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## *How being mindful impacts individuals' work-family balance, conflict, and enrichment: a review of existing evidence, mechanisms and future directions*

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### Introduction

Growing exponentially over the past several decades, the topic of work and family has fueled a large body of scholarship (see Allen 2012 for a review). Interest in work and family is expansive. The struggle to balance work and family is one that resonates with many adults. It is a topic of concern to organizations (Society for Human Resource Management Workplace Forecast 2008) and to societies across the globe (Poelmans, Greenhaus, and Las Heras Maestro 2013). Indeed, work-family issues have captured the attention of the public at large, frequently appearing as a focal topic in the popular press with titles such as “Why Women Still Can’t Have It All” (Slaughter 2012) and “Men Want Work-Family Balance, and Policy Should Help Them Achieve It” (Covert 2013).

To date, the majority of work-family scholarship has focused on situational factors that help or inhibit individuals' abilities to manage multiple role responsibilities. This focus has resulted in a considerable body of work that has demonstrated links between stressors and demands emanating from the work and the family domains with constructs such as work-family conflict (Michel, Kotrba, Mitchelson, Clark, and Baltes 2011). Much of the attention aimed at reducing work-family conflict has centered on organizational practices such as flexible work arrangements and dependent care supports, despite findings that such practices have limited effectiveness in terms of alleviating work-family conflict (Allen *et al.* 2013; Butts, Casper, and Yang 2013). Work-family intervention research has focused on training supervisors to be more family-supportive (e.g., Hammer *et al.* 2011) or on flexible

work practices (e.g., Perlow and Kelly 2014). Such approaches are based on the notion that experiences such as work-family conflict are primarily provoked by the situation.

There is also a growing body of research that demonstrates that personality variables are associated with work-family experiences, which suggests that individual differences beyond demographic variables also contribute to work-family experiences (Allen *et al.* 2012). Other individual difference approaches that have been applied to the study of work-family include the selection, optimization, and compensation model (Baltes and Heydens-Gahir 2003). This model is based on individuals' use of problem-focused coping strategies such as selecting goals and priorities, optimizing those goals and priorities, and compensating for losses in energy and resources (Baltes, Zhdanova, and Clark 2011). Relative to research on situational stressors and organizational policies, individual cognitive and behavioral strategies have received less attention in the work-family literature. In the current chapter we add to the individual approach by suggesting ways in which mindfulness may play a role in the work-family interface.

Mindfulness has been described as the ability to be present in the moment through attention and awareness (Brown, Ryan, and Creswell 2007). It requires an attitude of non-judging, non-striving, and patience (Kabat-Zinn 1990). Mindfulness is thought to enhance self-regulation in that a more mindful person allows sensory input and simply notices it rather than comparing, evaluating, or ruminating about it (Brown *et al.* 2007). Multiple streams of mindfulness research exist. One focus is on mindfulness-based training as a therapeutic intervention, often incorporating meditation (e.g., Kabat-Zinn 1990). Another focus is on trait-like mindfulness as an individual difference (e.g., Brown and Ryan 2003). Both types of studies show that a variety of positive outcomes are associated with mindfulness such as improvements in stress, depression, anxiety, sleep quality, physical health symptoms, and interpersonal relationship quality (see Brown *et al.* 2007 and Glomb *et al.* 2011 for reviews). Functional magnetic resonance imaging studies help explain the mechanisms through which mindfulness results in such positive outcomes; mindfulness-based training alters brain processes in a way that reflects more consistent attentional focus, enhanced sensory processing, and reflective awareness of sensory experience (e.g., Kilpatrick *et al.* 2011).

In the current chapter we review the literature on mindfulness that has implications for how individuals manage their work and family roles. Because the two critical components to mindfulness are (1) self-regulation of attention and (2) the adoption of an orientation toward one's experiences in the present moment, it has the potential to help individuals manage multiple role responsibilities. Further, a consideration of mindfulness-based concepts introduces the possible development of training tools that can be used to enhance work-family experiences. In our review, we include research investigating work-family variables as well as research with implications for work-family research. We delineate four pathways by which we believe mindfulness may relate to work-family experiences. The chapter closes with further suggestions for future research.

## **A review of relevant work-family literature**

### *Current approaches to work-family research*

Research on the work-family interface continues to grow at a rapid pace. Having long differentiated the domain-based roles of individuals into those that relate to work and those that do not, this literature now also distinguishes types of non-work roles (e.g., volunteer) including family roles (e.g., parent, spouse). For purposes of parsimony, we focus on the latter in this chapter, although much of our summary should also relate to the broader category of non-work roles.

