Leader Mindfulness and Employee Performance: A Sequential Mediation Model of LMX Quality, Interpersonal Justice, and Employee Stress

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1

Abstract

In the present research, we examine the relation between leader mindfulness and employee performance through the lenses of organizational justice and leader-member relations. We hypothesize that employees of more mindful leaders view their relations as being of higher leader-member exchange (LMX) quality. We further hypothesize two mediating mechanisms of this relation: increased interpersonal justice and reduced employee stress. In other words, we posit that employees of more mindful leaders feel treated with greater respect and experience less stress. Finally, we predict that LMX quality serves as a mediator linking leader mindfulness to employee performance—defined in terms of both in-role and extra-role performance. Across two field studies of triadic leader-employee-peer data (Study 1) and dyadic leader-employee data (Study 2), we find support for this sequential mediation model. We discuss implications for theorizing on leadership, organizational justice, business ethics, LMX, and mindfulness, as well as practical implications.

Introduction

Organizational interest in mindfulness – which can be defined as an open, present-centered awareness and attention (Bishop et al. 2006; Brown et al. 2007) – has increased significantly over recent years. This interest is driven by a substantial body of research showing a broad range of well-being and functioning benefits of being mindful such as lower anxiety and greater cognitive performance (e.g., Baer 2003; Chiesa and Serretti 2009; Chiesa et al. 2011; Eberth and Sedlmeier 2012). Building on this work, a growing body of organizational research has similarly found intrapersonal benefits of mindfulness at work in the areas of well-being and functioning (Good et al. 2016; Reb and Atkins 2015). Among others, research has related mindfulness to lower emotional exhaustion and greater job satisfaction (Hülsheger et al. 2013), greater performance (Dane and Brummel 2014), greater organizational citizenship behaviors and lower deviance (Reb, Narayanan, et al. 2015), and lower turnover intentions (Reb et al. 2017).

However, it has been argued that research on workplace mindfulness has been limited in at least two major ways. First, most research on mindfulness at work has focused on *intra*personal effects of how employee mindfulness benefits the employee him- or herself (Good et al. 2016; Sutcliffe et al. 2016). This is unfortunate, given that *inter*personal relations and interactions are at the core of organizational phenomena (Weick 1979). This approach has also been criticized as a decontextualized individual-level approach to mindfulness (Purser & Mililllo, 2015). In contrast, in leadership research relations between leaders and employees have received considerable research attention (e.g., Dachler 1992; Dulebohn et al. 2012; Gerstner and Day 1997; Uhl-Bien 2006). As Bennis (2007, p. 3) stated however, at its basic level, "leadership is grounded in a relationship".

While past research has argued that leader mindfulness may lead to better leader-member exchange (LMX) relations (Reb et al 2014), empirical evidence is lacking about

3

whether leader mindfulness helps in developing and maintaining high-quality relations with employees, as past research on leader mindfulness has focused either on how employees react to mindful leaders (i.e., experience more need satisfaction, less emotional exhaustion) or on what mindful leaders do (i.e., behave procedurally fairly). However, we believe there are good reasons to expect leader mindfulness to lead to better leader-employee relations. For example, as Good and colleagues (2016) argued, mindfulness may be associated with "greater attention to others, better communication, reduced conflict, reduced emotional reactivity, and greater expression of other-directed emotions" (p. 126). Reb and colleagues (2014) argued that "improvements in justice perceptions, supervisor support, and other possible factors may contribute to a generally favorable perception of the relation between the leader and the employee" (p. 43).

Second, research on mindfulness at the workplace has been criticized for neglecting the connection between mindfulness and ethics that features prominently in Buddhist approaches to mindfulness (e.g., Kudesia and Nyima 2015). Some scholars have warned that without such a foundation, mindfulness is in danger of turning into "McMindfulness"— an approach to mindfulness similarly corporatized as the McDonald's fast food chain—and given the example of mindfulness training for military snipers for how ethics have been sidelined in favor of managerial interests (Purser and Milillo 2015). From this perspective, more mindful leaders may use their ability to focus their attention on the present in an instrumental manner to extract more from their employees. However, to date little empirical research sheds light on whether mindfulness, construed as we do in this research as an attentional construct devoid of ethical connotations, actually is associated with unethical interpersonal leader behaviors.

Against this backdrop, we examine the role of mindfulness in leadership. We foreground the relational and ethical nature of leader mindfulness by examining its relation

with leader-member relationship quality as well as organizational justice. Specifically, in the present research, we test whether leader mindfulness facilitates employee performance (both in-role and extra-role) through the mediating process of LMX quality: the quality of the dyadic relationship between a leader and a follower (Graen and Uhl-Bien 1995). In other words, we posit that employees of more mindful leaders will experience higher quality relationships with their leaders. Moreover, we posit significant mediating roles of interpersonal justice and employee stress: mindful leaders enhance LMX quality by engaging in interpersonally fair behaviors that treat employees with respect and consideration (Masterson et al. 2000; Scandura 1999) and by lowering employee stress (Hui et al. 1999).

We test these hypotheses (see also Figure 3) in two field studies of leader-employee dyads. Study 1 assesses leader mindfulness (as the independent variable), LMX quality (as the second-stage mediating variable), and in-role and extra-role performance (as the dependent variables). Study 2 replicates and extends Study 1 by also assessing interpersonal justice and employee stress (as the first-stage mediators) and thus tests the entire sequential mediation model. We decided to take a quantitative, rather than a qualitative, approach because our goal is to deductively test the hypotheses outlined above. Theorists have argued that mindfulness can be described as "a state-level construct that can also be assessed at the trait level" (Dane 2011, p. 999). We decided to take a trait-level approach to mindfulness because we are interested in leader-employee relations and employee performance that reflect experiences and behaviors over extended time periods, making a state-level approach less suitable.

We believe that our research makes several noteworthy contributions. First, our research contributes to the emergent study of mindfulness and ethics. So far, this literature has focused more on exploring the ethical foundations of mindfulness within the Buddhist context (e.g., Qiu and Rooney 2017) and on ethical decision making (Pandey et al. 2017;

Ruedy and Schweitzer 2010; Shapiro et al. 2012), rather than on its relation to just behaviors at the workplace. Organizational justice represents a major way in which leaders enact ethical behaviors (Neubert et al. 2009) and a large body of research attests to the benefits of such behaviors, in terms of leader-employee relations (Masterson et al. 2000) and employee and organizational outcomes (Colquitt et al. 2001). Yet, despite this important role, little empirical research has studied antecedents of fair leader behavior. With respect to mindfulness in particular, Schuh and colleagues (2017) recently showed a positive relation between leaders' mindfulness and procedural justice. In the present research, we complement this work by examining leader mindfulness as an antecedent of interpersonal justice, which has been shown to be particularly important for leader-employee relations (e.g., Masterson et al. 2000; Rupp and Cropanzano 2002). If leader mindfulness indeed is associated with fairer interpersonal treatment of employees, it would help alleviate concerns that mindfulness, approached from an attentional perspective void of ethical connotations, leads to unethical behaviors (e.g., Purser and Milillo 2015; Reb, Sim et al 2015).

Second, although a large amount of research has studied LMX, much of this work has focused on the nature and consequences of high-quality leader-member relations (e.g., Dulebohn et al. 2012; Gerstner and Day 1997; Uhl-Bien 2006). The present research responds to calls for more research on the factors contributing to LMX as well as on the integration of antecedents and consequences of LMX quality (Dulebohn et al. 2012). By examining leader mindfulness as antecedent of LMX, and the mediating processes of interpersonal justice and employee stress, we increase understanding of the attentional, self-regulatory, and relational processes through which leaders maintain high quality relationships with their employees, and how these in turn influence employee performance.

Finally, we respond to recent calls (Good et al. 2016; Reb et al. 2014; Sutcliffe et al. 2016) to go beyond most of the mindfulness literature and examine the interpersonal aspect

of mindful leadership, thus contributing to the emerging literature on workplace mindfulness. By examining the relation between leader mindfulness and LMX quality through the mediating processes of interpersonal justice and employee stress, we put to an empirical test recent conceptual arguments that mindfulness may help leaders establish high-quality relationships with their employees and advance knowledge of the mediating processes through which leader mindfulness influences employee performance (Reb et al. 2014). By showing that leader mindfulness is related to how much stress employees experience and how interpersonally fairly they feel treated, we shed light not only on how leader mindfulness supports better leader-employee relations, but also discover novel ways in which leader mindfulness benefits employees with respect to their health, well-being, and sense of justice at work (Reb et al. 2014; Schuh et al. 2017).

