

# Mindfulness training in the workplace: exploring its scope and outcomes

Mindfulness training in the workplace

Karen R. Johnson

*Department of Learning Technologies, University of North Texas,  
Denton, Texas, USA*

Sunyoung Park

*School of Leadership and Human Resource Development,  
Louisiana State University, Baton Rouge, Louisiana, USA, and*

Sanghamitra Chaudhuri

*College of Management, Metropolitan State University, Saint Paul, Minnesota, USA*

---

Received 5 September 2019  
Revised 20 November 2019  
Accepted 24 November 2019

## Abstract

**Purpose** – As the concept of mindfulness gains popularity in the workplace, there is a need to understand the extent to which mindfulness-related practices are integrated into training and development activities and the impact of these practices on employees and organizations. The purpose of this study is to provide an overview of the scope of mindfulness as an intervention in the workplace and to identify outcomes of mindfulness-related training activities at the individual, job/work, team/group and organizational levels.

**Design/methodology/approach** – Torraco (2005) and Briner and Denyer's (2012) four steps (search, selection, analysis and synthesis) for conducting an integrative literature review were used for this study. This method enabled us to compare and contrast relevant articles, integrate distributed information, create new knowledge and provide research directions on mindfulness practices in work settings.

**Findings** – Through a revision of 28 empirical studies, the authors found that mindfulness-based training is an effective intervention for organizations to improve mental health, wellbeing and performance of employees. A total of 51 significant outcomes of mindfulness-related training categorized at the individual (23), job/work (17), group/team (7) and organizational (4) levels were identified.

**Practical implications** – Despite the benefits of mindfulness training, according to the research, only a handful of organizations have rolled-out this program for employees. The authors recommend that industry leaders and managers take a proactive approach and incorporate mindfulness-related practices as part of their professional development training for employees at all levels to improve personal and professional growth and performance.

**Originality/value** – This paper extends the emerging literature on mindfulness by providing a comprehensive summary of the consequences of mindfulness training at a multilevel context within the human resource development domain.

**Keywords** Mindfulness training, Employee well-being, Workplace training, Meditation training, Mindfulness-meditation, Mindfulness-related training

**Paper type** Literature review



## Introduction

Today, the world of work is impacted by increasing globalization, constant technological developments, complex, competitive and changing environments that culminate in heavy workloads and looming deadlines on multiple projects. Employees and organizations

---

consistently encounter demands for high performance – an ongoing problem in most workplaces considering that customer satisfaction, sustainable financial growth and success hinge on high performance (Swanson, 1999). Consequently, balancing and juggling numerous work and personal roles become difficult to manage. In some instances, employees are pressured by demanding work conditions that result in anxiety, stress, emotional exhaustion and burnout that negatively influence employee learning and performance and organizational effectiveness (Bakker *et al.*, 2005; Schaufeli *et al.*, 2008). Over the years, employee exhaustion, stress and burnout have been well documented in the academic literature (Bakker *et al.*, 2005; Schaufeli *et al.*, 2008). Furthermore, a number of employees experience poor health because of the impact of extreme work conditions (Van Gordon *et al.*, 2013). Despite the stress associated with continuous change in organizations, employers do little to promote employee well-being (Rumbles and Rees, 2013). Human resource development (HRD) professionals can play a role in facilitating activities to help employees better maintain their well-being for optimal functioning in organizations.

Employee well-being is one of the greatest challenges encountered by organizational leaders today and has become an important concern in the workplace. Employee well-being calls attention to the quality of employees' experiences and how they function on the job (Garg, 2017; Pawar, 2016). Organizations rely on different practices to promote employee well-being because of its importance on work outcomes and life, in general. Research and practice on workplace spirituality have been increasing because of the positive influence on employee well-being (emotional, psychological, social and spiritual) (Pawar, 2016). More attention is given to workplace spirituality because of its effectiveness to aid with issues of employees' quality of work life that benefits the organization as well as society (Sheep, 2006).

