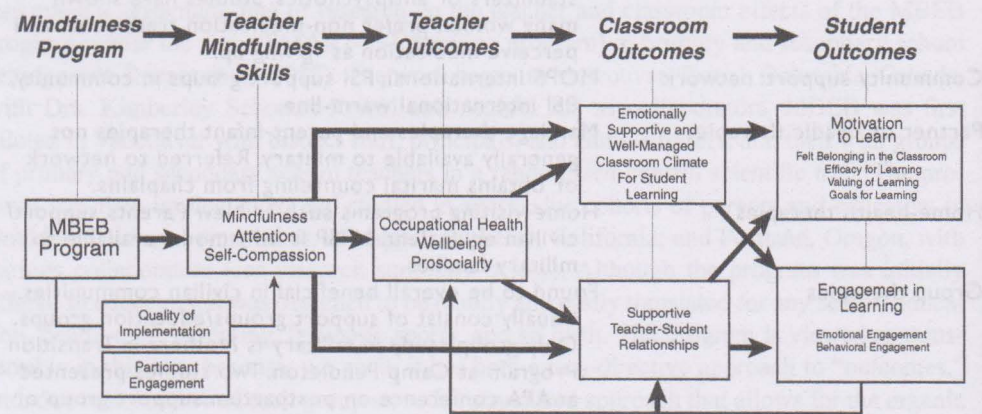


Figure 7.1 Theory of change.

Note: Hypothesized effects of the MBEB program on teachers, classrooms, and students.

daily 15 minutes of home practice. In addition, teachers receiving MBEB showed significant increases in mindfulness, self-compassion, and an objective measure of attention and memory; in empathy and forgiveness, and in sleep quality and quantity. Teachers receiving the training also showed significant reductions in occupational stress, burnout, and symptoms of anxiety and depression. No effects on biological measures of stress were found. Greater teacher mindfulness and self-compassion in the MBEB group after the training mediated longer-term reductions in occupational stress and burnout and anxiety and depression at follow-up during a new school year.

In 2010, Benn, Akiva, Arel, & Roeser (2012) conducted a randomized control trial in the Midwest examining the feasibility and efficacy of a five-week, 34-hour summertime version of the SMART program for parents and educators of children with special needs. The sample included 37 special educators (10 teachers, 11 teaching assistants, and 16 other professional staff) and 23 parents of children with special needs. The research results showed that parents and teachers were able to attend most sessions and reported enjoying and deriving benefit from the program. Furthermore, those receiving MBEB showed significant increases in mindfulness and self-compassion; significant increases in empathy and forgiveness; and significant reductions in stress and anxiety. Greater parent and teacher mindfulness in the MBEB group after the training mediated longer-term reductions in stress and anxiety at follow-up two months later.

In 2012, Roeser (2016) and colleagues conducted a pre-post, uncontrolled process study in the Western US of the nine-week 36-hour version of MBEB program for 16 educators in K-12 settings. The goal of this study was to “look inside the black box” of the MBEB program to document specific processes by which MBEB might be effecting teacher outcomes. Results showed that teachers reported increases in mindfulness and decreases in stress and depressive symptoms from pre- to post-program. Process study results showed that there were specific activities and ways of teaching employed by the mindfulness instructor (M. Cullen) that help participants to learn the skills of mindfulness and compassion. These activities and acts included the largely practice-focused, experiential, and dialogic nature of the program; a consistent focus on autonomy-supportive language and practice; and the embodiment of the qualities being taught to the teachers on the part of the mindfulness instructor (e.g., mindfulness, kindness, clarity, trustworthiness).

