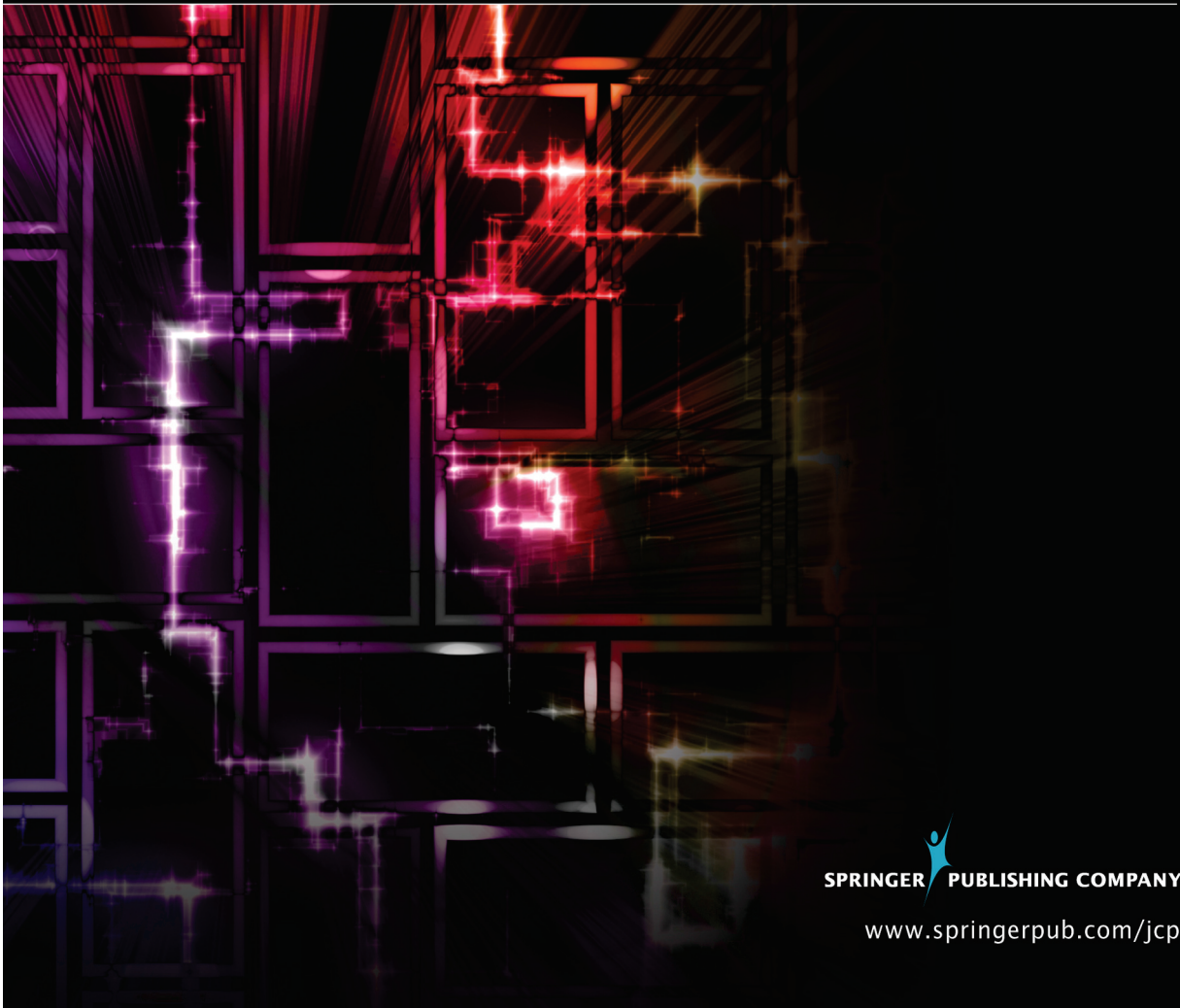


With the Compliments of Springer Publishing Company, LLC

JOURNAL OF
COGNITIVE
PSYCHOTHERAPY



SPRINGER  PUBLISHING COMPANY
www.springerpub.com/jcp

Effects of a Mindful Rational Living Intervention on the Experience of Destructive Emotions

Tiffany Chenneville, PhD

Marielle Machacek, MA

Tara Little, MA

Eliana Aguilar, MA

University of South Florida St. Petersburg, St. Petersburg, Florida

Alessandro De Nadai, MA

University of South Florida, Tampa, Florida

The objective of this study was to measure the effects of a 90-day mindful rational living (MRL) program on the experience of destructive emotions—anger, anxiety, depression, guilt—among a normal population in a pilot trial. The MRL program combines mindfulness meditation techniques with rational emotive behavior therapy (REBT) strategies. Participants were 17 adults who completed the MRL program. Participants completed pre- and post-intervention assessments, which included scales measuring anger, anxiety, depression, guilt, rumination, shame, and subjective happiness. As hypothesized, participants showed significant decreases in anger, rumination, anxiety, depression, and shame after participating in the MRL program. There were no significant increases in subjective happiness. Findings from this pilot study provide preliminary support for the potential utility of interventions that combine mindfulness meditation with REBT strategies and can be used as the basis of future studies.

Keywords: rational emotive behavior therapy; cognitive behavioral therapy; mindfulness; meditation

In 2005, the American Psychological Association began endorsing the use of evidence-based practices (EBP), which can be described as the integration of research findings with clinical acumen (Kazdin, 2008). By focusing on the implementation of EBP, the field is able to prioritize the accelerated transmission and use of research findings into clinical practice. Adopting best practices in the field requires that psychological interventions remain malleable and subject to advancement that is informed by the most current and accurate research. This presents opportunities for researchers and clinicians to adapt and combine components of vetted practices with new methods in an attempt to create new treatment practices that fill a perceived gap. One such EBP that has been used as the basis for newer forms of psychotherapy is cognitive behavioral therapy (CBT; Butler, Chapman, Forman, & Beck, 2006) and its derivative, rational emotive behavior therapy (REBT). Other EBPs include mindfulness and/or mindfulness meditation. These EBPs are described in more detail in the following discussion.

COGNITIVE BEHAVIORAL THERAPY

CBT finds its roots in behaviorism. The first wave of CBT involved behaviorally based therapy as a diversion from traditional psychoanalysis, which focuses on capturing unconscious meaning (Ost, 2008). The second wave of CBT involved cognitive therapy, which recognized the relationship between cognitions and behavior and the importance of changing the automatic meaning that we attach to events. Third wave CBTs (e.g., acceptance and commitment therapy [ACT], integrative behavioral therapy [IBT], dialectical behavior therapy [DBT]), much like the first and second wave CBTs, represent a heterogeneous group of psychotherapeutic practices. What sets third wave CBTs apart are the thematic elements of metacognition, mindfulness, and acceptance (Ost, 2008). For example, the mindfulness-based cognitive therapy (MBCT) paradigm to include mindfulness-based stress reduction (MBSR) integrates mindfulness meditation practice with teaching clients how to change their relationship to their own thoughts, emotions, and physical sensations.