As noted by Gutek, Searle, and Klepa (1991), the spillover between domains is bidirectional, such that work impacts family and family impacts work. One of the longest-studied paradigms of the work-family literature is that examining negative interdependencies between work and family roles. Studied under the rubric of work-family conflict (Greenhaus and Beutell 1985), we now have a large literature base identifying the causes, correlates, and outcomes associated with work-family conflict. More recently, positive interdependencies between these domains became a focus as theories concerning constructs such as work-family enrichment have been developed and tested (e.g., Greenhaus and Powell 2006). Another variable of interest within the work-family literature is work-family balance (Greenhaus and Allen 2011). Whereas work-family conflict and enrichment serve as linking mechanism constructs between work and

family roles, work-family balance takes a holistic, inter-domain focus. Specifically, work-family balance reflects an overall inter-role assessment of compatibility between work and family roles.

Historically, the majority of work-family research has been based on correlational, between-person investigations, studying the variation among people (e.g., women versus men). However, recent research includes the use of alternative designs such as diary or daily event methodologies (Paddock *et al.*, in progress; Rothbard and Wilk 2011; Shockley and Allen 2013) and quasi-experimental designs (e.g., Hammer *et al.* 2011). Daily methods allow for assessment within-people across work-family domains and highlight that a moderate amount of the variance in work-family concepts, including conflict and enrichment, occur within and between individuals. Quasi-experimental designs allow for the assessment of work-family interventions and are used to help clarify when and which work-family interventions are likely to be especially effective.

### *Defining work-family constructs*

The concept of how conditions or experiences in one domain (e.g. work) negatively impact conditions or experiences in another domain (e.g. family) is termed *work-family conflict* (Greenhaus and Beutell 1985). More specifically, work-family conflict is defined as “a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect” (p. 77). It can be time, strain, or behavior-based conflict. Time-based conflict results when time spent in one domain (e.g. home with young children) hinders the performance of responsibilities in the other domain (at work). Strain-based conflict occurs when demands including psychological pressures from one role (e.g. low autonomy work) make it difficult to engage in the other role (with family). Finally, behavior-based conflict results when behaviors required in one domain (e.g. objectivity at work) are carried into and conflict with the other domain (e.g. caring for others at home). The direction of the conflict is also commonly distinguished. Specifically, work interference with family (WIF) and family interference with work (FIW) are delineated as two related, but distinct variables.

A large body of research has investigated the predictors and outcomes associated with work-family conflict. For example, work-related

factors such as job stressors and job demands are positively associated with WIF while family-related factors such as family stressors and family demands are associated with FIW (e.g. Byron 2005). Dispositional variables such as negative affect have also been identified as predictors of both directions of work-family conflict (Allen *et al.* 2012). Both WIF and FIW have been associated with a wide variety of work-related (e.g. lower job satisfaction), family-related (e.g. lower family satisfaction), and health-related (e.g. higher depression) outcomes (Greenhaus, Allen, and Spector 2006).

Largely within the last decade, researchers have also assessed the positive impact resources within one domain (e.g. work) can have on a second domain (e.g. family), termed *work-family enrichment* (Greenhaus and Powell 2006). Like work-family conflict, work-family enrichment is a linking mechanism between domains. It builds on the perspective that individuals may benefit from holding multiple roles in different domains, and suggests two pathways – instrumental and affective – by which resources generated in one domain can benefit another domain. Resources included in Greenhaus and Powell's enrichment model consist of skills and perspectives, psychological and physical resources, social capital resources, flexibility, and material resources. Work-family enrichment shares many of the same predictors and outcomes associated with work-conflict, but with generally opposite relationships (Allen 2012). For example, greater work-family enrichment has been associated with higher job satisfaction and higher family satisfaction (e.g. Carlson *et al.* 2006).

A recent work-family concept is work-family balance. *Work-family balance* is defined as people's overall appraisal of their effectiveness and satisfaction with work and family life (Greenhaus and Allen 2011). Theoretically, role balance includes approaching all roles held and associated people with attentiveness and with care (Marks and MacDermid 1996). Balance is a relatively new concept to the work-family literature. Empirical evidence to date shows that longer work hours are associated with less perceived balance (Valcour 2007) and that greater time spent engaged in quality time with children is positively associated with perceived balance (Milkie, Kendig, Nomaguchi, and Denny 2010). With regard to outcomes, greater balance has been positively associated with greater satisfaction, organizational commitment, family satisfaction, family performance, and family functioning (Carlson, Grzywacz, and Zivnuska 2009).

