9-2012

Leading Mindfully: Two Studies of the Influence of Supervisor Trait Mindfulness on Employee Well-Being and Performance

Jochen Matthias REB
Singapore Management University, jochenreb@smu.edu.sg

Jayanth Narayanan
National University of Singapore

Sankalp Chaturvedi
Imperial College London

Leading Mindfully: Two Studies on the Influence of Supervisor Trait Mindfulness on Employee Well-Being and Performance

Jochen Reb[1] , Jayanth Narayanan[2] and Sankalp Chaturvedi[3]
(1) Lee Kong Chian School of Business, Singapore Management University, 50 Stamford Road, Singapore, 178899, Singapore
(2) NUS Business School, National University of Singapore, Singapore, Singapore
(3) Imperial College Business School, Imperial College London, London, UK

Jochen Reb
Email: jreb@smu.edu.sg

Abstract
This research examines the influence of leaders' mindfulness on employee well-being and performance. We hypothesized that supervisors' trait mindfulness is positively associated with different facets of employee well-being, such as job satisfaction and need satisfaction, and different dimensions of employee performance, such as in-role performance and organizational citizenship behaviors. We also explored whether one measure of employee well-being, psychological need satisfaction, plays a mediating role in the relation between supervisor mindfulness and employee performance. We tested these predictions in two studies using data from both supervisors and their subordinates. Results were consistent with our hypotheses. Overall, this research contributes to our understanding of leadership by examining the foundation of supervisors' effectiveness in their awareness and attention. It also contributes to our understanding of mindfulness by examining its interpersonal effects in a very important domain of human life: the workplace.

1

Introduction

Recent years have witnessed a steady increase in empirical research on mindfulness facilitated to a large extent by the development of self-report scales that allow inexpensive and convenient assessment of trait mindfulness (e.g., Baer et al. *2006*; Brown and Ryan *2003*; for a criticism of such measures, see e.g., Grossman *2011*). This research has resulted in a number of robust findings. The general picture that is emerging from this research is that trait mindfulness is associated with greater physical and psychological well-being (for reviews, see e.g., Brown et al. *2007*; Chiesa and Serretti *2010*).

Organizational scholars are also beginning to examine the role of mindfulness at the workplace, arguably one of the most important domains of human activity. These scholars have proposed that mindfulness allows organizations to perform more reliably (Weick and Sutcliffe *2006*; Weick et al. *1999*) and to perform better even in high-velocity environments (Dane *2011*). Furthermore, it has been suggested that being mindful helps employees in self-regulating their behavior to achieve better social relationships, enhanced well-being, and higher task performance (e.g., Glomb et al. *2011*). Empirical research is also starting to shed light on the role of mindfulness at the workplace (e.g., Shao and Skarlicki *2009*). For example, Narayanan, Chaturvedi, Reb, and Srinivas (*2011*) found that employee trait mindfulness was positively related to task performance, and this relation was partly mediated by the lower emotional exhaustion experienced by more mindful employees.

A limitation in the current organizational scholarship on mindfulness is that existing research on the topic has mostly examined intra-individual relations such as how employees' mindfulness relates to their emotional exhaustion and job performance (Narayanan et al. *2011*), rather than examining interpersonal influences. In other words, research has hitherto not examined how someone's mindfulness will impact other people in the workplace. In the present research, we begin to address these gaps by empirically examining the relation between supervisors' mindfulness and their subordinates' well-being and performance.

The term "leadership" is often associated in the popular mind with the CEO level at organizations. It is at this level that leaders take on figurehead roles and represent the organization internally and externally (Mintzberg *1973*). However, leadership takes place at multiple levels in organizations. It is at lower levels of an organization that supervisors take on leadership functions by being tasked to ensure that organizations translate plans into actions, achieve their goals, and complete their tasks. To ensure this, supervisor leadership provides direction, support, motivation, and feedback to employees (Scandura and Schriesheim *1994*).

Such leaders' actions have a significant impact on employees (e.g., Judge and Piccolo *2004*; Lowe et al. *1996*). Thus, from a practical perspective, it is important to understand the variables that contribute to leaders' bringing out the best in their employees and organizations. From a theoretical perspective, much research has focused on the effect of leader behaviors and styles such as transactional or transformational leadership. Less research has examined leader attributes, and most of this research has focused on leader personality traits such as the Big Five (Bono and Judge *2004*; Judge et al. *2002*). However, no research to date has examined how the quality of a leader's attention and awareness affects subordinates' well-being and performance.

Mindfulness

Consistent with others, we define mindfulness as present-moment awareness with an observing, non-judging stance (e.g., Bishop et al. *2004*; Brown et al. *2007*; Mikulas *2011*). To be mindful means to be fully in the "here and now," moment-to-moment. Mindfulness includes awareness of current external stimuli, such as external events or objects, as well as of internal processes and states, such as emotions, perceptions, sensations, and cognitions. The observing, witnessing stance of mindfulness is associated with a reduction in mental commentary and judgment (e.g., Weick and Putnam *2006*). At the trait level, mindfulness refers to cross-situational, relatively stable individual differences in the tendency of being in a state of mindful awareness (Brown et al. *2007*; Glomb et al. *2011*).

In a related program of research, Langer (e.g., *1989*; *2005*) has used the term mindfulness to refer to an open and creative attention to one's environment. Mindfulness in this sense allows one to avoid habitual and routine interpretation of stimuli that lead to mindlessness. Instead, stimuli and information is perceived and processed in a more creative and differentiated manner, allowing the creation and refinement of categories, connections, and perspectives.

Mindfulness can be contrasted with mindlessness. Being mindless can be defined as neither paying attention to, nor having awareness of, the activities one is engaged in or of the internal states and processes (e.g., emotions) one is experiencing. Modes of being that are characteristic of mindlessness are, for example, performing tasks on autopilot, daydreaming, worrying about the future, or ruminating about the past (Brown and Ryan *2003*).

