

Bridging the Sciences of Mindfulness and Romantic Relationships: A Theoretical Model and Research Agenda

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Abstract

Research on mindfulness, defined as paying conscious and non-judgmental attention to present-moment experiences, has increased rapidly in the past decade but has focused almost entirely on the benefits of mindfulness for individual well-being. This article considers the role of mindfulness in romantic relationships. Although strong claims have been made about the potentially powerful role of mindfulness in creating better relationships, it is less clear *whether*, *when*, and *how* this may occur. This article integrates the literatures on mindfulness and romantic relationship science, and sketches a theory-driven model and future research agenda to test possible pathways of when and how mindfulness may affect romantic relationship functioning. We review some initial direct and indirect evidence relevant to the proposed model. Finally, we discuss the implications of how studying mindfulness may further our understanding of romantic relationship (dys)functioning, and how mindfulness may be a promising and effective tool in couple interventions.

Keywords

close relationships, mindfulness, self-regulation

Introduction

Mindfulness, often defined as paying attention to present-moment experiences with an open and non-judgmental stance (Kabat-Zinn, 1990), is a hot topic in psychology. Worldwide, numerous people participate in training programs that aim to promote the cultivation of mindfulness. Likewise, scientific interest in mindfulness has grown exponentially in the past decade. A large number of studies have explored the effects of mindfulness on *individual* functioning, and they converge to the same conclusion: Mindfulness can have substantial and positive effects on a variety of indicators of psychological well-being and happiness (e.g., Brown & Ryan, 2003; Davidson et al., 2003; Lykins & Baer, 2009; for overviews, see Hofmann, Sawyer, Witt, & Oh, 2010; Keng, Smoski, & Robins, 2011; Sedlmeier et al., 2012). There is some evidence indicating that mindfulness is associated with better physical health (e.g., L. E. Carlson, Speca, Faris, & Patel, 2007; Creswell & Lindsay, 2014; Grossman, Niemann, Schmidt, & Walach, 2004).

In a now classic book, Thich Nhat Hanh (1975) describes several “miracles” of mindfulness, and in addition to reducing personal suffering and distress, most of these relate to the notion that mindfulness can be particularly powerful in creating love, empathy, and better relationships with others. However, scientific research has focused most strongly on

the benefits for individual well-being, while the *interpersonal* effects of mindfulness have received relatively little theoretical and empirical attention. Yet, considering the intrinsic association between the quality of one’s interpersonal relationships and psychological and physical health (e.g., Holt-Lunstad, Smith, & Layton, 2010), a full understanding of the positive effects of mindfulness for individual functioning requires taking into account its potential interpersonal consequences.

The present article focuses in particular on the potential role of mindfulness in romantic relationships, for many people a central if not key relationship in life. In recent years, a number of authors have theorized about the possible benefits of mindfulness in romantic relationships (e.g., Atkinson, 2013; Kozlowski, 2013), and there seems to be consensus that mindfulness can promote relationship satisfaction and longevity. Consistent with this notion, a growing number of

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studies now suggest that mindfulness is positively associated with overall relationship satisfaction (Barnes, Brown, Krusemark, Campbell, & Rogge, 2007; Carson, Carson, Gil, & Baucom, 2004, 2007; Jones, Welton, Oliver, & Thorburn, 2011; Wachs & Cordova, 2007; for an overview see Kozlowski, 2013). Yet, due to a relative lack of integration between the scientific literature on mindfulness on one hand, and theory and empirical findings in relationship science on the other hand, it is less clear what *specific* processes associated with mindfulness may result in *specific* romantic relationship processes that ultimately may affect relationship satisfaction and stability. The current article explores this question.

Whereas a brief review of research on mindfulness in romantic relationships has been published previously (e.g., Kozlowski, 2013), the goal of the article is to sketch a theory-driven model and future research agenda to test possible predictions concerning the potential relationship between mindfulness and romantic relationship functioning. We will review some extant direct and indirect evidence in support of the model, and identify pathways that require further investigation. In addition to theorizing about the relationship benefits of mindfulness, we will theorize about the boundary conditions, and consider when the cultivation of mindfulness may not affect relationship functioning, or when it actually may undermine certain beneficial relationship processes. Thus, the current article seeks to bridge the scientific literature on mindfulness and romantic relationship functioning, and to encourage collaboration between mindfulness and relationship researchers to study this topic more thoroughly.

The article is divided into three sections that together should provide sufficient information for both mindfulness and relationship researchers. In the section “What Is Mindfulness?” we start by discussing what mindfulness is and discuss a number of basic psychological processes associated with mindfulness that may be relevant to promoting relationship functioning. Next, the section “How Mindfulness May Affect Relationship-Specific Processes” discusses how mindfulness may affect a number of *specific* relationship processes. We close the article with a “Conclusions and Future Directions” section.

What Is Mindfulness?

Mindfulness, which is rooted in Buddhist and other contemplative traditions, refers to a state of consciousness in which an individual is attentive to and aware of what is happening in the present moment, with a non-judgmental and non-reactive stance (Kabat-Zinn, 1990). Two components of mindfulness are generally distinguished: (a) focused *attention* to present-moment experiences—bodily states, thoughts, and emotions—and (b) approaching these experiences with an open, non-judging, and accepting attitude, irrespective of the valence of the experience (Bishop et al., 2004). Thus, being mindful means to simply observe one’s bodily states, emotions, and

thoughts, and acknowledge them for what they are in this present moment. A mindful state can be contrasted with a mindless state of being lost in thoughts, not being consciously aware of one’s current experiences, and acting on the “automatic pilot” (Smalley & Winston, 2010).

From the outset, it is helpful to distinguish mindfulness from other related constructs (for extensive discussions, see Bishop et al., 2004; Brown & Ryan, 2003). Perhaps most importantly, mindfulness is related to but differs from constructs that describe self-awareness as a form of mental processing in which the individual reflects on the content of one’s thoughts (e.g., self-monitoring, M. Snyder, 1974; reflexive consciousness, Baumeister, 1999). Rather than trying to form an image of the self or reflecting on how the self is seen by others, mindfulness means giving bare attention to what is currently taking place in the mind and body, *without* reflecting on its content. Furthermore, mindfulness differs from other concepts that also involve focused attention. For example, whereas the concept of flow, the joyful experience of being fully immersed in an activity (Csikszentmihalyi, 1997), entails a heightened state of attention primarily focused externally on the task at hand, mindfulness involves the meta-cognitive awareness of internal experiences (Bishop et al., 2004). Finally, mindfulness requires self-regulation to direct attention toward current experiences but cannot be equated with self-regulation capacity. Self-regulation, or self-control, involves the monitoring of long-term goals and the regulation of responses to promote goal completion. Mindfulness simply means focusing attention on current experiences and does not entail the active regulation of these experiences. Mindful attention to current experiences, however, could *facilitate* self-regulation, partly because it sharpens the ability to monitor goal conflict. For example, mindful attention to current experiences includes increased awareness of current feelings or motives that may obstruct a certain long-term goal (e.g., Inzlicht, Legault, & Teper, 2014).

Mindfulness is not a “novel” or “invented” way of thinking or conscious awareness that can be taught only through training or meditation practice—though both can be very effective in cultivating mindfulness, as discussed below. As noted by Kabat-Zinn (2003), mindfulness is an inherent human capacity, and “we are all mindful to one degree or another, moment by moment” (pp. 145-146), although there are strong individual differences between people in the extent to which they are generally mindful to the present moment (i.e., *trait* mindfulness). A number of self-report measures have been developed to examine individual differences in mindfulness (for a recent overview, Bergomi, Tschacher, & Kupper, 2013). Although these measures have been adopted successfully in studies examining the effects of mindfulness, that is, individual differences in trait mindfulness are associated with a priori predicted effects of mindfulness, it should be noted that the validity of the measures is a topic of debate (see Bergomi et al., 2013; Grossman, 2011).

Mindfulness can be trained and cultivated, most notably by means of meditation practice. While several types of meditations exist (for an overview, see Sedlmeier et al., 2012), they have in common that the meditator attempts to consciously direct attention, either to a meditation object, which is often the breathing, or to any momentarily arising external (e.g., sounds, smells) or internal stimuli (e.g., bodily sensations, emotions, or thoughts). Repeated meditation practice is thought to train attention regulation skills, such that meditation should increase a more effortless and habitual focus of attention to current experiences during daily life (Lutz, Slagter, Dunne, & Davidson, 2008). Another essential aspect of many meditation practices involves a non-judgmental and accepting attitude. During meditation practice, one may focus attention on one object (e.g., the breathing), but when “distractors” arise, the meditator attends to them with an open and non-judgmental stance (e.g., just noticing that there is a sound, without judging it), and then brings back attention to the meditation object. According to Shapiro, Carlson, Astin, and Freedman (2006), training this skill of an accepting and open stance to one’s inner experiences through repeated meditation may generalize to daily life events by making people more aware of, and more accepting of, their inner experiences during daily activities and encounters.