It is difficult to establish the efficacy of different forms of therapy across studies. Meta-analyses must attempt to account for differences between practitioners' skill level, methodologies, and accuracy of diagnoses among other issues. Despite these challenges, Ost (2008) concluded that ACT and DBT not only showed moderate effect sizes related to efficacy but also noted that third wave CBTs lack rigorous and empirical testing. Hofmann, Sawyer, and Fang (2010) further contend that third wave CBTs do not differ significantly in theory or in implementation from other forms of CBT such that they should warrant their own category or classification. The need for empirical studies of third wave CBTs is documented (e.g., Hunot et al., 2013).

RATIONAL EMOTIVE BEHAVIOR THERAPY

In 1955, Albert Ellis developed REBT in response to his experiences as an informal sex-marital counselor and psychoanalyst (Ellis & Dryden, 1997). Inspired by Greek and Roman philosophies, REBT is based on the premise that negative emotions are not caused by the actual event but by how the person views the event. REBT is considered a form of CBT (Dobson, 2009), which assumes that core irrational beliefs generate distorted automatic thoughts that result in maladaptive consequences (Iftene, Predescu, Stefan, & David, 2015). Similar to other second wave CBTs, REBT encourages clients not only to recognize the connection between their thoughts, feelings, and subsequent behaviors but also to question their own belief systems. Clients are asked to examine their feelings in a nonjudgmental manner and are taught that they are solely in control of these feelings.

Consistent with other CBTs, REBT is considered to be a highly cognitive and discipline-oriented therapy that often relies on homework and practice completed outside of therapy. According to Ellis (2001), these assignments often include journaling, meditation, and mindfulness as meaningful tools to help a client face and overcome personal challenges. Along with the nonjudgmental acknowledgment of unhealthy thoughts and feelings, REBT also encourages clients to respond to events in a calm manner to decrease the likelihood of clients experiencing negative and self-destructive emotions. Clinicians using REBT as a therapeutic tool stress the importance of using these strategies outside of the therapeutic environment. This allows clients to become more self-aware of the real-life situations that trigger unhealthy thoughts and feelings, which in turn allows them to gain a greater level of personal insight.

It is important to note that the major lesson being taught in REBT is that clients have absolute control over their own thoughts and emotions. Ellis (2001) refers to this as a philosophy of unconditional acceptance. Successful clients using REBT have learned to become more skeptical thinkers and are able to question their own thoughts and behaviors, allowing them to recognize how unhealthy and often irrational thoughts are attributing to their own negative affect.

MINDFULNESS MEDITATION

The terms *mindfulness* and *meditation* often are incorrectly used interchangeably. As described in the sections to follow, mindfulness meditation is a distinct form of meditation. Yet, a broad understanding of meditation, generally speaking, is important for understanding the unique practice of mindfulness meditation.

Meditation

Although meditation is a contemplative practice that is most commonly associated with Asian religious traditions, Kristeller (2011) also describes it as a cognitive process that involves many practices including attention to and nonjudgmental awareness of a person's moment-to-moment experience. Similar to CBT, *meditation* can be considered an over-arching term that links various contemplative techniques and practices. For example, despite the differences between transcendental meditation and mindfulness meditation, they are both considered meditational practices because they both encourage one to center their attention on the present moment.

Previous research suggests that there are physiological changes, such as respiratory suspension and states of deep relaxation similar to sleep, after one practices meditation (Cahn & Polich, 2006). These changes can also lead to more activity throughout the brain. Lazar and colleagues (2000) collected functional magnetic resonance imaging (fMRI) data from participants who had practiced Kundalini meditation for at least 4 years. Results indicated that multiple areas of the brain including regions involved in attention (i.e., frontal and parietal cortices) and arousal/autonomic control (i.e., amygdala, midbrain, hypothalamus) were more active during meditation compared to times at rest. Results were consistent across participants with different breathing patterns during meditation, suggesting that differences in cardiorespiratory function may not be responsible for the increased brain activity observed in the fMRI. These results suggest that simply being in a meditative state may enhance one's focus, attention, and automatic processes underlying consciousness.

Mindfulness Meditation

Although general meditation and mindfulness meditation are similar in some ways, mindfulness meditation is recognized as a specific form of meditation that facilitates awareness of present physical and mental states while encouraging the practitioner to assume a nonjudgmental awareness and observe thoughts pass through the mind (Kabat-Zinn, 2003; Miller, Fletcher, & Kabat-Zinn, 1995). Like other forms of meditation, many programs that incorporate mindfulness meditation also use cognitive strategies such as asking the practitioner to employ selective attention to their emotions and feelings (Jain et al., 2007). Although mindfulness meditation shares many characteristics with traditional meditation and relaxation methods, results from previous studies suggest that mindfulness meditation may be unique (Cahn & Polich, 2006; Jain et al., 2007; Siegel, 2007). One such study examined the differences in effects between traditional relaxation techniques and mindfulness meditation in reducing negative states and distress among medical students (Jain et al., 2007).¹ The study found that although both techniques were effective in reducing distress and increasing positive affect, the mindfulness meditation group alone showed a reduction in distraction and rumination, suggesting that effects associated with mindfulness meditation may be linked to a mechanism distinct from other forms of relaxation/meditation training. These results are important given that rumination has been linked to higher rates of depression and other mental disorders (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). There also seems to be specific activation areas of the brain that are associated with practicing mindfulness meditation over other concentrative forms of meditation such as the middle prefrontal area which has been associated with metacognition and self-observation (Cahn & Polich, 2006;

Siegel, 2007). This same region has also been linked with certain attentional mechanisms and emotional regulation (Creswell, Way, Eisenberger, & Lieberman, 2007).

Mindfulness meditation has also been shown to help practitioners shift focus away from less adaptive thinking patterns. Farb and colleagues (2007) examined whether mindfulness training had any effect on one's ability to shift between two types of self-reference: *narrative focus*, which maintains continuity of identity across time, and *momentary experience focus*, the immediate "I" acting in the present. Participants who completed an 8-week mindfulness meditation course and those who did not were prompted to complete tasks that were designed to instigate the shift from narrative focus to momentary experience or vice versa. A review of fMRI scans revealed that participants who completed the mindfulness meditation course showed a change from activation in areas associated with narrative self-focus to dorsolateral prefrontal cortex areas, thus suggesting the capability to bring awareness back to the moment and to resist a shift to narrative thoughts. If mindfulness meditation can help us to be aware of our own mental processes in real time, it may also enable practitioners to recognize maladaptive thinking patterns that contribute to negative mental health outcomes such as depression and anxiety, leading to improved overall well-being (Siegel, 2007), although it is important to note that notions of "adaptive" and "maladaptive" thinking processes are contrary to some mindfulness approaches.