From 2014 to 2016, Roeser, Mashburn, and Skinner (in preparation) conducted a randomized control trial in the Northwest examining the feasibility and efficacy of a nine-week 28-hour summertime version of the SMART program for parents and educators of children with special needs. The sample included 58 middle school teachers. Results showed that teachers found the program feasible and acceptable, were able to attend most program sessions, and completed the daily 15 minutes of home practice. In addition, teachers receiving MBEB showed significant increases in mindfulness and self-compassion, but not an objective measure of attention and memory. Teachers receiving the training also showed significant reductions in occupational stress, burnout, and symptoms of anxiety and depression. No effects on biological measures of stress were found. This study also examined classroom effects. Results showed that participation in MBEB was not associated with increases in classroom emotional support or management/organization right after the program ended, but teachers who participated in the program did show more productive and better organized classrooms climates four months later at the beginning of a new school year.

In summary, results from these research trials provide evidence of program feasibility and efficacy for educator and parent outcomes, and evidence of promise for how the MBEB

teacher program can help middle teachers to create more productive and better managed classroom environments for student learning. More research is needed that includes: (a) active control groups; (b) non-self report measures of outcomes; (c) more diverse geographic samples of teachers; (d) additional measures of teacher behavior in the classroom and (e) student outcomes. We can say at this point that this program shows promising evidence in terms of improving teachers' mindfulness, self-compassion, occupational health, and wellbeing, as well as preliminary evidence in relation to improving middle school classroom climates for student learning.

Summary of research studies in military settings

Another line of research is examining the implementation of MBEB in military settings. One recent study compared the effects of two different-length versions of the MBEB program adapted for military spouses on attention and wellbeing outcomes (Brudner et al., 2016). The study included 95 military spouses recruited from three military bases. The study compared program effects on spouses allocated to one of three conditions (control, four-week/eight-hour MBEB, eight-week/27-hour MBEB). Both the four- and eight-week versions of the program improved subjective reports of increased mindfulness and improved psychological wellbeing. Participants in the eight-week, but not the four-week program, showed improvements on an objective measure of attention regulation.

Conclusion and acknowledgments

For fifteen years, MBEB has been evolving. The experience of every participant in every iteration has, in some way, influenced this evolution, not only through their participation in the scientific research, but through their comments in class and engagement with the materials. The history of MBEB begins with the key contributions of Wallace and Ekman. Wallace was the first to bring the four immeasurables into a secular contemplative training. Ekman's theories on emotion could be operationalized in a way to make our emotional lives more "user friendly." Collaborators have emerged at key moments to shape the direction of MBEB in profound ways. Kabat-Zinn was a tireless champion of MBEB, and a paragon of courage in his own determination to teach from the territory, not the map. Roeser brought not only a uniquely collaborative approach to research, but also a depth of understanding of emotion in the context of human development. Brito Pons brought the combination of years of intensive practice, clinical training, and in-depth training with Paul Gilbert. Jha contributed the bold vision of bringing mindfulness and emotion training into the military. It is our expectation that MBEB will continue to evolve, shaped by research outcomes, teacher trainings, future collaborators, and individual experience. And it is our hope that MBEB will continue to support the emotional wellbeing of our participants in the actuality of their lives.

References

- Analayo. (2003). *Sattipatthana: The Direct Path to Realization*. Birmingham: Windhorse.
- Barrett, L.F. (2017). *How Emotions Are Made: The Secret Life of the Brain*. New York, NY: Houghton Mifflin Harcourt.
- Benn, R., Akiva, T., Arel, S., & Roeser, R.W. (2012). Mindfulness training effects for parents and educators of children with special needs. *Developmental Psychology*, 48, 1476–1487.