In addition to meditation practice, a number of mindfulness interventions have been developed in the past decades. In fact, perhaps the most important reason for the enormous rise in mindfulness research is the increasing popularity of interventions and training programs. Most notably, in the 1980s, a pioneer in this field, Jon Kabat-Zinn, integrated traditional Buddhist meditation practices with Western psychological insights into a secular mindfulness training program called Mindfulness-Based Stress Reduction (MBSR) program. Originally, this 8-week training program was developed to explore the possibility that mindfulness could benefit chronic pain patients (Kabat-Zinn, 1982). Since then, the program has been applied in clinical settings—to help patients cope with physical and mental illnesses ranging from psoriasis, cancer, and coronary artery disease to depression, anxiety, and phobias—but is also increasingly attended by non-clinical healthy groups of people, for example, to better cope with daily stressors such as family and work pressures.¹

What does it mean to be mindful, and specifically, what does it mean to be mindful in the context of a relationship? At its core, mindfulness involves intentionally guiding attention to one’s experience in the present moment, recognizing the experience without evaluating it. In the context of a relationship, it means that one is consciously paying attention to feelings or thoughts that may directly or indirectly affect the relationships. This is perhaps best illustrated with concrete examples. During a conflict, a person being mindful guides attention to bodily sensations, feelings, thoughts, and action tendencies, and recognizes that there is tension in the body, that feelings of anger arise, and perhaps that aggressive

impulses occur, while acknowledging and accepting these experiences for what they are in this moment. In the aftermath of a conflict, one may become mindfully aware of any lingering feelings of resentment toward the partner that otherwise, in a mindless state, might escape conscious awareness. As another example, a partner may be tense about something that happened that day at work. In a mindless state, the tension may not get noticed consciously, and without realizing it one may be caught up in thoughts about what happened. In contrast, being mindful would be to realize and pay conscious and non-judgmental attention to the fact that there is tension in the body in this very moment, and to become aware that one had been lost in thought about the event at work. In these examples, when not being consciously aware of one’s current experience (i.e., being mindless), it is very likely that current thoughts, feelings, or impulses would affect responses to the partner automatically and outside of awareness. As will be explained below in more detail, we assert that becoming mindful of one’s experience in such contexts can alter one’s response toward the partner in various ways.

These examples also illustrate that mindfulness can best be considered a “mode” or state of awareness (see Bishop et al., 2004). Although there are individual differences in trait mindfulness, and mindfulness can be cultivated through training and meditation, ultimately, any effects of mindfulness should be understood in terms of whether or not a person is mindful *in the present moment*. As noted by Salzberg (2010), “Mindfulness isn’t difficult; we just need to remember doing it” (p. 104). Studies suggest that people high in trait mindfulness and those who have trained mindfulness are better capable of remembering to be mindful in the moment, across various situations and across various points in time (e.g., Brown & Ryan, 2003; Mrazek, Franklin, Phillips, Baird, & Schooler, 2013; Mrazek, Smallwood, & Schooler, 2012). Cultivating mindfulness strengthens the skill to habitually but intentionally pay conscious and non-evaluative attention to present-moment experiences.² Of course, this does not mean that people high in trait mindfulness or participants of a mindfulness training are being mindful all the time, in *any* given situation (just like a person high in extraversion is not always behaving in an extraverted manner). However, responding mindfully more frequently and across situations is thought to underlie its long-term individual benefits, and as we will explore here, its potential benefits for the relationship. Notably, based on the notion that mindfulness is essentially a state of consciousness, researchers have examined its immediate effects using brief mindfulness inductions in which participants are instructed, often through an audio-guided exercise, to pay conscious and open attention to present-moment experiences (e.g., Erisman & Roemer, 2010; Kiken & Shook, 2011; although the validity of such experimental inductions among participants inexperienced with mindfulness has been debated, for example, Davidson, 2010).³

The key question is as follows: Why is it important to be mindful of present-moment experiences? Why may it be valuable to be mindful in a romantic relationship? and How may it affect relationship well-being? There are at least four basic processes associated with mindfulness (e.g., Hölzel et al., 2011) that may be particularly relevant in understanding the association between mindfulness and relationship functioning. We now discuss these four processes, after which we will discuss in more detail how these processes may affect certain *specific* relationship processes and outcomes across several domains of a romantic relationship.

Awareness and Monitoring of Automatic and Otherwise Implicit Responses

By paying non-evaluative attention to inner experiences, mindfulness supposedly promotes access to processes that otherwise may have remained implicit or at least outside of conscious awareness (Brown & Ryan, 2003; E. N. Carlson, 2013). In a *mindless* state, a person can be irritable without being aware of irritation. Indeed, there are now a number of studies suggesting that in a state of mindfulness someone is more strongly aware of internal states that may remain outside of awareness otherwise. For example, a couple of studies have found that mindfulness is associated with enhanced congruency between implicit and explicit processes. Koole, Govorun, Cheng, and Gallucci (2009) demonstrated that, following a brief mindfulness induction, participants' implicit feelings about the self were more congruent with their explicitly reported feelings about the self as compared to participants in a control group. Similarly, Brown and Ryan (2003) demonstrated that participants high in dispositional mindfulness displayed stronger correspondence between implicit and explicit measures of current affect. Also, recent findings suggest that mindfulness increases awareness of automatic impulses. For example, a study by Papiés, Barsalou, and Custers (2012) suggested that individuals in a mindful attention condition, compared to controls, were better aware of their impulsive cravings (for attractive but unhealthy foods in this case). Thus, mindfulness seems to promote conscious awareness and monitoring of affective, cognitive, and behavioral tendencies that may otherwise have remained unnoticed (but may affect behavioral responses nevertheless). This should include having access to such processes that concern the partner or the relationship.

Emotion Regulation

As several authors have noted, mindfulness training and meditation may help practitioners develop meta-cognitive insight into the transient nature of experiences (including thoughts and emotions; for example, Bishop et al., 2004; Chambers, Gullone, & Allen, 2009). Directly observing and realizing that thoughts and emotions come and go (e.g., during meditation practice) makes it easier to accept the experience

of a negative emotion without getting upset about being upset (Farb et al., 2010). To be sure, the cultivation of mindfulness does not mean that (often functional) negative and distressing experiences may not occur anymore. Rather, a mindful person recognizes the emotion without identifying too much with the emotion and without getting caught up in additional thoughts and emotions (Teper & Inzlicht, 2013). Indeed, although the exact neural mechanisms are still debated (see Chambers et al., 2009; Chiesa, Serretti, & Jakobsen, 2013; Hölzel et al., 2011; Tang, Hölzel, & Posner, 2015), there is now growing evidence indicating that mindfulness is related to more effective emotion regulation and less emotion reactivity (e.g., Arch & Craske, 2006; Goldin & Gross, 2010; Hill & Updegraff, 2012; Ortner, Kilner, & Zelazo, 2007). Notably, mindful attending to whatever emotions are currently experienced critically differs from other emotion regulation strategies, such as suppression or reappraisal of the situation that is evoking distress (Brown & Ryan, 2003; T. L. Webb, Miles, & Sheeran, 2012).

Executive Control

Particularly, the cultivation and training of mindfulness through meditation has been associated with increased executive control and the promotion of self-regulatory capacity more generally (for a review, see Chiesa, Calati, & Serretti, 2011). Executive control consists of a set of related cognitive functions (updating, task switching, and inhibition; for details, see Miyake et al., 2000), which allows people to inhibit automatic and impulsive responses, and instead to respond in a manner that is consistent with a certain goal. Both mindfulness training and meditation practice have been associated with increased attention control and the ability to inhibit pre-potent responses (e.g., Heeren, Van Broeck, & Philippot, 2009; Moore & Malinowski, 2009; Teper & Inzlicht, 2013; P. A. van den Hurk, Giommi, Gielen, Speckens, & Barendregt, 2010). For example, Farb et al. (2007) found that following an 8-week MBSR course, participants showed increased activity in ventrolateral prefrontal cortex, a brain area implicated in inhibitory control. Such findings have been commonly explained in terms of the effects of practicing mindfulness—either during formal meditation or in everyday life—that requires the individual to monitor whether attention is focused on present-moment experiences and to readjust attention to the present moment if the mind starts wandering. This process of focusing and refocusing attention, a key component of mindfulness (Bishop et al., 2004), offers a training ground to develop and cultivate executive control (Teper & Inzlicht, 2013).

Self–Other Connectedness

Finally, mindfulness has been associated with self–other connectedness or increased feelings of closeness with others (Brown, Ryan, & Creswell, 2007; Trautwein, Naranjo, &

Schmidt, 2014). One explanation may be that increased mindful awareness of own reactions to experiences and situations may facilitate understanding of how other people's responses are guided by external circumstances (Block-Lerner, Adair, Plumb, Rhatigan, & Orsillo, 2007). Indeed, numerous studies suggest that mindfulness can increase empathy and understanding of another person's actions (e.g., Birnie, Speca, & Carlson, 2010; Block-Lerner et al., 2007; Hutcherson, Seppala, & Gross, 2008). In turn, being able to put oneself in another person's shoes generally increases feelings of interconnectedness, which has been found to be positively associated with mindfulness (Barnes et al., 2007; Brown & Ryan, 2003; Carson et al., 2004).