Writings on mindfulness in contemplative traditions have long argued that being fully in the present moment brings a variety of benefits including well-being. In contrast, the study of mindfulness within a Western scientific paradigm is relatively recent. Most of this research has been in medicine and psychology and has used both correlational (typically measuring mindfulness as a trait, or tendency to be mindful) and experimental designs (typically using some mindfulness intervention, such as the mindfulness-based stress reduction program, Kabat-Zinn *1982*, *2003*). This research has consistently shown positive relations between mindfulness and desirable outcomes. For example, research has found that mindfulness reduces chronic pain (Kabat-Zinn et al. *1985*), increases immunity (Davidson et al. *2003*), reduces anxiety (Kabat-Zinn et al. *1992*), and increases psychological well-being and positive affect (Brown and Ryan *2003*). Some evidence suggests that practice in developing mindfulness skills (i.e., mindfulness meditation) leads to structural changes to the dorsolateral prefrontal area of the brain, an area that is associated with positive affect (Cahn and Polich *2006*).

Emerging research also suggests that mindfulness affects a person's social relationships. For example, Wachs and Cordova (*2007*) found that mindfulness increased people's ability to identify and communicate emotional states with their partner as well as regulating their anger expression, which led to an increase in marital quality. Other research suggests that mindfulness increases people's ability to cope with relationship stress (Barnes et al. *2007*). These positive effects may be partly due to mindfulness increasing empathic concern towards relationship partners (Block-Lerner et al. *2007*). It has also been argued that mindfulness moves people from an adversarial mindset to a more collaborative mindset in mixed-motive interactions such as negotiations (Riskin *2002*).

These results from other domains of social life concerning the beneficial effects of mindfulness on social interactions suggest that mindfulness may also facilitate leadership

performance. As we will argue below, leadership is to a substantial extent a social, relational process. If mindfulness does indeed facilitate social relationships, as the above research suggests, this may prove beneficial for the leader–follower, or supervisor–employee relationship, and as a result, for employee well-being and performance.

Mindfulness and Leadership

As mentioned above, little theoretical and even less empirical research has examined the role of mindfulness at the workplace. Moreover, while this research is beginning to make an important contribution to organizational scholarship by examining the role of the quality of attention and awareness in organizations, it is relatively silent on the interpersonal effects of mindfulness. An interesting question is whether the mindfulness of one organizational member influences the workplace experiences and outcomes of other organizational members. One group of organizational members that plays a particularly prominent role is that in leadership positions.

It is widely accepted that how superiors exercise their leadership through different leader behaviors and styles influences employee attitudes, behaviors, well-being, and performance (e.g., Gerstner and Day *1997*; Lowe et al. *1996*). However, while we have learned much about the behaviors of leaders that influence employees, we know little empirically about how leaders' quality of awareness and attention influences their employees. A number of authors have recently made the case for the benefits of "mindful leadership." These benefits are said to include positive outcomes for employees such as higher performance and greater well-being (Boyatzis and McKee *2005*; Carroll *2008*). However, empirical support so far has been largely anecdotal.

In this research, we focus on supervisors as leaders. To perform effectively, supervisors need to carry out a variety of leadership functions such as providing direction, giving support, motivating, and providing feedback to their subordinates (Scandura and Schriesheim *1994*). This perspective on supervisory leadership highlights that leadership is not situated in the leader but takes place in a dynamic interaction between leader and follower, supervisor and subordinate, unfolding in a specific organizational context. Uhl-Bien (*2006*: 671) argued that "leadership is relational, and cannot be captured by examination of individual attributes alone." Similarly, Bennis (*2007*: 3) argued that, at its basic level, "leadership is grounded in a relationship." Leader–member exchange theory and relational leadership theory both emphasize the quality of the dyadic relationship between leader and follower in facilitating important employee outcomes such as job satisfaction, and there is considerable empirical support for this link (Dulebohn et al. *2012*; Brower et al. *2000*; Gerstner and Day *1997*).

If effective leadership is dependent on the quality of the relationship between leader and follower, then the ability of mindfulness to improve social interactions may facilitate effective leadership. As mentioned above, research suggests that mindfulness is associated with a better ability to function in relationships as it helps people relate to others emotionally (Wachs and Cordova *2007*), cope with relationship stress (Barnes et al. *2007*), and emphasize with relationship partners (Block-Lerner et al. *2007*). In addition, research found mindfulness to be related to higher emotional intelligence and self-regulation (e.g., Brown and Ryan *2003*), which implies a better recognition and understanding of others' emotional states as well as a better understanding and regulation of one's own emotions (Arch and Craske *2006*).

Mindfulness may be associated with higher relationship quality because mindful people are better able to be fully in the "here and now" with another person. When supervisors interact with their subordinates, subordinates may notice whether the supervisor is fully present not only physically, but with their entire being. To the extent that a supervisor is fully present in an interaction with a subordinate, that subordinate will feel valued and treated with respect, or a sense of interpersonal justice. Past research has documented numerous benefits of interpersonal justice including higher job satisfaction and organizational commitment (e.g., Colquitt et al. *2001*). Moreover, being fully present in an interaction with a subordinate may enable a supervisor to better recognize the needs of the other person, such as what kind of support that person requires. In this way, mindfulness may allow supervisors to engage in more effective leadership behaviors toward their subordinates.

