

Intra-Individual and Cross-Partner Associations Between the Five Facets of Mindfulness and Relationship Satisfaction

Katherine A. Lenger¹ · Cameron L. Gordon¹ · Simone P. Nguyen¹

Published online: 6 August 2016
© Springer Science+Business Media New York 2016

Abstract Research has established that mindfulness may be useful to individual and dyadic well-being among both early-stage and long-term relationships. Nonetheless, it remains unclear which mechanisms of mindfulness are most relevant to relationship satisfaction among long-term married couples. Furthermore, although previous research suggests that an individual's total mindfulness is not related to his or her partner's relationship satisfaction, we have yet to determine whether any specific facets of mindfulness may evidence a significant cross-partner association with relationship satisfaction. The present study seeks to address these gaps in the literature using the Five Facet Mindfulness Questionnaire (FFMQ). Data were collected from 164 long-term married couples (M relationship length = 28.30 years, SD = 8.43 years). Hierarchical linear modeling indicated that one's *Nonjudgment of Inner Experience* uniquely predicts one's own relationship satisfaction above and beyond the other facets, and that an individual's *Nonreactivity to Inner Experience* uniquely predicts his or her spouse's relationship satisfaction above and beyond the other facets. Implications for utilizing mindfulness aimed at both intra-individual and cross-partner relationship enhancement will be discussed.

Keywords Mindfulness · Relationship satisfaction · Couples · Five Facet Mindfulness Questionnaire

✉ Katherine A. Lenger
klenger@vols.utk.edu

¹ Department of Psychology, University of North Carolina, Wilmington, 601 South College Road, Wilmington, NC 28403, USA

Introduction

Marital researchers have long been dedicated to investigating and developing interventions to assist couples in establishing and maintaining satisfactory levels of relationship functioning. More recently, well-being variables have been integrated into marital research to further the understanding of how to propel “satisfied” relationships into optimal states of “relationship flourishing” (Fincham and Beach 2010). Well-being constructs such as gratitude (e.g., Emmons and McCullough 2003; Lambert and Fincham 2011; Gordon et al. 2011; Gordon et al. 2012), acceptance (Pakenham and Samios 2013), and forgiveness (see Fincham and Beach 2010 for a review), among others, have been shown to support both individual and dyadic well-being. Therefore, just as each individual's psychopathology is important to understanding relationship distress (Whitton et al. 2007; Whitton et al. 2008; Whitton and Whisman 2010; Baucom et al. 2012), it may be useful to examine individual strengths in an effort to develop interventions designed to assist couples in cultivating optimal relationship functioning (Gordon and Baucom 2009).

Mindfulness has become a construct of increasing interest to researchers over the last few decades. Mindfulness is characterized as a nonjudgmental awareness of the present moment (Kabat-Zinn 2003). Researchers have found mindfulness to be relevant to a wide variety of populations, including individuals (Brown and Ryan 2003) and couples (Burpee and Langer 2005; Wachs and Cordova 2007). For example, more mindful individuals tend to report greater well-being, life satisfaction, and creativity as well as less anxiety, depression, and stress (Brown and Ryan 2003). Similarly, more mindful couples tend to report greater relationship satisfaction (Burpee and Langer 2005; Carson et al. 2004) and tend to behave in a more relationally adaptive manner (Wachs and Cordova

2007; Barnes et al. 2007). Furthermore, mindfulness is a skill that can be learned and strengthened with a meditation practice, making mindfulness a low-cost and effective treatment strategy in therapeutic settings. This has motivated researchers to develop a detailed understanding of mindfulness, and the populations in which it is useful, in an effort to develop and refine more effective interventions for both individuals and couples.

Although it has been established that mindfulness is generally relevant to one's own relationship satisfaction (Wachs and Cordova 2007; Barnes et al. 2007; Khaddouma et al. 2015), we have yet to determine which specific facets of mindfulness are most relevant to one's own marital satisfaction. Furthermore, questions remain regarding cross-partner associations of mindfulness and relationship satisfaction. Previous mindfulness research has not found an association between an individual's mindfulness and his or her partner's relationship satisfaction (Barnes et al. 2007). However, this research has only been conducted using the Mindful Attention and Awareness Scale (MAAS; Brown and Ryan 2003), a single-facet conceptualization of mindfulness. Thus, questions remain regarding whether specific components of mindfulness, as measured by the Five Facet Mindfulness Questionnaire (Baer et al. 2006), may reveal specific aspects of mindfulness that evidence a significant cross-partner association with relationship satisfaction. It may be the case that an individual's total mindfulness is not related to his or her partner's relationship satisfaction, but perhaps an association does exist between specific facets of one's mindfulness (i.e., *Acting with Awareness*, *Describe*, *Nonjudgment of Inner Experience*, *Nonreactivity to Inner Experience*, and *Observe*) and a partner's relationship satisfaction.

In one of the first studies on mindfulness and romantic relationships, Carson et al. (2004) measured the effects of an 8-week Mindfulness-Based Relationship Enhancement (MBRE) program on a sample of nondistressed couples. The intervention consisted of weekly meetings, daily formal and informal meditations for each partner, and a 1-day mindfulness retreat. The control group tracked stress levels at various intervals during the intervention and included weekly meetings teaching skills development. Compared to the skills development control group, the couples in the MBRE group reported greater improvements in daily relationship happiness, relationship stress, and overall stress as well as greater increases in individual psychological well-being, stress coping skills, individual relaxation, and confidence in the ability to cope. Moreover, these results were maintained at 3-month follow-up. The findings of this study are particularly noteworthy since the population consisted of nondistressed couples where there is a greater risk of reaching ceiling effects when studying relationship enhancement interventions. According to these results, the benefits of mindfulness interventions are not limited to clinical populations and suggest that mindfulness may be

a vehicle to enable "satisfied" couples to reach more flourishing states of both individual and dyadic well-being.