How Mindfulness May Affect Relationship-Specific Processes

At a general level, there are good reasons to suspect that each of these four basic processes related to mindfulness may help explain the possible link between mindfulness and romantic relationship functioning. Having access to otherwise implicit processes may have important implications for relationship functioning in several ways, as we will explain below. Moreover, both successful emotion regulation (e.g., Brennan & Shaver, 1995; Simpson, Collins, Tran, & Haydon, 2007) and high levels of executive control (for an overview, see Karremans, Pronk, & van der Wal, 2015) have been demonstrated to be important in promoting romantic relationship satisfaction and stability. And finally, self–other connectedness is related to a range of factors that foster relationship functioning and stability (e.g., Agnew, Van Lange, Rusbult, & Langston, 1998; Aron et al., 2004).

Importantly, in this section we zoom in on how these basic processes may predict a number of *specific* relationship processes and outcomes in several relationship domains. Specifically, and as summarized in the model depicted in Figure 1, we discuss how mindfulness may play a role in affecting (a) *prorelationship motivation and behavior*, (b) *coping with distress*, and (c) *relationship cognition* (i.e., thoughts and beliefs about the partner, the relationship, and about romantic relationships in general). We also discuss possible boundaries, that is, when mindfulness may not benefit, or may even undermine, relationship functioning.

Before continuing, it is important to note that the model emphasizes that examining the implications of mindfulness for romantic relationships ultimately requires taking a dyadic perspective. By definition, partners in romantic relationships are *interdependent*, meaning that one partner's responses affect the other partner's outcomes, and vice versa (Kelley & Thibaut, 1978). Hence, to appreciate the effects of mindfulness on relationship functioning one should take into account both partners, not only the partner who is cultivating mindfulness (e.g., through meditation practice). As far as we know, only three studies have examined the role of mindfulness in

romantic relationships while taking a dyadic approach. A recent article by Williams and Cano (2014) found that, in chronic pain patients, the spouse level of dispositional mindfulness was associated with higher perceived partner support. However, two other studies did not find that self-reported trait mindfulness spilled over to relationship outcomes for the partner (Barnes et al., 2007; Pakenham & Samios, 2013). Examining *dyadic* romantic relationship processes and outcomes is essential in this research domain.

Mindfulness and Prorelationship Motivation and Behavior

Love is not “all you need.” In the end, how partners respond to and behave toward each other defines a well-functioning and stable romantic relationship (Rusbult & Van Lange, 2003). Particularly diagnostic of a well-functioning relationship is how partners respond when self-interested impulses may not be compatible with the interest of the partner or the relationship. For example, a self-interested need may arise that is not compatible with the partner's needs (Van Lange et al., 1997), retaliatory impulses may arise during conflict or in the aftermath of conflict (Paleari, Regalia, & Fincham, 2005; Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991), or a partner may be tempted by an attractive alternative (Miller, 1997; Simpson, Gangestad, & Lerma, 1990). Relationship satisfaction and stability for an important part hinges on partners' willingness and ability to transform such immediate self-interested impulses into a response that is based on broader concerns, such as the interest of the partner and the relationship—a process referred to as a transformation of motivation (Kelley & Thibaut, 1978; Rusbult & Van Lange, 2003).

Would mindfulness promote making a motivational transformation, resulting in, for example, more willingness to sacrifice own preferences for the sake of the partner and the relationship, more forgiving and constructive responding during and after conflict, and better resistance against attractive alternatives? Understanding of the processes that require a transformation of motivation might answer this question. First, self-interested impulses may automatically guide corresponding behavior when partners are not experientially aware of the impulse. When acting *mindlessly*, the urge to retaliate may evoke an aggressive behavioral response directly, or a self-interested preference may automatically guide self-interested behavior even when the response threatens the well-being of the partner and/or the relationship. In contrast, mindful attention may help an individual to become consciously aware of self-interested impulses and relationship-undermining feelings at earlier stages. Recognizing the self-interested impulse may disrupt the automatic and direct link between the implicit urge and behavior (cf. Papiés, Pronk, Keesman, & Barsalou, 2015), allowing a partner to act in line with long-term relationship goals (e.g., sacrifice

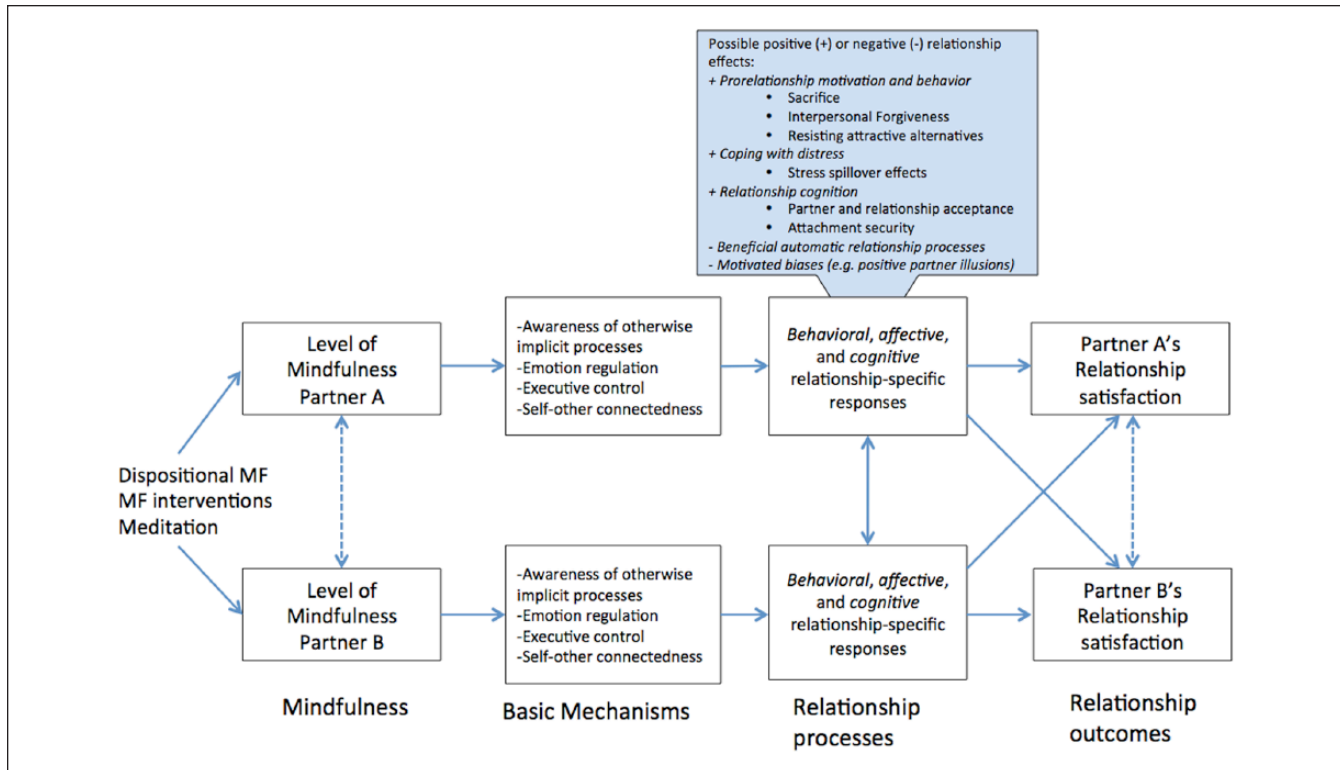


Figure 1. A theoretical model of how mindfulness may shape romantic relationship processes and outcomes.

self-interest, respond forgivingly, or refrain from getting involved with an attractive alternative).

Yet, even when aware of a potentially relationship-threatening impulse, it may be difficult to down regulate the impulse and act in a way that does not hurt the relationship or the partner, particularly when the impulse is strong. Thus, in addition to awareness of impulses, being able to regulate them is a second process involved in a transformation of motivation. In recent years, evidence has accumulated indicating that the executive control—and inhibitory control capacity in particular—helps partners inhibit self-interested impulses (for a recent overview, see Karremans et al., 2015). For example, research has demonstrated that executive control promotes forgiveness between partners (Pronk, Karremans, Overbeek, Vermulst, & Wigboldus, 2010; Wilkowski, Robinson, & Troop-Gordon, 2010). Moreover, Pronk and Karremans (2014) recently showed that high executive control is associated with increased willingness to sacrifice for the partner (but see Righetti, Finkenauer, & Finkel, 2013, who found that sacrifice can be the automatic response in relationships; we return to this issue when discussing boundary conditions). Finally, studies by Pronk, Karremans, and Wigboldus (2011) revealed that romantically involved participants relatively high (vs. low) in executive control were less likely to flirt during an interaction with an attractive alternative (see also Meyer, Berkman, Karremans, & Lieberman, 2011; Ritter, Karremans, & van Schie, 2010). Considering that (particularly the training of)

mindfulness has been associated with increases in executive control and self-regulation, mindfulness may enhance prorelationship responses through increases in inhibitory control and self-regulatory strength.