MINDFUL RATIONAL LIVING

Developed collaboratively by a former Buddhist monk and an REBT-trained psychologist of the Albert Ellis Institute,² mindful rational living (MRL) combines mindfulness meditation techniques with REBT strategies. Although cognitive disputation as a tenet of REBT is characteristic of second wave CBTs, one might argue MRL is more similar to third wave CBT given its integration of mindfulness techniques. Combining nonjudgmental awareness, which is central to mindfulness meditation practice, with disputing irrational beliefs, which is central to traditional REBT, may seem paradoxical. However, Ellis (2006) argued that the focus on self-acceptance and non-judgment of self and others is the most striking similarity between REBT and third wave CBTs, such as MBSR, which integrate mindfulness meditation practices into more traditional CBTs. Other similarities also exist. For example, both REBT and mindfulness meditation techniques rely heavily on Buddhist principles (Holt & Austad, 2013). Although Ellis (2006) did not advocate for the inclusion of meditation in therapy, Whitfield (2006) introduced case-specific applications for mindfulness-based REBT. However, a need exists for the empirical study of approaches that combine REBT and mindfulness meditation practices.

Purpose of Study

The purpose of this pilot study was to evaluate the efficacy of an existing 90-day MRL program as a unique approach for decreasing the experience of destructive emotions, which Ellis (2001) defined as anger, sadness, anxiety, and guilt. We hypothesized a significant decrease between pre- and post-intervention measures on the experience of anger, depression, anxiety, and guilt.

METHODS

Mindful Rational Living Program

We designed this study to evaluate an existing 90-day MRL program developed and delivered by a former Buddhist monk with expertise in mindfulness meditation and a psychologist with extensive training in REBT (hereafter referred to as *teachers* or *mentors*). This program was offered through the

TABLE 1. ABC EXAMPLE

Activating Event	Belief	Emotional Consequence
My husband had an affair and left me and our three children.	I should not have to raise our children by myself.	Anger
	I was a terrible wife and now my kids have to pay for my mistakes.	Guilt
	Being alone is awful. I cannot stand it.	Anxiety
	I will never find another man. My life is ruined.	Depression

Institute for Advanced Study of Mindful Rational Living in two locations—Florida and Colorado. Consistent with the program’s philosophy, which emphasizes *teaching* people the skills needed to reduce suffering and increase happiness, participants in the program are called *students*. The specific aim of the program is to decrease what Ellis (2001) referred to as the four primary destructive emotions: anger, depression, anxiety, and guilt. The program involves several components to include (a) twelve consecutive weekly 1-hour face-to-face meetings between the *student* and the *teacher* or *mentor* whereby students are trained in mindfulness meditation and REBT strategies, (b) daily mindfulness meditation practice beginning at 20 minutes and extending to at least 60 minutes each day, and (c) daily homework including journal activities and other assignments designed to increase awareness of factors affecting the student’s meditation practice and to allow students to practice questioning their own beliefs and experience the impact of doing so on their thoughts, feelings, and behaviors. More information about these components is included in the following sections. Because the program was designed for general use with a nonclinical population and not designed as a controlled trial, it was not manualized. There were no treatment fidelity checks in this study, nor was treatment adherence formally monitored by teachers/mentors, although we did collect self-report data on the latter.

Rational Emotive Behavior Therapy Strategies. As part of the MRL program, students are educated about the “ABC” model as a major tenet of REBT whereby A represents an activating event, B represents beliefs, and C represents consequences, which may be behavioral, emotional, or cognitive. In this model, the consequences are a function of beliefs. Emotional consequences include anger, anxiety, guilt, or depression, and students are taught formulas related to these destructive emotions (Tables 1 and 2). Students are encouraged to question their beliefs in a

TABLE 2. FORMULAS FOR DESTRUCTIVE EMOTIONS

Anger	Egocentric thinking + should/must/ought (I, me, my, or mine) Demanding that reality be different than it is
Anxiety	What if? + awfulizing + I couldn’t stand it
Depression	Hopeless + helpless + can’t get my needs met Needs are not preferences; must realize there are very few needs but mainly just preferences
Guilt	Concept of wrongness + worthlessness

Adapted from Chenneville, T., & Walsh, A. S. (2016). A “mindful rational living” approach for addressing HIV in the school setting. *International Journal of School & Educational Psychology*, 4(2), 71–78. Recreated with permission from Dr. Vincent Parr (personal communication, November 3, 2015).

nonjudgmental manner (e.g., Is the belief true? How strong is the belief? How would you feel if you did not maintain the belief or if the belief was stronger/weaker?). In addition, students are encouraged to consider their options: (a) maintain the belief and continue to experience the same behavioral, emotional, or cognitive consequence; (b) strengthen the belief and experience a stronger behavioral, emotional, or cognitive consequence; or (c) alter the belief and, consequently, alter the behavioral, emotional, or cognitive consequence. Within this framework, students are taught to distinguish the difference between needs and preferences and to limit judgment of self and others by eliminating words such as “should” and “must.”

Mindfulness Meditation. Also as part of the MRL program, students are provided with information about, instruction in, and opportunities to practice mindfulness meditation. The focus is nonjudgmental awareness of the present moment and familiarizing oneself with the contents of the mind. The idea is that, through this practice, students will be better positioned mentally to make use of the REBT strategies they are being taught as part of the MRL program. This is consistent with Whitfield’s (2006) suggestion that a mindfulness component may help to “achieve a philosophical change” (p. 208) in addition to behavioral changes related to REBT. Students are encouraged to begin by meditating at least 20 minutes per day and to slowly increase their time in daily meditation to 60 minutes per day. The instructional piece includes lessons on specific meditations such as loving kindness, or metta.

Daily Homework. Daily homework is delivered and returned via daily emails between the teacher/mentor and student and includes a variety of activities. At the beginning of the MRL program, homework includes goal setting. Students are instructed to identify and to write down three to four goals to include the behaviors they need to change to achieve their goals as well as perceived obstacles. As students learn about the ABC model and destructive emotions formulas, they are encouraged to document the ABCs of their emotional experience. For example, students may be asked to think of a time during the day they felt angry, anxious, guilty, or depressed and then document in writing the activating event and their belief. As students learn the importance of questioning beliefs, they then are instructed to document in writing the questioning process. Examples of other homework activities include gratitude journal entries and developing a playlist that represents personal goals. Finally, students are encouraged to document their daily meditation practice.

Participants

Participants were 33 adults enrolled in an MRL program in one of two locations—Florida or Colorado—of the Institute for Advanced Study of Mindful Rational Living. Individuals younger than the age of 18 years were excluded from the study. There were no other exclusion criteria.