Similarly, Barnes et al. (2007) examined the role of mindfulness in response to relationship stress (i.e., conflict). They found that more mindful individuals reported greater relationship satisfaction and engaged in more relationally healthy responses to conflict. Specifically, more mindful individuals evidenced less negative emotional expression during conflict and had greater positive perceptions of both the partner and the relationship following conflict. Interestingly, the effects found for an individual's trait mindfulness appeared to only be relevant to his or her own satisfaction and not the partner's relationship satisfaction.

Furthermore, Wachs and Cordova (2007) investigated the importance of mindful relating to marital quality. Results revealed that couple-level mindfulness was positively associated with global marital quality and emotion skills including identification and communication of emotions, empathic concern, perspective taking, lack of personal distress, control of anger expression, and self-soothing of anger. Couple-level mindfulness was negatively correlated with less relationally adaptive emotions and reactions including hostile anger expression, impulsivity, lack of aggression control, and acts of aggression. Regression analyses revealed that the association between couple-level mindfulness and global marital quality was fully mediated by the emotion skills pertaining to one's anger reactivity and identification and communication of emotions, respectively. According to these data, couple-level mindfulness may be relevant to marital quality by enabling spouses to utilize their greater emotional skills and respond to conflict in a more relationally adaptive manner.

Collectively, these results help us understand why mindfulness may be useful to relationship satisfaction by suggesting that more mindful couples tend to engage in more constructive conflict and manage difficult emotions in a more relationally adaptive manner (Barnes et al. 2007; Wachs and Cordova 2007). Although most of these studies cannot establish causality (i.e., happier couples may be more mindful as well), the associations available in the extant literature appear to offer promising avenues of further exploration regarding the potential relevance that mindfulness may have to relational well-being on both individual and dyadic levels (Carson et al. 2004). Thus, recent studies provide an encouraging foundation for further research aimed at advancing models of mindfulness within a couples context; however, it remains unclear which facets of mindfulness are most relevant to greater relationship happiness. With the introduction of the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al. 2006), methods are now available to address these gaps in the literature.

Recently, researchers have begun to conceptualize mindfulness as a multifaceted construct. Baer et al. (2006) suggested that mindfulness is comprised of five facets: Acting

with Awareness, Describe, Nonjudgment of Inner Experience, Nonreactivity to Inner Experience, and Observe, each of which can be measured with their FFMQ. The first facet, Acting with Awareness, is defined as staying present with actions, without distraction (e.g., “It seems I am ‘running on automatic’ without much awareness of what I am doing” (reverse scored)). The second facet, Describe, is characterized as being able to identify and express beliefs, opinions, emotions, feelings, and expectations (e.g., “I’m good at finding words to describe my feelings”). The third facet, Nonjudgment of Inner Experience, is characterized as being open and curious to one’s internal experience, rather than critical or wishing it was different in some way (e.g., “I tell myself I shouldn’t be feeling the way I’m feeling” (reverse scored)). The fourth facet, Nonreactivity to Inner Experience, is characterized by being able to perceive one’s thoughts and emotions as they are without reacting to them, becoming dysregulated by them, or trying to change them (e.g., “In difficult situations, I can pause without immediately reacting”). The fifth facet, Observe, is characterized by recognizing one’s thoughts, perceptions, sensations, and feelings and not trying to distract oneself even if they are unpleasant (e.g., “I pay attention to sensations, such as the wind in my hair or sun on my face”).

Dividing the construct of mindfulness into multiple components has enabled researchers to develop a more specific understanding of how mindfulness exerts its effects on a variety of psychological processes (e.g., Brown et al. 2015; psychological well-being; Cash and Whittingham 2010; substance use; Levin et al. 2014; disgust; Reynolds et al. 2014). This increased understanding can help researchers and therapists develop and implement more specialized interventions for their clients in an effort to improve therapeutic outcomes.

To date, very few studies have examined mindfulness and relationship satisfaction using the FFMQ. In a recent study, Khaddouma et al. (2015) found that the mindfulness facets Acting with Awareness, Describe, Nonjudgment of Inner Experience, and Observe were positively related to relationship satisfaction among dating couples, with Observe and Nonjudgment of Inner Experience evidencing the strongest associations with relationship satisfaction.

Although these results offer valuable insight into the mindfulness and romantic relationship literature for those developing a new relationship, we have yet to understand how each mindfulness facet associates with relationship satisfaction among long-term married couples. Furthermore, we have yet to identify whether any of the mindfulness facets are associated with a partner’s relationship satisfaction. It is reasonable to speculate that the mindfulness skills identified by the FFMQ (Baer et al. 2006) could be useful both to one’s own and a partner’s relationship satisfaction. For example, the mindfulness facet Acting with Awareness may help an individual to more readily notice things to appreciate about his or her partner and the relationship, thus enhancing his or her own

well-being. Similarly, this awareness could enable the individual to be more attentive to his or her partner’s changing needs in various situations thereby enhancing the partner’s relationship well-being. Thus, it may be important to identify the specific mechanisms of mindfulness that are relevant to one’s own and one’s partner’s relationship satisfaction to gain a more complete understanding of the role of mindfulness within a romantic relationship.