In addition to the role of awareness and executive control, a plausible hypothesis is that mindfulness affects prorelationship responding through an increase in empathy and closeness. As noted, mindfulness has been associated with empathy and partner closeness, and these factors are central in promoting a transformation of motivation (Finkel, Rusbult, Kumashiro, & Hannon, 2002; Miller, 1997; Rusbult et al., 1991; Van Lange et al., 1997).

Thus, through any of the processes described in the previous paragraphs, mindfulness may promote prorelationship responses. There is some support that mindfulness is indeed associated with prorelationship responding. Both correlational and intervention studies have indicated that mindfulness is positively associated with interpersonal forgiveness in the wake of an offense (Johns, Allen, & Gordon, 2015; Oman, Shapiro, Thoresen, Plante, & Flinders, 2008; Shapiro et al., 2008; J. R. Webb, Phillips, Bumgarner, & Conway-Williams, 2013). Moreover, Barnes et al. (2007) demonstrated that, during conflict, a partner's level of self-reported state mindfulness was related to less observed verbal aggression and negativity (for similar results, see Heppner et al., 2008). Similarly, Hertz, Laurent, and Laurent (2014) found that, during a conflict discussion task, couples higher in trait mindfulness displayed lower cortisol levels, reported lower

levels of negative affect and distress during the conflict (another study did not replicate the cortisol findings; Laurent, Laurent, Hertz, Egan-Wright, & Granger, 2013). Laurent and colleagues (2013) found some evidence that trait mindfulness was associated with sharper stress recovery in the wake of conflict (in terms of faster cortisol reduction) but only in men. Together, such findings suggest that mindfulness may prevent conflict escalation and facilitate conflict recovery.

Moreover, recent evidence indicates that mindfulness may help committed partners to regulate their responses to attractive alternatives. Papiés and colleagues (2015) demonstrated that, among heterosexual individuals (including romantically involved individuals), a mindful attention induction reduced the link between sexual motivation and perceived attractiveness of the opposite-sex other, which is in line with the reasoning outlined above that mindfulness may disconnect immediate hedonic impulses from relationship-threatening responding (Papiés et al., 2015). In sum, in terms of our model (Figure 1), mindfulness may be associated with prorelationship responses through enhanced awareness and monitoring of otherwise implicit and automatic impulses, enhanced ability to regulate them by means of better executive control, and (perhaps as a consequence) more room for the other person's perspective.

Yet, it is important to note that the processes associated with mindfulness may not lead to a transformation of motivation per se. A mindful (vs. non-mindful) individual may become better aware of self-interested impulses, have better executive control capacity to inhibit them, and may be better able to take the partner's perspective; however, whether the individual actually will act on self-interest *or* act on partner interest likely depends on the individual's motivation and commitment to the relationship. These processes associated with mindfulness may help a strongly committed partner to act in relationship-enhancing ways and prevent partners from acting in relationship-threatening ways. However, an individual not strongly committed to maintain a relationship may be more likely to act on self-interest, even when aware of these self-interested impulses (e.g., Rusbult et al., 1991). Indeed, an important theoretical and empirical question is for *whom* mindfulness may benefit relationship functioning, and we suggest that relationship commitment might be one important moderator.

Mindfulness and Coping With Distress in Romantic Relationships

As discussed above, a large number of studies have shown that mindfulness is associated with enhanced emotion regulation and stress reduction in both clinical and non-clinical populations (Goldin & Gross, 2010; for overviews, see Chiesa & Serretti, 2009; Goyal et al., 2014; Grossman et al., 2004). Research suggests that experienced negative affect is a key factor in affecting couple well-being (see Story & Bradbury, 2004). For example, a longitudinal study by Higginbottom,

Barling, and Kelloway (1993) found that increases in depressive symptoms were associated with increases in marital distress (they found no evidence for the reversed causal pattern). Negative affect and personal distress are associated with less warmth and more negativity during interaction with the partner (Matthews, Conger, & Wickrama, 1996). Also, individual distress is linked to reduced availability to provide support and reduced attention to the partner's needs (Story & Bradbury, 2004; Wood, Valdez, Hayashi, & Shen, 1990). Thus, at a very general level, mindfulness may be associated with improved relationships functioning partly due to better emotion regulation skills (Wachs & Cordova, 2007).

More specifically, mindfulness may play a role in the ability to more effectively deal with stressors that are essentially *external* to the relationship, such as high job demands and work-related stress, or illness of one of the partners or a child. Such challenges that are not specifically rooted in the relationship have been found to be associated with lower relationship satisfaction and higher rates of relationship dissolution (Bodenmann, 1997; Bolger, DeLongis, Kessler, & Schilling, 1989; Lavee, McCubbin, & Olson, 1987; Roberts & Levenson, 2001). The impact of external stressors on relationship well-being has been referred to as *stress spillover* (Karney & Bradbury, 1995; L. A. Neff & Karney, 2004).

May mindfulness prevent or reduce stress spillover effects? First, considering the emotion and stress regulation benefits associated with mindfulness, it is likely that mindfulness is related to less distress across different life domains. For example, a number of studies suggest that trait mindfulness is associated with reductions in job-related distress and increases in job satisfaction (e.g., Klatt, Buckworth, & Malarkey, 2009; Mackenzie, Poulin, & Seidman-Carlson, 2006; Shapiro, Astin, Bishop, & Cordova, 2005). Moreover, research suggests that mindfulness interventions can facilitate coping with serious illness. For example, mindfulness interventions and trait mindfulness both have been shown to be associated with less tension and distress, and increased quality of life, among cancer patients and their partners (Birnie, Garland, & Carlson, 2010; Ledesma & Kumano, 2009; D. G. van den Hurk, Schellekens, Molema, Speckens, & van der Drift, 2015), and in patients with chronic somatic diseases (Bohlmeijer, Prenger, Taal, & Cuijpers, 2010). As such, among partners high in mindfulness, successful coping skills in the face of distressing circumstances may result in *relatively* less stress to spill over to the relationship in the first place, either from work, disease, or other sources.

Second, if external stressors are present, the spillover of stress may often occur at an automatic level, outside of the individual's awareness, for example, when a grumpy husband is picking on his wife, not being aware that concerns about his job are coloring his responses. To prevent outside stressors from affecting one's behavior toward the partner, it seems critical to first become aware of the presence of these stressors, recognizing them instead of avoiding them. Giving more mindful attention to current experiences should promote

this process, enabling partners to separate external stress from experiences associated with the partner or the relationship (cf. L. A. Neff & Karney, 2004). Thus, in terms of our model, awareness and monitoring of otherwise implicit responses as a key aspect of mindfulness may reduce the likelihood of unconscious stress spillover effects.

Moreover, mindful attention to external stressors is another example of how mindfulness may affect healthy *dyadic* functioning. First, mindful awareness of external stressors may preclude partners from acting *mindlessly* on them in the relationship context, and as such may prevent reciprocal patterns of negativity and relationship conflict. Second, awareness of current external stressors is a prerequisite to communicate about them toward the partner, which in turn allows a partner to provide the support that is required (Wachs & Cordova, 2007). A testable prediction is that, through such dyadic processes, mindfulness moderates spillover effects from external stressors on relationship functioning and well-being.

Mindfulness and Relationship Cognition

A largely unexplored area of research is the potential role of mindfulness in the views people hold about their partner and the relationship, and romantic relationships in general. This may be a particularly important topic to study, as cognitions and beliefs may (partly) underlie the possible affective and behavioral responses toward the partner as described above. In the following, we discuss several related predictions of how mindfulness may affect thoughts and beliefs about romance, which in turn may have implications for romantic partners' affective and behavioral responses.

Mindfulness and partner acceptance. People tend to hold ideals (wishes and desires) about romantic partners, and they use these ideals to evaluate their partner and the relationship (Fletcher & Simpson, 2000). Discrepancies between ideals and the actual partner are associated with lower relationship satisfaction and declines in satisfaction over time (e.g., Fletcher, Simpson, Thomas, & Giles, 1999). One way in which romantically involved individuals deal with such possible discrepancies is to see their partners through rose-colored glasses (Murray, Holmes, & Griffin, 1996a, 1996b). That is, partners may form positive illusions about the partner, seeing his or her characteristics more positively than they actually are, thereby exaggerating the extent to which the partner matches ideals (Fletcher & Kerr, 2010). This process is generally related to higher levels of relationship satisfaction (we return to the possible link between mindfulness and positive partner illusions).

However, another way partners try to cope with actual/ideal discrepancies is by attempting to change and regulate the partner. Indeed, research by Overall and colleagues (Overall, Fletcher, & Simpson, 2006; Overall, Fletcher, Simpson, & Sibley, 2009) has demonstrated that low convergence between

perceptions of the partner/relationship and ideal standards typically results in attempts to regulate the partner. However, although successful attempts may be related to improved relationship satisfaction, it may be more common that partners are not able to produce the intended changes, or only to a small extent (Overall et al., 2006). In fact, an individual's attempts to regulate the partner may sometimes (or perhaps often) be detrimental to the relationship. Overall and colleagues (2006) found that Partner A's attempts to change and regulate Partner B result, over time, in more negative relationship evaluations in Partner B (see also Hira & Overall, 2011).