### *Review of existing research connecting mindfulness and work-family*

To date only a handful of studies have investigated linkages between work-family variables and mindfulness. These studies are reviewed below.

**Mindfulness and work-family balance.** Allen and Kiburz (2012) is the first study of which we are aware that linked trait mindfulness and a work-family construct. The authors examined the relationship between trait mindfulness and work-family balance among a sample of working parents. Drawing on self-regulation theory, Allen and Kiburz suggested that the present moment awareness associated with mindfulness should enable individuals to immerse themselves with care and attentiveness while engaged in family and work roles, ultimately resulting in individuals feeling more effective and satisfied in these roles. As hypothesized, they found that those higher on trait mindfulness also reported greater work-family balance. They also reported that the relationship was mediated by sleep quality and by vitality.

**Mindfulness and work-family conflict.** Kiburz and Allen (2012) examined the link between trait mindfulness and each direction of work-family conflict in married employees with at least one child at home. Trait mindfulness explained significant unique variance in both WIF and FIW beyond known antecedents (number of children, work hours, and Big 5 personality variables) and contemplative practices (exercise frequency and yoga practice).

Building on these initial favorable cross-sectional results, Kiburz and Allen (2014) developed a mindfulness-based intervention (MBI) and tested its effectiveness in increasing trait mindfulness and decreasing work-family conflict. Training consisted of a one-hour workshop followed by thirteen days of behavioral self-monitoring (BSM). The workshop included an introduction to the concept of mindfulness, an opportunity to practice mindfulness through three exercises (sitting with the breath, body scan, and walking meditation), and tips for applying mindfulness into everyday life. At the end of the workshop, participants set goals for increasing their own mindfulness-based behaviors (i.e. *dismiss thoughts and bring mind back to present*).

The training was effective in increasing mindfulness. Participants also reported a decrease in WIF pre- and post-training, but not in FIW. Participants who returned the BSM diaries had significantly higher

knowledge of mindfulness and an increase in trait mindfulness at post-training in comparison with those who did not return the BSM diaries. BSM participants also had significantly lower post-intervention FIW than non-BSM participants.

**Mindfulness and work-family enrichment.** We are not aware of research to date that has examined mindfulness and positive interdependencies between work and family roles. However, there is some indirect evidence to suggest that such spillover may occur. In a three-person study, mothers who worked as caregivers within group homes for individuals with profound disabilities received mindfulness training (Singh *et al.* 2010). The training was provided to enhance their work with individuals with disabilities. The research showed that following mindfulness training, noncompliant behaviors of their own children decreased. The authors suggest this illustrates a transfer of training effect in that providing mindfulness training to employees responsible for the care of others at work transfers to the family domain through the interactions of the employees with their own children. Said in enrichment terms, these mothers were able to use the resource of mindful behavior learned at work with their children at home, obtaining benefit from this resource at home.

**Other mindfulness research with work-family implications.** While the research investigating mindfulness and work-family variables is sparse, there is a growing body of research demonstrating that mindfulness is associated with work-related wellbeing (e.g. Hulsheger *et al.* 2013; Leroy *et al.* 2013). This is relevant in that work-family conflict has long been linked with the stressor-strain literature (Greenhaus *et al.* 2006). Moreover, mindfulness training has been shown to be an effective tool for helping individuals cope with stress. For example, Roeser *et al.* (2013) examined the effects of mindfulness training on elementary and secondary school teachers from Canada and the United States. Outcomes investigated were occupational stress, absences from work, symptoms of anxiety and depression, and occupational burn-out. They also assessed physiological indicators such as salivary cortisol, blood pressure, and resting heart rate. Teachers who completed the mindfulness training reported feeling less stressed, anxious, depressed, exhausted, and burned out due to their jobs than those who did not complete the training. In addition, those who completed the training demonstrated greater focused attention and working memory capacity.

No differences were found with regard to physiological measures of stress.

**Summary.** Research demonstrating links between work-family experiences and mindfulness constructs (i.e., trait-like mindfulness or MBIs) is in its infancy. Initial studies that directly link these constructs, as well as research that indirectly speaks to these links, underscore the merit of further investigation of the mechanisms that potentially underlie these relationships. In the following section we describe four mechanisms that we believe may help explain linkages between work-family constructs and mindfulness.

