

MINDFUL RELATING: EXPLORING MINDFULNESS AND EMOTION REPERTOIRES IN INTIMATE RELATIONSHIPS

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This study tested the theory that mindfulness contributes to greater intimate relationship satisfaction by fostering more relationally skillful emotion repertoires. A sample of married couples was administered measures of mindful awareness, emotion skills, and marital quality. We hypothesized that mindfulness would be associated with both marital quality and partners' emotion skills and that the association between mindfulness and marital quality would be mediated by emotion repertoire skill. Findings suggested that emotion skills and mindfulness are both related to marital adjustment, and that skilled emotion repertoires, specifically those associated with identifying and communicating emotions, as well as the regulation of anger expression, fully mediate the association between mindfulness and marital quality. Theoretical implications are discussed.

“Knowing that the other person is angry,
one who remains mindful and calm
acts for his own best interest
and for the other's interest, too.”

~Buddhist Scripture

Mindfulness research has linked the cultivation of present-centered awareness to a number of important emotional outcomes, including greater emotional resiliency in those suffering debilitating illnesses (e.g., Carlson, Speca, Patel, & Goodey, 2003), and increased levels of positive affect and empathy in nonclinical populations (Shapiro, Schwartz, & Bonner, 1998). Moreover, preliminary support for the notion of a linkage between mindfulness and relationship health was recently found in research on dating partners by Brown and Barnes (2004) and in a study of a mindfulness-based marriage enhancement program (Carson, Carson, Gil, & Baucom, 2004). Findings such as these strongly suggest mindfulness will have positive implications for relationship health, particularly given the role that healthy emotional functioning plays in establishing and maintaining intimacy (Cordova, Gee, & Warren, 2005). The emotional challenges inherent to maintaining intimacy necessitate that all couples will have to regularly negotiate such vulnerable emotional experiences as hurt, fear, and sadness in the context of their relationships. A relationship that navigates those emotional waters poorly is likely to generate destructive patterns such as demand-withdraw (e.g., Christensen & Heavey, 1993), mutual blame, or escalating negativity (Gottman, 1994). Thus one way to understand the development of relationship distress is as an outcome of maladaptive emotional repertoires in the context of challenging and vulnerable emotions. Mindful relating holds that an open and receptive attention to the present moment (mindfulness) promotes a more accepting and less experientially avoidant orientation to challenging emotions such that more responsive and relationally healthy modes of responding become possible. The present research represents a first step in exploring the theoretical relationships between mindfulness, emotion repertoires, and marital adjustment.

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In this study we examine the association between self-reported mindfulness and relationship satisfaction. We also examine the relationship between three hypothesized emotion skills—recognition and identification of emotions, empathy, and thoughtful responding in the context of anger (as opposed to impulsivity)—and both mindfulness and relationship satisfaction.

MINDFULNESS

Mindfulness, as a construct conceptualized and studied by Western researchers and practitioners, is derived from Buddhist and other Eastern spiritual systems that emphasize contemplation and the cultivation of conscious attention. A recent consensus paper advanced a two-component operational definition of mindfulness that consists of both the deployment of attention and the particular quality of that attention. Bishop et al. (2004) defined mindfulness as the direction of attention toward one's ongoing present experience, in a manner that is "characterized by curiosity, openness, and acceptance." Consistent across interpretations is the characteristic of nonrigid, nonjudgmental attention to what is happening *now* rather than thoughts or sensations having to do with any other moment, past or future (Kabat-Zinn, 1990). Such a way of being stands opposed to a perpetual automatic processing mode of mindlessness in which one's sensations, attributions, emotions, and actions—as well as those of others—pass by unnoticed (Langer, 2002).

The means by which mindful awareness operate on individual well-being are currently being investigated. Ongoing theoretical and empirical work has, to varying degrees, addressed biologic systems (Carlson et al., 2003), cognitive mechanisms (Teasdale et al., 2002), and affect regulation (Brown & Ryan, 2003).

In the present study we are most interested in the findings associating mindfulness with the quality and valence of subjects' affective experience. Numerous studies have reported changes in the experience of emotions, including improvements in mood, particularly in anxiety and depression. For example, Shapiro, Schwartz, and Bonner (1998) reported decreased depression and lowered anxiety levels in medical students. Another study involving medical students revealed posttreatment improvements on a number of mood dimensions, including tension/anxiety, fatigue, and mental confusion (Rosenzweig, Reibel, Greeson, Brainard, & Hojat, 2003). Miller, Fletcher, and Kabat-Zinn (1995) found that anxiety and depression amongst individuals meeting criteria for generalized anxiety and panic disorders were significantly reduced. A 2003 study (Davidson et al., 2003) further found decreased anxiety and negative affect in a nonclinical population. In their work to develop a preventive approach to depression relapse, Segal, Teasdale, and Williams (2002) found that incorporation of mindfulness training significantly improved outcomes for those who had already experienced several depressive episodes.

Conclusions from intervention-based research have been bolstered by findings from research designed to measure the mindfulness construct. One such study (Brown & Ryan, 2003) identified a number of psychological correlates of mindfulness using self-report measures as compared to scores on the Mindful Awareness Attention Scale (MAAS). Results suggested that mindfulness was moderately related to lower levels of neuroticism, self-consciousness, depression, negative affectivity, impulsivity, and angry hostility. Mindfulness scores were positively related to other indicators of well-being, including positive affectivity, life satisfaction, self-esteem, autonomy, competence, and relatedness fulfillment.

THE ROLE OF EMOTIONS

Our exploration of the association between mindfulness and relationship quality begins with recognition of the critical significance of emotions within intimate relationships. Many people's most intense emotions are associated with the initiation, maintenance, and disruption of marital bonds (Bowlby, 1980). Research into the role of emotion in marriage has concentrated primarily

on three areas. The first has demonstrated the salience of the occurrence, valence, and intensity of emotional responding in marriage for marital distress (e.g., Gottman, 1994; Gottman & Levenson, 1986). The second area, focusing on disordered emotions like depression or anxiety in marital health, has demonstrated a robust association between depressive affect and marital distress (e.g., Beach, 2001). The third area studies the role of emotion evocation as a mechanism in couple therapy, as in Integrative Couple Therapy (e.g., Christensen, Jacobson, & Babcock, 1995). For example, Greenberg and Johnson (1986) have found that evoking emotion in Emotionally Focused Couple Therapy (Johnson & Greenberg, 1994) facilitates both intimacy and conflict resolution.

The present work assumes the critical significance of emotions, but also draws upon recent work on emotions in intimate relationships that further distinguishes between the experience of emotions per se, and the ways in which people behave in the context of their emotions (Cordova et al., 2005; Mirgain, 2003). Evidence suggests that people are born with a basic set of emotional responses (e.g., Ekman & Friesen, 1971); however, how individuals learn to behave in the context of their emotions can vary dramatically. Some ways of behaving in the presence of strong emotions such as anger, jealousy, loneliness, fear, or love are more relationally skillful than others. From this perspective, it is not *having* an emotion that affects relationship health, but how skillfully one has learned to behave while experiencing that emotion. The recent work by Cordova et al. (2005) supports the notion that emotion skills, such as the ability to identify and express emotions, empathize, and manage challenging emotions, are essential to the maintenance of healthy marriages. Thus, how partners identify and communicate emotions, cope with their own and their partner's emotions, and generally enact their emotions in relation to intimate partners constitutes an important domain of couple health and well-being.