The combination of more effective leader behaviors and employee feelings of worthiness and respect can be expected to lead to a variety of beneficial consequences for employees. First, employees will feel more satisfied and less emotionally exhausted (Maslach *1982*; Maslach et al. *2001*). The high-quality relationship with their supervisor will also lead to employees having a greater sense of psychological need satisfaction (Deci et al. *2001*). We believe that this psychological need satisfaction as well as better leader support will also create a sense of greater work–life balance. Finally, employees will be motivated to reciprocate the engagement of their supervisor through superior performance on the job.

Taken together, the above suggests the following hypotheses.

Hypothesis 1: Leader trait mindfulness will be positively associated with different facets of employee well-being.

Hypothesis 2: Leader trait mindfulness will be positively associated with different facets of employee performance.

We test these hypotheses in two studies that include a total of four measures of different facets of employee well-being and four measures of different facets of employee performance. In "Study 2," we also explore whether the relation between supervisor mindfulness and employee performance is mediated through employee need satisfaction.

Study 1

Method

Procedure

Trained undergraduate students of a Singaporean university were given extra credit for recruiting supervisors and their subordinates to participate in an online study on mindfulness at the workplace. Supervisors (N□=□96) and their subordinates participated on a voluntary basis as part of a larger study involving additional measures. Matching data from supervisors' subordinates were collected at two points in time, about 2 weeks apart, and at about the same time as supervisor data was collected (more time was given for supervisors to respond and some responded earlier, some later).

Participants

For Time 1, matching data from a total of 95 employees and their supervisors were available. For Time 2, matching data from a total of 74 employees and their supervisors were available. Participants came from a variety of industries including service (27.1 %), financial (18.8 %), education (9.4 %), and manufacturing (8.3 %). The average age was 39 years (SD $=$ 14.4), and 55 % were male. About 26 % indicated that they were part of upper management, 29 % of middle management, and 41 % first-line supervisors. On average, participants were with their current organization for 9.7 years and held a supervisory position for 6.5 years. Eighty-three percent were ethnically Chinese.

Measures

Table 1 summarizes the variables of Study 1 as well as their rating source.

Table 1: Overview of variables and rating source for Study 1 and Study 2

Study	Variable	Variable type	Rating source
1	Leader mindfulness	IV	Supervisor
	Employee emotional exhaustion	DV	Employee
	Employee work–life balance	DV	Employee
	Employee overall job performance	DV	Supervisor
	Employee deviance	DV	Supervisor
2	Leader mindfulness	IV	Supervisor
	Employee psychological need satisfaction	Mediator	Employee
	Employee job satisfaction	DV	Employee
	Employee overall job performance	DV	Supervisor
	Employee task performance	DV	Supervisor
	Employee OCBs	DV	Supervisor

IV Independent variable, DV dependent variable, OCBs organizational citizenship behaviors

Leader Mindfulness We measured leader mindfulness using the 15-item Mindfulness Attention Awareness Scale (MAAS; Brown and Ryan *2003*). Sample items from the scale include: "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". Supervisors used a six-point scale to record their responses (1, almost always; 6, almost never). Items were scored such that higher values indicate higher mindfulness. The Cronbach α for this scale was 0.95.

Well-being measures We measured employee emotional exhaustion with the Maslach Burnout Inventory (Schaufeli et al. *1996*) nine-item scale using a seven-point (1, strongly disagree; 7, strongly agree) response format. Example items include: "I feel emotionally drained from my work" and "I feel used up at the end of the workday". The Cronbach α for this scale was 0.92.

We measured employee work–life balance with the nine-item, seven-point (1, strongly disagree; 7, strongly agree) scale developed by Greenhaus, Collins, and Shaw (*2003*). Example items are: "I feel successful in balancing my paid work and family life" and "I am

satisfied with the balance I have achieved between my work and life." The Cronbach α for this scale was 0.92.

Performance measures We measured overall job performance with Motowidlo and Scotter's (*1994*) three-item scale using a five-point (1–5) format. Performance was rated by the supervisor. An example item is: "This person exceeds/meets/does not meet standards for performance." The Cronbach α for this scale was 0.87.

We measured deviance as a form of negative performance, through supervisor ratings with Bennett and Robinson's (*2000*) 19-item scale using five points (1, never; 5, weekly). Example items include "this employee publicly embarrassed someone at work" and "this employee has taken property from work without permission." The interpersonal and organizational deviance subscales were combined for ease of reporting (similar results were obtained when analyzing the subscales separately). The Cronbach α for this scale was 0.96.

Results and Discussion

The intercorrelations of all study variables are shown in Table 2. Leader mindfulness was significantly related to both employee well-being and performance measures in the expected directions. The more mindful the supervisor, the lower the employee's emotional exhaustion, $r = −0.40$, $p < 0.01$. Also, higher leader mindfulness was associated with higher employee work–life balance, $r = 0.28$, $p < 0.05$. With respect to performance, the higher the supervisor's mindfulness, the more favorable were overall job performance ratings, $r = 0.32$, $p < 0.01$. Finally, higher supervisor mindfulness was related to lower employee deviance, $r = −0.57$, $p < 0.01$.