### **Theory and mechanisms that underlie the link between mindfulness and work-family experiences**

The central mechanism thought to be responsible for the beneficial effects of mindfulness is the improved self-regulation of thoughts, behaviors, psychological reactions, and emotions (Desrosiers *et al.* 2013; Glomb *et al.* 2011). In this section we elaborate on four specific pathways.

#### *Attention and the minimization of distractions*

Attention is a key aspect of mindfulness. Mindfulness is “intentionally paying attention to present-moment experience (physical sensations, perceptions, affective states, thoughts and imagery) in a nonjudgmental way, thereby cultivating a stable and nonreactive awareness” (Carmody *et al.* 2008, p. 394). Attention research concerns how voluntary control and subjective experience arise from and regulate behavior (Posner and Rothbart 2007). The capacity to sustain attention is important to various aspects of life. Attention requires focus and concentration. It essentially requires withdrawal from some things in order to deal with others. Self-regulation of attention enables a person to be more aware of their present situation so that they are more quickly able to recognize any discrepancies from a standard. Dane (2011) explains that mindfulness is unique from other states of attention because it includes a wide field of attention and a focus on the present moment.

The opposite of attention is distraction. The promulgation of new technologies has given rise to what has been referred to as a societal



attention deficient disorder (Jackson 2009). Writers have opined that the Internet is demolishing our capacity for deep, sustained, and perceptive attention (Carr 2011; Jackson 2009). Texting during family dinners or reading work emails while attending a child's soccer game are frequent occurrences in everyday family life. Cultivating a mindful awareness can be a valuable self-regulatory behavior that facilitates greater attentional control (Carmody *et al.* 2008), which can impact work-family perceptions in several ways.

First, bringing full attentiveness to work and family roles while in the roles helps reduce the perceived problem of role management, helping to facilitate effective personal resource allocation (Marks and MacDermid 1996). Thus, more mindful individuals should be more effective in both roles and report overall appraisals of work-family balance that are higher than less mindful individuals. Second, full attentiveness provides the opportunity to increase the sense of connection with others that is an essential component of overall psychological wellbeing (Baumeister and Leary 1995). Greater connection should help foster greater role satisfaction, heightening work-family balance perceptions. Further, connection is itself a resource within each domain, and as a component of the enrichment process (*i.e.*, elements of both social capital and psychological resources) it may help in another domain, heightening work-family enrichment perceptions. Third, the self-regulatory skills enhanced by mindfulness should enable individuals to maintain focus in a given domain, particularly when demands in the other domain are high. This should result in greater effectiveness across both domains, and thus higher perceptions of work-family balance. Similarly, individuals who are able to maintain focus should feel less strain-based conflict between domains, reducing work-family conflict. Finally, self-regulatory skills are themselves a resource and to the extent that these are deepened in one or both domains, they should help increase work-family enrichment.

### *Emotion regulation*

Another pathway by which mindfulness may relate to work-family experiences is emotion regulation. Emotion regulation has been defined as the process by which individuals modify their emotional experiences, expressions, and physiology and the situations that elicit the emotions in an effort to produce appropriate responses to the

demands imposed by the environment (Aldao 2013). Emotion regulation processes include those that require significant effort (e.g., remaining calm while accompanying an injured child to the hospital) as well as those that are nearly automatic (e.g., laughing at a friend's funny joke). The process model of emotion regulation distinguishes between antecedent-focused processes (those that occur prior to appraisals generating a full-blown emotional response) and response-focused strategies (those that occur after emotional responses are generated) (Gross 1998; Webb, Miles, and Sheeran 2012).

Mindfulness has been referred to as an antecedent-focused form of emotion regulation as it changes the person's relationship to his or her emotions rather than the nature of the emotions themselves (Teper, Segal, and Inzlicht 2013). Recent meta-analytic work reveals that such cognitive change emotional regulation strategies are more effective than other strategies such as response modulation (e.g., attempting to control the experience of emotion) (Webb *et al.* 2012). In addition, trait mindfulness has been associated with reduced use of maladaptive emotion regulation strategies such as rumination (e.g. Desrosiers *et al.* 2013). Rumination is defined as "the process of thinking perseveratively about one's feelings and problems rather than in terms of the specific content of thoughts" (Nolen-Hoeksema, Wisco, and Lyubormirsky 2008, p. 400).