Mindfulness and Ethics

In the present research, we approach mindfulness from a secular perspective as an open, present-centered awareness and attention (Bishop et al. 2006; Brown et al. 2007). This approach has been criticized by scholars approaching mindfulness from a Buddhist perspective (Purser and Milillo 2015). Long before secular approaches to mindfulness, the concept, and particularly the practice, of mindfulness has been central to Asian contemplative traditions such as Buddhism. In traditional Buddhist contexts, mindfulness and ethics are closely intertwined as the study of and adherence to ethical principles is considered a precondition for training of mindfulness, producing what is known as "right mindfulness" (Grossman 2011; Kudesia and Nyima 2015; Monteiro et al. 2015). Ethical conduct along with cultivation of attention and wisdom is regarded as the one of the three fundamental pillars of mindfulness in Buddhism (Thanissaro 1998). Right mindfulness thus entails a focus on present-moment events and actions that is directed by ethical principles. From this perspective, mindfulness, by definition, entails not merely attention and its quality (e.g.,

7

openness), but also intention and ethicality (Shapiro et al. 2006). From this perspective, mindfulness is not necessarily non-judging and accepting, but involves discerning and choosing wholesome states of mind and actions from those that are unwholesome and harmful to self and others (Bodhi 2011; Kudesia and Nyima 2015; Purser and Milillo 2015).

Indeed, Purser and Milillo (2015, p. 3) refer to mindfulness conceptualized purely from an attentional perspective as "denatured mindfulness divorced from its soteriological context" and they argue that it "reduces it to a self-help technique that is easily misappropriated for reproducing corporate and institutional power, employee pacification, and maintenance of toxic organizational cultures". In a related vein, Reb, Sim, and colleagues (2015) pointed out that when mindfulness is defined from an attentional perspective, it is possible that "a leader may use presence for selfish, political, or antisocial goals" (p. 261). Yet, at the same time, they pointed out that mindfulness, defined as a present-centred attention, may better enable leaders to "communicate their genuine care and respect to their subordinates" (p. 262). Overall, these arguments point to the need for more empirical research on the role of mindfulness in leadership.

Mindfulness in Leadership

Whereas a considerable amount of empirical and conceptual work has explored the role of mindfulness at work, little is known about the role of mindfulness in leadership. Indeed, it is largely practitioner-oriented writing that has argued that mindful leaders are more effective at their jobs (e.g., Boyatzis and McKee 2005; Carroll 2008; Goldstein 2011). Although a limited amount of organizational scholarship has discussed these claims (e.g., Reb, Sim, et al. 2015; Sauer and Kohls 2011), empirical evidence on the role of mindfulness in leadership remains scarce.

As Good et al. (2016: p. 128) have pointed out, although there is precedent to suggest that mindfulness may relate to leadership, "management scholars have not yet seriously

undertaken that challenge" of understanding the role of mindfulness in leadership. Among the limited research, Liang and colleagues (2016) found that leader mindfulness moderated the relation between employee performance and abusive supervision such that more mindful leaders were less likely to engage in abusive behavior following poor employee performance. Others have found that mindful leaders are seen by subordinates as engaging more often in behaviors associated with servant leadership (Verdorfer 2016) and are rated by supervisors as demonstrating greater self-mastery as leaders (King and Haar 2017).

Focusing on the link between leader mindfulness and employee performance, a main interest of the present research, Reb, Narayanan, and Chaturvedi (2014) found in two field studies that employees of mindful leaders were less emotionally exhausted, more satisfied with their jobs, and performed better, at least partly because they felt greater psychological need satisfaction. Building on this work, Schuh and colleagues (2017) found similarly that employees of more mindful leaders were less emotionally exhausted and performed better, because they felt their leaders acted with greater procedural justice. These studies have thus not only found empirical evidence of leader mindfulness enhancing employee performance, they also provided initial insights into the mediating variables underlying this relation.

LMX Quality as Mediator of the Leader Mindfulness–Employee Performance Relation

Extending existing research, posit that one pathway in which leader mindfulness can have beneficial effects is through greater relationship quality. We develop this argument by drawing on relational leadership theories which emphasize that leaders' effectiveness depends to a large extent on their ability to create and maintain high quality relationships with their subordinates (Uhl-Bien 2006). Leader-member exchange research argues that "effective leadership processes occur when leaders and followers are able to develop mature relationships (partnerships) and thus gain access to the many benefits these relationships bring" (Graen and Uhl-Bien 1995, p. 225). According to social exchange theory (e.g., Blau

1964; Homans 1958), high-quality relations are developed and maintained through the exchange of valued resources that create mutual obligations governed by norms such as reciprocity (Cropanzano and Mitchell 2005). The resources exchanged need not be economic in nature, but can also by socioemotional or symbolic. Indeed, it is often the exchange of such less tangible resources that characterizes less transactional and higher quality relations (e.g., Foa and Foa 1980).

We suggest that leader mindfulness supports high-quality LMX relationships because mindful leaders are better able to provide support and (socioemotional) resources to their employees. Kahn (1992) posited that employees who are in relationships with more psychologically present leaders will be given the resources to explore a fuller range of their workplace experiences. Reb and colleagues (2015) similarly argued that mindful leaders, through their open presence, can provision greater resources to their employees. Receiving support from their leaders, employees perceive that they have high quality LMX relations and feel an obligation to reciprocate. This, in turn, should result in greater in-role and extra-role performance (Dulebohn et al. 2012). Over time, such reciprocal resource exchange further develops mutual trust, respect, open-ended obligations, and a move beyond self-interest to larger mutual interests. This leads to mature, high-quality LMX relationships that further enhance employee performance, both in-role and extra-role (Graen and Uhl-Bien 1995; Uhl-Bien 2006; Uhl-Bien and Graen 1993).

Empirically, albeit not in a work context, research in domains such as romantic relationships (e.g., Barnes et al. 2007; Block-Lerner et al. 2007; Wachs and Cordova 2007) and parent-child relationships (e.g., Coatsworth et al. 2010; Singh et al. 2006) suggests that mindfulness positively relates to relationship quality. Further, meta-analytic evidence shows that LMX quality is positively related to employee in-role performance and extra-role performance (Dulebohn et al. 2012; Gerstner and Day 1997).

10

Based on the above, we expect that leader mindfulness will be positively related to LMX quality and employee in-role and extra-role performance and that LMX quality will mediate the relation between leader mindfulness and employee in-role and extra-role performance.

H1: Leader mindfulness will be positively associated with LMX quality.

H2a: Leader mindfulness will be positively associated with employee in-role performance.

H2b: Leader mindfulness will be positively associated with employee extra-role performance.

H3a: LMX quality will mediate the relation between leader mindfulness and employee in-role performance.

H3b: LMX quality will mediate the relation between leader mindfulness and employee extra-role performance.

How specifically do mindful leaders support employees and create high quality relations? In what follows, we identify two likely mediating processes: interpersonal justice and employee stress. Specifically, first, we argue that employees will perceive mindful leaders as more interpersonally fair. Employee interpersonal justice perceptions, in turn, will lead to greater LMX quality. Second, we argue that employees of mindful leaders will feel less stressed. Employee stress, in turn, will lead to lower LMX quality. Thus, overall, we predict multiple sequential mediation in which leader mindfulness positively relates to interpersonal justice and negatively relates to employee stress, both of which in turn predict LMX quality (positively and negatively, respectively).

Leader Mindfulness, Interpersonal Justice, and LMX Quality

A large body of research has studied the importance of employee justice perceptions (see Colquitt et al. 2001). Whereas the initial research focused on distributive justice (or the

justice of the distribution of valued resources) and procedural justice (or the justice of the decision processes used to distribute resources), subsequent research discovered the importance of interpersonal justice (Greenberg 1987; Leventhal et al. 1980). Employee interpersonal justice perceptions have been shown to predict the extent to which employees engage in negative behaviors such as rule breaking, theft, and retaliation, and in positive behaviors such as helping others and performing well on their work tasks (see Colquitt 2001; Colquitt et al. 2001).

The essence of interpersonal justice consists in supervisors and organizations treating employees with consideration and respect, which can be defined as showing due regard for the feelings, wishes, and rights of others (Bies and Moag 1986). This suggests an important connection to mindfulness: the attentional and emotional presence characteristic of mindfulness is likely to be a significant antecedent for consideration and respect. An open presence creates a foundation for mindful leaders to engage with employees in non-scripted ways that are responsive to the feelings and needs of the employee, to adjust their behaviors to the specific employee with whom they are interacting, and to accept employees for who they are rather than to judge them (Carson et al. 2004), thus increasing employee interpersonal justice perceptions. Also, given that leaders' attention is limited and becoming increasingly scarce, especially in this age of attentional overload (Simon 1971; van Knippenberg et al. 2015), the full presence of a mindful leader is a scarce resource that is likely experienced as a sign of respect and consideration.