Unfortunately, it appears that individual learning histories with regard to how certain emotions are or should be enacted can be quite rigid. Findings within the field of attachment would suggest that early learning about emotion regulation that takes place during infancy and childhood, in relation to one's caregivers, serves as a template which often remains in place throughout life and is applied to all intimate emotional relationships, including adult dating and marriage. More encouragingly, several recent studies of attachment style have found that attachment style, in some cases, may be more fluid than originally thought, and that styles may be altered in the contexts of specific adult relationships (Davila, Karney, & Bradbury, 1999; Kirkpatrick & Hazan, 1994). These findings provide some early indication that emotion repertoires may possibly be made more skillful. However, no studies have yet explored the means by which such movement can take place and so possible mechanism(s) for change remain to be articulated. Given existing studies demonstrating the association between mindfulness and emotion regulation, mindfulness may be one such mechanism that has the advantage of being trainable.

MINDFULNESS AND EMOTION REPERTOIRES: MINDFUL RELATING

The present study speculates, based on suggestive findings with regard to mindfulness, that the quality of one's conscious attention may create conditions in which more adaptive emotional responding is possible. Specifically, we propose that present-centered attention to the moment is partly characterized by a greater ability to tolerate the subjective experience of negative emotions. The rationale for an increase in emotion tolerance rests partly on noticing that paying sustained attention to ongoing experience puts the individual in close proximity to his or her own thoughts and feelings, allowing the individual to grow more comfortable with his or her own emotional experiences. In addition, through repeated observation of thoughts coming and going through the mind, individuals may gain insight into their own conscious processes, particularly the transitory nature of thoughts and feelings. This type of meta-level awareness of the contents of consciousness has been referred to as "meta-cognitive awareness" (Teasdale et al., 2002). Development of a mindfulness-based depression prevention program, Mindfulness-Based Cognitive Therapy (Segal et al., 2002), led its authors to speculate that through meta-cognitive

awareness, one is capable of observing thoughts and feelings as separate from the self, resulting in an increased ability to allow them to pass through the mind without seizing onto and becoming attached to them. Even challenging or psychologically painful internal states can be observed to dissipate when one chooses not to elaborate on the thoughts or feelings, but simply notice them. We suggest that through this process it should be possible to develop an understanding that negative feelings can be lived through and tolerated, thus reducing reactivity and impulsivity in emotionally challenging situations.

Although cultivated to exceptional levels through meditation, we believe that attending to the present moment is a type of activity that humans engage in naturally to varying degrees. Furthermore, we propose that those who tend to reside naturally in a more mindful state of awareness are more likely to behave skillfully with their emotions due to the level and quality of attention that they are directing to their internal and external environment. Thus the proclivity to identify, manage, and communicate emotional content effectively within the intimate relationship should be enhanced.

What, specifically, are the emotion skills we speculate will be enhanced given increased tolerance for negative emotion? First, such conditions should allow individuals to be better monitors of their own emotional climate. A notion of mindful relating asserts that close attention to one's experience at each moment presents one with better access to the full range of an emotional experience. The act of paying attention may be quite difficult, particularly under psychologically demanding conditions. Elevated stress may, in many cases, result in decrements to cognitive resources, including the capacity to process information and hold relevant details in mind (Hopko, Crittendon, Grant, & Wilson, 2005). Furthermore, the varied emotions evoked in conflict, such as hurt, fear, and sadness, are often the very feelings that people seek to avoid due to their threatening nature. Work on experiential avoidance has shown that individuals will engage in numerous self-deceptive and destructive strategies simply to get out of having to feel a negative emotion (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). The emotionally challenging nature of couple conflict therefore suggests that lack of close attention could lead to missing critical subtleties in one's own emotional experiencing. Moreover, according to Ekman and Davidson (1994), what we commonly experience and label as categorical emotions are not in fact discrete emotions, but emotion blends. Especially in the midst of conflict, feelings most likely consist of combinations of emotions, experienced at different intensities. Blended responses may comprise seemingly inconsistent or even mutually opposing feelings. Johnson (2004) notes that blends often consist of what might be thought of as primary and secondary emotions, in which primary emotions such as hurt are masked by secondary emotions such as anger, with such masking resulting in relationally unhealthy interactions. We suggest that those unskilled at recognizing and tolerating their challenging emotions will be particularly susceptible to missing emotion blends which may be useful in negotiating emotionally challenging exchanges.

Preliminary work exploring empathy levels in association with mindfulness furthermore leads us to speculate that attunement and concern for another's feelings is another skill set that may be associated with attention to the present moment. The construct of empathy captures the ability of an individual to be sensitive to another person's emotional state and to be able to reflect that emotion back to the person, indicating that they vicariously feel the same emotion (Johnson, Cheek, & Smither, 1983). In a conceptualization proposed by Davis (1983), a primary dimension of empathy is perspective-taking, or the ability to place oneself in another person's shoes and comprehend his or her point of view. Empathic concern, the second dimension, refers to caring about the welfare of others and becoming upset over their misfortunes. Personal distress, the third dimension, is defined as one's own negative affect connected with the suffering of others. Hypothesized principles of mindful relating suggest that the tendency to be overwhelmed by emotions may be attenuated by the process described above, in which individuals better regulate intense emotions by noticing and identifying feelings as they come online. We would also expect that noticing the feeling states of others more readily would enhance empathic concern. Finally,

a greater ability to take the perspective of others may be a product of the ability to stay in close proximity to one's own thoughts and feelings. We suggest that seeing the independence of cognitions from any notion of the self helps to promote flexibility in recognizing that a broad range of thoughts may be possible in response to a given circumstance. More specifically, it should become easier to entertain the possibility that one's partner can have completely different thoughts and feelings from one's own, and that they may be equally valid.

Finally, we propose that couples who are more mindful may also be more inclined toward thoughtful, considered responding to their partner in the presence of negative emotions. One implication of mindful relating is that increased tolerance for negative emotion should result in decrements to impulsive reactivity despite aversive circumstances. While research suggests that mindfulness will have a bearing on one's reactions in the presence of a variety of emotions, we propose that it may have a particularly salient relationship to anger. According to theoretical and empirical work in the field, the experience of anger in response to provocative stimuli may well be unavoidable. Motivational theories of emotion assert, for instance, that powerful feelings such as anger likely serve a catalyzing effect designed to push an organism toward self-preserving action (e.g., McGuire & Troisi, 1990). There is great individual variation, however, in the cognitive and behavioral repertoires enacted in the context of anger. Research suggests that the subjective experience of anger beyond the initial moment of arousal may be further modified by those repertoires (Berkowitz & Harmon-Jones, 2004). For instance, behaviors such as rumination and continued negative appraisal may perpetuate and intensify angry feelings, whereas perspective-taking activity would tend to diminish anger intensity. A number of studies have also observed a particular association between high levels of hostility and aggression and avoidant coping styles (Nagtegaal & Rassin, 2004; Vandervoort, 2006). We suggest that while mindfulness cannot alter "wired-in" responses to stimuli identified as threatening, it should attenuate avoidance behaviors and thus lay the groundwork for improving tolerance for negative emotions. The individual who is better able to first notice and then tolerate the discomfort of feelings like disappointment, frustration, and shame allows him- or herself expanded opportunity to activate adaptive coping mechanisms such as perspective-taking and compassion, rather than simple immediate discharge of anger. If true, this would be consistent with research findings showing that, as compared to negative and neutral emotions, positive emotions tend to broaden the scope of attention and thought-action repertoires (Fredrickson & Branigan, 2005).