More recently, there has been an increasing interest from researchers and practitioners across various disciplines on the applications and practice of mindfulness. Mindfulness applications have been found to be beneficial for a variety of mental and physical conditions, including anxiety, depression, stress, substance use, insomnia and post-traumatic stress disorder (Davidson and Kaszniak, 2015; Shamekhi and Bickmore, 2015). Mindfulness practices are becoming more acceptable and popular because of the positive effects on the brain and mind (Tang and Posner, 2014; Lutz *et al.*, 2008) to promote psychological (Brown and Ryan, 2004) and physical health (Keyworth *et al.*, 2014). The practice of mindfulness has expanded beyond its applications in medicine to other fields including education (Wisner *et al.*, 2010), and even more recently – the workplace (Shonin *et al.*, 2014). Mindfulness-related techniques are practiced in organizational settings primarily for the purpose of improving employee well-being and job performance (Mahon *et al.*, 2017; Gaspar *et al.*, 2018).

The term mindfulness is defined as the mental training of emotional and attentional regulation that involves the ability to stay focused (Lutz *et al.*, 2008), conscious and present in the moment while being attentive to yourself, others and the surrounding environs (Chaskalson, 2011). Mindfulness is fostered primarily through meditation (Irving *et al.*, 2009). Mindfulness was first coined by a Buddhist scholar named T.W. Rhys Davids in the early twentieth century. It is derived from a Pali word (an ancient language in India in which teachings of Buddha were originally recorded) "Sati", meaning awareness, attention, and remembering (Siegel *et al.*, 2009). It is important to note that although mindfulness is often thought of in relation to the religious and spiritual context, in the organizational literature, mindfulness is perceived as a secular practice of meditation (Ospina *et al.*, 2007). Mindfulness is both a skill and a way of being that can be cultivated through mindful practices using a wide range of techniques designed to stimulate relaxation (Lutz *et al.*, 2008) that results in increased attention and concentration levels, emotional intelligence, resilience

and improved relationships (Chaskalson, 2011). Individuals who practice mindfulness techniques have focused attention (Kozasa *et al.*, 2012), are more self-aware, and are better prepared to manage their thoughts and feelings (Chaskalson, 2011); altogether promoting an improved sense of well-being and emotional balance (Lutz *et al.*, 2008).

Focused attention, emotional balance, improved concentration levels, self-awareness, better relationships and enhanced well-being are benefits of mindfulness practices that are all important attributes needed to aid employee functionality in the workplace. Mindfulness-related practices are used today in the workplace as a promising and practical approach to manage work-related stress and burnout (Wayne, 2019) and improve employee mental health (Van Gordon *et al.*, 2013). For example, General Mills, a US-based food company, serves as an inspiration to other corporations, having organized their first mindfulness training in 2006 and currently has a room for mindfulness practices in every building on the General Mills campus (Marsh, 2018). Because the ability to be mindful is inherent in all individuals, it can be fostered through training (Chaskalson, 2011; Sirgy and Jackson, 2015). Research indicates that a growing number of organizations currently offer mindfulness training as a means to improve work outcomes and employee health. However, research on the effectiveness of mindfulness interventions in the workplace is still limited (Kersemakers *et al.*, 2018). Along similar lines, Sutcliffe *et al.* (2016) suggested that mindfulness research is still in its infancy, especially in the context of organizational sciences. Furthermore, mindfulness training as a technique for HRD professionals to enhance employee and organizational outcomes has not yet been explored in HRD research despite the fact that the field is committed to performance and quality improvement and aims to improve individual and organizational effectiveness (Swanson, 1999). Therefore, we believe as HRD scholars, a multilevel investigation of the extant literature on the usefulness of mindfulness-related training will be an important first step in this direction. Through an integrative review of the empirical literature on mindfulness training in the workplace, our study seeks to determine:

- the scope of mindfulness-related training as an intervention in the workplace; and
- individual, team/group job/work and organizational outcomes of mindfulness-related training.