Effective emotion regulation is important to consider in the context of work-family in that mood states and traits have been consistently associated with work-family conflict (Allen *et al.* 2012; Judge, Ilies, and Scott 2006) and with work-family enrichment (Carlson *et al.* 2011; Paddock *et al.*, in progress; Wayne, Musisca, and Fleeson 2004). As Teper and colleagues explain (2013), mindful individuals still experience initial affective reactions. However, more mindful individuals experience fewer of the negative consequences of the long-term activation of affect. Based on emotion regulation more mindful individuals should experience more satisfaction with work and family roles (a primary component of work-family balance) and less negative affect or emotion over durations (associated with work-family conflict). In fact, mindfulness heightens the experience of visceral, short-term affect (Williams 2010). To the extent that the affective pathway of work-family enrichment involves experienced transient positive affect rather than founded positive emotions, mindful individuals who are better at emotion regulation should have greater experiences of enrichment.

In addition, improved emotional self-regulation may also help facilitate effective work and family boundary management (Allen, Cho, and Meier 2014). To achieve a desired boundary between work and family, individuals may have to regulate emotions that they experience, such as suppressing negative emotions from work or expressing positive emotions to family members. Ineffective emotion management may result in emotional dissonance; Sonnentag, Kuttler, and Fritz (2010) reported that emotional dissonance at work resulted from the necessity to display positive emotions when they were not felt, and this was negatively associated with psychological detachment from work. Mindfulness may better enable individuals to detach from negative events in one role while present in another (e.g., stop ruminating about a disagreement with a co-worker while helping a child with homework), a skill that should lessen the emotional dissonance experienced in each domain. Less dissonance should relate positively to work-family balance, and less dissonance may take the form of less strain-based conflict. Further, given mindful individuals' ability to be in the moment and focus on the positive affect they are experiencing, they may be better able to utilize the affective pathway of work-family enrichment, resulting in higher levels of enrichment.

### *Optimization of resource allocation*

Mindfulness may help optimize resource allocation, resulting in improved work-family experiences. Time and energy have been referred to as the two most critical personal resources required for meeting work and family demands (Valcour 2007). Individuals simultaneously managing work and family roles are faced with a variety of choices on any given day with regard to how they expend their time and energy resources; they must make decisions with regard to where, when, and how they expend their personal resources across various tasks within and across life domains.

For example, consider the typical faculty member. Time may be allocated to designing a new research study, answering email, meeting with a student, preparing for a lecture, reviewing a colleague's grant application, attending a dissertation proposal meeting, and meeting with a curriculum review committee, all within one day. Non-work time may be allocated to grocery shopping, meal preparation and cleaning, picking up children from school, driving children to and

from afterschool activities, miscellaneous childcare (e.g., helping with homework, bathing), miscellaneous household chores (e.g., laundry, paying bills), exercise, leisure, and sleep. Daily life requires performing multiple tasks simultaneously or in rapid alternation. For example, a parent may be cooking dinner and answering a child's question about homework. Switching from one task to another requires use of mental executive control processes (Rubinstein, Meyer, and Evans 2001). Executive control includes two distinct processes that involve the frontal lobes of the brain. One is goal shifting (deciding to do this versus that), and the second is rule activation (turning off the rules for that and turning on the rules for this). Switching from one task to another takes time. The time costs increase along with the complexity of the tasks. The awareness that is inherent in mindfulness should facilitate individuals' determinations of when it is best to engage in what task and enable them to do so with an attentiveness that promotes more effective completion of tasks. Effective resource allocation should make individuals more effective at both work and family roles, increasing work-life balance. Further, given the time savings associated with more accurately and effectively managing tasks in either role, more mindful individuals should experience less time-based work-family conflict. As it relates to work-family enrichment, optimizing use of energy and time within the work or family domain allows for greater flexibility in completing tasks. Recall that flexibility, defined as "the discretion to determine the timing, pace, and location at which role requirements are met" (Greenhaus and Powell 2006, p. 80), is itself a resource identified in the work-family enrichment model. Thus, more mindful individuals should also report greater work-family enrichment perceptions as the flexibility experienced at work (family) results in more time or energy that can be accessed within the family (workplace).

### *Time perception*

Mindfulness impacts the way individuals perceive time, including the time perspective they take. Time perspective refers to an individual's typical way of relating to the psychological concepts of past, present, and future (Boniwell and Zimbardo 2004). Time perception is important in that it plays a fundamental role in the selection and pursuit of social goals, motivation, and behavior (Cartensen 2006).