Procedure

After obtaining institutional review board (IRB) approval, the Institute for Advanced Study of Mindful Rational Living provided information about this study to students who were enrolling in the MRL intervention program. Students who were interested in learning more contacted the study team who provided information about the study and obtained informed consent for those who agreed to participate. Participants were assigned a unique ID number to ensure the confidentiality of records. Participants were instructed to complete both pre-intervention assessment (before beginning the program) and the post-intervention assessment (at the end of the 90-day program) measures (described in the following discussion), which were administered online using Qualtrics survey software. A link to the survey was emailed to participants a week prior to their assessment date. In addition to the reminder email, a follow-up phone call was made 3 days prior to the due date for completion of the assessment to ensure the survey link had been received and was accessible. For confidentiality purposes, researchers did not have access to any

information about participants other than that provided by participants on the anonymous surveys (i.e., researchers did not have access to client files nor were they able to discuss participants with the teachers/mentors delivering the MRL program).

Measures

Measures included a brief demographic questionnaire during the pre-intervention assessment and a program satisfaction questionnaire during the post-intervention assessment. During both pre- and post-intervention assessments, the following measures also were administered: the Clinical Anger Scale (CAS; Snell, Gum, Shuck, Mosley, & Hite, 1995), the Depression Anxiety Stress Scale (DASS; Brown, Chorpita, Korotitsch, & Barlow, 1997), the Guilt and Shame Proneness Scale (GASP; Cohen, Wolf, Panter, & Insko, 2011), the Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999), and the Ruminative Responses Scale (RRS; Treynor, Gonzalez, & Nolen-Hoeksema, 2003). The CAS, the DASS, and the GASP were used to measure the four primary destructive emotions—anger, depression, anxiety, and guilt—which are the primary focus of the MRL program. The SHS and RRS also were included to determine if the MRL intervention had any direct impact on subjective happiness or rumination, respectively. All measures are described in more detail in the following discussion.

Brief Demographic Questionnaire. A brief demographic questionnaire was administered during pre-intervention assessment only and included items about age, gender, race/ethnicity, marital status, education level, family income, religion, and experience with therapy and meditation.

Clinical Anger Scale. The CAS (Snell et al., 1995) is an objective self-report scale designed to measure symptoms of anger. The scale includes 21 sets of statements assessing anger across various domains. Within each set, the respondent is presented with 5 statements describing how they feel and are asked to pick the one statement that best describes their feelings. For example, the first set includes the following statements: (a) I do not feel angry (0 points), (b) I feel angry (1 point), (c) I am angry most of the time now (2 points), and (d) I am so angry all the time that I can't stand it (4 points). Points are totaled and scored as follows: 0–13 = minimal anger, 14–19 = mild anger, 20–28 = moderate anger, and 29–63 = severe anger. Cronbach's alpha of .94 from a six-sample population of college students demonstrates strong internal consistency reliability of the CAS (Snell et al., 1995). Similarly, Cronbach's alpha was .88 in our sample. In the validation sample, test-retest correlation was .78, demonstrating adequate temporal stability (Snell et al., 1995). Convergent validity was assessed in the validation sample by comparing the CAS to the State-Trait Anger Scale ($r = .55$) and the Anger Expression Scale (ranging from $r = .36$ to $r = .45$; Snell et al., 1995).

Depression Anxiety Stress Scale. The DASS (Brown et al., 1997) is a 42-item test measuring current (over the past week) symptoms of depression, anxiety, and stress. Each of the three scales consists of 14 items with responses scored on a 0–3 scale, where 0 is “did not apply to me at all” and 3 is “applied to me very much, or most of the time.” The scales are evaluated individually (i.e., there is no total score). Within each scale, scores are averaged with higher scores indicating greater levels of depression, anxiety, or stress depending on the scale. Examples of the type of items on the depression scale are “I felt that I had nothing to look forward to” and “I felt I wasn't worth much as a person.” Examples of the type of items on the anxiety scale are “I felt I was close to panic” and “I was aware of the action of my heart in the absence of physical exertion.” Given the purpose of this study, only the depression and anxiety scales were used. Cronbach's alphas of .96 (depression subscale) and .89 (anxiety subscale) from a large clinical sample demonstrates strong internal consistency reliability of the DASS (Brown et al., 1997). Similarly, Cronbach's alphas were .97 (depression subscale) and .84 (anxiety subscale) in our sample. Temporal stability was established in the validation sample with test-retest correlations across 2 weeks of .71 and .79 for depression and anxiety, respectively (Brown et al., 1997).

Guilt and Shame Proneness Scale. The GASP (Cohen et al., 2011) scale is designed to assess the personal proclivity to experience guilt and shame across various personal infractions. The scale was normed on undergraduate students age 18 years and older. The scale consists of 16 items with a 7-point Likert scale where 1 = *Very Unlikely* and 7 = *Very Likely*. The GASP is composed of four subscales composed of four items each; there are two guilt subscales and two shame subscales. Guilt subscales evaluate negative behavior appraisal and proneness to repair actions after private infractions (e.g., “You secretly commit a felony. What is the likelihood that you would feel remorse about breaking the law?” and “You reveal a friend’s secret, though your friend never finds out. What is the likelihood that your failure to keep the secret would lead you to exert extra effort to keep secrets in the future?”), whereas shame subscales examine negative self-evaluations and withdrawal proneness subsequent to publicly disclosed infractions (e.g., “You make a mistake at work and find out a coworker is blamed for the error. Later, your coworker confronts you about the mistake. What is the likelihood that you would feel like a coward?” and “You take office supplies home for personal use and are caught by your boss. What is the likelihood that this would lead you to quit your job?”). Each subscale is scored by computing the average of each subscale with higher scores indicating greater levels of guilt or shame and lower scores indicating fewer experiences of guilt or shame.

Cronbach’s alphas ranging from .61 to .69 across the four subscales from a college sample demonstrates moderate internal consistency reliability of the measure (.69 for guilt-negative-behavior-evaluation, .61 for guilt-repair, .63 for shame-negative-self-evaluation, and .66 for shame-withdrawal; Cohen et al., 2011). In our sample, Cronbach’s alphas were higher for the shame subscales but lower for the guilt subscales. Specifically, we obtained Cronbach’s alphas of .81 and .71 for the shame-negative-self-evaluation and shame-withdrawal subscales, respectively, and .40 and .18 for the guilt-negative-behavior-evaluation and guilt-repair subscales, respectively. Because of the low alpha score, the guilt-repair subscale was excluded from analyses. In the validation sample, construct validity was assessed by correlating the GASP with theoretically related measures.