## Methods

We used Torraco's (2005, 2016) integrative literature review method to select relevant studies, frame our analysis and synthesize the findings based on the location of articles, search period, number of articles screened and criteria for screening. This method enabled us to compare and contrast relevant articles, incorporate distributed information and investigate new knowledge and research directions using the four stages suggested by Briner and Denyer (2012) and Torraco (2005): plan and search, evaluate and select, analyze and code and synthesize. To conduct the literature review, we found existing studies through multiple databases, including Academic Search Complete, Business Source Complete, EBSCO, Human Resources Abstracts, PsycARTICLES and Google Scholar. The search was conducted using the following keywords and mixed terms that needed to be identified within the title or keywords: "mindfulness", "meditation", "mindfulness meditation", "mindfulness training", "meditation training", "training", "workplace" and "organization".

We followed Briner and Denyer's (2012) and Torraco's (2005) four steps to review the literature. First, we searched related studies using the databases and keywords. The initial

---

findings resulted in a review of approximately 450 studies on mindfulness training. Second, we selected 28 articles for review based on the following criteria:

- peer-reviewed scholarly articles;
- studies grounded in empirical research in organizational contexts; and
- with a focus on mindfulness-related training.

---

Third, we conducted an in-depth review and analysis of the 28 articles that were identified as relevant to this study. We coded the articles by author(s), year published, title, journal name, independent variables, dependent variables, mediating variables, moderating variables, outcomes, measurement, analysis methods, number of participants, organizational setting and country. All of the information was included in an Excel worksheet. Fourth, we identified 51 significant outcomes of mindfulness training categorized at the individual (23), job/work (17), group/team (7) and organizational (4) levels. Because the concept of mindfulness training is a fairly new practice in work settings and research is emerging, we did not set a specific time frame as a starting point for the literature search. The search results confirmed our assumption as we found only one article from 1990, a few in the time period from 2000 to 2014 and the majority of the studies from 2015 onwards. Additionally, the search was not country-specific; however, publications included in this study needed to be in English.

## Results

### *Scope of mindfulness training as an intervention in the workplace*

In this study, we regarded the scope of mindfulness training in the workplace as the general characteristics/features of mindfulness training, including empirical research trends, industry sectors in which mindfulness is practiced, mindfulness training programs and measures. In the earlier days, mindfulness training in corporations was preserved only for the executives; however, recently organization-wide mindfulness programs are offered (Marsh, 2018). Today, professional development for some organizations includes mindfulness training and the expected benefits for the training has been a source of motivation for employee participation (Lyddy *et al.*, 2016). Although the roots of mindfulness can be traced back to India, from our findings, we found that the practice of mindfulness training in organizational settings has been studied primarily in the context of the Western world (mainly the USA and the UK) (Jones *et al.*, 2019; Kersemaekers *et al.*, 2018; Yu and Zellmer-Bruhn, 2018). However, the concept as an intervention in the workplace is also now being investigated in parts of Asia (particularly India and China) (Gupta *et al.*, 2014; Schuh *et al.*, 2017).

*Features of empirical research on mindfulness.* The majority of empirical studies on mindfulness-related training in the workplace have been conducted since 2015 with heavy reliance on the positivist research paradigm. Participants of mindfulness training have included employees at all levels in varying occupations. From this study, we found that mindfulness has been examined primarily as an independent/predictor variable. Employee stress, compassion, self-compassion, anxiety, depression, turnover intention and job performance are some of the common themes that have been examined in the academic literature in relation to the impact of mindfulness interventions in the workplace. Some of the findings associated with mindfulness-related training are actually astonishing given its impact on enhancing working memory, slowing the aging process and increasing the gray matter density in the human brain (Epel *et al.*, 2009; Hölzel *et al.*, 2011a; Jha *et al.*, 2010).