An important reason for this latter finding may be that Partner A's regulation attempts can lead to reduced perceptions of acceptance and appreciation, reactance, and loss of autonomy in Partner B (Overall et al., 2006). In this manner, a partner's regulation attempts of sometimes relatively minor shortcomings (e.g., a partner is less orderly than one would wish for) may negatively affect relationship functioning. Rather than trying to change the partner (which often fails), accepting a partner's shortcoming possibly is a more sustainable way of coping with actual/ideal partner discrepancies. We conceptualize *partner acceptance* here as the ability to acknowledge potential shortcomings of a partner without feeling the urge to change them. This does not necessarily mean that one will not be annoyed by a partner's shortcoming anymore, but rather one accepts that the shortcoming is present and accepts that sometimes it may evoke annoyance (or other negative emotions). Importantly, acceptance critically differs from tolerating or resigning to relationship-destructive partner characteristics that are intrinsically harmful to the partner or the relationship (such as aggression), and unlike acceptance, both tolerating and resigning imply some form of personal anguish in the face of certain partner characteristics.

The concept of acceptance is increasingly used in couple therapy. Whereas traditional approaches often focus on deliberate change, according to Doss and Christensen (2006), "Acceptance has become one of the most important trends in the prevention and treatment of relationship discord" (p. 289). Randomized trials have demonstrated that the use of acceptance in couple therapy indeed can be very effective in enhancing relationship satisfaction (e.g., Christensen, Atkins, Baucom, & Yi, 2010). Yet, although related concepts such as forgiveness and gratitude have been studied extensively (e.g., Algoe, Gable, & Maisel, 2010; Fincham, 2000), the potentially important concept of acceptance has received little explicit attention in relationship science.

The concept, however, is central to (the science of) mindfulness. As noted throughout this article, a key aspect of mindfulness is the ability to recognize and accept present-moment experiences as they are. Theoretically, cultivating a mindful accepting stance toward current experiences involves recognizing one's own reactions in response to a partner's shortcomings (e.g., annoyance, thoughts about wanting a

“better” partner). A partner may be more likely to realize that often it is (at least) as much one’s own response to the partner’s shortcoming as it is the shortcoming itself that is causing distress. We propose that frequently giving mindful attention to negative feelings or thoughts in response to a partner’s shortcoming may decrease distress and increase acceptance. By being accepting toward each other, both partners may feel more appreciated, and relationship well-being may increase in the long run. An important related question, however, is whether a mindful person is able to separate acceptance of partner shortcomings from tolerance of intrinsically relationship-destructive partner characteristics. Although these two processes, as mentioned earlier, can be distinguished conceptually, at a subjective level there may be a gray area between acceptance (which we believe would be a good thing for relationship functioning and personal well-being) and tolerance (which we believe would be a bad thing).

There is some initial evidence in line with the notion that mindfulness may enhance partner acceptance. Carson and colleagues (2004) found that couples that followed a mindfulness training showed increases in relationship satisfaction, which were indeed accompanied by increases in acceptance of one another, both post-training and at 3 months follow-up. Similarly, in a recent set of studies (Kappen, Karremans, & Dijksterhuis, 2014), we found cross-sectional evidence that self-reported partner acceptance explained the association between dispositional mindfulness and relationship satisfaction. Moreover, a brief mindful attention induction in the lab reduced distress when thinking about the partner’s shortcomings.

Mindfulness and acceptance of fluctuations in relationship functioning. Related to partner acceptance is the ability to recognize and accept that relationship satisfaction and the functioning of romantic relationships in general tend to fluctuate. Romantic relationships are generally characterized by relative ups and downs in relationship satisfaction and relationship commitment from day to day, and across longer periods of time (Arriaga, 2001). A mindful accepting stance toward momentary drops in relationship satisfaction, and recognizing their transient nature, may prevent a number of outcomes that may harm the long-term stability and functioning of the relationship. For example, a lack of acceptance toward temporary declines in relationship satisfaction may be associated with ruminative and meta-cognitive thoughts about the relationship (“Am I in the right relationship?”), which may lead to further decreases in satisfaction. Relatedly, as a dyadic process, drops in relationship satisfaction may be the onset of negative interaction patterns, which may result in further relationship decline. Thus, again, a more accepting stance toward current relationship problems (what we term *relationship acceptance*) may paradoxically promote relationship well-being, or at least prevent relationship deterioration, in the long run.

Mindfulness and attachment. Finally, there is evidence indicating that mindfulness is associated with the general belief individuals hold about whether others (and relationship partners in particular) can be trusted and depended on—that is, attachment processes, a central topic in romantic relationship research (see Mikulincer & Shaver, 2010). Adult attachment is often conceptualized in terms of two dimensions of attachment insecurity: attachment avoidance (discomfort with closeness and dependence, low trust of others) and attachment anxiety (fear of rejection, strong need for approval). A number of studies have explored the association between attachment and mindfulness, and have found that both attachment anxiety and avoidance tend to be related to lower levels of trait mindfulness (Shaver, Lavy, Saron, & Mikulincer, 2007). Pepping, Davis, and O’Donovan (2013) found that this link was explained by differences in emotion regulation. Walsh, Balint, Smolira, Fredericksen, and Madsen (2009) found that low attachment anxiety (but not avoidance) was associated with increases in trait mindfulness through better attentional control. In the study discussed previously, Hertz et al. (2014) observed that low levels of attachment avoidance mediated the effect of trait mindfulness on lower stress reactivity during conflict.

Although these findings provide suggestive evidence that attachment security and mindfulness are positively associated, *why* this relationship occurs is a more complex issue. As argued by Ryan, Brown, and Creswell (2007), a history of supportive and attentive caregiving is likely to promote both attachment security and mindfulness. For example, having supportive and accepting caregivers may promote acceptance of own experiences and reduce tendencies to avoid or judge own experiences, which is at the heart of the ability to be mindful. Moreover, they may be associated in a bidirectional manner. A sense of felt security may make people less avoidant or suppressing toward current experiences, and be more open to them, and mindfulness may foster secure attachment “through an open, receptive attention to relationship partners” (Ryan et al., 2007, p. 180).

In addition, there is recent evidence suggesting that mindfulness may buffer attachment insecurity. A study by Saavedra, Chapman, and Rogge (2010) found that anxious attachment was associated with higher probability of romantic breakup over a 1-year period; however, this relationship was absent among people high in trait mindfulness. According to the authors, mindfulness may reduce the hyperactivation of the attachment system in anxiously attached individuals when encountering relationship-threatening situations. While the “safe haven” function of the attachment system is not functioning properly among people high in anxiety, such findings suggest that mindfulness in itself may act as a safe haven in threatening situations, allowing people to respond more acceptingly and less reactively toward stressful experiences.

In sum, there is initial evidence indicating that mindfulness and attachment are associated, but there are several

interesting theoretical questions that require further exploration. Importantly, studies so far have relied mostly on self-report measures of mindfulness, with only two studies that have (unsuccessfully) used experimental inductions of mindfulness (Bernstein, Laurent, Nelson, & Laurent, 2015; Pepping, Davis, & O'Donovan, 2015). Thus, future research should extend the existing literature on this specific topic, both methodologically and theoretically.

Possible Boundary Conditions

Would mindfulness always and in every relationship lead to the kind of beneficial processes we have discussed so far? And importantly, would mindfulness always be beneficial to relationship functioning, or are there potential negative effects of mindfulness on romantic relationships?

Recently, McNulty and Fincham (2012) challenged the view, often asserted in the field of positive psychology, that certain traits are inherently beneficial. They suggested that ostensibly *positive* processes (e.g., forgiveness, kindness, optimism) predict better relationship well-being in healthy couples but often predict worse relationship well-being in already troubled couples (see Luchies, Finkel, McNulty, & Kumashiro, 2010; McNulty, 2008). As noted by Carson and colleagues (2004), the relationship benefits of mindfulness may occur mainly in distressed but otherwise committed relationships, but not in relationships in which partners are not committed to maintain the relationship. As discussed before, some of the theorized processes are likely to benefit relationships of high commitment in particular: Mindful awareness of self-interested and potentially relationship-threatening impulses, acceptance of drops in relationship satisfaction (and recognizing that these drops may be temporary), and acceptance of partner shortcomings that deviate from the “perfect” partner are processes supposedly promoted by mindfulness. These processes may help *committed* partners to regulate potentially relationship-threatening responses into more relationship-benefitting responses, because they are motivated to do so. In relationships of low commitment, mindful awareness of relationship-threatening reactions, or awareness of relationship problems, may not motivate partners to regulate these responses and act in a prorelationship manner.