In contrast, a leader who is absentminded and distracted with a subordinate is likely perceived as disrespectful and inconsiderate. A mindless leaders' presence may be diverted during interactions with employees due to their attention being occupied with internal activities such as worrying, ruminating, or daydreaming, or with external activities such as typing on the computer or looking at their mobile phones. Research on workplace incivility

(e.g., Pearson et al. 2000; Schilpzand et al. 2016) helps to further understand the potential relation between mindfulness and interpersonal justice. As Andersson and Pearson (1999, p. 457) point out: "Uncivil behaviors are characteristically rude and discourteous, displaying a lack of regard for others." Examples of uncivil behaviors include "neglecting to greet one another, cutting people off while speaking" (Pearson et al. 2000, p. 126) and it is easy to see how mindless leaders would be more likely to engage in such behaviors due to their absentmindedness. This may be perceived as both uncivil and interpersonally unfair due to the lack of respect displayed.

Thus, based on the above, we hypothesize a positive relation between leader mindfulness and employee interpersonal justice perceptions. Moreover, consistent with past theorizing and empirical findings, we predict a positive relation between employee interpersonal justice perceptions and LMX quality (Masterson et al. 2000; Rupp and Cropanzano 2002; Sparr and Sonnentag 2008). In particular, whereas employees tend to rely on their perceptions of procedural justice when assessing the organization more broadly, employees tend to rely on their perceptions of interpersonal justice to assess their supervisor in particular (Bies and Moag 1986). As Masterson and colleagues (2000, p.740) argued: "employees perceive acts of fairness to be contributions that enhance the quality and desirability of their ongoing relations." In turn, these contributions obligate employees to reciprocate as part of ongoing social exchange relationships. Thus, to the extent that employees perceive that they are treated fairly by their supervisor, they will perceive their relation with the leader in ways characteristic of high-quality LMX relations, such as mutual trust, respect, and obligation. Overall, we thus posit the following hypotheses.

H4a: Leader mindfulness will be positively associated with employee interpersonal justice perceptions.

H4b: Employee interpersonal justice perceptions will mediate the relation between

leader mindfulness and LMX quality.

H4c: There will be a sequential mediation from leader mindfulness to employee in-role performance through interpersonal justice and LMX quality.

H4d: There will be a sequential mediation from leader mindfulness to employee extra-role performance through interpersonal justice and LMX quality.

Leader Mindfulness, Employee Stress, and LMX Quality

Stress is an evolved physiological and psychological response to demanding situations that influences how people put their personal resources to use (Lazarus and Folkman 1984; Motowidlo et al. 1986). While stress can have adaptive functions in the short-term, prolonged and chronic stress has pernicious long-term effects on health, wellbeing, and performance (Maslach et al. 2001; Moore 2000). A considerable amount of research has established a negative relation between mindfulness and stress (Baer 2003; Chiesa and Serretti 2009; Eberth and Sedlmeier 2012; Grossman et al. 2004). Within a workplace context, research has also found that mindfulness is negatively related to stress and emotional exhaustion in employees (Good et al. 2016).

However, past research has taken an intrapersonal perspective, examining the relation between a person's mindfulness and that person's level of stress. In the present research, we instead examine how one person's (i.e., a leader) mindfulness relates to another person's (i.e., an employee) stress. We believe there are good reasons to expect this interpersonal effect of leader mindfulness on employee stress. For example, given the research reviewed above, the more mindful leaders are, the less stressed they are expected to be. Meta-analytic research suggests that leader stress influences leader behaviors and these leader behaviors, in turn, influence employee stress (Harms et al. 2017). Specifically, Harms et al. (2017) found that leader stress is associated with reduced transformational leadership and increased abusive supervision, which in turn are negatively and positively (respectively) associated with

employee stress. Also, leaders' lower stress levels can translate into lower stress levels for leaders' subordinates through the process of emotional contagion (Hatfield et al. 1994). Indeed, a large body of work supports the idea that leaders exhibit strong contagion effects on employees (e.g., Anderson et al. 2003; Lewis 2000; Sy et al. 2005).

Also, mindful leaders, partly by being less stressed themselves, may have a greater capacity to support their subordinates. Stress is associated with a feeling of lack of energy, control, and efficacy, and the accompanying physical and psychological state may preclude less mindful and more stressed leaders from spending limited resources on others, such as their employees (Demerouti et al. 2001). Instead, such leaders will be more likely to focus their efforts and resources on regulating their stress level, for example, by reducing effort and spending more time on recovery. Mindful leaders, by being better able to regulate their attention and emotions, may be more attuned to their subordinates, which allows them to provide subordinates with more appropriate support as needed (Reb, Sim, et al. 2015). An abundance of research on social, organizational, and supervisory support, in turn, suggests that when employees experience more support from their leaders, they are better able to cope with work stressors and as a result experience less stress (Babin and Boles 1996; Ganster et al. 1986; Rhoades and Eisenberger 2002; Viswesvaran et al. 1999).

As employees experience less stress as a result of the support they receive from their leader, their perceptions of LMX quality are expected to increase. Although most empirical research has not focused on employee stress per se, the existing research supports a negative relation between employee negative affectivity, which is closely intertwined with stress, and LMX quality (e.g., Bernerth et al. 2007; Hochwarter 2005; Hui et al. 1999). These studies suggest that "if a person tends to view life negatively, this person may be less likely to build effective work relationships with others" (Hui et al. 1999, p. 8). Overall, as stress erodes available resources (Hobfoll 1989) and is associated with negative affect, we suggest that

stress will reduce employee investment in interpersonal relations and thereby reduce LMX

quality. We posit the following hypotheses.

H5a: Leader mindfulness will be negatively associated with employee stress.

H5b: Employee stress will mediate the relation between leader mindfulness

and LMX quality.

H5c: There will be a sequential mediation from leader mindfulness to employee in-

role performance through employee stress and LMX quality.

H5d: There will be a sequential mediation from leader mindfulness to employee

extra-role performance through employee stress and LMX quality.

Study 1

Method

Procedure and Sample

Participants for this study were recruited by trained undergraduate students enrolled in

a management course at a university in Singapore. This is a commonly used method and

several studies suggest that data quality using this method is comparable to using more

traditional procedures (e.g., Hazer and Highhouse 1997; Reeve and Smith 2001). The

students were trained to recruit supervisors, their immediate subordinates, and peers (to

provide ratings of extra-role performance) to participate in the study. By research design,

each student recruiter could recruit only one triad. Students were given course credit if all

three members of the triad participated in an online study on mindfulness at the workplace.

In total, 88 triads had at least one participant, and we had complete data from 76

triads, which constitute the sample for this study. The leader sample was 52% male and 42.5

years of age on average. The employee sample was 42% male and 37.9 years of age on

average. The peer sample was 40% male and 33 years of age on average. All three samples

were primarily Singaporean by nationality and Chinese by ethnic descent. Leader, peer, and

employee variables were assessed at around the same time. The surveys were in English and all respondents were fluent in English, which is one of the national languages of the country.

Measures

Leader mindfulness. We decided to measure mindfulness with the Mindfulness Attention and Awareness Scale (MAAS; Brown & Ryan 2003) as a unidimensional mindfulness scale—rather than using a multidimensional scale such as the Five Factor Mindfulness Questionnaire (Baer et al. 2008)—because our theorizing does not differentiate among different mindfulness dimensions. Despite some criticism of this scale and the approach of self-rating mindfulness (e.g., Grossman 2008, 2011), a considerable amount of reliability and validity evidence supports the use of this scale (e.g., (Brown and Ryan 2003; Carlson and Brown 2005). Leaders self-rated their mindfulness on the 15 items of the MAAS on a 6-point response scale (1 = *almost always*; 6 = *almost never*). Sample items include "I find it difficult to stay focused on what's happening in the present," "It seems I am 'running on automatic' without much awareness of what I'm doing," and "I find myself preoccupied with the future or the past." Responses were reverse-scored such that higher values indicate higher mindfulness. The Cronbach's alpha was .92.

LMX quality. Employees rated LMX quality on Graen and Uhl-Bien's (1995) 7-item measure using a 4-point (1–4) Likert-type scale. This LMX-7 measure has been one of the most widely cited and has been found to have the soundest psychometric properties of all existing LMX scales (Gerstner and Day 1997). An example item is "I would have enough confidence in my immediate supervisor that I would defend and justify his or her decisions if he or she were not present to do so." The Cronbach's alpha was .87.