---

*Dominant industry sectors in which mindfulness is practiced.* The studies conducted have been applied to a range of organizational, sectors including pharmaceutical companies (Bostock *et al.*, 2019; Kersemaekers *et al.*, 2018), insurance (Gupta *et al.*, 2014; Wolever *et al.*, 2012), restaurants (Dane and Brummel, 2014), marketing (Slutsky *et al.*, 2019), service centers (Reb *et al.*, 2017; Walach *et al.*, 2007); with the majority of studies being conducted in health care (Gaspar *et al.*, 2018; Hulsheger *et al.*, 2013; Lyddy *et al.*, 2016; Mahon *et al.*, 2017; Orellana-Rios *et al.*, 2017; Van Gordon *et al.*, 2013; Warriner *et al.*, 2016) as well as higher educational settings (Andrews *et al.*, 2014; Aranega *et al.*, 2019; Jensen *et al.*, 2012; Hulsheger *et al.*, 2013; Jones *et al.*, 2019; Kurash and Schaul, 2006; Ray *et al.*, 2011; Yu and Zellmer-Bruhn, 2018). Although mindfulness-related training is gaining increasing attention in organizations as a way to reduce stress and increase individual and organizational performance, a greater number of these studies has been published in health- and psychology-related journals with only few business, training or HRD related journals being targeted as an outlet for disseminating the research findings.

*Mindfulness-related training programs.* Despite the fact that the concept is still a fairly new intervention in the workplace, a number of mindfulness-related training programs are currently offered with the general aim to improve physical and psychological well-being. Developed by Dr Jon Kabat-Zinn and colleagues at the University of Massachusetts Medical Center, the Mindfulness-Based Stress Reduction may be considered as the most researched and validated approach to mindfulness training (Lyddy *et al.*, 2016). Adapted for the work context, the mindfulness-based stress reduction training program is educational based and spans a period of eight weeks with weekly 2.5 h long classes and one day of silence. Now, there is a shortened version of four weeks for this program which is critiqued by some researchers as potentially lacking the depth needed to sustain the effectiveness of the training (Smith, 2014).

Other mindfulness-based training included the Tergar Meditation Community's nonsectarian Joy of Living program, Meditation Awareness Training, Metta and Tonglen Meditation, WorkingMind and Finding Peace in a Frantic World. Most of the mindfulness-based training initiatives seem to have adopted a similar approach to the Mindfulness-Based Stress Reduction program, in that, they are offered over an average time of eight weeks with weekly meetings for an average of two hours per week. The programs are a combination of formal training/teaching and informal meditation practices applied in class, at home and work. Training often include formal presentations (Shonin *et al.*, 2014), mindful interactions with others/discussions, retreat components, (Gaspar *et al.*, 2018; Kurash and Schaul, 2006; Mahon *et al.*, 2018; Shonin *et al.*, 2014), mindful journaling (Hulsheger *et al.*, 2013; Kurash and Schaul, 2006) and mindful communication including emailing (Kersemaekers *et al.*, 2018). Mindfulness training encapsulated a variety of activities including gentle yoga/mindful movements; seated, lake and mountain meditations (Gaspar *et al.*, 2018); additional meditational practices involved daily routines such as eating, driving and walking.

Training activities also included the "importance of posture, body awareness, the breath as the object of attention in mindfulness meditation, and mental noting of one's thoughts and feelings" (Kurash and Schaul, 2006, p. 59). Simply sitting together in a group in meditation created a sense of being and belonging; this sharing of time whether through silence or mindful interactions resulted in a strong bond among participants (Kurash and Schaul, 2006). Some training programs are more flexible than others, for example, The Joy of Living approach is designed to accommodate employees' busy work schedules, in that, unlike the Mindfulness-Based Stress Reduction program, there is no consistent session timeline (Lyddy *et al.*, 2016) nor fixed routine of formal seated meditation sessions (Shonin *et al.*, 2014). The WorkingMind training program has a longer duration to meet the needs

---

and demands of employees (Kersemaekers *et al.*, 2018). Although the previously mentioned mindfulness-based training programs have been delivered in a traditional format, more current research indicates that mindfulness can also be practiced via a smartphone application (app) as part of workplace training. Short guided mindfulness meditations delivered using the smartphone and practiced multiple times per week can improve work stress and well-being (Bostock *et al.*, 2019). In general, mindfulness-based interventions are considered to be a cost-effective way for organizations to improve mental health and wellbeing of employees as well as performance (Van Gordon *et al.*, 2013).