If mindfulness may benefit only relatively healthy relationships in which partners are moderately to strongly committed, does this imply that the incremental benefits of mindfulness might be limited (i.e., a ceiling effect) or even inconsequential (i.e., they are already happy)? This is one of the key questions in this research area. Based on what we have discussed so far, one possibility is that mindfulness may be positively associated with relationship well-being mainly because it buffers the relationship from the impact of distressing factors and relationship-threatening situations. Many relationships start out just fine: Partners love each other, are satisfied, and over time partners become strongly

committed and long-term oriented toward the relationship (of course, also many relationships end quickly, before partners even become committed). Yet, in many Western countries, 30% to 50% of marriages end in divorce, and it seems safe to assume that a high percentage of these couples once were satisfied and strongly committed to maintain the relationship. An important reason for relationship decline is that, particularly in times when the relationship is challenged by internal or external stressors (e.g., job stress or loss; disease; child raising), partners may become captured in a downward spiral of negativity, resulting in further relationship deterioration, which in the long run may undermine relationship commitment and stability (e.g., Arriaga, Reed, Goodfriend, & Agnew, 2006). We propose that a number of the processes associated with mindfulness as discussed here—for example, awareness of relationship-threatening impulses, acceptance of partner shortcomings, and recognizing and being able to accept temporary drops in relationship satisfaction—may prevent committed partners from becoming trapped in downward spirals of relationship negativity particularly during episodes of relationship distress (due to either internal or external distressing factors) that may otherwise lead to relationship dissolution. Thus, a plausible prediction is that mindfulness may not make an already happy relationship even more happy, but that it may prevent the onset of relationship decline in times of relationship distress, and may put relationships that are essentially committed but deteriorating back on track.

Furthermore, an important topic to explore is whether in relationships that are fundamentally troubled (e.g., relationships characterized by psychological or physical abuse) increases in mindfulness may enhance the likelihood of breakup. One possibility is that mindfulness increases awareness of overall negative feelings toward the partner and the relationship. Greater awareness of implicit feelings (Brown & Ryan, 2003; Koole et al., 2009) and recognition of one's overall negative feelings about the partner may undermine “self-justifications” to stay in a troubled relationship and persuade a person to leave a troubled relationship. Moreover, mindfulness is strongly associated with self-compassion. In fact, according to K. Neff (2003), the ability to attend mindfully to negative emotions without suppressing them or ruminating on them is a defining component of self-compassion. Several studies have suggested that the psychological benefits of mindfulness training are partly due to increases in self-compassion (e.g., Birnie et al., 2010; Kuyken et al., 2010). Supposedly, self-compassion increases because mindfulness allows people to identify less with their negative or self-judgmental thoughts and feelings (Hölzel et al., 2011). Whereas self-judgment and “it must be my fault” tend to be habitual responses for people low in self-compassion (K. Neff, 2003), the cultivation of self-compassion during mindfulness interventions is likely to reduce such feelings. As a result, partners who have been unhappy in a relationship, for example, while enduring an abusive partner for a prolonged

period of time may be more likely to stand up for themselves. In line with this notion, Yarnell and Neff (2013) recently found that higher levels of self-compassion were associated with a lower likelihood to subordinate personal needs during conflict with the partner. Thus, an interesting question to explore is whether mindfulness, through greater self-compassion, may motivate partners to end an abusive or otherwise fundamentally flawed relationship.

Another potential boundary to explore is whether mindfulness may affect, and perhaps undermine, automatic processes that are *functional* in maintaining relationship satisfaction. So far, we have focused on the potential role of mindfulness in promoting the awareness and regulation of *dysfunctional* automatically induced emotions, thoughts, and action tendencies that may threaten relationship functioning. Clearly, however, automatic processes also play an important *beneficial* role in relationships (McNulty & Olson, 2015). For example, automatic and implicit feelings toward the partner are related to relationship-enhancing behavior and relationship satisfaction in the long run (LeBel & Campbell, 2009; McNulty, Olson, Meltzer, & Shaffer, 2013). Especially in potentially relationship-threatening situations, positive automatic partner attitudes help partners prioritize relationship-protective goals (e.g., approaching and trusting the partner) over self-protective goals (e.g., avoiding the partner; Murray, Gomillion, Holmes, & Harris, 2015; Murray, Gomillion, Holmes, Harris, & Lamarche, 2013; Murray et al., 2011). Similarly, research has shown that specific pro-relationship responses may become automatized. For example, Righetti and colleagues (2013) found that the willingness to sacrifice not always requires a transformation of motivation but can arise automatically. Moreover, as noted briefly, partners may form positive illusions about each other, in a motivated but seemingly automatic and spontaneous fashion, which may help buffer potential relationship doubts and promote relationship satisfaction (Murray et al., 1996a, 1996b).

Such findings seem to suggest that acting on the “automatic pilot” can have important benefits to the relationship, allowing partners to enjoy their relationship relatively effortlessly. Does becoming mindful of automatic positive partner attitudes, automatic pro-relationship impulses, or positive partner illusions prevent their beneficial effects? These are important theoretical and empirical questions that have not been addressed yet. First, it seems reasonable to suggest that mindfulness may interfere with the beneficial role of automatic positive partner attitudes and pro-relationship impulses. For example, while an automatic pro-relationship impulse or feeling can lead directly to a corresponding behavior that benefits the relationship, becoming aware of the automatic impulse may allow other considerations (e.g., norms, self-interest) to affect this process, possibly preventing the pro-relationship response from actually emerging. Second, in the case of positive partner illusions, becoming aware that one is making positive and biased interpretations of certain less positive characteristics of the partner would, by definition,

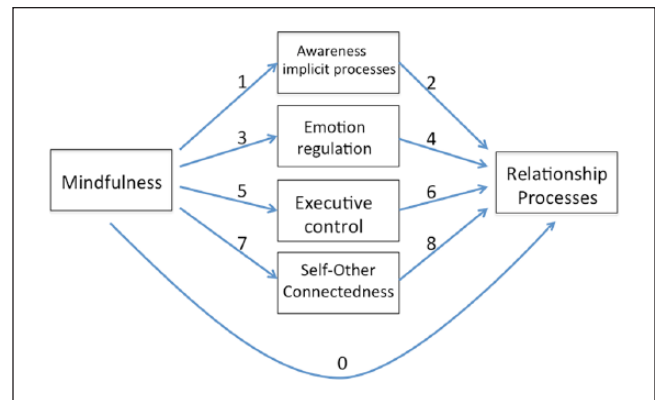


Figure 2. A summary of the pathways through which mindfulness may promote romantic relationship functioning.

Note. The pathway numbers correspond to the numbers in Table 1, which summarizes supportive evidence for each pathway.

break the illusion. An interesting question therefore is whether more mindful partners indeed possess less positive illusions about the partner, and whether this may be negatively related to relationship satisfaction (although we have discussed how mindfulness may then help accept the partner as he or she really is, including the shortcomings).

Conclusions and Future Directions

So far, we have situated the concept of mindfulness into the broader literature on romantic relationships, and have discussed a model (Figure 1) that describes when and how the basic processes and outcomes of mindfulness may—*theoretically*—affect a number of relationship-specific processes. In Figure 2 and Table 1, we have summarized the existing empirical evidence that provides direct and (mostly) indirect support for the model, and also have indicated which pathways in particular require more empirical support. Thus, while there is some empirical basis for the general notion that mindfulness may positively affect romantic relationship functioning and stability, it is also clear that more research is needed before strong conclusions can be made about the potential relationship benefits of mindfulness. In the following, we discuss a number of promising future directions that could move the field forward and examine this topic more thoroughly.

Theory

Previous research has provided suggestive evidence for the notion that mindfulness—in a *very broad sense*—may positively affect relationship satisfaction (Kozlowski, 2013). Our model provides an initial attempt to integrate knowledge of mindfulness and relationship science, which leads to more detailed predictions, and ultimately should lead to a clearer understanding of the potential relationship between mindfulness and relationship functioning. To be sure, the model is

Table 1. Summary of Articles and Key Findings in Support of the Pathways in the Model.