Table 2: Means, standard deviations, and inter-correlations of Study 1 variables

	M	SD	N	1	2	3	4	5	6
Leader mindfulness	3.55	0.82	96						
Leader age	38.90	14.36	96	−0.04					
Leader gender	0.41	0.53	96	0.08	−0.12				
Employee emotional exhaustion	3.56	1.07	95	−0.40[*]	−0.13	0.03			
Employee work-life balance	4.70	1.01	74	0.28[**]	0.13	0.15	−0.41[*]		
Employee job performance	3.97	0.52	96	0.32[*]	0.03	0.08	−0.21[**]	0.19	
Employee deviance	1.37	0.60	96	−0.57[*]	−0.12	−0.08	0.30[*]	−0.20[†]	−0.33[*]

Gender was coded as 0 = male, 1 = female
[†]$p < 0.1$
[*]$p < 0.01$
[**]$p < 0.05$

Furthermore, we examined a path model in which leader mindfulness was simultaneously related to all dependent variables (work–life balance, emotional exhaustion, deviance, and job performance) simultaneously (see Fig. 1). The model was tested using AMOS 18. Consistent with Hypotheses 1 and 2, we found that supervisors' mindfulness was positively related to employee work–life balance ($β = 0.21$, $p < 0.05$) and overall job performance

($\beta = 0.28$, $p < 0.001$), and negatively related to employee emotional exhaustion ($\beta = -0.40$, $p < 0.001$) and deviant behaviors ($\beta = -0.22$, $p < 0.05$). Overall fit statistics of the model were good, $\chi^2(df = 6) = 13.35$, $CFI = 0.82$, $RMSEA = 0.07$.
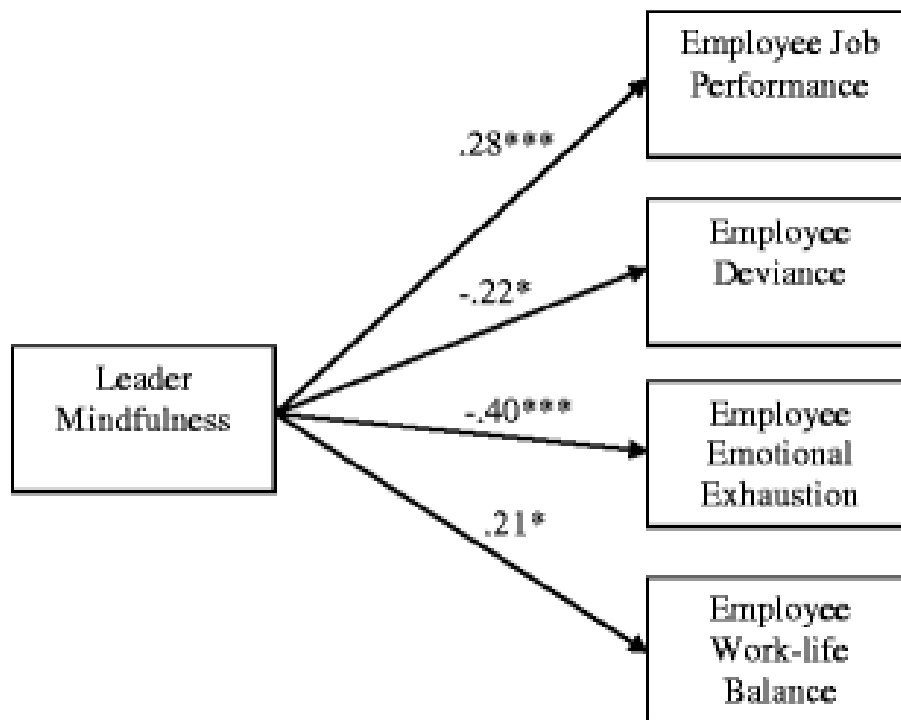

Fig. 1: Path model, Study 1. Numbers are standardized path coefficients. [*]$p < .05$, [***]$p < .001$

These findings provide evidence of a positive influence of leader trait mindfulness on employees both with respect to employee well-being and employee performance. All significance test results were consistent with Hypotheses 1 and 2. It is perhaps worth noting that a significant relation was found not only with a variable that is closely related to well-being specifically at work, i.e., emotional exhaustion, but also with a variable that reflects well-being more broadly, i.e., work–life balance. That supervisor mindfulness is even related to employee work–life balance indicates the potentially powerful role leaders' mindfulness plays at the workplace.

With respect to performance, it is interesting that leader mindfulness was particularly strongly (and negatively) associated with employee deviance. This is consistent with our argument that employees appreciate mindful leaders' tendency to be fully with them when they are seeking the leader's attention. In contrast, mindless leaders who are absentminded in their interactions with employees may be perceived as not being respectful and as incompetent. Past research has shown that a feeling of interpersonally unfair treatment (i.e., treatment that violates an employee's sense of dignity and respect) is associated with deviance (Robinson and Bennett *1997*).

Study 2 provides a conceptual replication of the findings of Study 1, using other operationalizations of employee well-being and performance. Study 2 also examines on an exploratory basis whether the relation between leader mindfulness and employee variables is mediated through employee psychological need satisfaction.

Study 2

Method

Procedure

Trained undergraduate students of a Singaporean university were given extra credit for recruiting supervisors and their subordinates to participate in an online study on mindfulness at the workplace. Supervisors (N = 79), and their subordinates participated on a voluntary basis as part of a larger study involving additional measures. Matching data from supervisors' subordinates were collected at two points in time, about 2 weeks apart, and at about the same time as supervisor data was collected (more time was given for supervisors to respond and some responded earlier, some later).

Participants

For Time 1, matching data from a total of 73 employees and their supervisors were available. For Time 2, matching data from a total of 61 employees and their supervisors were available. Participants came from a variety of industries including service (19 %), manufacturing (17.7 %), and education (10.1 %). The average age was 42 years (SD = 10.9), and 52 % were male. About 37 % indicated that they were part of upper management, 43 % of middle management, and 17 % first line supervisors. On average, participants were with their current organization for 9.6 years and held a supervisory position for 7.8 years. Seventy percent were ethnically Chinese.

Measures

Table 1 summarizes the variables of Study 2 as well as their rating source.

Leader mindfulness We measured supervisor mindfulness using the MAAS (Brown and Ryan *2003*). The Cronbach α for this scale was 0.94.

Well-being measures We measured employee job satisfaction with Cammann et al's (*1979*) three-item seven-point (1, strongly disagree; 7, strongly agree) scale. An example item is "all in all I am satisfied with my job." The Cronbach α for this scale was 0.77.