Although objectively time is a fixed resource, the subjective perception of time availability can be shifted (Rudd, in progress, manuscript a). Kramer, Weger, and Sharma (2013) focused on changes in state mindfulness and compared reports of time duration across participants who engaged in a ten-minute mindfulness meditation versus participants who listened to a ten-minute audio excerpt of *The Hobbit*. Afterwards both groups were asked to classify the duration of a stimulus. Those in the meditation condition classified the duration of the stimulus activity as longer than those in the audiobook condition. Similarly Rudd (in progress, manuscript a) compared the perceptions of time pressure of participants assigned to a future-focused condition and those assigned to a present-focused condition, finding that heightened present-focus during an event (watching a nature video) expanded participants' ensuing perceptions of current time availability. Other research has shown that thinking about the present moment slows down the perceived passage of time. Participants instructed to take long and slow breaths versus short and quick breaths perceived their day to be longer and felt that there was more time available to get things done (Rudd, in progress, manuscript b).

Related research shows a direct link between trait mindfulness and reports of time affluence (Kasser and Sheldon 2009; LaJeunesse and Rodriguez 2012). Time affluence is the feeling that one has sufficient time to pursue activities that are personally meaningful, to reflect, and to engage in leisure (Ben-Shahar 2007). Those who report high degrees of time affluence, report the ability to perform tasks at leisure and to deeply reflect on life's experiences.

Research on time perception is important to consider in the context of work-family experiences. Time scarcity has long been associated with multiple role engagement (Goode 1960) and much has been written about the "time famine" associated with modern life (e.g. O'Brien 2012; Perlow 1999). Central to the experience of work-family conflict is the feeling of insufficient time to effectively perform work and family responsibilities, thus we expect mindfulness relates to less work-family conflict through the reduction of perceived time scarcity.

The perception of time scarcity has downstream consequences in that time scarcity creates a mindset that leads individuals to engage in behaviors that help manage scarcity in the short term, but may not be beneficial for the long term. That is, time scarcity changes how individuals allocate attention. Because scarcity elicits engagement in

the problem at hand, it can result in the attentional neglect of other situations (Shah, Mullainathan, and Shafir 2012). This may result in a focus on the work or family role with the most immediate demands, resulting in the neglect of other roles. For example, a working parent with a project deadline may stay at work late to respond to this immediate demand, canceling plans to go to a movie with the family. The accumulation of these attention allocation decisions may result in a decrement of relationship satisfaction among family members as well as a lack of work-family balance.

Further, the time scarcity associated with lower mindfulness should relate positively to work-family conflict, and especially time-based conflict, as individuals perceive insufficient time to complete tasks in both domains. Finally, because they are focused on the task at hand these same individuals may take a narrower perspective and thus be less able to assess which resources from one domain will benefit the other domain.

For reasons reviewed in our discussion of attention, shifting individuals time perceptions to encourage them to stay in the present moment may allow individuals to derive more from work and home domains, resulting in heightened perception of work-family balance. Work-family conflict may be mitigated given that perceptions of time affluence provide individuals a chance for recovery from strain. Finally, work-family enrichment and the transfer of resources that it includes should be facilitated as individuals are able to reflect deeply on each domain, likely coming to a better understanding of how to function in that domain as well as what resources may be transferable across domains.

### **Additional suggestions for future research**

In the previous section we posed four pathways by which mindfulness may be linked to work-family constructs: attention and minimizing distractions, emotion regulation, optimization of resource allocation, and time perception. Research investigating these pathways is important to further our understanding of how mindfulness may be beneficial to individuals managing multiple role responsibilities. In the following section we further draw from the mindfulness and work-family literatures to offer several directions for future research that go beyond these specific mechanisms identified. As discussed in

this review, research linking mindfulness and work-family is in a nascent stage, leaving the door open for many new lines of research.

### *Consideration of multiple construct dimensions*

Mindfulness has been conceptualized in multiple ways. Most workplace mindfulness research to date has been based on the dispositional, single dimension approach as assessed by the Mindful Attention Awareness Scale (Brown and Ryan 2003). However, mindfulness has also been conceptualized as multidimensional, with subscales that include observing, describing, acting with awareness, nonjudging of inner experience, and nonreactivity to inner experience (Baer, Smith, and Allen 2004; Baer *et al.* 2008). These facets are correlated modestly and have demonstrated discriminant validity (Baer *et al.* 2008; Emanuel *et al.* 2010). For example, research has shown that mindfulness facets do not operate homogeneously with regard to outcomes such as depression and anxiety (Desrosiers *et al.* 2013).

Work-family constructs are also multidimensional. As described previously, work-family conflict includes dimensions such as time, strain, and behavior. Constructs reflecting the positive side of the work-family interface (e.g., work-family enrichment) also include multiple dimensions such as development (e.g., skills, knowledge, behaviors), affect (e.g., positive emotional state or attitude), and capital (e.g., security, confidence) as different resources that can be transferred from one domain to another (Carlson *et al.* 2006).