*Measures of mindfulness.* Although mindfulness training is still emerging in organizations, there is a growing number of self-report measures of mindfulness; one of the most commonly used measures is the 15-item Mindful Attention Awareness Scales (MAAS) developed by Brown and Ryan (2004). The MAAS is designed to assess mindfulness across various contexts and audiences. Mindfulness has also been measured using the 39-item Five Facets Mindfulness Questionnaire developed by Baer *et al.* (2006). The five facets (observing, describing, acting with awareness, nonreactivity to inner experience and nonjudging of inner experience) assess the general tendency to be mindful on a daily basis. The Freiburg Mindfulness Inventory (FMI) (Walach *et al.*, 2006) is comprised of 30 items; with a new shortened version of 14 items (FMI-14). There is also a five-item measure of mindfulness developed and validated by Zivnuska *et al.* (2013). Recently, a 10-item team mindfulness scale was developed by Yu and Zellmer-Bruhn (2018). Altogether, the construct of mindfulness has been empirically validated.

#### *Outcomes of mindfulness training*

Based on our review, we identified the outcomes of mindfulness training according to the individual, job, group/team and organizational levels (Table I). The outcomes of mindfulness training at the individual level are attitude, emotional change, resilience and self-ability (such as empathy, integration, mindfulness, motivation, positive emotion, active listening, self-compassion/knowledge, skillfulness and well-being) (Aránega *et al.*, 2019; Atkins and Parker, 2012; Chin *et al.*, 2019; Jensen *et al.*, 2012; Jones *et al.*, 2019; Lyddy *et al.*, 2016). When employees experience mindfulness-related training or programs, they are more likely to change their cognitive, affective and emotional aspects in a positive way. In addition, mindfulness training can contribute to reducing or decreasing individuals' anxiety, burnout, distress, emotional exhaustion, stress and turnover intention in the workplace (Gaspar *et al.*, 2018; Hülshager *et al.*, 2013; Shonin *et al.*, 2014; Wolever *et al.*, 2012).

The job-related outcomes of mindfulness-related training include engagement, performance, reappraisals, job productivity, job satisfaction, promotion focus, work-life balance, workplace pro-environmental behaviors and perception and work-related mental health (Andrews *et al.*, 2014; Dane and Brummel, 2014; Gupta *et al.*, 2014; Leroy *et al.*, 2013; Petchsawang and McLean, 2017; Reb *et al.*, 2017; Slutsky *et al.*, 2019). By participating in mindfulness training and related activities, employees can be more productive and demonstrate their improvement in positive outcomes related to their job (Van Gordon *et al.*, 2013). Mindfulness training can enhance employee engagement by instilling positive emotions and purposefulness in life (Silver *et al.*, 2018) while also reducing employees' job strain, mind-body workplace stress, separation and isolation and work-life conflict at the job/work level (Bostock *et al.*, 2019; Wolever *et al.*, 2012).