Subjective Happiness Scale. The SHS (Lyubomirsky & Lepper, 1999) measures global subjective happiness from the perspective of the respondent. This 4-item measure uses a 7-point Likert scale with higher scores indicating greater happiness. An example of the types of items included on this scale is “In general, I consider myself,” where 1 is *not a very happy person* and 7 is *a very happy person*. The fourth item is reverse scored, and the global subjective happiness score is computed by averaging individual responses with higher scores indicating greater happiness. Cronbach’s alphas ranging from .79 to .94 ($M = .86$) from 14 samples of college students demonstrates strong internal consistency reliability (Lyubomirsky & Lepper, 1999). In our sample, the Cronbach’s alpha of .33 was notably lower. Recognizing that variability in alpha does exist between samples and not all studies find the same reliability as the validation sample, given the large and robust sample data that support this measure, we believe this remains a sound measure of the construct, albeit an imperfect one. Temporal stability of this measure was established in the validation sample with test-retest reliability estimates of 3 weeks to 1 year ranging from $r = .55$ to $r = .90$ ($M = .72$; Lyubomirsky & Lepper, 1999). Convergent validity was established by comparing the SHS to other published measures of happiness and well-being with correlations ranging from .52 to .72 ($M = .62$).

Ruminative Responses Scale. The RRS (Treyner et al., 2003) is a 22-item self-response scale designed to measure the self-focused method of coping with negative moods known as rumination in adults. The scale possesses two subscales: reflection and brooding. The RRS uses a Likert response scale asking participants to indicate what they “generally do” ranging from 1 (*Almost Never*) to 4 (*Almost Always*) and is scored by summing responses on all items. Examples of the types of items included on the RRS are “think about how alone you feel” and “think ‘why can’t I handle things better?’” Although there are no cutoff scores, it is recommended the results be

evaluated as follows: top 33% classified as high ruminators and bottom 33% classified as low ruminators with individuals in between considered average. Cronbach's alpha of .90 from a community sample demonstrates the internal consistency reliability of this measure (Treyner et al., 2003). Similarly, Cronbach's alpha was .97 in our sample. Temporal stability was established in the validation sample with a 1-year test-retest reliability coefficient of $r = .67$.

Program Satisfaction Questionnaire. A program satisfaction questionnaire was included at the post-intervention assessment. Using a 5-point rating scale (*strongly agree to strongly disagree*), this questionnaire was designed to assess clients' overall satisfaction with the MRL program along multiple dimensions to include but not limited to the content, speed/pace, and usefulness of the program. In addition, items were included to evaluate adherence to the program, specifically adherence to daily homework and weekly meetings.

Data Analysis

Prior to conducting analyses, hot deck imputation was used to address missing data. Benefits of using hot deck imputation are that it imputes plausible values, does not lean heavily on parametric assumptions, and reduces nonresponse bias (Andridge & Little, 2010). Hot deck imputation is recommended when missing data are less than 10% (Myers, 2011), which was the case in this study. Consistent with Myers' (2011) recommendations, we chose age as the deck variable because there was little missing data for this variable and because it provided information related to outcomes but was not theoretically central to our hypotheses (i.e., age was not theoretically central to our hypotheses but has been related to mindfulness, which is a hypothesized predictor of outcomes; please see Hohaus and Spark [2013] for more information about the relationship between age and mindfulness). As Myers (2011) recommends, we recategorized age into two discrete groups: 45 years and younger versus 46 years and older.

Descriptive statistics were used to characterize demographic data and data from the program satisfaction questionnaire. Paired samples t tests were conducted to compare pre- and post-intervention assessment scores on affective measures. Because of the high attrition rate and the large number of Buddhists in our sample, independent samples t tests were conducted to examine baseline differences between completers and noncompleters and Buddhists and non-Buddhists. To following up on significant differences between Buddhists and non-Buddhists, analysis of covariance (ANCOVA) was conducted to examine differences in affective scores at pre- and post-intervention assessment using religion as a covariate. ANCOVA also was used to examine difference in affective change scores between pre- and post-intervention based on gender, with post-intervention scores being predicted by gender while also including pre-intervention scores as a covariate. Finally, for affective measures that showed significant change, we tested whether such change was related to the process variables of program satisfaction, adherence to daily homework, and adherence to weekly meetings.

RESULTS

Participant Demographics

Of the 33 participants who consented to this study, 6 notified us via email of their withdrawal from the MRL program and our study between Days 1 and 55 of the 90-day period. An additional 10 participants did not complete the post-intervention assessment measures. Because of IRB constraints related to confidentiality, we were unable to confirm whether or not they completed the MRL program. After eliminating participants from analyses who did not complete the post-intervention assessment measures, the final sample population consisted of 17 participants. The majority of participants were White (82%) females (53%). Participants ranged in age from

30 years to 67 years with a mean age of 51 years ($SD = 11$), and most were married (53%). The large majority (94%) of participants had a higher education degree, and most reported an annual income of greater than \$40,000 (64.7%). Nearly half of the sample population identified as Buddhist (47%). Among those who did not identify as Buddhist, there was a fairly even spread across the other major religions (e.g., Christianity, Judaism, agnostic, atheism). All participants reported having prior experience with some form of meditation, and 82% reported having prior therapy experience. See Table 3 for more detailed information about the demographics of the sample.

Differences Between Completers and Noncompleters

We conducted analyses to determine if there were any differences in terms of demographics or baseline functioning between those who completed the pre-intervention assessment only and those who completed both the pre- and post-intervention assessments. Those who completed both assessments were significantly older ($M = 51.47$, $SD = 10.86$) than those who completed only the pre-assessment ($M = 39.20$, $SD = 13.84$), $t(25) = -2.56$, $p = .02$. There were no differences between groups based on gender, and baseline functioning on affective measures did not differ between groups with one exception. Rumination scores were significantly higher among noncompleters ($M = 57.70$, $SD = 17.66$) than those who completed both assessments ($M = 41.06$, $SD = 14.42$), $t(25) = 2.67$, $p = .01$, $d = 1.03$.

Pre- and Post-Intervention Data

Results from paired samples t tests conducted to compare scores between pre- and post-intervention assessment revealed significant decreases on the CAS, $t(16) = 3.30$, $p = .004$, $d = .96$; the depression subscale of the DASS, $t(16) = 3.97$, $p = .001$, $d = .76$; the anxiety subscale of the DASS, $t(16) = 4.34$, $p = .001$, $d = 1.36$; the shame-negative-self-evaluation subscale of the GASP, $t(16) = 6.08$, $p < .001$, $d = 1.67$; the shame-withdrawal subscale of the GASP, $t(7) = 3.47$, $p = .01$, $d = 1.33$; and the RRS, $t(16) = 5.92$, $p < .001$, $d = .86$. There was no significant difference in pre- and post-intervention scores on the guilt-negative-behavior-evaluation subscale, $t(16) = 1.38$, $p = .19$, $d = .25$. There also was no significant difference between pre- and post-intervention scores on the SHS, $t(16) = .16$, $p = .88$, $d = .06$. See Table 4 for pre- and post-intervention scores. When considering gender differences, no significant changes on affective measures were detected (see Table 5).