Employee in-role performance. Leaders assessed employee in-role performance using the 3-item scale of Motowidlo and Van Scotter (1994). Leaders rated employees on a 5-point (1–5) scale based on the degree to which they meet standards for performance, their level of

performance relative to others in the same job, and their contribution to the organization's effectiveness. The Cronbach's alpha for this measure was .94.

Employee extra-role performance. Peers assessed employee extra-role performance with 17 items of Moorman and Blakely's (1995) organizational citizenship behaviors (OCBs) scale on a 7-point response scale (1 = *almost never*; 7 = *almost always*). Example items include "shows genuine concern and courtesy toward co-workers, even under the most trying business or personal situations" and "for issues that may have serious consequences, expresses opinions honestly even when others may disagree." The Cronbach's alpha was .97.

Results and Discussion

The means, standard deviations, correlations, and reliability statistics are shown in Table 1. Hypothesized correlations were significant and in the expected directions. Specifically, leader mindfulness was positively related to LMX quality, employee in-role and extra-role performance, and LMX quality was positively related to employee in-role and extra-role performance.

[Insert Table 1 about here]

For hypotheses testing, we ran OLS regression using SPSS (see Table 2) and used the PROCESS macro as recommended by Hayes (2013) to estimate direct and indirect effects for mediation testing. Consistent with Hypothesis 1, the relationship between leader mindfulness and LMX quality was positive and significant (b = .19, $p<.01$). Hypotheses 2a and 2b predicted that leader mindfulness would be positively associated with employee in-role and extra-role performance. In support of the hypotheses, analyses with the hypothesized mediator, LMX quality, included showed that the total effect (i.e., the direct and indirect effect combined) of leader mindfulness was significant for employee in-role performance (b = .30, $p<.01$; the bias-corrected bootstrap confidence interval did not include zero, bias corrected lower bound (BCLB) = .11, bias corrected upper bound (BCUB) = .49) and extra-

role performance ($b = .40$, $p<.01$, BCLB = .13; BCUB = .66).

[Insert Table 2 about here]

Importantly, analysis of the mediation Hypothesis 3a found that the indirect effect of leader mindfulness on employee in-role performance was significant ($b = .10$, p<.05, BCLB = .02, BCUB = .23). The direct effect of leader mindfulness on in-role performance was also significant ($b = .20$, $p<.05$; BCLB = .01, BCUB = .38). Thus, leader mindfulness had both a direct and indirect effect (through LMX) on employee in-role performance. Analysis of the mediation Hypothesis 3b similarly found that the indirect effect of leader mindfulness on employee extra-role performance was significant ($b = .13$, $p<.05$, BCLB = .03, BCUB = .29). The direct effect of leader mindfulness on employee extra-role performance did not quite reach significance ($b = .26$, $p=.06$; BCLB = -.01, BCUB = .53).

On an exploratory basis, we also examined whether the results remained significant for all four facets of Moorman and Blakely's (1995) OCB scale (interpersonal helping, individual initiative, personal industry, loyal boosterism). This was indeed the case, suggesting that employee extra-role performance was higher for more mindful leaders across the diverse dimensions of helping co-workers, showing initiative and industry, and promoting the organization to outsiders. As a further robustness check, we also had leaders rate employee OCBs using the same scale. All hypotheses test results were replicated in analyses with leader-rated employee extra-role performance.

Overall, consistent with earlier research (Reb et al. 2014), we found that leader mindfulness was positively related to both leader-rated in-role performance and peer-rated extra-role performance. To our knowledge, this is the first study that avoids same source concerns with respect to measuring leader mindfulness and leader-rated employee performance by using peer ratings of extra-role performance. More importantly, we found that employee perceptions of LMX quality acted as a significant mediator of the relation

between leader mindfulness and employee performance. This is consistent with the idea that mindfulness helps leaders maintain higher-quality relations with their employees. These relations, characterized by trust, respect, reciprocal influence, and mutual obligations, result in greater employee performance (Graen and Uhl-Bien 1995; Uhl-Bien and Graen 1993).

In Study 2, we extend these findings to better understand how leader mindfulness enables higher-quality leader-employee relations and increases employee perceptions of LMX quality. In particular, we highlight two distinct potential mediational pathways: reduced employee stress and increased employee perceptions of interpersonal justice.

Study 2

Method

Procedure and Sample

Leader-employee dyads in this study were recruited in the same manner as in Study 1. In total, 255 dyads had at least one participant, and we had complete data from 227 dyads, which constitute the sample for this study. The leader sample was 60% male, 41 years of age on average and the employee sample was 40% male, 36.7 years of age on average. Both samples were primarily Singaporean by nationality and Chinese by ethnic descent.

Measures

Leader mindfulness. Leader mindfulness was measured using the same measure as in Study 1 (MAAS; Brown & Ryan, 2003). The Cronbach alpha in this sample was .92.

LMX quality. Employees rated LMX quality using the same measure as in Study 1 (LMX 7; Graen & Uhl-Bien, 1995). The Cronbach alpha was .83.

Interpersonal justice. Employee rated supervisor interpersonal justice using the 5-item scale developed by Colquitt (2001) on a 5-point (1 = *strongly disagree*; 5 = strongly agree) response scale. A sample item is "my supervisor treated me with dignity". The Cronbach alpha was .93.

Employee stress. Employees rated their stress using Cohen and Williamson's (1988) 10-item Perceived Stress Scale. The items ask about participants' feelings and thoughts during the last month, using a 5-point (1 = *almost never*; 5 = *very often*) response scale. A sample item is "in the last month, how often have you found that you could not cope with all the things that you had to do?" The Cronbach alpha in this sample was .80.

Employee in-role performance. Leaders assessed employee in-role performance using the 7-item in-role performance measure developed by Williams and Anderson (1991). Sample items include "Adequately completes assigned duties" and "Engages in activities that will directly affect his or her performance evaluation." Responses were made on a 7-point scale (1 = *almost never*; 7 = *almost always*). The Cronbach alpha was .81.

Employee extra-role performance. To reduce survey length, we focused specifically on employee interpersonal helping as a main facet of OCB. We used five items of Moorman and Blakely's (1995) scale. Leaders rated employees on a 7-point response scale (1 = *almost never*; 7 = *almost always*). An example item is "Voluntarily helps new employees to settle in the job." The Cronbach's alpha in this sample was .87.

Results and Discussion

The means, standard deviations, correlations, and reliability statistics are shown in Table 3. Hypothesized correlations were significant and in the expected directions. Specifically, leader mindfulness was positively related to LMX quality (H1), employee in-role (H2a) and extra-role performance (H2b), and employee interpersonal justice (H4a), and negatively related to employee stress (H5a). Employee interpersonal justice was positively (H4b), and employee stress was negatively related to LMX quality (H5b); and LMX quality was positively related to employee performance, both in-role and extra-role.

[Insert Table 3 about here]

As multiple variables were collected from a single source each (i.e., leaders and

21

employees), we ran several confirmatory factor analyses (CFA) to ascertain distinctiveness from common sources for all variables that were reported by leaders and employees separately (Podsakoff et al. 2003; Spector 1987). Leaders rated mindfulness, employee in-role, and employee extra-role performance. We found that a model with these three factors had an adequate fit (Hu and Bentler 1999) with the data (CFI = .90; TLI = .89; RMSEA = .07; Chi Square = 658.30; D_f = 320) and was significantly better than a two factor model in which in-role and extra-role performance were treated as one factor (CFI = .74; TLI = .72; RMSEA = .11; Chi Square = 1195.27; D_f = 322) and one factor model in which all three variables were subsumed under a single factor of leader-rated variables (CFI = .59; TLI = .55; RMSEA = .14; Chi Square = 1712.97; D_f = 323).

Employees provided ratings of LMX quality, interpersonal justice, and stress. We found that the CFA model of three factors fit the data adequately (CFI = .86; TLI = .84; RMSEA = .08; Chi Square = 509.81; D_f = 186) and significantly better than a two factor CFA with LMX quality and interpersonal justice treated as one factor (CFI = .65; TLI = .61; RMSEA = .14; Chi Square = 982.10; D_f = 188) and a single factor CFA in which all three variables were subsumed under a single factor of employee-rated variables (CFI = .50; TLI = .44; RMSEA = .16; Chi Square = 1316.07; D_f = 189). Overall, the CFA analyses suggest that the study variables are empirically distinct despite same source measurement.