THE PRESENT STUDY

The present study represents a first test of the theorized relationship between conscious attending to the present moment, enactment of emotions, and relationship quality. In accordance with existing conceptualizations of mindfulness and our proposal that mindfulness should positively alter particular emotion repertoires in the context of intimate relationships, we hypothesized that (a) mindfulness would be positively associated with marital quality for couples; (b) mindfulness would be positively associated with emotion repertoire skill for couples along the three dimensions of emotion recognition and identification, empathy, and anger reactivity; (c) emotion repertoire skill (along the same three dimensions) would be positively associated with marital quality for couples; and (d) skillfulness of emotion repertoire would mediate the relationship between mindfulness and marital quality.

METHODS

Participants

The sample ($N = 66$) consisted of 33 married couples. Due to incomplete questionnaires, four of the couples were excluded from all analyses except for that pertaining to the third hypothesis. Participants were recruited from a pool of 60 couples who had earlier completed a

study of marital satisfaction and emotional skillfulness (Cordova et al., 2005). Couples were offered a chance to win \$200 in exchange for their participation. Mean age was 40 ($SD = 12.9$) for husbands, and 38 ($SD = 12.6$) for wives. Duration of marriage averaged 12 years ($SD = 11.4$). Thirty-two couples within this sample had children; number of children ranged from 1 to 4 with 1 being the mode. The majority of those completing the study were Caucasian, with only three individuals identifying as nonwhite. Participating couples were on average happily married, with mean DAS scores 109 ($SD = 16.9$) for husbands and 111 ($SD = 14.2$) for wives.

Procedure

As part of a larger study on emotional skillfulness (Cordova et al., 2005), respondents completed a questionnaire packet assessing background variables (gender, age, length of marriage, occupation), marital satisfaction and stability, and emotion skills. For the present study they were additionally asked to complete, by phone, measures of subjective satisfaction with life, mindful awareness, a global measure of marital satisfaction, and various indices of relationship quality.

Measures

The *Dyadic Adjustment Scale* (DAS; Spanier, 1976) is a widely used 32-item measure of marital quality based on partners' Likert-type ratings of criteria such as agreement on activities and issues such as sex relations, philosophy of life, and religious matters. Previous studies have identified four subscale factors, measuring marital satisfaction, degree of consensus between partners, amount of affectionate expression in the relationship, and dyadic cohesion, or the degree to which partners function as a team. The DAS has acceptable psychometric properties as an assessment device, with internal consistency high across studies (Spanier, 1976; Spanier & Thompson, 1982). Internal consistency of the global scale was also high in the present study ($\alpha = .89$ for both husbands and wives).

The *Marital Satisfaction Inventory-Revised* (Snyder, 1999) is a 150-item (true/false) self-report measure of marital satisfaction providing T scores reflecting the intensity of distress in several relationship areas. The aggression subscale specifically addresses physically abusive behavior within the relationship. Items include statements such as "My partner has slammed things around or thrown things in anger" and "I have worried about my partner losing control of his or her anger." Higher scores indicate the presence of aggressive behaviors.

The *Toronto Alexithymia Scale* (TAS-20; Bagby, Taylor, & Parker, 1994) is a 20-item self-report scale assessing difficulty with identifying and communicating emotions and externally oriented thinking. Respondents indicate the degree to which they agree with each statement on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree); lower scores reflect greater skillfulness on two dimensions as captured by Identifying and Communicating emotions subscales (e.g., "I am often confused about what emotion I am feeling" and "It is difficult for me to find the right words for my feelings," respectively). The TAS-20 has been found to have moderate test-retest reliability and internal consistency, and good convergent and discriminant validity (Bagby, Taylor, & Parker, 1988; Taylor, Bagby, Ryan, & Parker, 1990). In the present study, the global score had adequate internal reliability ($\alpha = .75$ and $.69$ for wives and husbands, respectively). Intra-subscale consistency for Identifying emotions was high ($\alpha = .89$ and $.81$ for husbands and wives, respectively), while for Communicating emotions it was somewhat lower ($\alpha = .57$ and $.74$ for husbands and wives, respectively).

The *Interpersonal Reactivity Index* (IRI; Davis, 1980) is a 21-item Likert scale (1 = strongly agree; 5 = strongly disagree) measuring three domains of empathic ability, averaged to create a global measure of empathy; higher scores reflect greater empathic capacity. The *Perspective-Taking* (PT) subscale measures ability to see things from another's point of view, the *Empathic Concern* (EC) subscale assesses ability to experience feelings of compassion for others, while the *Personal Distress* (PD) subscale measures the tendency to experience personal feelings of discomfort in the presence of others' suffering. For consistency with the

directionality of the other scales, the third scale is referred to as *Lack of Personal Distress* (LPD) throughout this article. In the present study, PT, EC, and LPD scales all possessed adequate internal reliability ($\alpha = .80$ and $.72$, $.68$ and $.76$, and $.79$ and $.72$ for husbands and wives, respectively). Construct validity has also been demonstrated (e.g., Bernstein & Davis, 1982; Davis, 1983).

The *Self-Expression and Control Scale* (SECS; van Elderen, Verkes, Arkesteijn, & Komproue, 1994) measures how anger and hostility are expressed and controlled and contains four subscales. Participants rate how often they use various strategies when feeling angry or furious using a 4-point scale (1 = almost never to 4 = almost always); higher scores indicate greater anger control skills. Two of the subscales refer to anger control: *Control of Internalization of Anger* (CAI) assesses inwardly directed control, or self-soothing, of anger (e.g., "I try to relax"), and *Control of Externalization of Anger* (CAO) assesses outwardly directed control of anger (e.g., "I keep my anger in restraint"). Alphas for CAI were $.93$ and $.95$ for husbands and wives, respectively, and for CAO were $.86$ and $.89$ for husbands and wives, respectively. The remaining two subscales may be combined into a measure of anger expression, with *Anger In* (AI) assessing the degree to which anger is directed inward, or "stuffed" (e.g., "Inside I see the anger without showing it") while *Externalized Anger* (AO) assesses outward, hostile demonstration of anger (e.g., "I say hateful things"). Alphas for AI were $.82$ and $.93$ for husbands and wives, respectively, and for AO were $.84$ and $.67$ for husbands and wives, respectively.