For the present investigation, we sought to examine how one’s overall trait mindfulness and how each mindfulness facet measured by the FFMQ relate to one’s own (intra-individual) and one’s spouse’s (cross-partner) relationship satisfaction among long-term married couples. We hypothesized that total mindfulness, as measured by the FFMQ (Baer et al. 2006), would be positively associated with one’s own relationship satisfaction. On the intra-individual level, we hypothesized that one’s report of each mindfulness facet (i.e., Acting with Awareness, Describe, Nonjudgment of Inner Experience, Nonreactivity to Inner Experience, and Observe) would be positively associated with one’s own relationship satisfaction. On the cross-partner level, we hypothesized that one’s report of the more observable mindfulness facets Acting with Awareness, Describe, and Nonreactivity to Inner Experience would be positively associated with the spouse’s relationship satisfaction. Finally, we sought to identify which facet(s) of mindfulness may be the strongest predictor(s) of an individual’s own relationship satisfaction as well as his or her spouse’s relationship satisfaction in order to identify which mechanism(s) of mindfulness may be most useful to target in interventions aimed at relationship enhancement.

Method

Participants

Data were collected from both husbands and wives of 164 married couples representing long-term marriages (188 wives, 173 husbands; *M* relationship length = 28.30 years, *SD* = 8.43 years; see Table 1 for sample demographics). The participants were parents of students attending a university in the southeastern USA and were recruited through a list of parent contact information provided by the university’s registrar. Couples were randomly selected from this list and contacted to ask for their participation in a one-time online survey.

Procedure

Parents of university students were randomly selected from a list of contact information provided by the university’s registrar. The randomly selected couples were mailed a letter

Table 1 Present sample's demographic characteristics

Demographic	<i>N</i> (%) or mean (SD)	Range
Race		
White	96.10	
African American	0.8	
Hispanic	1.4	
Asian or Pacific Islander	0.3	
Other	0.6	
Education		
Did not graduate from high school	0.3	
High school degree or equivalent	8.3	
Some college but no degree	12.7	
Associate's degree	9.7	
Bachelor's degree	42.4	
Graduate degree	26.6	
Income		
Under \$5,000	6.4	
\$5,000–\$9,999	1.4	
\$10,000–\$14,999	3.9	
\$15,000–\$24,999	4.7	
\$25,000–\$34,999	7.5	
\$35,000–\$49,999	10.0	
\$50,000–\$74,999	19.1	
\$75,000–\$99,999	13.0	
\$100,000–\$249,999	23.5	
\$250,000 and over	7.2	
No response	3.3	
Children		
No children	3.6	
1 Child	12.7	
2 Children	42.1	
3 Children	28.5	
4 Children	8.0	
5 or more children	3.7	
No response	1.4	
Age	52.46 (5.29)	33–81
Relationship length (in months)	339.55 (101.12)	6–729
Relationship satisfaction	62.62 (16.14)	5–81
Total mindfulness	132.87 (15.77)	91–177
Acting with Awareness	28.04 (5.18)	15–40
Describe	27.43 (6.02)	10–40
Nonjudgment of Inner Experience	28.15 (5.40)	12–39
Nonreactivity to Inner Experience	22.91 (3.69)	13–34
Observe	26.10 (5.40)	9–40

informing them about the online study and to expect a call from a research assistant. The couples were then contacted via phone to request their participation. Inclusion criteria for the study required that the participants be married, have individual

email accounts that the unique survey link could be sent to, and be able to read and understand English. Upon agreeing to participate, each spouse was emailed a unique link to the online survey, which they were asked to complete in private to prevent influenced responding. Data were collected using a secure online data collection website provided by the university. Upon opening the survey, participants were informed that participation is completely voluntary and that all responses would be kept confidential. In exchange for completing the survey, each member of the couple was entered into a drawing to win one of the three \$50.00 Amazon gift cards and a gift basket from a local bakery delivered to their child during final exam week.

Measures

Participants reported their gender, age, race, education, income, relationship length, and number of children. See Table 1 for sample demographics.

Relationship satisfaction was measured using the 16-item Couples Satisfaction Index (CSI-16; Funk and Rogge 2007). The CSI-16 is an abridged version of the original 32-item measure. The 16-item measure has been established as a more precise and sensitive measure than other commonly used relationship satisfaction measures (Funk and Rogge 2007). The measure assesses one's overall satisfaction with their relationship using a Likert scale, with higher values representing greater levels of relationship satisfaction. This measure has shown high internal consistency, $\alpha = 0.98$ (Funk and Rogge 2007). Internal consistency for the present sample was 0.98.

Trait mindfulness was assessed using the 39-item FFMQ (Baer et al. 2006). The scale uses a 5-point Likert scale (1 = never or very rarely true of me to 5 = very often or always true of me) to measure the five facets of mindfulness: Acting with Awareness ($\alpha = 0.87$), Describe ($\alpha = 0.91$), Nonjudgment of Inner Experience ($\alpha = 0.87$), Nonreactivity to Inner Experience ($\alpha = 0.75$), and Observe ($\alpha = 0.83$). Internal consistency in the present sample was good: Total Trait Mindfulness ($\alpha = 0.89$), Acting with Awareness ($\alpha = 0.88$), Describe ($\alpha = 0.92$), Nonjudgment of Inner Experience ($\alpha = 0.87$), Nonreactivity to Inner Experience ($\alpha = 0.74$), and Observe ($\alpha = 0.84$).