Taking a more granular approach may yield new insights into the beneficial links between mindfulness and work-family experiences. It could be speculated that the ability to distance oneself from everyday thoughts and worries (e.g., nonjudgment and nonreactivity to inner experiences) would be more likely to prevent strain-based work-family conflict than would the observation of the present moment aspect of mindfulness. In contrast, acting with awareness may enable individuals to identify and develop solutions for time-based conflicts more so than labeling emotions and cognitions. With regard to work-family enrichment, distancing oneself from everyday thoughts and worries may better allow for use of the affective pathway while acting with awareness and being attentive to role-partners may enable the development and transfer of skills.

### *Mindfulness and family-supportive supervision*

Thus far, we have primarily considered mindfulness as a tool that individuals can cultivate to improve their own multiple role management. However, work-family experiences do not occur in a vacuum. Others within an individual's social system also contribute to the ease or difficulty by which individuals are able to juggle work and family roles (Kossek *et al.* 2011). Research has shown that supervisor behaviors in particular are associated with work-family experiences. Family-supportive supervision is defined as behaviors displayed by supervisors that are supportive of employees' family roles (Hammer *et al.* 2009). A considerable body of research has demonstrated that greater family-supportive supervision is associated with less work-family conflict (e.g., Allen 2001; Lapierre and Allen 2006) and that supervisors can be trained to be more family-supportive (Hammer *et al.* 2009).

Brown *et al.* (2007, p. 225) suggested that mindfulness may "promote interaction styles that support healthy relationship functioning and enhance overall relationship quality." Thus, mindfulness training may be useful as a component of family-supportive supervisor training. Indeed, in a study investigating leader mindfulness Reb, Narayanan, and Chaturvedi (2014) found that greater leader trait mindfulness was associated with employees who reported more work-life balance. More mindful supervisors may respond to employee requests for accommodations that enable them to manage multiple role responsibilities with greater creativity and attentiveness. This is important in that informal accommodations have been shown to relate to less work-family conflict (Behson 2005).

### *Methodological advancements*

Consideration of methodological issues is needed to advance mindfulness-based work-family research. As discussed earlier, one aspect of mindfulness that we believe is powerful for improving work-family experiences is attention within role. The ability to remain attentive to others and in the present moment is a hallmark of mindfulness. The former of these especially can best, and possibly only, be captured through reports provided by others. For example, spouses can provide reports of the extent that the partner is attentive in the



family domain, while supervisors can provide reports of attention and engagement in the work domain. Such data could be particularly useful in investigating the effectiveness of MBIs.

Investigating episodes of work-family conflict in addition to the common between-subjects levels approach may also be useful (Maertz and Boyar 2011; Shockley and Allen 2013; Shockley and Allen, *in press*), especially because results based on episodes differ from those based on levels. For example, Shockley and Allen (*in press*) found no differences in the frequency that WIF episodes versus FIW episodes were reported by participants, whereas between-subjects levels assessment of work-family conflict consistently finds higher reported levels of WIF than FIW. Conflicts between work and family typically transpire at specific times and require in-the-moment behavioral decisions (e.g., agreeing to stay late at work to make a deadline, thus missing a child's baseball game). Given that mindfulness has been shown to improve decision making (e.g., by reducing the sunk cost bias, Hafenbrack, Kinias, and Barsade 2014), it may also help individuals make decisions that involve competing work and family demands with clarity (Shockley and Allen, *in press*). Assessment of work-family enrichment episodes may yield similarly interesting findings, and may better highlight the role of decision making in resource allocation between domains.

Another avenue for future research is to supplement survey data with data collected through other methodologies. Wearable technology tools such as mobile neurophysiological monitoring devices and sociometric badges have the potential to illuminate the processes by which mindfulness is beneficial.

Evidence shows mindfulness meditation training to alter neural activity (Berkovich-Ohana, Glicksohn, and Goldstein 2012). Brain functioning can be characterized by three fundamental electrophysiological concepts: (a) characteristics of the electrical signal in terms of frequency and amplitude, (b) spatial location of the sources of brain electrical activity, and (c) pattern of connectivity across the brain (neural network dynamics). For example, relaxed and inattentive states are associated with greater amplitude and lower frequency brain wave patterns, while excited, working or attentive states are associated with lower amplitude and greater frequency (Hannah *et al.* 2013). Recent advances in mobile neurophysiological monitoring devices capture real-time electroencephalography (EEG) data that provide

information on neurological processes. Such devices permit the practical application of quantitative EEG in studying interactions as they occur. This methodology could be used to compare the neurophysiological patterns that occur when responding to a work-family conflict or enrichment as moderated by trait mindfulness.