Next, we conducted a sequential multiple mediation analysis using AMOS software. AMOS was considered suitable for the analyses as we included two dependent variables in the models tested and, unlike Study 1, we had a sufficiently large sample size to allow for latent structural equation modeling (SEM). For clarity, we present the SEM analyses in three models: Model 1 focuses on LMX as the (second-stage) mediator of the relation between leader mindfulness and employee performance, essentially replicating the analyses of Study 1; Model 2 focuses on interpersonal justice and employee stress as parallel (first-stage)

mediators of the relation between leader mindfulness and LMX quality; and finally, Model 3 examines the complete sequential multiple mediation model, estimating all paths simultaneously. We ran bootstrap analyses (200 iterations) to get stable regression coefficients for all models. We report standardized regression coefficients with bias corrected lower bound and upper bound confidence intervals.

The results of Model 1 are shown in Figure 1. The overall fit indices of this model show adequate fit (CFI = .88; TLI = .87; RMSEA = .06; Chi Square = 1010.72; D_f = 521). Consistent with Hypothesis 1, the direct effect of leader mindfulness on LMX quality was significant (β = .20; p<.01). We also found a positive significant association of LMX with employee in-role performance (β = .30, p<.01) and extra-role performance (β = .35, p<.01).

Moreover, bootstrap analysis, showed a significant indirect effect of leader mindfulness on in-role performance through LMX quality (β = .06, p<.001, BCLB = .03; BCUB = .11). There also was a significant direct effect of leader mindfulness on employee in-role performance (β = .26, p< .01, BCLB = .12; BCUB = .37) and the total effect was .32 (p<.01). Similarly, we found a significant indirect effect of leader mindfulness on extra-role performance through LMX quality (β = .07, p<.05, BCLB = .03; BCUB = .12). The direct effect was .13 (*ns.*, BCLB = .00; BCUB = .28) and the total effect was .21 (p<.05, BCLB = .09; BCUB = .35). These results support Hypotheses 2b and 3b and show that the relation between leader mindfulness and employee extra-role performance was significantly mediated through LMX quality. Overall, these results replicate Study 1 findings.

[Insert Figure 1 about here]

Model 2 tested the first-stage mediation model with leader mindfulness as independent variable, LMX quality as the dependent variable, and interpersonal justice and stress as mediators (Figure 2). The overall fit indices are acceptable (CFI = .85; TLI = .84; RMSEA = .07; Chi Square = 1266.89; D_f = 589). Consistent with Hypotheses 4a and 4b, we found

significant relationships between leader mindfulness and employee interpersonal justice

perceptions (β = .17, p<.01; BCLB = .04; BCUB = .26) and between interpersonal justice and

LMX quality (β = .50, p<.001; BCLB = .38; BCUB = .61). Consistent with Hypotheses 5a

and 5b, we found significant and negative relationships between leader mindfulness and

employee stress (β = -27, p<.01; BCLB = -.39; BCUB = -.15) and between employee stress

and LMX quality (β = -.20, p<.01, BCLB = .32; BCUB = -.06).

Importantly, bootstrap analysis of the multiple mediation model showed that the

indirect effect (from leader mindfulness to LMX quality via interpersonal justice and

perceived stress) was significant (β = .14, p<.01, BCLB = .06; BCUB = .21). The direct

effect (from leader mindfulness to LMX quality) was non-significant (β = .07, $ns.$, BCLB =

-.17; BCUB = .03) in this model.

[Insert Figure 2 about here]

Finally, Model 3 was examined to test all hypotheses simultaneously (see Figure 3).

The results were consistent with the hypothesized sequential mediation process. The global

fit indices of the model show good fit (CFI = .85; TLI = .84; RMSEA = .06; Chi Square =

1957.05; D_f = 1071). Hypotheses 4c and 4d postulated indirect sequential effects of leader

mindfulness through employee interpersonal justice perceptions and LMX quality to in-role

and extra-role performance, respectively. Consistent with the hypotheses, the relevant path

coefficients were significant. As shown in Figure 3, direct effects of leader mindfulness on

interpersonal justice (β = .17, p<.05, BCLB = .06; BCUB = .29), of interpersonal justice on

LMX quality (β = .52, p<.01; BCLB = .41; BCUB = .64), of LMX quality on in-role

performance (β = .32, p<.01; BCLB = .18; BCUB = .45), and of LMX quality on extra-role

performance (β = .35, p<.01; BCLB = .23; BCUB = .51), were all significant.

Similarly, Hypotheses 5c and 5d predicted indirect sequential effects of leader

mindfulness through employee stress and LMX quality on employee in-role and extra-role

performance. Consistent with the hypotheses, direct effects of leader mindfulness on perceived stress (β = -.27, $p<.01$; BCLB = -.39; BCUB = -.16) and of employee stress on LMX quality (β = -.22, $p<.01$, BCLB = -.34; BCUB = -.09) were significant.

[Insert Figure 3 about here]

Most importantly, supporting the sequential mediation hypothesis, bootstrap analyses found that the indirect effects of leader mindfulness on employee in-role performance (β = .05, $p<.001$, BCLB = .02; BCUB = .08) and on employee extra-role performance (β = .05, $p<.001$, BCLB = .02; BCUB = .09) were both significant. Further, the total effects of leader mindfulness on in-role performance (β = .31, $p<.001$, BCLB = .18; BCUB = .43) and on extra-role performance (β = .19, $p<.01$, BCLB = .06; BCUB = .32) were also significant, as were the direct effects of leader mindfulness on in-role performance (β = .27, $p<.01$, BCLB = .12; BCUB = .38) and on extra-role performance (β = .14, $p<.05$, BCLB = .01; BCUB = .28). This confirms that the relationship between leader mindfulness and employee in-role and extra-role performance was mediated through sequential mediators.

Overall, Study 2 replicated all results of Study 1. This study thus lends further credence to the hypothesis that mindful leaders create higher-quality relations with their followers. Importantly, Study 2 also found support for the complete sequential mediation model depicted in Figure 3, in which leader mindfulness is associated with lower employee stress and greater employee interpersonal justice perceptions, which in turn predict LMX quality, which then is related to greater employee in-role and extra-role performance.

General Discussion

Interest in the role of mindfulness for leaders has increased substantially over recent years and practitioner-oriented writings have made the case that mindfulness plays an important role in leaders' ability to meet the challenges of their job (e.g., Boyatzis and McKee 2005; Carroll 2008). At the same time, critical voices have argued that organizations

and their leaders may use mindfulness to take advantage of employees (e.g., Purser and Milillo 2015; Reb, Sim, et al. 2015). Emerging empirical research suggests that mindful leaders may indeed be more effective and that employees of more mindful leaders do better with respect to job satisfaction, well-being, and performance (Reb et al. 2014). Further, recent research suggests that this effect may be at least partly due to more ethical leader behavior in the form of procedural justice (Schuh et al. 2017). In the present studies, we built on this research by taking a relational and ethical view of leadership (e.g., Graen and Uhl-Bien 1995; Uhl-Bien 2006) that sees effective leadership as resulting from high-quality relationships between leaders and employees that are characterized by respect and consideration. We proposed that leader mindfulness enables high-quality LMX relationships by reducing employees' stress levels and by increasing employees' interpersonal justice perceptions. These high-quality relations, in turn, lead to greater employee performance (Dulebohn et al. 2012).

To test these hypotheses, we collected data from leader-employee-peer triads (Study 1) and leader-employee dyads (Study 2). Consistent with the hypotheses, we found that the more mindful the leaders, the higher the dyadic relationship quality between leader and employee, as perceived by the subordinate. Further, we found that the more mindful leaders were, the better their employees performed—and that this relation was partly mediated through LMX quality. These findings held for two important dimensions within the performance criterion space: in-role performance (rated by supervisors) and extra-role performance (rated by peers in Study 1 and supervisors in Study 2). Finally, testing a sequential multiple mediation model in Study 2, we found that the relation between leader mindfulness and LMX quality was mediated by employee stress and interpersonal justice.