Data Analyses

The present sample of married couples represents non-independent data; thus, analyses were conducted using SAS PROC MIXED to analyze our data in a hierarchical linear modeling framework where individual participants were nested within couples. A power analysis run with APIMPowerR (Ackerman and Kenny 2016), a power analysis program designed for Actor-Partner Interdependence Models with

distinguishable dyads, indicates that our sample is sufficient to examine a hierarchical linear model with five predictors.

Results

First, we examined the intra-individual association between an individual's total mindfulness and his or her own relationship satisfaction. Results revealed that an individual's total mindfulness was positively related to his or her own relationship satisfaction (see Table 2). Recall, we further predicted that each mindfulness facet would be related to one's own relationship satisfaction. To test this, we examined the associations between each individual facet of mindfulness and relationship satisfaction, with each facet being analyzed in its own separate model. Results revealed that when examining them in separate models, four of the five facets were significantly related to relationship satisfaction: Acting with Awareness, Describe, Nonjudgment of Inner Experience, and Nonreactivity to Inner Experience. The facet Observe was not significantly associated with relationship satisfaction (see Table 2).

Next, we sought to determine which mindfulness facet(s) are most relevant to one's own relationship satisfaction. To avoid capitalizing on shared variance, we examined all five facets of mindfulness together in the same model predicting one's own relationship satisfaction. The facet Nonjudgment of Inner Experience emerged as the only significant intra-individual predictor of one's own relationship satisfaction when controlling for all facets, Acting with Awareness, Describe, Nonreactivity to Inner Experience, and Observe, which were not significant predictors (see Table 2) in this combined model. Thus, the facet Nonjudgment of Inner Experience contributes significantly to the variance in one's own relationship satisfaction above and beyond the other four facets of mindfulness measured in this study.

Next, we wanted to examine the cross-partner associations between an individual's mindfulness and his or her spouse's relationship satisfaction. Recall, based on previous research, we expected that total mindfulness would not be associated to a spouse's relationship satisfaction. To test this, we first examined the association between an individual's total mindfulness and his or her spouse's relationship satisfaction using actor-partner interdependence modeling (APIM; Kenny et al. 2006). Results confirmed our hypothesis, and replicated previous research, that an individual's total trait mindfulness was not related to his or her spouse's relationship satisfaction (see Table 3). Next, we sought to determine which mindfulness facet(s) are most relevant to a spouse's relationship satisfaction. Recall, we expected the more observable mindfulness facets, Acting with Awareness, Describe, and Nonreactivity to Inner Experience, to be positively associated with the spouse's relationship satisfaction. To test this, we examined how each individual facet of one's mindfulness related to one's spouse's relationship satisfaction, with each facet examined individually in separate models and, contrary to our hypotheses, found no significant cross-partner associations for any of the facets (see Table 3).

Lastly, we sought to identify whether any mindfulness facet(s) were associated with the spouse's relationship satisfaction when controlling for the shared variance among facets. Thus, we examined all five facets of mindfulness together in the same model predicting the spouse's relationship satisfaction. The facet Nonreactivity to Inner Experience emerged as a unique significant predictor of relationship satisfaction, whereas Acting with Awareness, Describe, Nonjudgment of Inner Experience, and Observe were not significantly associated with the spouse's relationship satisfaction (see Table 3) in this combined model. Thus, an individual's Nonreactivity to Inner Experience contributes significantly to the variance in his or her spouse's relationship satisfaction above and beyond the other facets.

Table 2 Fixed effects for within-individual models predicting own relationship satisfaction from own total mindfulness and each mindfulness facet in both separate and combined models

Predictor	Separate models of each facet				Combined model of facets			
	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Actor Total Mindfulness	0.24***	0.06	4.33	<0.001	–	–	–	–
Actor Acting with Awareness	0.54***	0.16	3.45	<0.001	0.29	0.18	1.59	0.11
Actor Describe	0.28*	0.13	2.19	0.03	0.11	0.16	0.71	0.48
Actor Nonjudgment of Inner Experience	0.54***	0.15	3.69	<0.001	0.42*	0.18	2.40	0.02
Actor Nonreactivity to Inner Experience	0.53*	0.22	2.43	0.02	0.37	0.26	1.44	0.15
Actor Observe	0.09	0.15	0.61	0.54	0.05	0.18	0.30	0.77

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 3 Fixed effects for cross-partner models predicting partner's relationship satisfaction from one's own total mindfulness and each mindfulness facet in both separate and combined models

Predictor	Separate models of each facet				Combined model of facets			
	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Actor Total Mindfulness	0.07	0.06	1.12	0.26	–	–	–	–
Actor Acting with Awareness	0.03	0.18	0.17	0.87	–0.09	0.22	–0.43	0.67
Actor Describe	0.24	0.16	1.52	0.13	0.18	0.19	0.95	0.34
Actor Nonjudgment of Inner Experience	0.02	0.18	0.09	0.93	–0.23	0.21	–1.10	0.27
Actor Nonreactivity to Inner Experience	0.47	0.25	1.85	0.07	0.61*	0.29	2.12	0.04
Actor Observe	0.11	0.17	0.62	0.54	0.02	0.20	0.11	0.91