We measured employee psychological need satisfaction with Deci et al.'s (*2001*) 21-item need satisfaction scale using a seven-point (1, strongly disagree; 7, strongly agree) response format. As is common practice, all 21 items were averaged into a single score, α = 0.85. Example items include: "I feel like I can make a lot of inputs to deciding how my job gets done," "I really like the people I work with," and "I do not feel very competent when I am at work."

Performance measures As in Study 1, supervisors rated employees' overall job performance using Motowidlo and Scotter's (*1994*) three-item (1–5) scale, α = 0.96.

To further corroborate the findings from Study 1, we used McNeely and Meglino's (*1994*) seven-item measure of in-role performance. Supervisors rated employees on a seven-point (1,

almost never; 7, almost always) scale. Example items include "arrives at work on time" and "completes work requested as soon as possible." The Cronbach α for this scale was 0.83. Finally, we measured organizational citizenship behaviors (OCBs) as another dimension of job performance using Moorman and Blakely's (*1995*) 17-item scale. Supervisors rated employees on a seven-point response format (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." For simplicity of reporting, the four subscales were combined, $\alpha = 0.93$ (similar results were obtained when analyzing each subscale separately).

Results and Discussion

The intercorrelations of all study variables are shown in Table 3. Leader mindfulness was again significantly correlated with both employee well-being and performance measures in the expected directions. With respect to employee well-being, the more mindful the supervisors, the higher the employees' psychological need satisfaction, $r = 0.36$, $p < 0.01$. Also, higher supervisor mindfulness was associated with higher employee job satisfaction, $r = 0.27$, $p < 0.05$. With respect to performance, the higher the leader's mindfulness, the more favorable were overall job performance ratings, $r = 0.27$, $p < 0.05$, directly replicating the results of Study 1. Leader mindfulness was also positively related to in-role performance, $r = 0.43$, $p < 0.01$. Finally, the more mindful the supervisor, the more likely was the employee to engage in organizational citizenship behaviors, $r = 0.38$, $p < 0.01$. These findings were confirmed in a path model in which leader mindfulness was simultaneously related to all dependent variables.

Table 3: Means, standard deviations, and intercorrelations of Study 2 variables

	M	SD	N	1	2	3	4	5	6	7
Leader mindfulness	3.36	0.86	79							
Leader age	41.96	10.92	76	–0.09						
Leader gender	0.48	0.50	79	0.12	–0.10					
Employee job satisfaction	5.62	0.96	61	0.26[*]	0.08	0.00				
Employee psychological need satisfaction	5.17	0.64	61	0.36[**]	0.08	0.18	0.70[**]			
Employee job performance	4.11	0.65	79	0.27[*]	–0.05	0.12	0.42[**]	0.56[**]		
Employee in-role performance	6.11	0.58	79	0.43[**]	–0.05	0.08	0.38[**]	0.43[**]	0.44[**]	
Employee OCBs	5.41	0.76	79	0.38[**]	–0.07	–0.07	0.47[**]	0.59[**]	0.58[**]	0.60[*]

Gender was coded as $0 = $ male, $1 = $ female. OCBs organizational citizenship behaviors
[*] $p < 0.05$
[**] $p < 0.01$

On an exploratory basis, we examined whether psychological need satisfaction, mediated the relation between supervisor mindfulness and employee attitudes, OCB, and performance. Past research has indeed found that psychological need satisfaction is positively related to performance (e.g., Greguras and Diefendorff *2009*). We examined a potential mediating role of need satisfaction for all four dependent variables: job satisfaction, overall performance, in-role performance, and OCBs.

We examined two path models. In the first model, we found that mindfulness was positively associated with the dependent variables job satisfaction ($\beta = 0.23$, $p < 0.001$), job performance ($\beta = 0.32$, $p < 0.001$), in-role performance ($\beta = 0.13$, $p < 0.05$), and OCBs ($\beta = 0.40$, $p < 0.001$). These results confirm the correlational findings reported above.

Second, we ran an indirect model with need satisfaction as a mediator in the above relationships (see Fig. 2). We found that leader mindfulness predicted employee psychological need satisfaction, $\beta = 0.32$, $p < 0.001$. Furthermore, need satisfaction was positively associated with the dependent variable job satisfaction ($\beta = 0.56$, $p < 0.001$), overall job performance ($\beta = 0.59$, $p < 0.001$), in-role performance ($\beta = 0.65$, $p < 0.05$), and OCBs ($\beta = 0.65$, $p < 0.001$). Finally, the results suggest that psychological need satisfaction fully mediated the relation of leader mindfulness with job satisfaction (direct path $\beta = 0.05$, n.s.) and in-role performance (direct path $\beta = 0.08$, n.s.), and partially mediated the relation with overall job performance (direct path $\beta = 0.13$, $p < 0.05$) and OCBs (direct path $\beta = 0.12$, $p < 0.1$). Overall fit statistics of the model were good, $\chi 2(df) = 32.72(6)$; $CFI = 0.91$; $RMSEA = 0.1$.
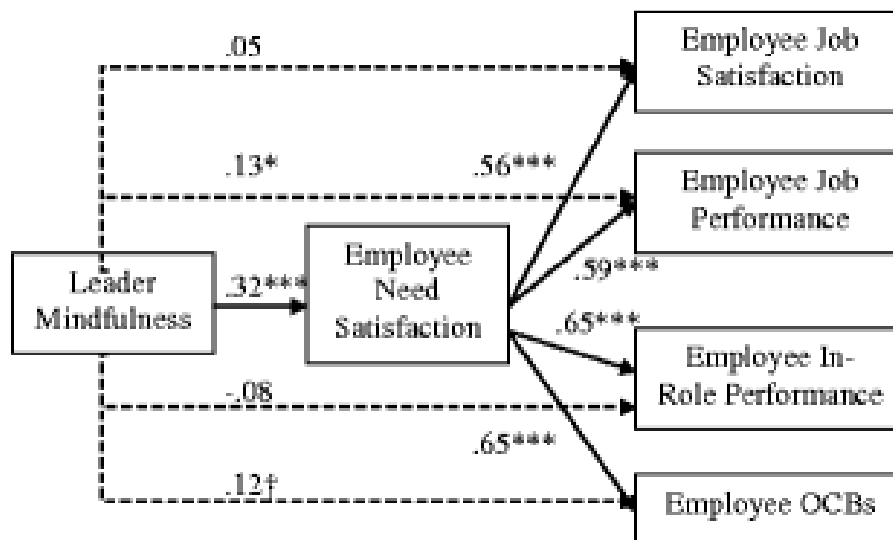