| Pathway (corresponding to Figure 2) | Example articles and key findings |
|---|---|
| Pathway 1: MF—AIP | MF is associated with better access to implicit feelings (Brown & Ryan, 2003; Koole, Govorun, Cheng, & Gallucci, 2009). MF is associated with better awareness of impulses (Papies, Barsalou, & Custers, 2012). For an excellent theoretical discussion, see E. N. Carlson (2013). |
| Pathway 2: AIP—Relationship outcomes | There is very little research that has looked directly at the role of awareness of relationship-threatening responses and relationship outcomes. Papies, Pronk, Keesman, and Barsalou (2015) found that paying mindful attention to internal experiences reduces the link between sexual motives and attraction to attractive alternative partners. |
| Pathway 3: MF—ER | Neurophysiological and self-report findings indicate that MF is associated with improved ER, as a result of MF interventions (e.g., Goldin & Gross, 2010), brief MF inductions (e.g., Arch & Craske, 2006), or a high MF disposition (Creswell, Way, Eisenberger, & Lieberman, 2007). For extensive reviews, see Chambers, Gullone, and Allen (2009) and Chiesa, Serretti, and Jakobsen (2013). |
| Pathway 4: ER—Relationship outcomes | Successful ER skills are associated with more positive and less negative experiences in the romantic relationship (e.g., Simpson, Collins, Tran, & Haydon, 2007), and with greater overall relationship satisfaction and stability (e.g., Bloch, Haase, & Levenson, 2014; Salvatore et al., 2011). |
| Pathway 5: MF—EC | MF training and meditation is associated with EC (e.g., Farb et al., 2007; Heeren, Van Broeck, & Philippot, 2009; Moore & Malinowski, 2009; Teper & Inzlicht, 2013; P. A. van den Hurk, Giommi, Gielen, Speckens, & Barendregt, 2010) and cognitive functioning more generally (for a review, see Chiesa, Calati, & Serretti, 2011). |
| Pathway 6: EC—Relationship outcomes | EC is associated with forgiveness and less retaliation (Pronk, Karremans, Overbeek, Vermulst, & Wigboldus, 2010; Van der Wal, Karremans, & Cillessen, 2014; Wilkowski et al., 2010) with willingness to sacrifice (Pronk & Karremans, 2014) and resisting temptation of attractive alternatives (Pronk, Karremans, & Wigboldus, 2011). For a review, see Karremans, Pronk, and van der Wal (2015). |
| Pathway 7: MF—SOC | MF is associated with perceived SOC (e.g., Barnes, Brown, Krusemark, Campbell, & Rogge, 2007; Brown & Ryan, 2003; Carson, Carson, Gil, & Baucom, 2004) and with related constructs such as empathy and perspective taking (e.g., Birnie, Speca, & Carlson, 2010; Block-Lerner, Adair, Plumb, Rhatigan, & Orsillo, 2007; Hutcherson, Seppala, & Gross, 2008). For a review, see Trautwein, Naranjo, and Schmidt (2014). |
| Pathway 8: SOC—Relationship outcomes | Indicators of SOC (e.g., closeness, relationship commitment) are strongly associated with prorelationship responses, and relationship satisfaction and stability (e.g., Agnew, Van Lange, Rusbult, & Langston, 1998; Aron et al., 2004). |
| Pathway 0: MF—Relationship outcomes | Evidence for the benefits of MF in romantic relationships is emerging. MF is associated with relationship satisfaction (Barnes et al., 2007; Carson et al., 2004; Carson, Carson, Gil, & Baucom, 2007; Pakenham & Samios, 2013; Wachs & Cordova, 2007). There is some (but mixed) evidence on role of MF in conflict resolution (Barnes et al., 2007; Hertz, Laurent, & Laurent, 2014; Laurent, Laurent, Hertz, Egan-Wright, & Granger, 2013). However, except Carson et al. (MBSR), all studies examined effects of self-reported trait or state MF. |

Note. MF = mindfulness; AIP = awareness of automatic and implicit processes; ER = emotion regulation; EC = executive control; SOC = self-other connectedness; MBSR = Mindfulness-Based Stress Reduction.

mainly intended to generate specific predictions about the role of mindfulness in romantic relationships. In future research, it is important to directly test and uncover the specific mechanisms by which mindfulness may promote specific relationship outcomes. Importantly, some aspects of mindfulness may foster some specific relationship outcomes, while other aspects of mindfulness may support other relationship outcomes. For example, whereas monitoring of automatic responses helps partners regulate and inhibit self-interested destructive impulses particularly during stressful episodes (e.g., conflict), self-other connectedness may promote acts such as sacrifice and support giving in relationships. Also, an important question is how the basic processes of mindfulness as depicted in Figure 1 work together—in

parallel or in sequence—to promote relationship-beneficial processes. For example, in case of interpersonal anger or aggressive impulses, mindful *awareness* of impulses may lay the basis for regulatory processes, which in turn may leave more room for taking the partner's perspective. Thus, while the current model provides a starting point for testing predictions like these, future studies should further specify the model.

Research on mindfulness in relationships may uncover important processes that have not received much attention in relationship science yet. For a long time, researchers have recognized that relationship problems may often be caused by automatic and mindless dysfunctional interaction patterns between partners (e.g., Fincham, Bradbury, & Scott, 1990;

Sullaway & Christensen, 1983). However, researchers have mainly focused on the factors that help partners to regulate dysfunctional behavior in a relationship, including motivational factors (e.g., commitment) and capacity factors (e.g., executive control; for an overview, see Karremans et al., 2015). However, as we have argued, when not being consciously and experientially aware of automatic relationship-destructive impulses, these impulses may “bypass” commitment and inhibitory control by affecting behavior toward the partner automatically and directly. Put differently, lacking awareness of current experiences—mindlessness—could result in relationship-destructive behavior despite relatively high commitment and high inhibitory control capacity. Thus, *awareness* may play a crucial role in understanding relationship functioning, a topic that has received very little attention in relationship science. This is one example of how research on mindfulness in relationships may contribute to a better understanding of the processes that promote relationship functioning (as noted, the role of acceptance is another example).

In addition to its potential for providing novel insights into the workings of romantic relationships, mindfulness seems a promising intervention tool to prevent and reduce couple distress (Carson et al., 2004). Traditional couple interventions often seek to educate and train certain specific relationship skills (e.g., communication or conflict resolution skills) in partners, although often with modest success (Hawkins, Blanchard, Baldwin, & Fawcett, 2008; Rogge, Cobb, Lawrence, Johnson, & Bradbury, 2013). As recommended by D. K. Snyder and Schneider (2002, cited in Rogge et al., 2013), in addition to helping couples to train and cultivate relationship skills, a critical improvement of interventions would be to instruct partners to attend to the cues in everyday life that signal the need to use these skills. While this recommendation highlights the importance of increasing awareness, a caveat is that this is easier said than done: In the heat of the moment, when acting mindlessly, partners may often be missing these cues or remember them only after the damage has been done (e.g., when having acted on aggressive or retaliatory impulses). Mindfulness training and mindfulness meditation seem unique in actually promoting awareness and should help partners notice, at earlier stages, the cues that are potentially relationship-threatening and that require a relationship-maintenance response. As noted, there are some initial research findings by Carson et al. (2004) that have provided preliminary support in line with this idea, although it is difficult to tell what specific ingredient of their training caused the effects (in addition to mindfulness training, the intervention included common elements of couple interventions, such as skill training). An important research question is whether regular mindfulness training or meditation practice, perhaps in combination with or as integral part of more traditional couple interventions, would promote long-term relationship well-being.

Notably, a related mind-training practice, namely loving-kindness meditation (LKM), has received increasing attention

in recent years, and has been demonstrated to promote self- and other-compassion (e.g., Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008). Unlike mindfulness interventions that train participants to pay non-judgmental attention to present-moment experiences (irrespective of the valence of the experience), LKM is specifically focused on intentionally cultivating warm and positive feelings toward oneself and others. Arguably, as compared to the possible relationship-enhancing effects of LKM (e.g., promoting positive feelings and compassion for the partner), the potential consequences of mindfulness and mindfulness training on relationship functioning may be much broader, as we have suggested in this article.

A critical future direction is to examine the boundary conditions of the link between mindfulness and relationship functioning. Above, we have discussed some potential boundaries. In particular, we have argued that in relationships with a strong basis for commitment, mindfulness may prevent relationship decline, particularly when internal or external stressors threaten relationship satisfaction. In other words, mindfulness may act primarily as a stress buffer among strongly committed partners (cf. Creswell & Lindsay, 2014). Also, we have discussed the possibility that mindfulness may affect and even undermine the *positive* effects of automatic processes in relationships. If mindfulness results in refraining from acting on automatic feelings and impulses when doing so would be beneficial, it is interesting to examine whether there is an “optimal” level of mindfulness to promote relationship functioning. In this regard, researchers, for example, could check for possible curvilinear associations between mindfulness and relationship satisfaction. In addition to these topics, other possible limitations should be considered. For example, mindfulness may be particularly helpful for relationships in which partners possess certain individual traits. For instance, theory and initial empirical findings suggest that mindfulness may promote secure attachment, which could imply that particularly relationships in which partners are insecurely attached may benefit from mindfulness interventions. As another example, it has been suggested that the training of mindfulness may be particularly helpful for individuals high in neuroticism (Feltman, Robinson, & Ode, 2009), and neuroticism is generally negatively associated with relationship functioning and well-being (e.g., Malouff, Thorsteinsson, Schutte, Bhullar, & Rooke, 2010). And indeed, research may also uncover certain relationship features that may be associated with negative effects of mindfulness on relationship well-being. For example, Baker and McNulty (2011) found that, among men who were low in conscientiousness, more self-compassion (which is strongly associated with mindfulness) was associated with less motivation to correct interpersonal mistakes. Thus, while more empirical research is required to examine the potential mechanisms of the mindfulness–relationship satisfaction association, another important step is to examine potential moderators, and we have offered a number of suggestions in this article.

Likewise, mindfulness may promote some relationship processes but not other relationship processes. The list of relationship processes and phenomena that may benefit from mindfulness in our proposed model probably is not exhaustive. For example, a couple of studies suggest that mindfulness interventions can decrease sexual distress (Brotto et al., 2012; Brotto & Heiman, 2007; Silverstein, Brown, Roth, & Britton, 2011), which in turn may promote relationship functioning. The point of the proposed model is to theoretically consider whether the basic processes and outcomes of mindfulness would promote certain specific relationship-beneficial processes, and not just any relationship process. To give some examples, attitude similarity has been associated with better relationship functioning (Davis & Rusbult, 2001), as has a common sense of humor (e.g., Ziv & Gadish, 1989) and relationship excitement (Aron et al., 2004), but there seem to be no direct theoretical reasons to suspect that mindfulness would promote either of these relationship-beneficial processes. In fact, if mindfulness reduces impulsivity, increased mindfulness may reduce relationship excitement. Thus, despite that there are good theoretical reasons to suggest that mindfulness promotes relationship functioning within certain boundary conditions, researchers should remain skeptical and examine what aspects of a relationship it may or may not affect, and whether it may affect certain relationship processes negatively.