Differences Based on Religion

Because a large portion of our sample identified as Buddhist, and meditation is an integral part of the Buddhist tradition, we conducted analyses to determine if there were any differences in terms of demographics or baseline functioning between those who identified as Buddhist and those who did not. There were no significant differences between groups based on age or gender, and baseline functioning on affective measures did not differ between groups with two exceptions. Buddhists reported less rumination ($M = 33.25$, $SD = 8.21$) than non-Buddhists ($M = 48.00$, $SD = 15.54$), $t(15) = 2.40$, $p = .03$, $d = 1.19$. They also reported lower scores on the shame-negative-self-evaluation subscale of the GASP ($M = 4.69$, $SD = 1.39$) compared to non-Buddhists ($M = 6.11$, $SD = 1.15$), $t(15) = 2.31$, $p = .04$, $d = 1.13$. To follow up on these differences, repeated measures ANCOVAs were conducted looking at pre- and post-assessment rumination and shame-negative-self-evaluation scores with religion (Buddhist vs. Non-Buddhist) as a covariate. For both rumination, $F(1,15) = 21.24$, $p = .42$ and shame-negative-self-evaluation, $F(1,15) = .07$, $p = .80$, there was no significant pre/post difference when controlling for religion.

TABLE 3. DEMOGRAPHIC INFORMATION

	<i>N</i>	%
Gender		
Male	8	47
Female	9	53
Ethnicity		
Hispanic/Latino	2	12
White	14	82
Other	1	6
Religion		
Agnostic	1	6
Atheism	2	12
Buddhism	8	47
Christianity	2	12
Judaism	2	12
I wish not to answer	2	12
Marital status		
Single, never married	3	18
Married or domestic partnership	9	53
Widowed	0	0
Divorced	3	18
Separated	2	12
Education		
High school	1	6
Bachelor's degree or equivalent	7	41
Master's degree or equivalent	6	35
PhD or MD	3	18
Income		
Less than \$20,000	1	6
\$20,000–\$40,000	3	18
\$40,000–\$70,000	4	24
\$100,000–\$150,000	2	12
\$150,000+	5	29
Wish not to answer	2	12
Prior therapy experience		
No	3	18
Yes	14	82
Prior meditation experience		
No	0	0
Yes	17	100

TABLE 4. PRE- AND POST-INTERVENTION SCORES ON AFFECTIVE MEASURES (N = 17)

	Pre		Post		<i>t</i>	<i>p</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Happiness	18.24	5.72	17.94	4.45	.16	.88	0.06
Anger	9.12	8.95	2.59	3.48	3.30	.004**	0.96
Anxiety	1.46	.23	1.18	.18	4.34	.001**	1.36
Depression	1.66	.72	1.23	.35	3.97	.001**	0.76
Rumination	41.06	14.42	29.88	11.31	5.92	<.001**	0.86
Guilt-negative-behavior-evaluation	6.16	.68	5.96	.93	1.38	.19*	0.25
Shame-negative-self-evaluation	5.44	1.43	2.46	2.08	6.08	<.001*	1.67
Shame-withdrawal ^a	3.31	1.02	2.19	.62	3.47	.01*	1.33

^a*n* = 8.

p* < .05. *p* < .01.

Relationship Between Affective Change Scores, Program Satisfaction, and Program Adherence

There was a significant negative correlation between adherence to daily homework and the shame-negative-self-evaluation subscale of the GASP measure, $r(17) = -.77, p < .001$. No other correlations were significant. See Table 6 for more information.

DISCUSSION

The majority of our hypotheses were supported. As we hypothesized, there were significant decreases in anger, depression, anxiety, and rumination after participating in the MRL intervention program. These findings are consistent with the existing literature (Jain et al., 2007; Davidson et al., 2003). For example, Brown and Ryan (2003) reported that increases in mindfulness over an 8-week mindfulness intervention were related to lower levels of mood disturbance and stress in cancer patients. In another study, participants in an 8-week mindfulness training program displayed less neural reactivity to sadness provocation and increased recruitment of right-lateralized

TABLE 5. GENDER DIFFERENCES ON AFFECTIVE CHANGE SCORES

	Men (<i>n</i> = 8)		Women (<i>n</i> = 9)		ANCOVA		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>df</i>	<i>p</i>
Anger	3.88	4.52	1.44	1.81	1.52	1,14	.24
Anxiety	1.23	.19	1.13	.17	.94	1,14	.35
Depression	1.23	.19	1.13	.17	.79	1,14	.39
Rumination	30.38	10.71	29.44	12.44	.74	1,14	.41
Guilt-negative-behavior-evaluation	6.13	.57	5.81	1.18	2.36	1,14	.15
Shame-negative-self-evaluation	2.84	2.16	2.11	2.07	.07	1,14	.80
Shame-withdrawal ^a	2.25	.46	2.13	.83	.002	1,5	.97

^aSample size for men and women was 4.

TABLE 6. CORRELATIONS BETWEEN RESIDUAL AFFECTIVE CHANGE SCORES AND PROGRAM SATISFACTION AND ADHERENCE ($N = 17$)

	Satisfaction	Homework Adherence	Meeting Adherence
Anger	.44	.08	−13
Anxiety	.18	.07	−14
Depression	.18	.02	.19
Rumination	.44	−.01	.24
Guilt-negative-behavior-evaluation	.21	.08	.17
Shame-negative-self-evaluation	−.06	−.77*	−.05
Shame-withdrawal ^a	.59	−.20	−.18

^a $n = 8$.

* $p < .01$.

neural regions associated with detached, somatic awareness than those in a waiting-list control group (Farb, Anderson, Mayberg, Bean, & McKeon, 2010). Greater right-lateralized activation was associated with decreased scores on the Beck Depression Inventory. Recent studies have also reported similar findings to ours with regard to decreases in rumination. Specifically, participants reported decreases in maladaptive rumination after mindfulness training compared to control groups (Heeren & Philippot, 2011; Jain et al., 2007).

It is noteworthy that changes in scores for rumination and shame-negative-self-evaluation disappeared when controlling for religion in our sample. Grabovac, Lau, and Willett (2011) proposed a “Buddhist psychological model,” which integrates Buddhist practices and traditions into contemporary CBT. They explain that rumination and other negative thought processes are reduced because of diminished attentional resources of the practitioner during mindfulness sessions. This is consistent with our findings and suggests that prior experience with Buddhist traditions and practices may affect baseline functioning with regard to rumination. It also is possible that novice practitioners may still see the effects of decreased rumination and negative self-evaluations with more practice.