Fig. 2: Path model including direct and indirect paths, Study 2. Numbers are standardized path coefficients. [†]$p < .1$, [*]$p < .05$, [***]$p < .001$

Taken together, these findings conceptually replicate the results of Study 1, showing that leader mindfulness was positively related to different dimensions of employee well-being and performance. These results go a considerable way in reassuring us that the results of Study 1 were not limited to the specific dependent measures used. The findings also suggest that psychological need satisfaction can serve as a mediator between leader mindfulness and employee attitudes, behaviors, and performance.

General Discussion

To date, little research has examined the role of mindfulness at the workplace (Glomb et al., *2011*). Even less research has focused on interpersonal aspects of mindfulness. This has limited our understanding of the effects of mindfulness. At the same time, little research on leadership has focused on the quality of awareness and attention. The present research begins to address these gaps by examining the influence of leader trait mindfulness on employees. We hypothesized that leader mindfulness would be positively associated with employee well-being and employee job performance. We also explored whether one measure of employee well-being, psychological need satisfaction, plays a mediating role in the relation between leader mindfulness and employee performance.

We tested these predictions in two studies using data from both supervisors and their subordinates. Results provided consistent support for our hypotheses. In Study 1, supervisor mindfulness was negatively related to employee emotional exhaustion and positively related to employee work–life balance. Furthermore, leader mindfulness was positively related to overall employee performance and negatively related to employee deviance. Study 2 examined additional dimensions of well-being and performance. The study found that supervisor mindfulness was positively related to employee job satisfaction and psychological need satisfaction. Furthermore, leader mindfulness was positively related to overall job performance, as well as to in-role performance and organizational citizenship behaviors. That leader mindfulness was related to different dimensions of employee well-being, and performance provides considerable assurance as to the robustness of the results and also suggests a potentially important role of leading mindfully in organizations.

Limitations and Future Directions

The exploratory mediation analysis provides some evidence in support of a mediating mechanism linking leader mindfulness to employee performance through employee need satisfaction, consistent with other research that found need satisfaction to predict performance (Greguras and Diefendorff *2009*). Further research could extend these initial findings and examine in more depth and breadth the mechanisms linking leader mindfulness to employee well-being and performance. For example, in the "Introduction," we argued that leaders who are fully present when interacting with the subordinates may derive a better understanding of their employees' needs which may allow them to more effectively support employees. Leader mindfulness may also create a sense of interpersonal fairness in employees. Thus, future research could examine perceived supervisor support and interpersonal justice as additional mediators of the link between mindfulness and important employee outcomes. Further, 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, resulting in higher ratings on scales measuring LMX, which has been shown to be an important mediating variable of the effects of leadership on employees (e.g., Dulebohn et al. *2012*). Thus, future research should examine LMX as a mediator of the relation between mindfulness and employee outcomes.

An interesting question refers to the relation between leader mindfulness and existing leadership concepts, such as leader emotional intelligence, authentic leadership, and transformational leadership. Emotional intelligence concerns individuals' ability to perceive,

understand, and regulate own and even others emotions (e.g., Wong and Law *2002*). Past research has found mindfulness and emotional intelligence to be positively correlated (Brown and Ryan *2003*), suggesting the two are related but distinct. Mindful awareness may allow leaders to better regulate their emotions. At the same time, mindfulness is not limited to awareness of emotions but to other factors both internal and external to the leader, such as thoughts, bodily sensations, or the environment.

Authentic leaders have been defined as those who have, and are perceived by others as having, awareness of themselves, of others, and of the context, as well as being optimistic, hopeful, trusting, and positive (Avolio et al. *2004*). Awareness is considered foundational for authentic leadership (Gardner et al. *2005*), suggesting a connection to mindfulness as a certain quality of awareness and attention. Future research should examine the relation between mindfulness and authentic leadership. Specifically, we suspect that mindfulness will facilitate authentic leadership. It would be interesting to find out whether mindfulness training can be used to develop authenticity in leaders.

One limitation of the present study is that it does not examine different aspects of mindfulness. For example, being mindful not only means keeping attention focused on the present moment but also means doing so with awareness in a non-judgmental, open manner (Kabat-Zinn *2003*). The reduction in mental commentary and judgments is expected to enable individuals to be more receptive to developments in their environments, allowing them to respond more effectively to challenging and changing situations (Weick et al. *1999*; Dane *2011*; Salvato *2009*). Another aspect of mindfulness, referred to as "de-centering" or "witnessing" (Lau et al. *2006*), allows individuals to observe and acknowledge thoughts and feelings without necessarily reacting upon them. This aspect of mindfulness may allow leaders to better handle emotionally charged encounters with employees, leading to better performance. Future research should examine in more detail the different conceptualizations and aspects of mindfulness and their role at the workplace.