Our research makes several noteworthy contributions. First, the present studies add in several ways to the sparse empirical literature on the role of mindfulness at the leader-

employee interface. Most of the early research in a work context, perhaps influenced by the earlier medical and clinical studies, has focused on health-related dependent variables at the intrapersonal level, such as stress or emotional exhaustion (Good et al. 2016). In contrast, our research contributes to a small set of studies (e.g., Liang et al. 2016; Long and Christian 2015; Reb and Narayanan 2014) that examine the interpersonal effects of mindfulness within the workplace. Specifically, our research suggests that the quality of the relationship between two individuals is important in translating one person's (i.e., a leader's) mindfulness into another person's (i.e., a subordinate's) performance. Our findings thus replicate and extend previous findings linking leader mindfulness to employee performance (Reb et al. 2014) and offer a more nuanced explanation of the process by which this happens. Moreover, our research also sheds light on the processes through which leaders' mindfulness benefits employees and enables better relations: through reduced employee stress levels and increased interpersonal justice perceptions. Interestingly, whereas much of the early research has focused on how mindfulness leads to lower stress within the same person, our research shows that one person's mindfulness is associated with another person's lower stress levels (as well as their sense of being treated fairly).

Second, our research responds to calls to study the micro-foundations of leadership behaviors (Yukl 2012) as well as the antecedents of LMX quality (Dulebohn et al. 2012; Gerstner and Day 1997). We do so by shedding light on how mindfulness can serve as an attentional, self-regulatory basis of creating high quality relationships with subordinates and of positively influencing subordinates' performance. Self-regulation of attention has been considered fundamental to emotion and behavior regulation in general (e.g., Baumeister and Heatherton 1996; Carver and Scheier 1981; Posner and Rothbart 2000), at work (e.g., Beal et al. 2005; Lord et al. 2010), and in leadership (Collins and Jackson 2015). Faced with challenging tasks and complex task environments, how well leaders are able to self-regulate

their limited attentional capacities—and therefore their emotions and behaviors—has been argued to be a crucial meta-competency for leaders to perform effectively (e.g., Yeow and Martin 2013). As Beal and colleagues (2005, p. 1058) put it, attentional resources serve as "an 'engine' specifically for self-regulation". The present studies thus add to the small set of studies examining individual differences in leader self-regulation (e.g., Collins and Jackson 2015; Sosik et al. 2002). In addition, our research extends limited previous work examining employee stress and interpersonal justice as antecedents of LMX quality (e.g., Hui et al. 1999; Masterson et al. 2000).

Last but not least, our studies add to the emerging literature on the relation between mindfulness and business ethics. Several authors have examined this relation from a conceptual perspective. For example, Marques (2012) has examined how several concepts from Buddhism, including mindfulness, relate to business ethics. Qiu and Rooney (2017) have developed a four-stage model of workplace mindfulness from a Buddhist psychology perspective. La Forge (2000) has argued that (mindfulness) meditation can facilitate the development of an ethical vision. Empirically, research has found that organizational ethics, as expressed in perceived corporate ethical values and a shared ethics code, predicted employee mindfulness (Valentine et al. 2010). Ruedy and Schweitzer (2010) found that trait mindfulness predicted self-importance of moral identity, a principled approach to ethical decision making, and less severe cheating. Shapiro and colleagues (2012) found that mindfulness training improved moral reasoning and ethical decision making two months following the training.

We complement this work by examining the role of mindfulness for just behaviors. Scholars have wondered "why managers do not always practice fairness principles" (Folger and Skarlicki 2001, p. 98). The present studies suggest that leader mindlessness may be contributing to unfair practices and that leaders who are more mindful engage in more

interpersonally fair behaviors, complementing recent work linking leader mindfulness to procedurally fair behaviors (Schuh et al. 2017).

Establishing this empirical link between mindfulness and organizational justice is important as concerns have been raised about the approach of viewing mindfulness as an attentional state/trait devoid of ethical and intentional foundations (e.g., Grossman 2011). Scholars have warned of "McMindfulness"—an approach to mindfulness similarly corporatized as the McDonald's fast food chain—and given the example of mindfulness training for military snipers for how ethics have been sidelined in favor of managerial interests (see Purser and Milillo 2015). From this perspective, more mindful leaders may use their ability to focus their attention on the present in an instrumental manner to extract more from their employees (cf. Reb, Sim et al., 2015). In contrast to this idea, our findings suggest that more mindful leaders' presence helps employees feel respected and less stressed. While further research is needed, these results suggest the possibility that mindfulness, as defined from a state/trait perspective, may align with ethical behaviors, despite not explicitly including an ethical component in its definition (which may be distinct from practice).

Where might this alignment come from? It has been argued that what is just is concerned "with taking account of the situation and the specific people involved, giving a role to good judgment as opposed to just following the rules'' (Fortin and Fellenz 2008, p. 419). By helping managers to engage openly and flexibly with the present situation, mindfulness supports such good judgment, as well as respectful communication with employees (Carson et al. 2004; Glomb et al. 2011; Karelaia and Reb 2015). We posit that such behavior is seen as interpersonally fair and these perceptions, in turn influence the quality of leader-member relations (Rupp and Cropanzano 2002).

As such, we suggest that the willingness to allocate one's attention toward others, which is typically considered merely in terms of human cognition, may have an inherently

ethical and social component to it. To the extent that mindfulness entails a greater willingness to offer attention within social relationships (Kudesia 2018), it may even contribute to an ethical workplace culture. Mindful leaders would have a special role in contributing to such an ethical workplace culture, as it has been argued that "the perception of managers as being interpersonally just likely elevates their status as a moral authority, which heightens their influence on virtuously shaping perceptions of an ethical work environment" (Neubert et al. 2009, p. 161). Research on mindfulness thus can extend existing work that has focused more on moral values by highlighting the importance of attention and self-regulation for just and ethical behaviors at the workplace.

On the other hand, we appreciate that it is not enough to solely consider individual attention levels when considering ethics in organizations—as doing so can lead to the myopic McMindfulness approach noted earlier (see Purser and Milillo 2015). For instance, as several organization theorists have noted (e.g., Ocasio and Wohlgezogen 2010; Weick 1995), organizational structures and processes influence both what people pay attention to and what they do. By shaping commonly held assumptions, setting certain strategic priorities, and controlling flows of information, organizational structures and processes can shape attention to ethical concerns. Namely, these higher-order methods of control can discount the importance of ethical concerns, increase the salience of competing goals such as profitability, and limit feedback from stakeholders that might trigger ethical concerns. Simply because people are more attentive in general, or allocate attention to their dyadic relationships with others, does not mean that they will necessarily be attentive to the ethical concerns implied in their work. As such, whether mindfulness makes individuals more or less susceptible to organizational structures and processes that shift attention away from ethical concerns in their work remains an important research question. We accordingly suggest that the future research on ethics and mindfulness consider not just individuals, but the broader organizational

context in which people collectively construct and respond to ethical issues at work (see Sonenshein 2007).

Practical Implications

Our research suggests several practical implications. In particular, given the positive relation between leader mindfulness, employee stress, interpersonal justice, LMX quality, and employee performance, our studies suggest that organizations may benefit from paying attention to, and investing in, their leaders' mindfulness. This may be accomplished by systematic attempts at raising the level of their leaders' mindfulness through mindfulness training, especially training programs tailored to the workplace (e.g., Young 2017). Such training programs should stay true to the roots of mindfulness, even as they make sensible adjustments to the context (Qiu and Rooney 2017). Past research suggests that practices designed to increase mindfulness, such as mindfulness meditation, do indeed increase mindfulness (e.g., Brown and Ryan, 2003). Research also suggests that mindfulness training can lead to persistent changes in emotion and behavior, as well as in the neural systems responsible for self-regulation (e.g., Baer 2003; Cahn and Polich 2006). Doing so, our research suggests, will result in broad employee benefits, ranging from physical health and mental well-being (lower stress levels, a greater sense of justice at work) over better relations to greater performance. Moreover, engaging in mindfulness practice may also lead to a more ethical vision (La Forge 2004).

Organizations have long endeavored to find ways to develop leadership skills. For example, having shown the various benefits of LMX quality, Dulebohn and colleagues (2012) raise the open question: "However, how do we train leaders to develop and maintain high-quality relationships with their followers?" (p. 1743). While mindfulness is unlikely to be a panacea in this endeavor, we believe it constitutes a promising direction. One particularly attractive finding of our study is that mindfulness seems to benefit not only

oneself (one's well-being and functioning), as past research has suggested (e.g., Eberth and Sedlmeier 2012), but mindfulness also benefits others. Thus, as leaders increase their mindfulness, both they and their employees may benefit. This may ultimately result in more "mindful organizations" (Sutcliffe et al. 2016). Such mindful organizations may also be facilitated by organizational cultures and processes that support the development of mindfulness (Kudesia 2018).