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Discussion

Overall, these data suggest that mindfulness may be beneficial to relationship satisfaction among long-term married couples. As hypothesized, one's total mindfulness was positively related to one's own relationship satisfaction. Furthermore, the results generally confirm our hypothesis that each individual facet of mindfulness is related to relationship satisfaction, with the exception of Observe. It appears that one's ability to be present (Acting with Awareness), put into words his or her thoughts, feelings, and opinions (Describe), be open and curious to his or her present moment experience (Nonjudgment of Inner Experience), and perceive his or her thoughts, feelings, and emotions without becoming dysregulated or trying to change them (Nonreactivity to Inner Experience) are components of mindfulness that are significantly associated with one's own relationship satisfaction among long-term married couples. Of course, we wish to be cautious not to imply causality while interpreting our findings due to the cross-sectional nature of our study. Whereas our theory was conceptualized to consider ways that mindfulness facets may benefit couples, it could also be the case that greater relationship satisfaction may cause increased mindfulness, or that a third variable may enhance both mindfulness and relationship satisfaction.

We were surprised to find that the facet Observe, or one's tendency to remain present without distraction, was not correlated with one's own nor a spouse's relationship satisfaction in the present study. Theoretically, we would expect that if an individual is more present and less distracted, he or she may be more engaged and open to his or her ever-changing relationship. It is reasonable to speculate that this type of engagement would enable an individual, as well as his or her partner, to feel happier in his or her relationship. However, it is important to note that the authors of the FFMQ caution that this facet may only fit the model when examined among individuals who are currently meditating on a weekly basis (Baer et al. 2006; Baer et al. 2008). Furthermore, later studies have found that meditators in fact report high levels of Observe whereas nonmeditators report low levels of Observe (Lilja et al. 2013).

Perhaps, the Observe facet was not associated with relationship satisfaction in the present study since our sample is not comprised of enough participants that are currently meditating on a weekly basis. However, in a recent study examining mindfulness and relationship satisfaction in relationships, Observe was positively correlated with relationship satisfaction and actually one of the strongest predictors of relationship satisfaction among early-stage dating relationships and frequency of meditation was not discussed (Khaddouma et al. 2015). It may be that the five facets of mindfulness associate differently with early-stage relationships than with long-term relationships or associate differently when considering the age of the individuals within the dyad. Future research should carefully consider the populations and conditions under which Observe is associated with relationship satisfaction to help clarify this discrepancy.

When examining the facets together in the same model to statistically control for the shared variance among the facets, Nonjudgment of Inner Experience emerged as the only significant predictor of one's own relationship satisfaction above and beyond the other facets. Thus, on an intra-individual level, it appears that those who are more curious about and accepting of their inner experience (as opposed to being judgmental or critical of their own emotions) are happier in their relationships. Nonjudgment of Inner Experience is associated with decreases in negative affect (Schroevers and Brandsma 2010). Perhaps, more mindful individuals experience less negative affect that in turn may buffer the relationship from the detrimental impact that an individual's negative affectivity can have on his or her relationship experience (Davila et al. 2003).

Overall, on an intra-individual level, it appears that mindfulness may benefit an individual's relationship satisfaction by mitigating negative processes that may be detrimental to the relationship. Again, future research will need to build upon the present cross-sectional study to establish causality among the variables. Nonetheless, we suggest that it is more theoretically likely that one's tendency to be less judgmental of his or her inner experience should support greater relationship happiness rather than the inverse causal direction, although a bi-directional association likely exists to some degree.

Consistent with our hypotheses, the cross-partner association between an individual's own total mindfulness and his or her spouse's relationship satisfaction was nonsignificant. This result replicates recent research examining cross-partner effects of an individual's overall mindfulness and his or her partner's relationship satisfaction (Barnes et al. 2007; Pakenham and Samios 2013), suggesting that overall mindfulness may be relevant to one's own relationship experience (Barnes et al. 2007), but not to the partner's happiness. Whereas we predicted this to be the case given past research findings, we also expected to identify significant cross-partner associations when we examined specific facets of mindfulness as they relate to the partner's satisfaction.

Contrary to our hypotheses, however, no significant cross-partner associations were evident when separately examining an individual's mindfulness facets and his or her partner's relationship satisfaction. It may be possible that this trend in the data is explained by the fact that mindfulness skills truly have no significant dyadic relevance to a mindful individual's spouse. This seems hard to imagine, however, given the emotion regulation, communication, and distress tolerance skills (to name a few) that are a hallmark of mindfulness and should theoretically prove very useful in mitigating corrosive effects of conflict for both partners. Alternatively, although we conceptualized mindfulness as a skill set that could help promote optimal relationship functioning in this study (which seems supported by our significant intra-individual results), perhaps the cross-partner relevance of mindfulness skills in relationships is confined to the alleviation of negative dyadic processes which were not well represented in our generally satisfied community sample. Future research examining conflict as a potential moderator in cross-partner associations between mindfulness and relationship satisfaction is needed to clarify this possibility.