Sociometric badges are wearable sensing devices that collect data on face-to-face communication interaction in real time (Waber 2013). The device is able to record multiple types of information such as the physical proximity to others, location in the environment, motions (e.g., posture, running), and communication patterns (e.g., volume of speech, speaking speed, turn taking). Sociometric devices could be used to examine work-family phenomena such as those that involve interactions between employees and supervisors negotiating the use of flexible work arrangements. Based on the research concerning mindfulness and leadership noted above, one might expect these negotiations to be more successful with leaders higher rather than lower in trait mindfulness. Sociometric devices may also provide support for mindfulness-based training, as those who receive such training may engage more in these interactions. Such beneficial interactions with others likely produce patterns (e.g., in proximity to others and communication patterns) that differ from less mindful interactions.

### *Role transitions*

The cultivation of mindfulness may be particularly beneficial to the process of transitioning across work and family roles (Allen, Cho, and Meier 2014). Because role crossing is an effortful process that involves self-regulation, the present moment awareness component of mindfulness may better enable individuals to psychologically detach from one role and smoothly enter into another, possibly relating positively to work-family balance and negatively to work-family conflict. Effectively transitioning across roles may be particularly challenging when self-regulatory resources are depleted. As an example, consider the employee whose last interaction while at work was with an angry customer who upon returning home is greeted with the news that his child failed an exam at school. The employee may still be preoccupied with emotions associated with the customer interaction while simultaneously experiencing emotional responses of anger, disappointment, and/or worry activated by the news of the failed exam.

The effortful suppression of negative emotions while dealing with the angry customer at work would require the employee to draw upon self-regulatory resources. Such self-regulation draws on finite resources and impacts subsequent performance of behaviors necessitating self-regulation (Baumeister, Vohs, and Tice 2007). To effectively transition to the family role this individual must put aside thoughts of the angry customer (i.e., leave the work role) and engage with family members with regard to the failed exam (i.e., enter the family role). An individual higher in mindfulness and better able to regulate emotion is better able to make this transition.

### *Less favorable effects of mindfulness*

Consistent with the larger literature on mindfulness as reviewed, the relationships we propose between mindfulness and work-family experiences take a decidedly positive perspective. However, it seems possible that mindfulness may also have some negative consequences, and identifying these also deserves research attention.

One way in which mindfulness may have potential negative ramifications is that completely investing a present role may encourage individuals to view their underlying identities as being in conflict and manage them as such. Individuals' identities (e.g., employee, parent) are evident in, and sometimes even synonymous with, the roles they hold in work and family domains. By focusing entirely on the present role, individuals may be less likely to integrate the identities that make up these roles. Individuals manage their identities in multiple ways, including a focus on one identity to the exclusion of others (as discussed in the previous paragraph) to an integration of identities into a compatible whole (Roccas and Brewer 2002). Individuals who view their own identities – their values, attitudes, and expectations – as more compatible are high in identity integration (Cheng, Sanchez-Burks, and Lee 2008). In contrast, individuals low in identity integration view roles as less compatible, suppress one identity while the other is activated, and alter their behaviors between contexts. Individuals high in identity integration are able to access resources from both domains simultaneously and thus show higher levels of creativity (Cheng *et al.* 2008) and have more diverse social networks (Mok, Morris, Benet-Martinez, and Karakitapoglu-Aygun 2007) than individuals low in identity integration. With regard to work-family experiences this is important in

that higher identity integration may result in greater transference of resources across domains, resulting in greater work-family enrichment.

Multivariate models are needed to better understand the potential interplay between both the positive and the negative links between mindfulness and work-family experiences. For example, it may be that the detrimental effects of a negative relationship between mindfulness and identity can be compensated by other benefits of mindfulness. This is an empirical question, and as with the other ideas for future research discussed here, further research is required to identify how this aspect of work-family and mindfulness relates.

## Conclusion

In addition to better understanding the role that trait mindfulness plays in individuals' work-family experiences, the cultivation of mindfulness practice through training may be one tool that can help regulate affect and promote healthy work-family connections. In this chapter we review the literature that links mindfulness with work-family constructs, identify four potential mechanisms that may help explain this link, and suggest future directions for research. We hope these ideas inspire additional research on this timely topic.

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