Strengths, Limitations and Future Directions

The current research is based on two field studies using cross-sectional data and is thus subject to the usual cautions regarding the causal direction of the reported findings. Within the confines of field research, we tried to strengthen internal validity by collecting triadic (Study 1) and dyadic (Study 2) data from leaders, employees, and even peers of employees, rather than relying on single-source data. One concern here is that leaders provided both ratings of their mindfulness (the independent variable) as well as of employees' task performance (the dependent variable). For example, it could be that more mindful leaders give higher performance ratings independent of actual performance, perhaps because they experience more empathy towards their employees. We tried to address such concerns about single-source data by assessing the mediators at both stages—employee stress, interpersonal justice, and LMX quality—through employee ratings. Doing so rules out that the findings can be fully explained by common source variance. Moreover, findings were replicated across two important dimensions of employee performance—in-role and extra-role performance— as well as peer ratings, providing some assurance as to the robustness of the results. Nevertheless, future research could attempt to build on the present studies by including peer ratings of leader mindfulness or objective performance measures.

More fundamentally, some researchers have raised doubts about the possibility of assessing mindfulness through self-report scales such as the MAAS, as we did in the current

study (Grossman 2008, 2011). Others have questions its distinctiveness from earlier and related constructs (e.g., self-control; Masicampo and Baumeister 2007). In response to such concerns, a considerable amount of research has examined the construct validity as well as the nomological net of mindfulness, with generally encouraging results. For example, scale development research (Baer et al. 2006; Brown and Ryan 2003) has reported low to moderate correlations with emotional intelligence (Salovey et al. 1995), self-consciousness (Fenigstein et al. 1975), and self-monitoring (Snyder and Gangestad 1986). Further, in a meta-analytic review, Giluk (2009) found only moderate correlations between mindfulness and the Big Five personality traits and positive and negative affect. Overall, this existing research suggests that the tendency to be mindful can be measured reliably and validly by self-report and that mindfulness—while being significantly related to a variety of constructs one would expect to find in its nomological net—does not overlap with these constructs to an extent as to suggest redundancy.

Nevertheless, further research could use complementary methods such as intervention studies in order to corroborate and extend the present findings. Of particular interest from both a theoretical and practical perspective would be intervention studies in which an experimental group of leaders participates in a mindfulness training program and is compared to a control group. Furthermore, our conceptualization of mindfulness as a self-report does not take into account the nuance that mindfulness may indeed occur in stages with varying degrees of refinement ranging from preliminary concentration, deep concentration, self-transcendence, and reengagement (see Qiu and Rooney 2017). From this standpoint, it is important for future research to examine whether the interpersonal fairness element of mindfulness in leaders occurs at a particular stage of refinement rather than in more preliminary stages of cultivating mindfulness.

We also suggest the need for more qualitative research on the topic of mindfulness in

organizations. Whereas quantitative research, like the present study, necessarily operates that the level of abstract constructs (e.g., interpersonal justice, leader-member exchange), qualitative research more closely considers the more specific interpretations and processes that underlie these abstract constructs (see Langley 1999; Morgan and Smircich 1980). For instance, our quantitative study helps establish that leaders who report being more mindful are seen by employees as demonstrating greater interpersonal justice. But our study cannot identify the specific processes by which this finding obtains. What specific actions do mindful leaders undertake? How do employees come to form their interpretations of these actions? Such questions show that qualitative and quantitative approaches to a topic can lead to richer understandings (Bartunek and Seo 2002). We suggest the same for the topic of mindfulness.

A strength of the present research is that it goes beyond the individual level and examines the relationship between leaders and their employees. In doing so, our research takes into account the relational nature of leadership, and indeed of organizations in general. However, admittedly, the present investigation can only offer a glimpse into the complexity of leader-follower relationships. For example, we focused on employee perceptions of LMX quality. While this allowed us to have other-source data (with mindfulness and performance being leader-rated), future research could complement this work by examining LMX quality from the leader's perspective. Such research could also investigate whether *employee* mindfulness plays a role in influencing the creation and maintenance of high-quality relationships between leaders and followers. To allow a fuller understanding of the role of mindfulness in leader-follower relationships, research should thus examine both leader and follower mindfulness in these relationships, as well as any possible interaction between leader and follower mindfulness. However, it also needs to be recognized that such research, including the present studies, are based on responses from leader-member dyads and as such,

it is unclear whether the findings generalize beyond these specific dyadic relations. Thus, future research should examine the relation of leader mindfulness with employee interpersonal justice perceptions and employee stress more broadly.

Finally, and most broadly, we believe that the study of mindfulness can contribute to a unique perspective on leadership research and practice that emphasizes a balance between 'doing' and 'being'. According to culture researchers, societies can be differentiated based on their orientation towards action with Western cultures tending to orient towards doing rather than being (Kluckhohn and Strodtbeck 1961; Schein 1992; Triandis 1982). These orientations are also relevant for leadership. For example, according to Triandis (1982), cultures with a being orientation value interpersonal sensitivity and as a result, leaders in such cultures tend to be more considerate of others. Leadership theories arguably have been dominated by Western cultural values and have focused on leader behaviors, or what leaders *do*. Perhaps not surprisingly given its Eastern contemplative roots, the concept of mindfulness is deeply consistent with a being orientation. For example, Brown et al. (2007) argue that, whereas other forms of self-awareness, such as self-monitoring, serve to control behavior—thereby entailing a doing mode—mindfulness serves an observing function, thereby entailing a being mode. We believe it will be fascinating to further explore the potential of a being orientation for leadership, as well as how mindfulness may help integrate doing and being for more balanced and ultimately effective leadership.

Compliance with Ethical Standards:

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

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

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Table 1: Means, Standard Deviations, Correlations, and Reliabilities, Study 1

		M	SD	1	2	3	4
1	Leader mindfulness	4.09	.75	(.92)			
2	LMX quality	2.74	.45	.35**	(.87)		
3	Employee in-role performance	3.78	.67	.34**	.43***	(.95)	
4	Employee extra-role performance	5.23	.92	.33**	.39***	.44***	(.97)

*** *p<.001** p<.01; * p<.05*

Notes. N=76, Reliabilities (Cronbach alphas) are in parentheses on the diagonal.

Table 2: Regression and Results for Mediation Model, Study 1

	LMX quality			Employee in-role performance			Employee extra-role performance		
	b	*SE*	*t*	*b*	*SE*	*t*	*b*	*SE*	*t*
Constant	1.96	.26	7.44***	1.54	.48	3.19***	2.39	.68	3.52***
Leader mindfulness	.19	.06	3.06**	.20	.09	2.09*	.26	.13	1.93
LMX quality				.51	.16	3.22**	.64	.22	2.86**
Indirect effect (Confidence interval)				.10 (BCLB = .02, BCUB =.23)	.07		.13 (BCLB = .03, BCUB = .29)	.06	
Direct effect (Confidence interval)				.20 (BCLB = .01, BCUB = .38)	.09	2.09*	.26 (BCLB = -.01, BCUB = .53)	.13	1.93
Total effect (Confidence interval)				.30 (BCLB = .11, BCUB = .49)	.09	3.16**	.40 (BCLB = .13, BCUB = .66)	.13	2.97**
F		9.39**			9.97**			8.94***	
R^2		.11			.11			.11	

*** *p<.001;* ** *p<.01;* * *p<.05*

Notes. Unstandardized coefficients are reported. BCLB refers to lower limit of the 95% confidence interval and BCUB refers to upper limit of

the 95% bootstrapped confidence interval.

Table 3: Means, Standard Deviations, Correlations, and Reliabilities, Study 2

		M	SD	1	2	3	4	5	6
1	Leader mindfulness	4.31	.87	(.92)					
2	Interpersonal justice	3.65	.63	.15*	(.93)				
3	Employee stress	2.82	.51	-.18**	-.19**	(.80)			
4	LMX quality	2.85	.56	.15*	-.29***	.48***	(.83)		
5	Employee in-role performance	5.83	.75	.32***	-.22***	.26***	.28***	(.81)	
6	Employee extra-role performance	5.26	.91	.08	-.15*	.16*	.28***	.51***	(.87)

*** *p<.001** p<.01; * p<.05*

Notes. N=227. Reliabilities (Cronbach alphas) are in parentheses on the diagonal.