The *Emotional Control Questionnaire* (ECQ; Roger & Najarian, 1989) is a 34-item scale assessing emotion control strategies using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree); lower scores indicate superior emotion control. The ECQ contains four domains, two of which speak to impulse management. The first domain, *Benign Control*, measures the tendency to act on emotions impulsively, or without thinking. Throughout this article, for the purpose of clarity, we refer to this scale as the *Impulsivity* (IMP) subscale. The second, *Aggression Control*, measures the tendency to react aggressively. Also for the sake of clarity, we refer to this scale as the *Lack of Aggression Control* (LAC) subscale. Alphas for Impulsivity were $.71$ and $.66$ for husbands and wives, respectively, while for Lack of Aggression Control they were $.77$ and $.70$, respectively.

The *Mindful Awareness Attention Scale* (MAAS; Brown & Ryan, 2003) is a Likert-type 15-item questionnaire designed to measure mindfulness as a naturally occurring characteristic. It addresses the core component of mindfulness, sustained attention to the present, asking respondents to state how often they would attribute certain statements to themselves, such as "I do jobs or tasks automatically, without being aware of what I'm doing," "I find it difficult to stay focused on what's happening in the present," "I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there," and "I find myself listening to someone with one ear, doing something else at the same time." Internal consistency in the present sample was relatively high ($\alpha = .77$ for husbands, $.82$ for wives). The MAAS was chosen rather than the other instrument available at the time of this study's inception, due to its potential applicability to the broader population. In contrast, the Freiburg Mindfulness Inventory (Buchheld, Grossman, & Wallach, 2001) was developed for and valid for use only with experienced meditators.

RESULTS

We first conducted paired t tests testing for gender differences across all study variables, and found no significant differences on mindfulness and marital quality scales. Amongst emotion repertoire measures, we found that women on average scored lower on the MSI aggression subscale than men ($M = 2.88$, $SD = 8.39$, $t = 2.19$). However, when the analyses described below were run for men and women separately the results did not change substantially; therefore scores for husbands and wives were collapsed by taking the mean. We chose to focus

on couple-level results as a first step toward understanding mindfulness within the relationship as a global variable. Correlations between study variables and demographic variables were all nonsignificant. Including level of education, age, number of children, income, and years married as covariates did not substantively change the results of the following analyses.

Hypothesis 1: Mindfulness Will Be Positively Associated with Marital Quality

A Pearson correlation was conducted between couple-level mindful awareness scores and total DAS scores, which provide an index of overall marital adjustment. As expected, there was an association between mindfulness and global marital adjustment ($r = .37, p < .05$).

Hypothesis 2: Mindfulness Will Be Positively Associated with Emotion Repertoire Skill

Pearson correlations were conducted between couple-level mindfulness scores and measures of three emotion repertoire domains, including identification and communication of emotions, empathy/emotional attunement, and impulsivity. Correlations amongst these variables are presented in Table 1. Associations between MAAS scores and the difficulty Identifying and Communicating emotions subscales of the TAS were significant. There were significant correlations in the expected direction between mindfulness scores and the Empathic Concern, Perspective-Taking, and Lack of Personal Distress subscales of the IRI, our empathy/attunement measure. Findings for correlations between mindfulness and reactivity were largely consistent with the hypothesis. MAAS scores were negatively correlated with hostile anger expression (Anger Out) and positively with both control of anger expression (Control of Anger Out) and self-soothing of anger (Control of Anger In), all subscales of the SECS. The correlation with “stuffing” of anger (Anger In) approached but did not quite reach significance. MAAS scores were also correlated in the expected direction with both Impulsivity and Lack of Aggression Control subscales of the ECQ. Furthermore, mindfulness was also negatively correlated with acts of aggression as measured by the MSI aggression subscale.

Hypothesis 3: Emotion Skills Will Be Positively Associated with Marital Quality

Pearson correlations were conducted between the same measures of the three targeted emotion repertoire domains, and indices of marital adjustment. Correlations amongst these variables are presented in Table 1. Associations between global marital quality and the difficulty Identifying and Communicating emotions subscales of the TAS were significant. Regarding global marital quality scores and empathy as measured by the IRI, only the relationship with the Lack of Personal Distress subscale was found to be significant, while those for Perspective-Taking and Empathic Concern were both nonsignificant. Findings for correlations between marital satisfaction and reactivity were mixed, although largely consistent with the hypothesized association. Global marital quality scores were significantly correlated in the expected direction with hostile anger expression (Anger Out) and control of anger expression (Control of Anger Out) subscales of the SECS; however, the correlation with self-soothing anger (Control of Anger In) approached but did not quite reach significance. The correlation with stuffing of anger (Anger In) was nonsignificant. Marital quality scores were also correlated in the expected direction with impulsivity as measured by the ECQ, however not with the ECQ's Lack of Aggression Control subscale. Global marital quality was significantly negatively correlated with acts of aggression as measured by the MSI aggression subscale.

Hypothesis 4: Skillfulness of Emotion Repertoire Will Mediate the Relationship Between Mindfulness and Marital Quality

We used Baron and Kenny's (1986) criteria to test our mediation hypothesis. First, variation in the mediator variable (emotion repertoire skill) must be significantly associated with variation in the independent variable (mindful awareness). Second, variation in the mediator variable (emotion repertoire skill) must be significantly associated with variation in

Table 1
Correlations Among Couple-Level Mindfulness and Emotion Repertoires

Scale (N = 33)	MAAS	DAS	ID	COM	EC	PT	LPD	CAI	CAO	AI	AO	LAC	IMP	MSIA
MAAS	—	.37*	-.48**	-.35*	.38*	.49**	.35*	.33*	.42**	-.29	-.57**	-.51**	-.37*	-.58**
DAS		—	-.65**	-.41**	.07	.26	.33*	.28	.39*	-.23	-.42**	-.17	-.45**	-.57**
ID			—	.59**	-.05	-.25	-.27*	-.23	-.38**	.29*	.34*	.17	.46**	.38*
COM				—	-.07	-.19	-.33	-.20	-.34*	.53**	.06	.00	.43**	.14
EC					—	.48**	.04	.33*	.41**	.01	.30*	-.29*	-.17	-.12
PT						—	.34*	.35*	.31*	.28*	-.24	-.32*	-.42**	-.18
LPD							—	.33*	.30*	-.23	-.11	-.19	-.07	-.12
CAI								—	.49**	-.32*	-.32*	-.38**	-.22	-.09
CAO									—	-.26	-.67**	-.53**	-.57**	-.57**
AI										—	.00	.15	.28*	-.02
AO											—	.71**	.48**	.60**
AC												—	.54**	.53**
BC													—	.58**

Note. MAAS = Mindful Awareness Attention Scale; DAS = Dyadic Adjustment Scale (n = 29); ID = Difficulty Identifying Emotions (TAS); COM = Difficulty Communicating Emotions (TAS); EC = Empathic Concern Subscale (IRI); PT = Perspective-Taking Subscale (IRI); PD = Lack of Personal Distress Subscale (IRI); CAI = Control of Anger In Subscale (SECS); CAO = Control of Anger Out Subscale (SECS); AI = Anger In Subscale (SECS); AO = Anger Out Subscale (SECS); LAC = Lack of Aggression Control Subscale (ECQ); IMP = Impulsivity Subscale (ECQ); MSIA = MSI Aggression Subscale.
*p < .05, **p < .01.

the dependent variable (marital adjustment). Finally, when regressing the dependent variable on both the independent variable and the mediation variable, a previously significant association between the independent and dependent variable should no longer be significant.