Lastly, when examining all of the facets together in the same model to control for overlap among the facets, results suggested that an individual's Nonreactivity to Inner Experience is a unique predictor of his or her spouse's relationship satisfaction. In other words, it appears that individuals who report greater Nonreactivity to Inner Experience tend to have happier spouses. This finding is in line with our explanation that mindfulness may be relevant to an individual's own and his or her spouse's relationship satisfaction by mitigating negative processes that are corrosive to a relationship. Nonreactivity to Inner Experience is an observable mindfulness skill that, when present, may be capable of alleviating negative relationship processes (e.g., during conflict), and conversely when absent may exacerbate negative relationship processes. These data are the first that we know of to provide support for a cross-partner association between one individual's mindfulness skill (specifically, Nonreactivity to Inner Experience) and a spouse's relationship satisfaction. This may provide intervention researchers with a treatment target

to pursue in designing a mindfulness-based intervention for couples that has increased potential to work on both individual and dyadic levels.

Although future research is needed to establish firm conclusions regarding the reasons underlying this significant cross-partner association, we suggest that Nonreactivity to Inner Experience may be the facet most likely to buffer against corrosive relationship behaviors and promote healthy relational processes. For example, in the context of an argument, if one engages in a nonreactive way to their own heightened arousal, the couple is likely to have a more constructive conversation that creates growth in the relationship for both partners. Conversely, if during conflict one engages in more reactive behaviors (e.g., yelling, storming out), it is likely to generate less relationship growth (and potentially detrimental negative reciprocity cycles or negative escalation) from the argument which may inhibit relationship happiness. Relationship researchers have posited that discomfort with increased physiological arousal during conflict may trigger withdrawal from the argument (Levenson et al. 1994). Furthermore, this pattern of interacting, referred to as the demand-withdraw pattern (Christensen et al. 1987), is associated with immediate and longitudinal declines in relationship satisfaction (Heavey et al. 1995; McGinn et al. 2009). Thus, when addressing this common relationship interaction pattern in treatment, it may be useful to utilize mindfulness in an effort to teach partners to tolerate the internal discomfort experienced during conflict and in turn be able to engage more effectively in the conversation rather than withdrawing to avoid the physiological discomfort.

Furthermore, previous research examining the relationship between mindfulness and relationship satisfaction has found that more mindful couples tend to have a more skillful emotional repertoire (Wachs and Cordova 2007) and engage in more constructive conflict (Barnes et al. 2007) compared to their less mindful counterparts. Perhaps, this Nonreactivity to Inner Experience component of mindfulness is the underlying mechanism most responsible for these effective relationship skills which in turn fosters greater relationship satisfaction for one's partner. Lastly, a qualitative phenomenological study examined the subjective experience of the effects of mindfulness training on romantic relationships. To do this, researchers conducted a semi-structured interview with a mindfulness-based stress reduction (MBSR) program graduate and his or her partner, who did not complete the program (Gillespie et al. 2015). Partners of MBSR graduates most commonly reported noticing decreased reactivity from the MBSR graduate partner. The present data offer quantitative support to these recent qualitative observations.

In eastern religious traditions, mindfulness skills are generally trained through meditation. Thus, in therapy, encouraging individuals within the dyad to begin a mindfulness practice

supplement to other therapeutic treatments may help promote relational well-being both on the intra-individual (e.g., especially with Nonjudgment of Inner Experience) and cross-partner (e.g., especially with Nonreactivity of Inner Experience) levels. This could enable individuals within the dyad to benefit from therapy in both their individual and dyadic functioning (Baucom et al. 2012) which in turn may help motivate continued engagement in the intervention until reaching treatment goals. Furthermore, after treatment is complete, this established meditation practice can be continued as a maintenance strategy that each individual can do independently (i.e., without the added difficulty of coordinating schedules, addressing differences in motivation between partners) to keep both the individual and the couple at desired levels of functioning.

Limitations and Future Directions

Although the present study offers a variety of strengths, it is important to acknowledge its limitations. As previously acknowledged, it is important to note that these data are cross-sectional; thus, causal directions between mindfulness and relationship satisfaction cannot be inferred from the present study. Although we suggest a theoretical conceptualization indicating that mindfulness may contribute to more fulfilling relationships, the inverse direction that a happier relationship fosters greater mindfulness may also be true. In all likelihood, we expect that a bi-directional relationship exists since conflict, distress, and happiness certainly can influence one's fluctuating capacity to engage in mindfulness as well.

Furthermore, data were collected from a predominantly white, middle-class sample of well-educated couples; thus, future studies should be designed to examine how well these results generalize to more ethnically, educationally, and economically diverse populations. Perhaps, the individual mindfulness facets relate differently to an individual's own, as well as his or her partner's relationship satisfaction when examined among different cultures or underrepresented populations. For example, individuals from underrepresented populations may be more likely to experience different stressors than individuals in the present study and thus varying aspects of mindfulness may be more or less relevant in these populations (Sobczak and West 2013).

Future research should also examine how mindfulness relates to different ages and relationship stages (e.g., early-stage, transition to parenthood). Barnes et al. (2007) did not find cross-partner associations between mindfulness, as measured by the MAAS (Brown and Ryan 2003), and relationship satisfaction. Their samples were comprised, however, of dating college students (M age = 19.68; range 18–25 years; M relationship length = 16.04 months; range = 3–85 months). Although, when comparing our results to Barnes et al. (2007), it appears that total trait mindfulness does not differ

among early-stage dating relationships and long-term married relationships, perhaps the mindfulness facets relate differently to one's own as well as one's partner's relationship satisfaction across different age groups and relationship stages. Developing a more thorough understanding of how mindfulness relates to relationship satisfaction within these samples can enable researchers to develop mindfulness-based interventions tailored toward specific needs that exist across different developmental stages of the relationship.