With regard to guilt, our hypothesis was partially confirmed. That is, there was a significant decrease in shame, but not *guilt* per se, after participation in the MRL intervention program. As described earlier, we removed the guilt-repair subscale from analyses because the Cronbach’s alpha was low, leaving only an analysis of the guilt-negative-self-evaluation subscale. Our findings may reflect this limitation as well as general limitations of the GASP (Cohen et al., 2011). For example, because GASP is based on hypothetical scenarios, it is not reflecting actual levels of guilt or shame based on personal transgressions. Although GASP’s definitions of guilt and shame are consistent with current conceptualizations of these constructs in the literature (Fedewa, Burns, & Gomez, 2005), definitions and measures of guilt vary widely and lack conceptual clarity, making it difficult to interpret research findings in a reliable or valid manner (Tilghman-Osborne, Cole, & Felton, 2010). In the MRL program evaluated in this study, guilt was defined as a concept of wrongness combined with a feeling of worthlessness. Clearly, this definition is more consistent with current conceptualizations of shame as measured on the GASP.

Interestingly, findings do not reveal an increase in subjective happiness after participating in the MRL intervention program. This is inconsistent with findings from previous studies such as Davidson and colleagues (2003) who reported increases in left-sided anterior brain activation, associated with positive affect, after an 8-week clinical training program in mindfulness meditation. Similarly, Jain and colleagues (2007) reported that participants of a 1-month mindfulness meditation program, as well as participants of a somatic relaxation training program, experienced

increases in positive mood states over time, as compared to a control group. Reasons for this finding cannot be explained by a ceiling effect given that pre- and post-intervention mean scores fell in the middle of the range of possible values indicating there was room for an increase. However, the reliability of the SHS for our sample was low, which may have affected findings. Alternatively, this finding may be a function of how the construct of happiness is conceptualized and assessed on the SHS (Lyubomirsky & Lepper, 1999). The SHS was created to quickly assess whether a person views themselves as a happy or unhappy person in terms of their overall personality (i.e., globally) and compared to others around them (i.e., subjective). Also, it is important to note that the MRL program was not designed to increase happiness per se although one might assume that a decrease in destructive emotions would result in greater perceptions of happiness. It is possible that the inclusion of activities specifically designed to increase happiness may affect findings.

Overall program satisfaction and adherence to weekly meetings did not appear to account for any differences in affective change scores for subjective happiness or the experience of destructive emotions. Similarly, adherence to daily homework was unrelated to affective change scores with one only exception (shame-negative-self-evaluation), and this finding may have been spurious. The fact that adherence to daily homework was, for the most part, unrelated to affective changes scores contradicts the assumption that homework is a critical component of REBT. A meta-analysis conducted by Vettese and colleagues (2009) revealed that less than a quarter of published literature on mindfulness meditation examined adherence to daily homework at all. Of those that did, however, half found a significant link between home practice and beneficial outcomes, which is inconsistent with our findings.

There are several limitations to this pilot study. Clearly, our ability to generalize findings is limited by a small and select sample of adults with a college education, stable income, and prior meditation and therapy experience. A high attrition rate also is problematic although there were few differences between those who completed the study and those who did not. The only differences that emerged between completers and noncompleters were age (older adults were more likely to complete the program) and rumination scores (adults with lower rumination scores were more likely to complete the program). Given the small sample size and the number of analyses conducted, this is an underpowered study.³ Furthermore, the study design is limited by the lack of a control group. Finally, we acknowledge some theoretical concerns, namely, that some might argue against integrating these models—REBT and mindfulness meditation—on theoretical grounds. Those opposing this combination may argue that there are no significant gains to be made by merging these approaches. Yet, others have described the combination of these approaches as not only “exciting” but also “potentially productive” (Teasdale, Segal, & Williams, 2003, p. 160). Ellis (2006) himself described the similarities between REBT and mindfulness to be more profound than the differences.

These findings contribute to the literature by providing preliminary estimates of efficacy and effect sizes, which merit replication in a larger randomized trial. Future directions should include a randomized controlled trial with a larger, more representative sample and possibly the inclusion of two additional groups: REBT only and mindfulness meditation only. Also, it may be helpful to examine differences between individuals with and without prior meditation and therapy experiences. In addition, studies that examine effective ways to increase program adherence and completion may be beneficial. Finally, studies that include qualitative measures may contribute to our understanding of the mechanisms behind the effectiveness of programs that combine mindfulness meditation with REBT techniques.

COMPLIANCE WITH ETHICAL STANDARDS

There was no funding for this project. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national

research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

NOTES

1. Relaxation is not the intent or the apparent mechanism of action of mindfulness interventions. We include a discussion of Jain and colleague's (2007) study not to suggest the two are linked, which is contrary to mindfulness meditation theory and practice, but rather to highlight the differences between relaxation techniques and mindfulness meditation.

2. See Acknowledgments.

3. In our analytic approach, we considered the balance between type I and type II error. We did not adjust alpha because (a) we were concerned that type II error would predominate; (b) our main focus is on generating a new approach and initial effect sizes; and (c) the hypotheses tested are a priori supported by previous literature and do not reflect a post hoc approach, which is the most common reason for adjusting alpha.

REFERENCES

- Andridge, R. R., & Little, R. J. (2010). A review of hot deck imputation for survey non-response. *International Statistical Review*, 78(1), 40–64.
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84(4), 822–848.
- Brown, T. A., Chorpita, B. F., Korotitsch, W., & Barlow, D. H. (1997). Psychometric properties of the Depression Anxiety Stress Scales (DASS) in clinical samples. *Behaviour Research and Therapy*, 35(1), 79–89.
- Butler, A. C., Chapman, J. E., Forman, E. M., & Beck, A. T. (2006). The empirical status of cognitive-behavioral therapy: A review of meta-analyses. *Clinical Psychology Review*, 26(1), 17–31.
- Cahn, B. R., & Polich, J. (2006). Meditation states and traits: EEG, ERP, and neuroimaging studies. *Psychological Bulletin*, 132(2), 180–211.
- Cohen, T. R., Wolf, S. T., Panter, A. T., & Insko, C. A. (2011). Introducing the GASP scale: A new measure of guilt and shame proneness. *Journal of Personality and Social Psychology*, 100(5), 947–966.
- Creswell, J. D., Way, B. M., Eisenberger, N. I., & Lieberman, M. D. (2007). Neural correlates of dispositional mindfulness during affect labeling. *Psychosomatic Medicine*, 69(6), 560–565.
- Davidson, R. J., Kabat-Zinn, J., Schumacher, J., Rosenkranz, M., Muller, D., Santorelli, S. F., . . . Sheridan, J. F. (2003). Alterations in brain and immune function produced by mindfulness meditation. *Psychosomatic Medicine*, 65, 564–570.
- Dobson, K. S. (2009). *Handbook of cognitive-behavioral therapies* (3rd ed.). New York, NY: The Guilford Press.
- Ellis, A. (2001). *Overcoming destructive beliefs, feelings, and behaviors: New directions for rational emotive behavior therapy*. Amherst, NY: Prometheus Books.
- Ellis, A. (2006). Rational emotive behavior therapy and the mindfulness based stress reduction training of Jon Kabat-Zinn. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 24(1), 63–78.
- Ellis, A., & Dryden, W. (1997). *The practice of rational emotive behavior therapy*. New York, NY: Springer Publishing.
- Farb, N. A., Anderson, A. K., Mayberg, H., Bean, J., McKeon, D., & Segal, Z. V. (2010). Minding one's emotions: Mindfulness training alters the neural expression of sadness. *Emotion*, 10(1), 25–33.
- Farb, N. A., Segal, Z. V., Mayberg, H., Bean, J., McKeon, D., Fatima, Z., & Anderson, A. K. (2007). Attending to the present: Mindfulness meditation reveals distinct neural modes of self-reference. *Social Cognitive and Affective Neuroscience*, 2(4), 313–322.