In testing Hypotheses 1–3, we determined that only two of our potential mediators—identification/communication of emotions and skill with anger expression—met criteria for testing a mediation model. Lack of skill in identifying and communicating emotions as measured by the TAS was negatively correlated with both mindful awareness ($r = -.49, p < .01$) and marital adjustment ($r = -.63, p < .01$). Poor anger expression skill (including MSI Aggression, ECQ Impulsivity and Lack of Aggression Control, and SECS Anger Out and Control of Anger Out subscales) was also negatively correlated with both mindfulness ($r = -.58, p < .01$) and adjustment ($r = -.51, p < .01$). The third repertoire, empathy, was not significantly associated with marital quality as expected in this study. We therefore chose to test two simultaneous mediation models.

In order to test whether anger skill served as a mediator, we focused on an “anger reactivity” variable excluding Anger In and Control of Anger In subscales (which describe the internal experience of anger). Higher scores in this composite variable represented a higher degree of reactivity. We hypothesized that this global anger reactivity variable would mediate the relationship between mindfulness and marital adjustment. Regression analyses revealed that the association between couple mindfulness and marital adjustment was fully mediated by the anger reactivity variable (β changed from $-.37 [p = .04]$ to $.11 [p = .57]$; see Table 2.) The more stringent Sobel test was also applied, with a finding that the indirect effect of mindfulness on marital quality via anger reactivity was significantly different from zero ($z = 2.16, p < .05$).

Second, we examined whether difficulty in identifying and communicating emotions mediated the relationship between mindfulness and marital quality. We hypothesized that this variable, as measured by the TAS, would mediate the relationship between mindfulness and marital adjustment. Regression analyses revealed that the association between couple mindfulness and marital adjustment was fully mediated by the identification/communication variable (β changed from $-.37 [p = .04]$ to $.09 [p = .62]$; see Table 3). The more stringent Sobel test was also applied, with a finding that the indirect effect of mindfulness on marital quality via emotion identification/communication was *not* significantly different from zero ($z = -0.47, p = .64$).

In order to examine the additional predictive utility of a model that incorporates both skill with emotion identification/expression *and* anger as mediators of the association between mindfulness and marital adjustment, we included both variables as simultaneous mediators.

Table 2
Summary of Regression Analyses Testing Anger Reactivity as a Mediator of the Association Between Mindfulness and Global Marital Adjustment in Couples (N = 29)

Variables	Couples' dyadic adjustment scale		
	<i>B</i>	<i>SE B</i>	β
Step 1			
Couples' mindful awareness	.69	.32	.37*
Step 2			
Couples' mindful awareness	.21	.37	.11
Couples' anger reactivity	-3.88	1.37	-.55**
* $p < .05$, ** $p < .01$.			

Table 3

Summary of Regression Analyses Testing Difficulty Identifying and Communicating Emotions as a Mediator of the Association Between Mindfulness and Global Marital Adjustment in Couples (N = 29)

Variables	Couples' dyadic adjustment scale		
	<i>B</i>	<i>SE B</i>	β
Step 1			
Couples' mindful awareness	.69	.32	.37*
Step 2			
Couples' mindful awareness	.16	.32	.09
Couples' identification/communication	-1.49	.44	-.58**

* $p < .05$, ** $p < .01$.

Table 4

Summary of Regression Analyses Testing Difficulty with Identifying/Communicating and Anger Reactivity as Dual Mediators (N = 29)

Variables	Couples' dyadic adjustment scale			
	<i>B</i>	<i>SE B</i>	β	R^2
Step 1				
Couples' mindful awareness	.69	.32	.37*	.184
Step 2				
Couples' mindful awareness	.21	.37	.11	
Couples' anger reactivity	-3.88	1.37	-.55**	.388
Step 3				
Couples' mindful awareness	-.27	.32	-.14	
Couples' anger reactivity	-.358	1.10	-.51**	
Couples' identification/communication	-1.42	.37	-.56**	.635

Note. R^2 for Steps 2 and 3 = cumulative R^2 .
* $p < .05$, ** $p < .01$.

Results indicated that both variables accounted for a unique portion of the variance in the dependent variable, while simultaneously mediating the relationship between mindfulness and marital adjustment. Results are reported in Table 4.

DISCUSSION

Mindfulness and Marital Quality

The benefits of mindful relating appear consistent with the existing research literature suggesting that mindfulness should be especially beneficial within intimate relationships, given the emotionally challenging nature of intimacy (Cordova & Scott, 2001). Results of the current

study provide preliminary support for the theory that mindfulness contributes to greater intimate relationship satisfaction by fostering more relationally skillful emotional repertoires.

Principally, we found a significant correlation between mindfulness and global marital adjustment. The medium effect size ($r = .37$) may be considered somewhat surprising given that without the theoretical rationale provided by suggested principles of mindful relating, one would not necessarily intuitively expect items such as “I rush through activities without really being attentive to them” and “I tend to walk quickly to get where I’m going without paying attention to what I experience along the way” to be associated with marital adjustment. The concept of mindful relating suggests that greater attentiveness to the present moment enables partners to create and maintain a healthy intimate process by improving the quality of their moment-to-moment emotional interaction. More mindful partners should literally see each other more clearly, regard each other more nonjudgmentally, behave more responsively toward each other, and navigate the emotionally challenging waters of intimacy more gracefully.

Mindfulness and Emotion Repertoires

In the present study we focused explicitly on three emotion repertoire domains that we theorized might be influenced by the quality of one’s conscious attention—identification and communication of emotions, empathy, and anger reactivity.

In the case of emotion identification and communication, findings linking subscales of the Toronto Alexithymia Scale to the MAAS revealed that more mindful partners were indeed superior at identifying their own emotions, as well as being superior at communicating their emotions to others. Again, theoretically, being able to identify emotions as they unfold requires a level of mindful attention to one’s moment-to-moment experiencing and the attendant capacity to tolerate emotional content. To the degree that an individual is distracted from his or her present experience, the ability to identify emotions is compromised, which in turn compromises his or her ability to engage in the emotional processes of intimacy. Similarly, the ability to communicate emotions likely also hinges upon attentiveness to one’s present experience and tolerance of emotional content, and may also benefit from accurately tracking the emotional experience of one’s partner in order to communicate emotions in an interpersonally effective manner.

In addition, these findings are consistent with a large body of literature showing a robust association between difficulty identifying and communicating emotions and a number of measures of psychological well-being (e.g., Zimmermann, Rossier, Meyer de Stadelhofen, & Gaillard, 2005). Further, recent empirical studies have made the explicit connection between the ability to identify and communicate emotions and satisfaction in close relationships (Cordova et al., 2005).