Future research may also benefit from identifying factors that enable an individual to cultivate greater Nonjudgment of Inner Experience and Nonreactivity to Inner Experience. In theory, cultivating Nonjudgment or Nonreactivity may sound simple; however, in practice, individuals may meet many obstacles when trying to adopt a less judgmental or less reactive perspective. Furthermore, designing specific interventions to reduce judgment or reactivity may be grasped more easily than simply telling one to be "less judgmental" or "less reactive" of their experience, which may lead the client to ask "How?" Perhaps, individuals are less judgmental after spending time outside, reading, exercising, or writing in a gratitude journal. Or perhaps, one's nonjudgment is related to more inherent factors such as openness to experience, self-esteem, or humility. Identifying a variety of specific processes (including specific meditation practices) to help cultivate non-judgmental and nonreactive perspectives can enable relationship enhancement programs to incorporate specific skills aimed at reducing judgment and perhaps more directly improve relationship functioning and overall program success.

Additionally, future research may aim to further clarify discrepancies between the few studies currently available on mindfulness in couples. For example, using the FFMQ, Khaddouma et al. (2015) found that Observe was positively associated with relationship satisfaction among early-stage relationships but Nonreactivity to Inner Experience was not. However, in the present study, we found Nonreactivity to Inner Experience to be positively associated with one's own and one's partner's relationship satisfaction among long-term married couples, but Observe was not related to either partner's relationship satisfaction. Two major differences between these studies are the ages and relationship stages of the studies' samples. Research may benefit from exploring these and other potential moderators responsible for the discrepancies among these findings in the couples area, as well as other potential discrepancies in the mindfulness literature in general, in an effort to generate a more accurate understanding of how mindfulness relates differently among various populations.

Acknowledgments This research was funded by The Ann Sherman Skiba Fellowship at the University of North Carolina, Wilmington. We would like to thank Lydia Eisenbrandt and Shaina Frank for their assistance in collecting these data as well as the couples who volunteered their time to participate in our study.

Compliance with Ethical Standards The manuscript does not contain clinical studies or patient data.

Ethical Approval All procedures performed in studies involving human participants were in accordance with ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

This article does not contain any studies with animals performed by any of the authors.

Conflict of Interest The authors declare that they have no conflict of interest.

Informed Consent Informed consent was obtained from all individual participants in the study.