Method

Although several studies have now provided initial and fairly consistent positive associations between mindfulness and relationship satisfaction, there is a general lack of experimental, longitudinal, and intervention studies to support the causal role of mindfulness in romantic relationships directly. In addition, with a few notable exceptions (e.g., Carson et al., 2003; Papiés et al., 2015), most studies on this topic have relied solely on self-report measures of mindfulness, while there is an ongoing debate about the construct validity of these measures (see Brown, West, Loverich, & Biegel, 2011; Grossman, 2011). Two methodological issues in particular are important for future studies. First, testing the role of mindfulness in romantic relationships ideally involves a multimethod approach to provide convergent support based on experimental inductions of mindfulness (e.g., Papiés et al., 2015), effects associated with mindfulness interventions and meditation (e.g., Carson et al., 2004), and trait mindfulness measures (e.g., Brown & Ryan, 2003). For example, while intervention studies should examine the practical application of mindfulness in relationships, experimental studies could provide more insight into the exact working mechanisms by which mindfulness may promote relationship functioning, both in the short and in the long run. This is particularly important, given that mindfulness intervention programs often involve a number of exercises (e.g., yoga exercises; LKM) that make it difficult to conclude

what specific aspect of the intervention is causing an effect. Second, on part of the dependent variable, researchers should not rely only on self-report measures relating to relationship functioning and well-being. There are several possibilities to study relationship well-being indirectly, implicitly, or unobtrusively. Specifically, to examine the effects of mindfulness in relationships more objectively, the field could greatly profit from the use of implicit measures of partner and relationship evaluation (e.g., Murray et al., 2011), physiological measures as indicators of relationship distress (e.g., Feeny & Kirkpatrick, 1996), and observational studies with observers blind to the level of mindfulness (training) of partners in a couple (Gottman & Notarius, 2000).

Dyadic Data

As noted, with a few exceptions (Barnes et al., 2007; Pakenham & Samios, 2013; Williams & Cano, 2014), most studies so far have examined whether each partner's level of mindfulness is related to each partner's relationship experiences, or whether mindfulness at the couple level is related to relationship outcomes. Put differently, studies have examined whether Peter's mindfulness is related to Peter's relationship satisfaction, or whether Peter and Barbara's total level of mindfulness affects their relationship satisfaction (e.g., Barnes et al., 2007; Carson et al., 2004, 2007; Jones et al., 2011; Wachs & Cordova, 2007; for an overview, see Kozlowski et al., 2013). Although informative, such studies did not address the question whether, and how, Peter's mindfulness ultimately promotes his partner Barbara's satisfaction with the relationship, and how mindfulness may thus affect relationship functioning at the level of the dyad (Kenny, Kashy, & Cook, 2006).

Taking a dyadic perspective raises additional interesting and important questions that have not been addressed so far. For example, are Peter and Barbara's mindfulness interrelated, and if so how? We are aware of only two studies that have reported the intercorrelation between both partners' self-reported mindfulness scores, which were non-significant ($r_s = -.17$ and $.01$, respectively; Barnes et al., 2007; Pakenham & Samios, 2013). Although these findings suggest that the level of mindfulness between partners may be largely independent, no studies have examined the effect of one partner's cultivation of mindfulness, for example, through meditation or mindfulness training (e.g., MBSR), on the other partner's level of mindfulness. A related question is whether, and how, the level of symmetry in mindfulness between partners is associated with relationship functioning. For example, could high levels of mindfulness in one partner compensate for the other partner's relative lack of mindfulness? Or, is relationship functioning affected positively only when both partners in a couple have relatively high levels of mindfulness—either as a result of mindfulness training, meditation, or as a personality trait? In a somewhat similar vein, Vohs, Finkenauer, and Baumeister (2011) addressed similar

questions about the level of symmetry between partners' level of self-control, and basically found that the total sum of self-control in a couple was positively associated with relationship satisfaction. Considering the potential benefits of mindfulness for a number of relationship processes as discussed here, one may expect that having one partner in a couple with relatively high levels of mindfulness would be associated with better relationship functioning as compared to both partners lacking mindfulness, while both partners high in mindfulness should thrive even better. In other words, when studying this topic at the dyadic level, it is important to examine possible interactions between both partners' level of mindfulness on relationship outcomes.

Broader Considerations

Finally, there are some broader questions that follow from examining the role of mindfulness in romantic relationships. What is the role of potential social and interpersonal skills related to mindfulness in the link between mindfulness and individual well-being and health? There is abundant evidence demonstrating that our happiness and well-being, and even our physical health, for an important part rely on the quality of our closest relationships with others, including the romantic partner (e.g., Holt-Lunstad, Birmingham, & Jones, 2008; Pietromonaco, Uchino, & Dunkel Schetter, 2013). Yet, so far the individual and interpersonal benefits of mindfulness have been studied largely in isolation of each other, with some exceptions. For example, a recent study found that the link between mindfulness and psychological well-being was mediated by higher inclinations to forgive close others (J. R. Webb et al., 2013). A study by Schutte and Malouff (2011) demonstrated that the association between mindfulness and subjective well-being was mediated by scores on a measure of emotional intelligence that includes items referring to the ability to regulate emotional responses toward others. Also relevant to this issue, Creswell and colleagues (2012) demonstrated that mindfulness training can reduce perceptions of loneliness, which was in turn associated with health benefits (i.e., reduced expression of inflammation-related genes). We propose that a model for understanding the benefits of mindfulness for mental and physical health ultimately should incorporate the interpersonal consequences associated with mindfulness. Hence, examining how mindfulness, individual well-being, and relationship well-being are interrelated is an important and promising avenue for future research.

Moreover, although we have focused in this article on how mindfulness may affect processes in *romantic* relationships, many of the proposed ideas may be applied to close relationships more generally. To a large extent, the functioning and well-being of close bonds with others—be it with friends, family, or co-workers—also depend on both partners' willingness and capacity to forgive, to sacrifice, to refrain from acting out during conflict, acceptance of the other, and other related processes as we have described here

(e.g., Finkel et al., 2002; Van Lange et al., 1997). Many of the ingredients in our model may generalize beyond romantic relationships, and the model thus offers testable predictions of how mindfulness may improve people's interpersonal relationships more generally.

Final Remark

Theoretically, while it may not turn a fundamentally dysfunctional relationship into a happy one, mindfulness may be a powerful way of improving romantic relationships, perhaps especially by buffering an ongoing relationship from the impact of distressing episodes. Moreover, research on mindfulness in relationships may provide novel theoretical insights into the workings of romantic relationships, and we have suggested that its flipside—mindlessness—may underlie relationship-destructive responses across various situations. Researchers have only just begun to empirically address these issues, and our hope is that the current article will inspire additional future research on this topic.

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Notes

1. During the 8-week Mindfulness-Based Stress Reduction (MBSR) program (Kabat-Zinn, 1990), participants meet once a week for 2.5 hr, learn about mindful attention and acceptance, and receive instructions to practice mindfulness at home through guided meditations and mindful yoga exercises. The meditation and yoga practices are meant to train and increase awareness of present-moment inner experiences, including body sensations, emotions, and thoughts. Also, participants are encouraged to practice and adopt mindfulness in their daily lives, by attempting to attend to present-moment experiences in a non-judgmental fashion during daily activities such as brushing ones teeth, eating, cycling, during communication with others, or any other activity. In the wake of the rising popularity of MBSR training, a number of other mindfulness-based interventions were developed. Mindfulness-based cognitive therapy (MBCT) integrates the MBSR program with elements of cognitive therapy (Segal, Williams, & Teasdale,

2002). Another intervention that is aimed at increasing awareness and acceptance of negative thoughts is acceptance and commitment therapy (ACT). While this intervention generally does not involve meditation or yoga techniques, mindfulness is taught and encouraged through psychoeducation.

2. How exactly this process of remembering to be mindful in daily life might work is still a topic of (neuro-)scientific scrutiny and debate. For example, research suggests that mindfulness training is associated with less activity of the so-called default mode network in the brain (Brewer et al., 2011), which is associated with less mind wandering and more focused attention on the present moment. Also, research indicates that mindfulness training affects brain regions involved in specific aspects of attention regulation, such as voluntary orienting of attention (Jha, Krompinger, & Baime, 2007).
3. Experimental inductions of mindfulness in the lab are thought to induce a temporary state of mindfulness, and the immediate effects of this state are then measured. This differs in important ways from examining the effects of a mindfulness-based intervention (such as participation in an MBSR program). A mindfulness intervention is supposed to train the skill to be mindful across situations and across moments during daily life, and therefore is expected to be associated with more enduring effects (on well-being, relationships, or other outcome measures).

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