The current study also found associations between mindfulness and empathy. We interpret our findings as support for the notion that mindfulness promotes more skilled empathic responding along the dimensions suggested in Davis’ three-factor model of empathy. First, in being mindful one maintains an open and curious stance toward one’s own experience. We expect that having a receptive stance toward ongoing experience enables perspective-taking as a natural outgrowth of openness and curiosity about the experience of others. Additionally, greater mindfulness is also theoretically associated with being less distracted by one’s own thoughts about the past and future and the feelings that attend those thoughts, and therefore more attention is available for attending to a partner’s perspective. Furthermore, it is likely that compassion and empathic concern are products of increased contact with the perspective of others and a generally more receptive stance to ongoing experience. Finally, as noted above, increased distress tolerance is theoretically a manifestation of the greater acceptance of negative affect that characterizes greater mindfulness. Greater distress tolerance should enable an individual to maintain empathic contact with the suffering of others.

Surprisingly, in our study empathy was largely unrelated to marital quality, save for the inverse correlation between tendency toward personal distress in the presence of others' emotions and relationship quality. Such findings are inconsistent with prior research indicating that empathic ability is one of the factors most useful in maintaining the quality of romantic relationships (e.g., Davis & Oathout, 1987). Because the connection between empathy and relationship quality was not statistically supported in our study, we were not able to test a model in which empathy serves as a mediator between mindfulness and positive regard for the relationship. However, given the extant literature, it is possible that this finding is anomalous, and if so future work could well reveal a mediational function served by empathy.

Research into negative affect in marriage has done a great deal to describe those behaviors appearing to weaken intimate relationships, including "stonewalling" or shutting down during arguments, overt hostility, and impulsive displays of aggression (e.g., Gottman, 1994). Thus, we hypothesized in this study a relationship between unhealthy anger repertoires and both mindfulness and marital quality.

As anticipated, correlations between mindful awareness and anger-related emotion skills were observed in most cases, although two of the predicted correlations with anger subscales failed to appear. Neither Anger In nor Control of Anger In as measured by the SECS was significantly correlated with the MAAS. However, MAAS scores *were* correlated in the expected direction with Anger Out and Control of Anger Out subscales of the SECS, with both Impulsivity and Lack of Aggression Control subscales of the ECQ, and with acts of aggression as measured by the MSI Aggression subscale. One way to understand these findings, and particularly in a way which takes into account those correlations which were *nonsignificant*, is that being mindfully aware may not minimize the internal experience of anger or self-soothing behaviors specifically, but a mindful orientation appears to enable one to think twice about how to behave in the context of experienced anger. For instance, more mindful couples were not necessarily more likely to endorse items such as, "I put myself at ease" or "I blame others without expressing it." However, there were associations with interpersonal expressions of anger, for example, on statements such as "I often do or say things I later regret," "If someone were to hit me I would hit back," and "I make sarcastic remarks to others." Couples who experience emotions as less aversive may be better able to handle the pragmatics of problem solving, even under emotionally challenging circumstances.

Mindful Relating

We anticipated that emotion skills, generally speaking, would likely account for the anticipated relationship between mindfulness and marital quality. However, in the process of testing our first several hypotheses it became evident that our data did not support the role of empathic ability in this relationship. We therefore chose to test both anger repertoire and emotion identification/communication as co-mediators, anticipating that each would be important ways of explaining the role of mindful awareness in more healthful relationships.

As an initial step we tested and found evidence supporting a model in which partners' anger-related emotion skills mediate the association between mindfulness and relationship quality. We believe these findings are particularly relevant with regard to their implications for impulsivity, hence our decision to label a variable comprising these types of endorsements as anger reactivity. More mindful couples apparently exercised better control over aggressive impulses, and indicated a tendency to keep aggressive behaviors, especially hostility, to a minimum. This model met both Baron and Kenny's, as well as the more stringent Sobel, criteria for full mediation. As a second step, we tested and found evidence supporting the capacity to identify and communicate one's emotions as an additional mediator, which added considerable predictive power to the consideration of anger reactivity alone. This second model, however, did not reach significance according to the Sobel test.

We interpret these findings as suggesting that there may be multiple, and at least partially independent, pathways by which an open and aware orientation to the present can operate within intimate relationships. Buddhist teaching emphasizes the importance of ameliorating “destructive emotions,” with particular emphasis on anger as the most damaging of all. Given that thousands of years of Buddhist scholarship has suggested mindfulness as the paramount means by which to eradicate anger, it is perhaps unsurprising to find mindful awareness linked here with an inclination to tolerate strong negative emotion without reacting in a destructive manner. Theoretically speaking, mindfulness may ultimately diminish the intensity of negative emotions by rendering them less aversive. Second, some ability to keep the “noise” of one’s own mind filtered should allow for greater attentional resources for superordinate goals, such as the best interests of one’s relationship, in mind even under stress. Third, more mindful couples should also be less likely to enact entrenched, negative, reciprocal patterns of behavior when angry. That is, they should be more open to and aware of the contingencies of each situation as unique, and thus less likely to react in the context of assumptions and past hurts or resentments.

The ability to both identify one’s emotional states and effectively communicate them is expected to be an important part of managing the unique demands of the moment. If an individual becomes more flexible and responsive by attending to his or her own moment-by-moment experience, he or she clearly must be able to discern what that experience *is*. Those who are able to first identify the emotions they are experiencing in a sensitive way—for example, discerning feelings of hurt or disappointment from (or within) anger—create a greater and more adaptive array of options for expressing their wishes to their partners. Similarly, those who can and do express their emotions in turn give others greater opportunity to respond sensitively to those emotions, an exchange which is essential to the process of building intimacy. We imagine that effectively identifying and communicating emotions is an important piece of the optimally healthy anger repertoire, in that the expression of softer emotions can greatly ameliorate conflict. However, we also imagine that emotion identification and communication operate in relationally healthy ways distinct from anger, such as in the expression of love, warmth, and humor.

Limitations and Future Directions

Because this is among the first studies to assess couple-level mindfulness in relation to marital quality, and the first to incorporate assessment of emotion skills, results should be viewed as preliminary. Moreover, a great deal of work remains to be done to explore the interpersonal ramifications of mindfulness in such a way that honors the complexity of the phenomenon. The current study utilized a self-report measure that rests on the assumptions that, first, individuals are accurate reporters of their own behavior and, second, that the psychological construct of mindfulness is well quantified by items primarily assessing present-centered attention. Buddhist conceptualizations of mindfulness hold that a critical aspect of this form of attention is that it is nonjudgmental and nonevaluative in nature. Thus “true” mindfulness has a quality of acceptance that may not be captured by the Brown and Ryan (2003) measure employed in this study, and which may be captured by other instruments which have since become available, such as the Kentucky Inventory of Mindfulness Skills, Cognitive and Affective Mindfulness Scale, and The Mindfulness Questionnaire (e.g., KIMS; Baer, Smith, & Allen, 2004; CAMS-R; Hayes & Feldman, 2004; MQ; Chadwick, Hember, Mead, Lilley, & Dagnan, 2005). By the same token, we feel that it is both notable and significant that a measure which focuses largely on the bare attentional aspects of mindfulness should nonetheless ultimately be related to higher levels of identifying and communicating emotions, and decreased impulsivity, as found in this study. Statistical analysis of the more recent questionnaires revealed that they loaded, more so than the MAAS, on factors such as “nonreactivity to inner experience” and “observing/noticing/attending to sensations/

perceptions/thoughts/feelings.” As such, these measures will be highly useful for confirming and further teasing out the mechanisms of mindfulness suggested in this study.