References

- Ackerman, R. A., & Kenny, D. A. (2016, April). APIMPowerR: an interactive tool for actor-partner interdependence model power analysis [Computer software]. Available from <https://robert-a-ackerman.shinyapps.io/APIMPowerRdis/>.
- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13*, 27–45. <http://dx.doi.org/10.1177/1073191105283504>.
- Baer, R. A., Smith, G. T., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., Walsh, E., Duggan, D., & Williams, J. M. G. (2008). Construct validity of the five facet mindfulness questionnaire in meditating and nonmeditating samples. *Assessment, 15*, 329–342.
- Barnes, S., Brown, K. W., Krusemark, E., Campbell, W. K., & Rogge, R. D. (2007). The role of mindfulness in romantic relationship satisfaction and response to relationship stress. *Journal of Marital and Family Therapy, 33*, 482–500. <http://dx.doi.org/10.1111/j.1752-0606.2007.00033.x>.
- Baucom, D. H., Whisman, M. A., & Paprocki, C. (2012). Couple-based interventions for psychopathology. *Journal of Family Therapy, 34*, 250–270. doi:10.1111/j.1467-6427.2012.00600.x.
- 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*, 822–848. <http://dx.doi.org/10.1037/0022-3514.84.4.822>.
- Brown, D. B., Bravo, A. J., Roos, C. R., & Pearson, M. R. (2015). Five facets of mindfulness and psychological health: evaluating a psychological model of the mechanisms of mindfulness. *Mindfulness, 6*, 1021–1032.
- Burpee, L. C., & Langer, E. J. (2005). Mindfulness and marital satisfaction. *Journal of Adult Development, 12*, 43–51. <http://dx.doi.org/10.1007/s10804-005-1281-6>.
- Carson, J. W., Carson, K. M., Gil, K. M., & Baucom, D. H. (2004). Mindfulness-based relationship enhancement. *Behavior Therapy, 35*, 471–494. [http://dx.doi.org/10.1016/s0005-7894\(04\)80028-5](http://dx.doi.org/10.1016/s0005-7894(04)80028-5).
- Cash, M., & Whittingham, K. (2010). What facets of mindfulness contribute to psychological well-being and depressive, anxious, and stress-related symptomatology? *Mindfulness, 1*, 177–182.
- Christensen, A., Hahlweg, K., & Goldstein, M. J. (Eds.). (1987). *Understanding major mental disorder: the contribution of family interaction research*. New York: Family Process Press.
- Davila, J., Karney, B. R., Hall, T. W., & Bradbury, T. N. (2003). Depressive symptoms and marital satisfaction: within-subject associations and the moderating effects of gender and neuroticism. *Journal of Family Psychology, 17*, 557–570. doi:10.1037/0893-3200.17.4.557.
- Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: an experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology, 84*, 377–389. doi:10.1037/0022-3514.84.2.377.
- Fincham, F. D., & Beach, S. R. H. (2010). Of memes and marriage: toward a positive relationship science. *Journal of Family Theory and Review, 2*, 4–24. doi:10.1111/j.1756-2589.2010.00033.x.
- Funk, J. L., & Rogge, R. D. (2007). Testing the ruler with item response theory: increasing precision of measurement for relationship satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology, 21*, 572–583. doi:10.1037/0893-3200.21.4.572.
- Gillespie, B., Davey, M. P., & Flemke, K. (2015). Intimate partners' perspectives on the relational effects of mindfulness-based stress reduction training: a qualitative research study. *Contemporary Family Therapy, 37*, 396–407.
- Gordon, C. L., & Baucom, D. H. (2009). Examining the individual within marriage: personal strengths and relationship satisfaction. *Personal Relationships, 16*, 421–435. doi:10.1111/j.1475-6811.2009.01231.x.
- Gordon, C. L., Arnette, R. A. M., & Smith, R. E. (2011). Have you thanked your spouse today?: felt and expressed gratitude among married couples. *Personality and Individual Differences, 50*, 339–343. doi:10.1016/j.paid.2010.10.012.
- Gordon, A. M., Impett, E. A., Kogan, A., Oveis, C., & Keltner, D. (2012). To have and to hold: gratitude promotes relationship maintenance in intimate bonds. *Journal of Personality and Social Psychology, 103*, 257–274.
- Heavey, C. L., Christensen, A., & Malamuth, N. M. (1995). The longitudinal impact of demand and withdrawal during marital conflict. *Journal of Consulting and Clinical Psychology, 63*, 797–801. <http://dx.doi.org/10.1037/0022-006X.63.5.797>.
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: past, present, and future. *Clinical Psychology: Science and Practice, 10*, 144–156. <http://dx.doi.org/10.1093/clipsy.bpg016>.
- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. Guilford Press.
- Khaddouma, A., Gordon, K. C., & Bolden, J. (2015). Zen and the art of sex: examining associations among mindfulness, sexual satisfaction, and relationship satisfaction in dating relationships. *Sexual and Relationship Therapy, 2*, 268–285. doi:10.1080/14681994.2014.992408.
- Lambert, N. M., & Fincham, F. D. (2011). Expressing gratitude to a partner leads to more relationship maintenance behavior. *Emotion, 11*, 52–60. doi:10.1037/a0021557.
- Levenson, R. W., Carstensen, L. L., & Gottman, J. M. (1994). Influence of age and gender on affect, physiology, and their interrelations: a study of long-term marriages. *Journal of Personality and Social Psychology, 67*, 56–68.
- Levin, M. E., Dalrymple, K., & Zimmerman, M. (2014). Which facets of mindfulness predict the presence of substance use disorders in an outpatient psychiatric sample? *Psychology of Addictive Behaviors, 28*, 498–506.
- Lilja, J. L., Lundh, L. G., Josefsson, T., & Falkenström, F. (2013). Observing as an essential facet of mindfulness: a comparison of FFMQ patterns in meditating and non-meditating individuals. *Mindfulness, 4*, 203–212.
- McGinn, M. M., McFarland, P. T., & Christensen, A. (2009). Antecedents and consequences of demand/withdraw. *Journal of Family Psychology, 23*, 749–757. <http://dx.doi.org/10.1037/a0016185>.
- Pakenham, K. I., & Samios, C. (2013). Couples coping with multiple sclerosis: a dyadic perspective on the roles of mindfulness and acceptance. *Journal of Behavioral Medicine, 36*, 389–400.
- Reynolds, L. M., Considine, N. S., & McCambridge, S. A. (2014). Mindfulness and disgust in colorectal cancer scenarios: non-judging

- and non-reacting components predict avoidance when it makes sense. *Mindfulness*, 5, 442–452.
- Schroevers, M. J., & Brandsma, R. (2010). Is learning mindfulness associated with improved affect after mindfulness-based cognitive therapy? *British Journal of Psychology*, 101, 95–107. doi:10.1348/000712609x424195.
- Sobczak, L. R., & West, L. M. (2013). Clinical considerations in using mindfulness-and acceptance-based approaches with diverse populations: addressing challenges in service delivery in diverse community settings. *Cognitive and Behavioral Practice*, 20, 13–22.
- Wachs, K., & Cordova, J. V. (2007). Mindful relating: exploring mindfulness and emotion repertoires in intimate relationships. *Journal of Marital Family Therapy*, 33, 464–481. doi:10.1111/j.1752-0606.2007.00032.x.
- Whitton, S. W., & Whisman, M. A. (2010). Relationship satisfaction instability and depression. *Journal of Family Psychology*, 24, 791–794. [://dx.doi.org.proxy.lib.utk.edu/90/10.1037/a0021734](https://dx.doi.org.proxy.lib.utk.edu/90/10.1037/a0021734).
- Whitton, S. W., Olmos-Gallo, P. A., Stanley, S. M., Prado, L. M., Kline, G. H., St. Peters, M., & Markman, H. J. (2007). Depressive symptoms in early marriage: predictions from relationship confidence and negative marital interaction. *Journal of Family Psychology*, 21, 297–306.
- Whitton, S. W., Stanley, S. M., Markman, H. J., & Baucom, B. R. (2008). Women's weekly relationship functioning and depressive symptoms. *Personal Relationships*, 15, 533–550.