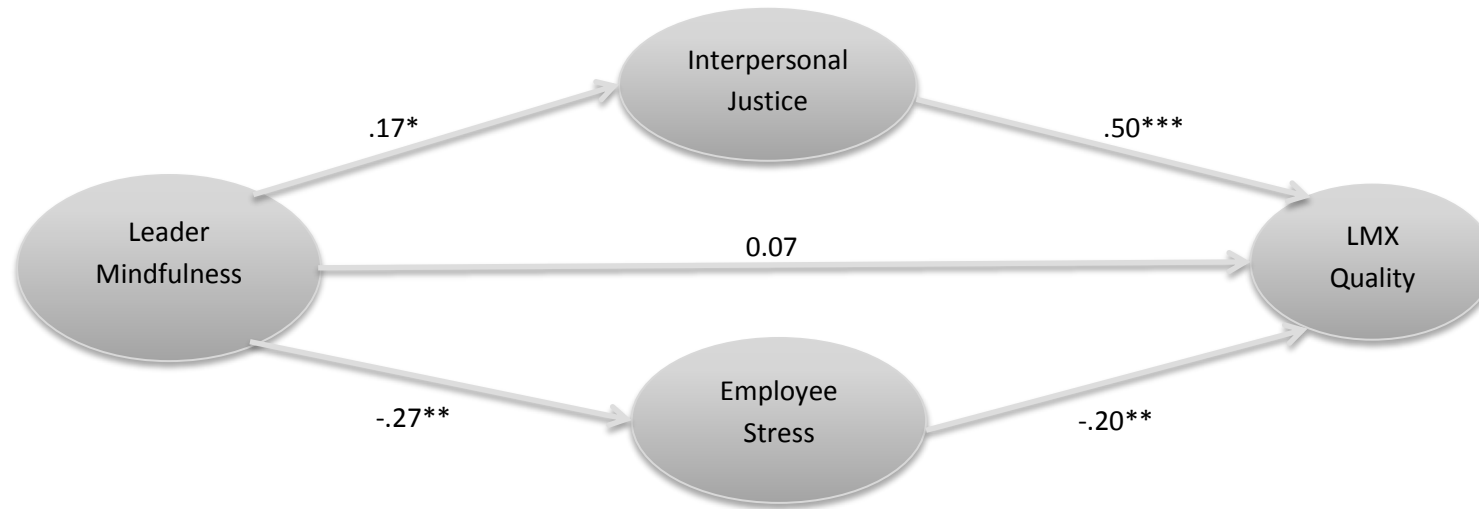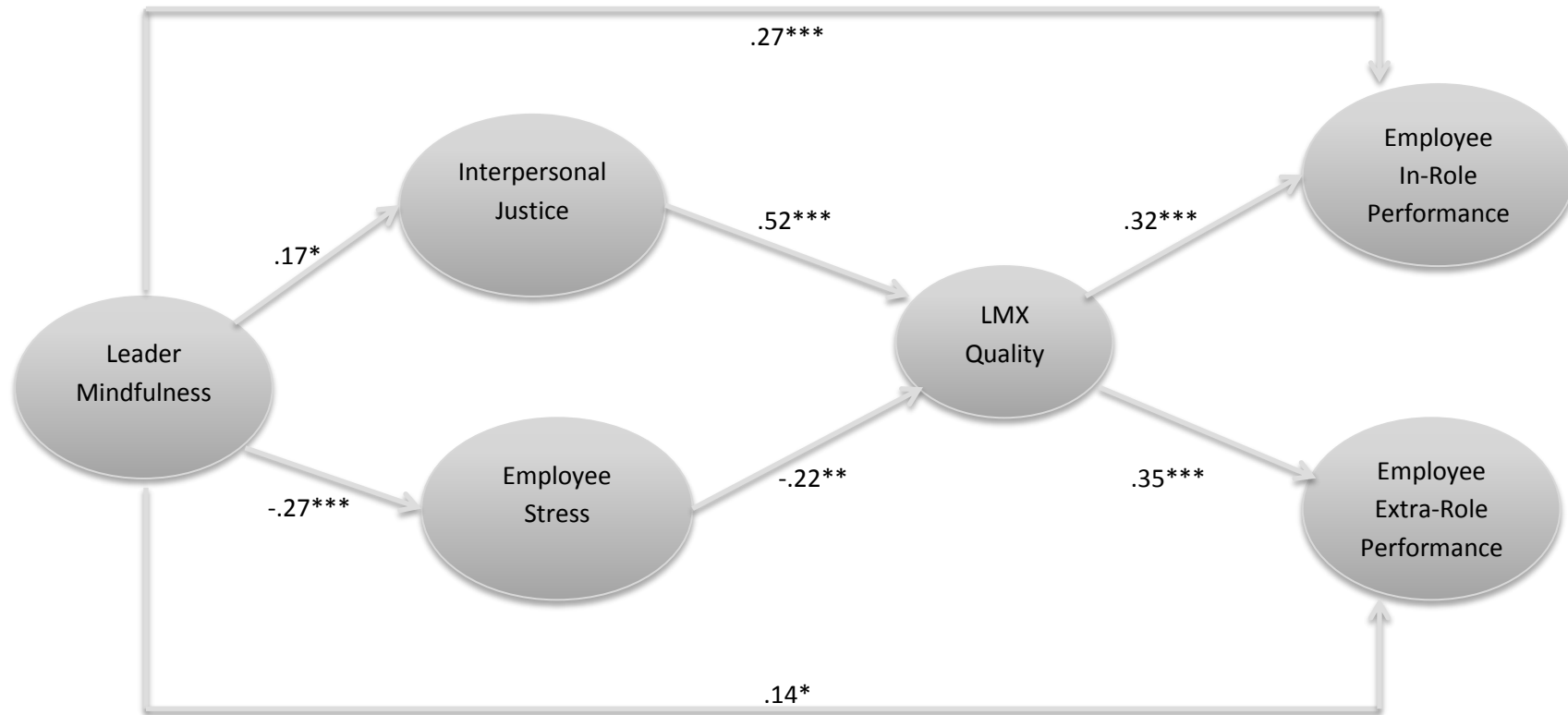Figure 1: Second-stage Mediation Model, Study 2
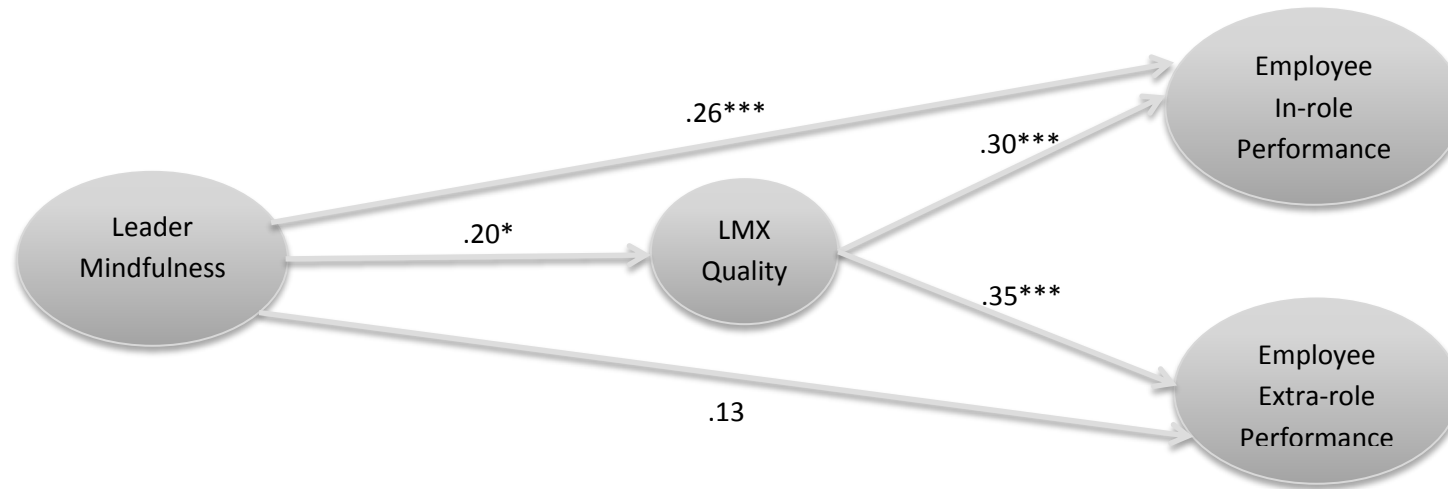
Notes. Standardized coefficients are reported. CFI=0.88; TLI= .87; RMSEA=.06; Chi Square=1010.72; D_f= 521.

Figure 2: First-stage Multiple Mediation Model, Study 2

Notes. Standardized coefficients are reported. CFI=0.85; TLI= 0.84; RMSEA=0.07; Chi Square=1266.89; D_f= 589.

Figure 3: Full Sequential Multiple Mediation Model, Study 2

Notes. Standardized coefficients are reported. CFI= 0.85; TLI= 0.84; RMSEA= 0.06; Chi Square=1957.05; D_f= 1071.