The current data are subject to the usual cautions associated with observational and cross-sectional data, such as concerns about the causal direction of the reported findings. Nevertheless, conceptually, it seems more plausible that a trait variable (leader trait mindfulness) would affect non-trait variables such as attitudes (job satisfaction) and performance. However, clearly, further longitudinal and experimental research is needed to corroborate the present findings. Particularly interesting might be intervention studies in which an experimental group of leaders participates in mindfulness training, and this group is then compared with a control group.

Another methodological concern relating to the present studies is that leader mindfulness and employee performance were measured using the same source (i.e., the leader), introducing the possibility of common source bias. There are at least two reasons reducing this concern. First, leader mindfulness was not only related to leader-rated employee performance but also to employee well-being, and all employee well-being variables were reported by the employees, not the supervisors. Second, mediation analysis suggested that employee need satisfaction partially mediated the relation between supervisor mindfulness and both employee in-role performance as well as OCBs. That the mediator is collected from a different source than the independent and dependent variables in these mediation analyses, speaks against a common source explanation of the relation between leader mindfulness with employee performance.

Another limitation of the present studies is that we focused on supervisory leadership. Thus, our research cannot answer conclusively how mindfulness supports or hinders that performance of effective leadership at other levels and roles of an organization. Clearly, future research should extend the study of mindful leadership to a broad range of conceptualizations, levels, and functions of leadership.

Overall, this research contributes to our understanding of leadership by examining the foundation of leadership effectiveness in leader's awareness and attention. It also contributes to our understanding of mindfulness by examining its interpersonal effects in a very important domain of human life: the workplace. Hopefully, future research will allow us to better understand the role of mindfulness and awareness at the workplace, and this understanding will lead to workplaces that allow people to perform well and be well.

References

Arch, J. J., & Craske, M. G. (2006). Mechanisms of mindfulness: Emotion regulation following a focused breathing induction. *Behavior Research and Therapy, 44*, 1849–1858.

Avolio, B. J., Gardner, W. L., Walumbwa, F. O., Luthans, F., & May, D. R. (2004). Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors. *The Leadership Quarterly, 15*, 801–823.

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13*, 27–45.

Barnes, S., Brown, K. W., Krusemark, E., Campbell, W. K., & Rogge, R. D. (2007). The role of mindfulness in romantic relationship satisfaction and responses to relationship stress. *Journal of Marital and Family Therapy, 33*(4), 482–500.

Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. The *Journal of Applied Psychology, 85*, 349–360.

Bennis, W. (2007). The challenges of leadership in the modern world: Introduction to the special issue. *The American Psychologist, 62*, 2–5.

Bishop, S. R., et al. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice, 11*, 230–241.

Block-Lerner, J., Adair, C., Plumb, J. C., Rhatigan, D. L., & Orsillo, S. M. (2007). The case for mindfulness-based approaches in the cultivation of empathy: Does nonjudgmental, present-moment awareness increase capacity for perspective-taking and empathic concern. *Journal of Marital and Family Therapy, 33*(4), 501–516.

Bono, J. E., & Judge, T. A. (2004). Personality and transformational and transactional leadership: A meta-analysis. *The Journal of Applied Psychology, 89*, 901–910.

Boyatzis, R., & McKee, A. (2005). *Resonant leadership: Renewing yourself and connecting with others through mindfulness, hope, and compassion*. Boston: Harvard Business School Press.

Brower, H. H., Schoorman, F. D., & Tan, H. H. (2000). A model of relational leadership: The integration of trust and leader–member exchange. *The Leadership Quarterly, 11*, 227–250.

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84*(4), 822–848.

Brown, K. W., Ryan, R. M., & Creswell, J. D. (2007). Mindfulness: Theoretical foundations and evidence for its salutary effects. *Psychological Inquiry, 18*, 211–237.

Cahn, R. B., & Polich, J. (2006). Meditation states and traits, EEG, ERP and neuroimaging studies. *Psychological Bulletin, 132*(2), 180–211.

Cammann, C., Fichman, M., Jenkins, D., & Klesh, J. (1979). *The Michigan organizational assessment questionnaire*. Unpublished manuscript. Ann Arbor: The University of Michigan.

Carroll, M. (2008). *The mindful leader: Ten principles for bringing out the best in ourselves and others*. Boston: Trumpeter.

Chiesa, A., & Serretti, A. (2010). A systematic review of neurobiological and clinical features of mindfulness meditations. *Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences, 40*, 1239–1252.

Colquitt, J., Conlon, E., Wesson, M., Porter, C., & Ng, K. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *The Journal of Applied Psychology, 86*, 425–445.

Dane, E. (2011). Paying attention to mindfulness and its effects on task performance in the workplace. *Journal of Management, 37*(4), 997–1018.

Davidson, R. J., Kabat-Zinn, J., Schumacher, J., Rosenkrantz, M., Muller, D., Santorelli, S. F., et al. (2003). Alterations in brain and immune function produced by mindfulness meditation. *Psychosomatic Medicine, 65*, 564–570.

Deci, E. L., Ryan, R. M., Gagné, M., Leone, D. R., Usunov, J., & Kornazheva, B. P. (2001). Need satisfaction, motivation, and well-being in the work organizations of a former Eastern Bloc country: A cross-cultural study of self-determination. *Personality and Social Psychology Bulletin, 27*, 930–942.

Dulebohn, J. H., Bommer, W. H., Liden, R. C., Brouer, R. L., & Ferris, G. R. (2012). A meta-analysis of antecedents and consequences of leader-member exchange: Integrating the past with an eye toward the future. *Journal of Management*, doi:10.1177/0149206311415280

Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., & Walumba, F. O. (2005). Can you see the real me? A self-based model of authentic leader and follower development. *The Leadership Quarterly, 16*, 343–372.