Recognition of nonjudgment as part of the conceptualization of mindfulness in turn suggests possible mechanisms not addressed in this study. For instance, a stance of open acceptance may serve an ameliorating effect in close relationships where the friction of close and ongoing proximity may lead partners to focus on imperfections and shortcomings in their partners, and from judging them as such. As human beings it seems we are bound by nature to be evaluative, at least according to theories of evolutionary psychology (e.g., Chiappe & MacDonald, 2005). In their discussion of the theoretical underpinnings of Acceptance and Commitment Therapy, Hayes and Wilson (1994) described the particular implications of language and the role it takes in promoting inherently judgmental thoughts. According to this particular construction, thoughts are affectively laden without our conscious awareness, and carry automatic evaluations that such thoughts are “good” or “bad.” Moreover, the *holder* of those thoughts tends to take on the properties of those evaluations, becoming a good or bad (or “serious” or “funny” or “anxious”) person for being the bearer of these thoughts. Thus subjective distress occurs in response to the vagaries of the ongoing thought stream. Mindfulness may, essentially, pull the plug on evaluative thought, as it involves simply noticing experience without engaging in any further evaluation of it. We also believe that meta-cognitive awareness, theorized to increase tolerance for previously aversive emotional experience, should tend to reduce negative judgments of that experience—the emotion is no longer quite so bad because, seen from perspective, emotions are an acceptable facet of the ongoing stream of experience, and further, one has observed that one can live through it. The proposed mechanisms of mindful relating suggest that there should be an additional benefit of increasing tolerance for one’s partner in that negative expressions previously seen as expressions of an immutable self may now also be seen as isolated behaviors, or passing phenomena. Partners may come to see provocative behavior by the other as less subjectively distressing as they become more tolerant of their own emotional experiencing. Finally, we propose that in mindful relating, increased perspective-taking should allow one to identify partner characteristics and behaviors as having multiple facets and motivations, which in turn should promote tolerance and acceptance. Findings from studies on mindful relating by Brown and Barnes (2004) and Carson et al. (2004) both provide support for increased feelings of acceptance of intimate others in association with greater mindfulness.

SUMMARY AND CONCLUSIONS

The findings here suggest that mindfulness, a state of consciousness in which one is oriented to the present moment, confers specific benefits in the context of intimate relationships. This study suggests that couples who are more mindful appear to be more likely to enjoy greater relationship health and stability, and within that, increases in satisfaction and affectionate behavior, as well as greater inter-partner harmony on a range of life issues. Examination of several emotion skill domains in conjunction with mindfulness further suggests that at least one of the avenues to enhanced relationship functioning may be through partners’ more relationally skillful emotion repertoires. We posit that mindfulness puts one in closer contact with one’s own experience relative to the more typical mode of consciousness which, according to Buddhist thinking, is akin to a perpetual state of distraction, if not full-on experiential avoidance. As a result individuals may closely watch their feeling states and potentially become newly tolerant as even negative feelings, such as anger, are observed to come and go of their own accord when they are not elaborated upon by suppression or rumination. Through this process we suppose that more skilled emotion repertoires may be learned. Support for the hypothesized mechanism was found in the present study. Mindfulness was associated with superior emotions skill in the domains of empathy, improved ability to identify and communicate emotions, and

the skillful handling of anger. We suggest that decreases in impulsivity and hostility around the experience of anger are specifically implicated, wherein lessened anger reactivity appears to play a mediating role in the association between mindfulness and relationship quality.

REFERENCES

- Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report: The Kentucky Inventory of Mindfulness Skills. *Assessment, 11*(3), 91–206.
- Bagby, R. M., Taylor, J. D., & Parker, G. J. (1988). Construct validity of the Toronto alexithymia scale. *Psychotherapy & Psychosomatics, 50*(1), 29–34.
- Bagby, R. M., Taylor, J. D. A., & Parker, G. J. (1994). The twenty-item Toronto alexithymia scale: I. Item selection and cross-validation of the factor structure. *Journal of Psychosomatic Research, 38*(1), 23–32.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173–1182.
- Beach, R. H. (Ed.). (2001). *Marital and family processes in depression: A scientific foundation for clinical practice*. Washington, DC: American Psychological Association.
- Berkowitz, L., & Harmon-Jones, E. (2004). Toward an understanding of the determinants of anger. *Emotion, 4*(2), 107–130.
- Bernstein, W. M., & Davis, M. H. (1982). Perspective-taking, self-consciousness, and accuracy in personal perception. *Basic and Applied Social Psychology, 3*(1), 1–19.
- Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N., Carmody, J., et al. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice, 11*, 230–242.
- Bowlby, J. (1980). *Attachment and loss*. New York: Basic Books.
- Brown, K. W., & Barnes, S. (2004). *Mindfulness in interaction quality*. Symposium conducted at the 38th Annual Association for Advancement of Behavior Therapy Convention, New Orleans, LA.
- 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.
- Buchheld, N., Grossman, P., & Wallach, H. (2001). Measuring mindfulness in insight meditation (Vipassana) and meditation-based psychotherapy: The development of the Freiburg Mindfulness Inventory (FMI). *Journal for Meditation and Meditation Research, 1*, 11–34.
- Carlson, L. E., Speca, M., Patel, K. D., & Goodey, E. (2003). Mindfulness-based stress reduction in relation to quality of life, mood, symptoms, and immune parameters in breast and prostate cancer patients. *Psychosomatic Medicine, 65*, 571–581.
- Carson, J. W., Carson, K. M., Gil, K. M., & Baucom, D. H. (2004). Mindfulness-based relationship enhancement. *Behavior Therapy, 35*, 471–494.
- Chadwick, P., Hember, M., Mead, S., Lilley, B., & Dagnan, D. (2005). *Responding mindfully to unpleasant thoughts and images: Reliability and the validity of the mindfulness questionnaire* (Unpublished manuscript).
- Chiappe, D., & MacDonald, K. (2005). The evolution of domain-general mechanisms in intelligence and learning. *Journal of General Psychology, 132*(1), 5–40.
- Christensen, A., & Heavey, C. L. (1993). Gender differences in marital conflict: The demand/withdraw interaction pattern. In S. Oskamp & M. Costanzo (Eds.), *Gender issues in contemporary society* (pp. 113–141). Thousand Oaks, CA: Sage.
- Christensen, A., Jacobson, N. S., & Babcock, J. (1995). Integrative behavioral couple therapy. In N. S. Jacobson & A. S. Gurman (Eds.), *Clinical handbook of couple therapy* (pp. 31–64). New York: Guilford.
- Cordova, J. V., Gee, C. B., & Warren, L. Z. (2005). Emotional skillfulness in marriage: Intimacy as a mediator of the relationship between emotional skillfulness and marital satisfaction. *Journal of Social & Clinical Psychology, 24*(2), 218–235.
- Cordova, J. V., & Scott, R. L. (2001). Intimacy: A behavioral interpretation. *Behavior Analyst, 24*(1), 75–86.
- Davidson, R. J., Kabat-Zinn, J., Schumacher, J., Rosenkranz, M., Muller, D., Santorelli, S. F., et al. (2003). Alterations in brain and immune function produced by mindfulness meditation. *Psychosomatic Medicine, 65*(4), 564–570.
- Davila, J., Karney, B. R., & Bradbury, T. N. (1999). Attachment change processes in the early years of marriage. *Journal of Personality and Social Psychology, 76*, 783–802.

- Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *Catalog of Selected Documents in Psychology*, 10, 85.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality*, 51(2), 113–126.
- Davis, M. H., & Oathout, H. A. (1987). Maintenance of satisfaction in romantic relationships: Empathy and relational competence. *Journal of Personality and Social Psychology*, 53(2), 397–410.
- Ekman, P., & Davidson, R. J. (Eds.). (1994). *The nature of emotion: Fundamental questions*. New York: Oxford University Press.
- Ekman, P., & Friesen, W. V. (1971). Constants across cultures in the face and emotions. *Journal of Personality and Social Psychology*, 17(2), 124–129.
- van Elderen, T., Verkes, R. J., Arkesteijn, J., & Komprou, I. (1994). Psychometric characteristics of the self-expression and control scale in a sample of recurrent suicide attempters. *Personality & Individual Differences*, 21(4), 489–496.
- Fredrickson, B. L., & Branigan, C. (2005). Positive emotions broaden the scope of attention and thought-action repertoires. *Cognition & Emotion*, 19(3), 313–332.
- Gottman, J. M. (1994). *What predicts divorce? The relationship between marital processes and marital outcomes*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Gottman, J. M., & Levenson, R. W. (1986). Assessing the role of emotion in marriage. *Behavioral Assessment*, 8, 31–48.
- Greenberg, L. S., & Johnson, S. M. (1986). When to evoke emotion and why: Process diagnosis in couples therapy. *Journal of Marital & Family Therapy*, 12(1), 19–23.
- Hayes, A. M., & Feldman, G. (2004). Clarifying the construct of mindfulness in the context of emotion regulation and the process of change in therapy. *Clinical Psychology: Science and Practice*, 11(3), 255–262.
- Hayes, S. C., & Wilson, K. G. (1994). Acceptance and commitment therapy: Altering the verbal support for experiential avoidance. *Behavior Analyst*, 17(2), 289–303.
- Hayes, S. C., Wilson, K. G., Gifford, E. V., Follette, V. M., & Strosahl, K. (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology*, 64(6), 1152–1168.
- Hopko, D. R., Crittendon, J. A., Grant, E., & Wilson, S. A. (2005). The impact of anxiety on performance IQ. *Anxiety, Stress, & Coping: An International Journal*, 18(1), 17–35.
- Johnson, S. M. (2004). Attachment theory: A guide for healing couple relationships. In S. W. Rholes & J. A. Simpson (Eds.), *Adult attachment: Theory, research, and clinical implications* (pp. 367–387). New York: Guilford Press.
- Johnson, S. M., & Greenberg, L. S. (1994). Emotion in intimate relationships: Theory and implications for therapy. In S. M. Johnson & L. S. Greenberg (Eds.), *The heart of the matter: Perspectives on emotion in marital therapy* (pp. 3–22). Philadelphia: Brunner/Mazel.
- Johnson, J. A., Cheek, J. M., & Smither, R. (1983). The structure of empathy. *Journal of Personality & Social Psychology*, 45(6), 1299–1312.
- Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. New York: Dell.
- Kirkpatrick, L. A., & Hazan, C. (1994). Attachment styles and close relationships: A four-year prospective study. *Personal Relationships*, 1, 123–142.
- Langer, E. (2002). Well-being: Mindfulness versus positive evaluation. In C. R. Snyder & S. Lopez (Eds.), *Handbook of positive psychology* (pp. 214–230). New York: Oxford University Press.
- McGuire, M. T., & Troisi, A. (1990). Anger: An evolutionary view. In R. Plutchik & H. Kellerman (Eds.), *Emotion, psychopathology, and psychiatry* (pp. 43–57). San Diego, CA: Academic Press.
- 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(3), 192–200.
- Mirgain, S. A. (2003). The emotional life of marriages: The investigation of emotional skillfulness and its effects on marital satisfaction and intimacy. *Dissertation Abstracts International*, 64(3-B).
- Mirgain, S., & Cordova, J. V. (in press). Emotion skills and marital health: The association between observed and self-reported emotion skills, intimacy, and marital satisfaction. *Journal of Social and Clinical Psychology*.
- Nagtegaal, M. H., & Rassin, E. (2004). The usefulness of the thought suppression paradigm in explaining impulsivity and aggression. *Personality and Individual Differences*, 37(6), 1233–1244.

- Roger, D., & Najarian, B. (1989). The construction and validation of a new scale for measuring emotion control. *Personal & Individual Differences, 10*(8), 845–853.
- Rosenzweig, S., Reibel, D. K., Greeson, J. M., Brainard, G. C., & Hojat, M. (2003). Mindfulness-based stress reduction lowers psychological distress in medical students. *Teaching and Learning in Medicine, 15*(2), 88–92.
- Segal, Z., Teasdale, J. D., & Williams, S. (2002). *Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse*. New York: Guilford.
- Shapiro, S. L., Schwartz, G. E., & Bonner, G. (1998). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of Behavioral Medicine, 21*(6), 581–599.
- Snyder, D. K., & Aikman, G. G. (1999). Marital Satisfaction Inventory-Revised. In M. E. Maruish (Ed.), *The use of psychological testing for treatment planning and outcomes assessment* (2nd ed., pp. 1173–1210). Mahwah, NJ: Lawrence Erlbaum Associates.
- Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family, 38*(1), 15–28.
- Spanier, G. B., & Thompson, L. (1982). A confirmatory analysis of the dyadic adjustment scale. *Journal of Marriage and the Family, 44*(3), 731–738.
- Taylor, G. J., Bagby, R. M., Ryan, D. P., & Parker, J. D. (1990). Validation of the alexithymia construct: A measurement-based approach. *Canadian Journal of Psychiatry, 35*(4), 290–297.
- Teasdale, J. D., Moore, R. G., Hayhurst, H., Pope, M., Williams, S., & Segal, Z. (2002). Metacognitive awareness and prevention of relapse in depression: Empirical evidence. *Journal of Consulting and Clinical Psychology, 70*(2), 275–287.
- Vandervoort, D. J. (2006). Hostility and health: Mediating effects of belief systems and coping styles. *Current Psychology: Developmental, Learning, Personality, Social, 25*(1), 50–66.
- Zimmermann, G., Rossier, J., Meyer de Stadelhofen, F., & Gaillard, F. (2005). Alexithymia assessment and relations with dimensions of personality. *European Journal of Psychological Assessment, 21*, 23–33.