- Fedewa, B. A., Burns, L. R., & Gomez, A. A. (2005). Positive and negative perfectionism and the shame/guilt distinction: Adaptive and maladaptive characteristics. *Personality and Individual Differences, 38*(7), 1609–1619.
- Grabovac, A. D., Lau, M. A., & Willett, B. (2011). Mechanisms of mindfulness: A Buddhist psychological model. *Mindfulness, 2*(3), 154–166.
- Heeren, A., & Philippot, P. (2011). Changes in ruminative thinking mediate the clinical benefits of mindfulness: Preliminary findings. *Mindfulness, 2*(1), 8–13.
- Hofmann, S. G., Sawyer, A. T., & Fang, A. (2010). The empirical status of the “new wave” of CBT. *The Psychiatric Clinics of North America, 33*(3), 701–710.
- Hohaus, L. C., & Spark, J. (2013). 2672—Getting better with age: Do mindfulness & psychological well-being improve in old age? *European Psychiatry, 28*, 1.
- Holt, S. A., & Austad, C. S. (2013). A comparison of rational emotive therapy and Tibetan Buddhism: Albert Ellis and the Dalai Lama. *International Journal of Behavioral Consultation and Therapy, 7*(4), 8–11.
- Hunot, V., Moore, T. H., Caldwell, D. M., Furukawa, T. A., Davies, P., Jones, H., . . . Churchill, R. (2013). ‘Third wave’ cognitive and behavioural therapies versus other psychological therapies for depression. *The Cochrane Database of Systematic Reviews, 10*, CD008704.
- Iftene, F., Predescu, E., Stefan, S., & David, D. (2015). Rational-emotive and cognitive-behavior therapy (REBT/CBT) versus pharmacotherapy versus REBT/CBT plus pharmacotherapy in the treatment of major depressive disorder in youth: A randomized clinical trial. *Psychiatry Research, 225*(3), 687–694.
- Jain, S., Shapiro, S. L., Swanick, S., Roesch, S. C., Mills, P. J., Bell, I., & Schwartz, G. E. (2007). A randomized controlled trial of mindfulness meditation versus relaxation training: Effects on distress, positive states of mind, rumination, and distraction. *Annals of Behavioral Medicine, 33*(1), 11–21.
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice, 10*(2), 144–156.
- Kazdin, A. E. (2008). Evidence-based treatment and practice: New opportunities to bridge clinical research and practice, enhance the knowledge base, and improve patient care. *The American Psychologist, 63*(3), 146–159.
- Kristeller, J. (2011). Spirituality and meditation. In J. D. Aten, M. McMinn, & E. Worthington, Jr. (Eds.), *Spiritually oriented interventions for counseling and psychotherapy* (p. 197–227). Washington, DC: American Psychological Association.
- Lazar, S. W., Bush, G., Gollub, R. L., Fricchione, G. L., Khalsa, G., & Benson, H. (2000). Functional brain mapping of the relaxation response and meditation. *Neuroreport, 11*(7), 1581–1585.
- Lyubomirsky, S., & Lepper, H. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research, 46*(2), 137–155.
- Miller, J. J., Fletcher, K., & Kabat-Zinn, J. (1995). Three-year follow-up and clinical implications of a mindfulness meditation-based stress reduction intervention in the treatment of anxiety disorders. *General Hospital Psychiatry, 17*, 192–200.
- Myers, T. A. (2011). Goodbye, listwise deletion: Presenting hot deck imputation as an easy and effective tool for handling missing data. *Communication Methods and Measures, 5*(4), 297–310.
- Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on Psychological Science, 3*(5), 400–424.
- Ost, L. G. (2008). Efficacy of the third wave of behavioral therapies: A systematic review and meta-analysis. *Behaviour Research and Therapy, 46*(3), 296–321.
- Siegel, D. J. (2007). Mindfulness training and neural integration: Differentiation of distinct streams of awareness and the cultivation of well-being. *Social Cognitive and Affective Neuroscience, 2*(4), 259–263.
- Snell, W. E., Jr., Gum, S., Shuck, R. L., Mosley, J. A., & Hite, T. L. (1995). The Clinical Anger Scale: Preliminary reliability and validity. *Journal of Clinical Psychology, 51*, 215–226.
- Teasdale, J. D., Segal, Z. V., & Williams, J. M. G. (2003). Mindfulness training and problem formulation. *Clinical Psychology: Science and Practice, 10*(2), 157–160.

- Tilghman-Osborne, C., Cole, D. A., & Felton, J. W. (2010). Definition and measurement of guilt: Implications for clinical research and practice. *Clinical Psychology Review, 30*(5), 536–546.
- Treynor, W., Gonzalez, R., & Nolen-Hoeksema, S. (2003). Rumination reconsidered: A psychometric analysis. *Cognitive Therapy and Research, 27*(3), 247–259.
- Vettese, L. C., Toneatto, T., Stea, J. N., Nguyen, L., & Wang, J. J. (2009). Do mindfulness meditation participants do their homework? And does it make a difference? A review of the empirical evidence. *Journal of Cognitive Psychotherapy, 23*(3), 198–225.
- Whitfield, H. J. (2006). Towards case-specific applications of mindfulness-based cognitive-behavioural therapies: A mindfulness-based rational emotive behaviour therapy. *Counselling Psychology Quarterly, 19*(2), 205–217.

Acknowledgments. We would like to thank Marc Matza for his contributions to this manuscript. We also would like to thank Dr. Vincent Parr from the Institute for Advanced Study of Mindful Rational Living and Michael Gregory from Mindfulness Meditation Centers.

Correspondence regarding this article should be directed to Tiffany Chenneville, PhD, Department of Psychology, University of South Florida St. Petersburg (USFSP), 140 7th Avenue South, DAV 216, St. Petersburg, FL 33701. E-mail: chenmevi@mail.usf.edu