Gerstner, C. R., & Day, D. V. (1997). Meta-analytic review of leader–member exchange theory: Correlates and construct ideas. *The Journal of Applied Psychology, 82*, 827–844.

Glomb, T. M., Duffy, M. K., Bono, J. E., & Yang, T. (2011). Mindfulness at work. *Research in Personnel and Human Resources Management, 30*, 115–157.

Greenhaus, J. H., Collins, K. M., & Shaw, J. D. (2003). The relation between work–family balance and quality of life. *Journal of Vocational Behavior, 63*, 510–531.

Greguras, G. J., & Diefendorff, J. M. (2009). Different fits satisfy different needs: Linking person–environment fit to employee commitment and performance using self-determination theory. *The Journal of Applied Psychology, 94*, 465–477.

Grossman, P. (2011). Defining mindfulness by how poorly I think I pay attention during everyday awareness and other intractable problems for psychology's (re)invention of mindfulness: Comment on Brown et al. (2011). *Psychological Assessment, 23*, 1034–1040.

Judge, T. A., & Piccolo, R. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *The Journal of Applied Psychology, 89*, 755–768.

Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. (2002). Personality and leadership: A qualitative and quantitative review. *The Journal of Applied Psychology, 87*, 765–780.

Kabat-Zinn, J. (1982). An out-patient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results. *General Hospital Psychiatry, 4*(1), 33–47.

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice, 10*, 144–156.

Kabat-Zinn, J., Lipworth, L., & Burney, R. (1985). The clinical use of mindfulness meditation for the self-regulation of chronic pain. *Journal of Behavioral Medicine, 8*(2), 163–190.

Kabat-Zinn, J., Massion, A. O., Kristeller, J., Peterson, L. G., Fletcher, K., Pbert, L., et al. (1992). Effectiveness of a meditation-based stress reduction program in the treatment of anxiety disorders. *The American Journal of Psychiatry, 149*(7), 936–943.

Langer, E. (1989). *Mindfulness*. Reading: Addison-Wesley.

Langer, E. (2005). *On becoming an artist: Reinventing yourself through mindful creativity*. New York: Ballantine.

Lau, M. A., Bishop, S. R., Segal, Z. V., Buis, T., Anderson, N. D., Carlson, L., et al. (2006). The Toronto mindfulness scale: Development and validation. *Journal of Clinical Psychology, 62*, 1445–1468.

Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *The Leadership Quarterly, 7*, 385–425.

Maslach, C. (1982). *Burnout: The cost of caring*. Englewood Cliffs: Prentice Hall.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. Fiske, S. T., Schacter, D. L., & Zahn-Waxler, C. eds. *Annual Review of Psychology, 52*, 397–422

McNeely, B. L., & Meglino, B. M. (1994). The role of dispositional and situational antecedents in prosocial organizational behavior: An examination of the intended beneficiaries of prosocial behavior. *The Journal of Applied Psychology, 79*, 836–844.

Mikulas, W. (2011). Mindfulness: Significant common confusions. *Mindfulness, 2*, 1–7.

Mintzberg, H. (1973). *The nature of managerial work*. New York: Harper & Row.

Moorman, R. H., & Blakely, G. L. (1995). Individualism–collectivism as an individual difference predictor of organizational citizenship behavior. *Journal of Organizational Behavior, 16*, 127–142.

Motowidlo, S. J., & Scotter, J. R. V. (1994). Evidence that task performance should be distinguished from contextual performance. *The Journal of Applied Psychology, 79*, 475–480.

Narayanan, J., Chaturvedi, S., Reb, J. & Srinivas, E. (2011). Examining the role of trait mindfulness on turnover intentions and job performance: The mediating role of emotional exhaustion. Working paper, National University of Singapore

Riskin, L. (2002). The contemplative lawyer: On the potential contributions of mindfulness meditation to law students, lawyers and their clients. *Harvard Negotiation Law Review, 7*, 1–67.

Robinson, S. L., & Bennett, R. J. (1997). Workplace deviance: Its definition, its manifestations, and its causes. In R. J. Lewicki & R. J. Bies (Eds.), *Research on negotiation in organizations* (Vol. 6, pp. 3–27). Greenwich: JAI.

Salvato, C. (2009). Capabilities unveiled. The role of ordinary activities in the evolution of product development processes. *Organization Science, 20*(2), 384–409.

Scandura, T. A., & Schriesheim, C. A. (1994). Leader–member exchange and supervisor career mentoring. *The Academy of Management Journal, 37*, 1588–1602.

Schaufeli, W. B., Leiter, M. P., Maslach, C., & Jackson, S. E. (1996). *Maslach burnout inventory manual*. Palo Alto, CA: Consulting Psychologist Press.

Shao, R., & Skarlicki, D. P. (2009). The role of mindfulness in predicting individual performance. *Canadian Journal of Behavioural Sciences, 41*(4), 195–201.

Uhl-Bien, M. (2006). Relational leadership theory: Exploring the social processes of leadership and organizing. *The Leadership Quarterly, 17*, 654–676.

Wachs, K., & Cordova, J. V. (2007). Mindful relating: Exploring mindfulness and emotion repertoires in intimate relationships. *Journal of Marital and Family Therapy, 33*(4), 464–481.

Weick, K. E., & Putnam, T. (2006). Organizing for mindfulness: Eastern wisdom and western knowledge. *Journal of Management Inquiry, 15*, 275–287.

Weick, K. E., & Sutcliffe, K. M. (2006). Mindfulness and the quality of organizational attention. *Organization Science, 17*(4), 514–524.

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (1999). Organizing for high reliability: Processes of collective mindfulness. *Research in Organizational Behavior, 21*, 81–123.

Wong, C.-S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *The Leadership Quarterly, 13*, 243–274.