- Brudner, E.G., Ramos, N., Denkova, E., Morrison, A.B., Cullen, M., MacAulay, J., & Jha, A.P. (2016). *The Influence of Training Program Duration on Cognitive and Psychological Benefits of Mindfulness and Compassion Training in Military Spouses*. Poster presented at the biennial meeting of the International Symposium on Contemplative Studies, San Diego, CA.
- Crain, T., Schonert-Reichl, K., & Roeser, R.W. (2016). Cultivating teacher mindfulness: Effects of a randomized-controlled trial on work, home, and sleep outcomes. *Journal of Occupational Health Psychology*, 22(2), 138–152.
- Cullen, M. (2011). Mindfulness-based interventions: An emerging phenomenon. *Mindfulness*, 2, 186–193.
- Cullen, M., & Brito Pons, G. (2015). *The Mindfulness-Based Emotional Balance Workbook: An Eight-Week Program for Improved Emotion Regulation and Resilience*. Oakland, CA: New Harbinger.
- Davidson, R. (2012). *The Emotional Life of Your Brain: How Its Unique Patterns Affect the Way You Think, Feel, and Live*. New York, NY: Hudson.
- Eccles, J.S., & Roeser, R.W. (2016). School and community influences on human development. In M.H. Boorstein & M.E. Lamb (Eds.), *Developmental Psychology: An Advanced Textbook, Seventh Edition*. Hillsdale, NJ: Erlbaum.
- Ekman, P. (2003). *Emotions Revealed*. New York, NY: Holt.
- Ekman, P. (2008). *Emotional Awareness: Overcoming the Obstacles to Psychological Balance and Compassion*. New York, NY: Holt.
- Gilbert, P. (2009). *The Compassionate Mind*. Oakland, CA: New Harbinger.
- Goldstein, J. (2002). *One Dharma*. San Francisco, CA: Harper.
- Goleman, D. (1997). *Healing Emotions*. Boston, MA: Shambhala.
- Goleman, D. (2003). *Destructive Emotions: A Scientific Dialogue with the Dalai Lama*. New York, NY: Bantam.
- Gunaratana, B. (2012). *The Four Foundations of Mindfulness in Plain English*. Somerville, MA: Wisdom.
- Kabat-Zinn, J. (1990). *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness*. New York, NY: Delta Trade.
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present and future. *Clinical Psychology: Science and Practice*, 10, 144–156.
- Kabat-Zinn, J. (2011). Some reflections on the origins of MBSR, skillful means, and the trouble with maps. *Contemporary Buddhism*, 12, 281–306.
- Kornfield, J. (2013, December 13). *Four principles for mindful transformation*. Retrieved May 15, 2017, from <http://www.oprah.com/own-super-soul-sunday/Jack-Kornfield-Four-Principles-for-Mindful-Transformation/3>
- McCown, D., Reibel, D., & Micozzi, M. (2010). *Teaching Mindfulness*. New York, NY: Springer.
- Roeser, R.W. (2016). Processes of teaching, learning and transfer in mindfulness-based interventions (MBIs) for teachers: A contemplative educational perspective. In K. Schonert-Reichl & R.W. Roeser (Eds.), *Handbook of Mindfulness in Education: Theory, Research, Practice and Future Directions*. New York, NY: Springer.
- Roeser, R.W., Mashburn, A.J., & Skinner, E.A. (in preparation). Teacher and classroom impacts of mindfulness training for middle school teachers. *Mixed Methods Results from a Randomized-Control Trial*.
- Roeser, R.W., Schonert-Reichl, K.A., Jha, A., Cullen, M., Wallace, L., Wilensky, R., Oberle, E., Thomson, K., Taylor, C., & Harrison, J. (2013). Mindfulness training and reductions in teacher stress and burnout: Results from two randomized, waitlist-control field trials. *Journal of Educational Psychology*, 105, 787–804. doi: 10.1037/a0032093
- Roeser, R.W., Skinner, E., Beers, J., & Jennings, P.A. (2012). Mindfulness training and teachers' professional development: An emerging area of research and practice. *Child Development Perspectives*, 6, 167–173.

- Taylor, C., Harrison, J., Haimovitz, K., Oberle, E., Thomson, K., Schonert-Reichl, K., & Roeser, R.W. (2016). Examining ways that a mindfulness-based intervention reduces stress in public school teachers: A mixed-methods study. *Mindfulness*, 1-15.
- Thera, N.T. (1965). *The Heart of Buddhist Meditation*. Boston, MA: Weiser.
- Wallace, B.A. (2011). *Minding Closely: The Four Applications of Mindfulness*. Ithaca, NY: Snow Lion.