Group and team-related outcomes of mindfulness training are a sense of community, group cohesion, social support, team climate and team cooperation and productivity (Kersemaekers *et al.*, 2018; Kurash and Schaul, 2006). In particular, mindfulness-related training can help to improve the relationships between team members by improving each

## Mindfulness training in the workplace

Category	Outcomes		
	Positive	Negative	
Individual (23)	Active listening	Anxiety (-)	
	Attention	Burnout (-)	
	Awareness	Distress (-)	
	Compassion	Emotional exhaustion (-)	
	Coping with stress	Stress (-)	
	Ego functioning	Turnover intention (-)	
	Empathy		
	Integration		
	Mindfulness		
	Motivation		
	Positive emotion		
	Resilience		
	Self-compassion		
	Self-knowledge		
	Skillfulness		
	Stress resilience		
	Wellbeing		
Job/work (17)	Employee engagement	Job strain (-)	
	Employee performance	Mind-body workplace stress (-)	
	Facilitating reappraisals	Separation made by employees between their own interests and those of the organizations they work for (-)	
	Job performance		
	Job productivity		
	Job satisfaction		
	Perception of work and psychological environment	Work-life conflict (-)	
	Personal performance		
	Promotion Focus		
	Task performance		
	Work-life balance		
	Workplace pro-environmental behaviors		
	Work-related mental health		
	A sense of community		
	Group cohesion		
	Group/team (7)	Perception of workplace social support	Social undermining (-)
		Team climate	Team relationship conflict (-)
Team cooperation and productivity			
Leader procedural justice enactment			
Organizational mindfulness			
Organizational climate			
Workplace culture			
Organizational (4)		NA	

**Table I.**  
Outcomes of mindfulness related training

member's way of dealing with individual emotions and being conscious of each member's strengths and weaknesses (Rupprecht and Walach, 2016). Mindfulness training can reduce social undermining and relationship conflict among the team and group members (Yu and Zellmer-Bruhn, 2018).

Organizational outcomes of mindfulness training include leader procedural justice enactment, organizational mindfulness, organizational climate and workplace culture (Ray *et al.*, 2011; Schuh *et al.*, 2017; Warriner *et al.*, 2016). Employees were more willing to establish positive workplace climate and culture after mindfulness training sessions because they felt less stress and anxiety and experienced more resilience, self-compassion and

---

mindfulness (Warriner *et al.*, 2016). Through mindfulness initiatives, organizations develop an increase in openness to new information and awareness of multiple perspectives, improved capabilities to sense the possibility of failures, correct errors and mistakes accurately and rapidly, adapt to different situations and better use individual expertise (Ray *et al.*, 2011).

### Discussion

The purpose of this study was to provide an overview of the scope of mindfulness as an intervention in the workplace and to identify outcomes of mindfulness-related training activities at the individual, team/group and organizational levels. We identified 51 significant outcomes of mindfulness training categorized at the various levels of analyses (individual [23], job/work [17], group/team [7] and organizational [4] levels). Our findings showed that individual outcomes of mindfulness training have a larger portion (46 per cent) than other categories. In particular, mindfulness training played an important role in reducing employees' anxiety, burnout, distress, stress and increasing their awareness, motivation, positive emotion, resilience and well-being. Our review supported previous studies that discussed mindfulness training as an intervention to foster employees' mental health and well-being (Van Gordon *et al.*, 2013).

Mindfulness training can contribute to employees' higher level of work/job performance, productivity, behavior and job satisfaction by increasing the awareness of work and psychological environment and their situations. Employees who have a positive experience of mindfulness training can better manage and control strain, stress and conflict from their job by identifying the issues related to the job, communicating with supervisors and colleagues and improving work efficiency. Meditation can affect how employees experience their job and work environment. Through mindfulness training, employees are less likely to separate their own interests from organizational goals, and then, are more likely to focus on their work (Shonin *et al.*, 2014).

The research on team mindfulness is also taking shape because of the impact this practice can have on group functioning (Yu and Zellmer-Bruhn, 2018). The group/team-related outcomes emphasized how mindfulness training and interventions can affect relationship and performance within a group. The group-level outcomes can be related to individual outcomes because mindfulness can be enhanced when shared in a group setting, even though practicing mindfulness is personal (Kurash and Schaul, 2006). Through mindfulness interventions, groups/teams can reduce both relationship and task conflict among members and decrease individual social undermining by increasing interactions, awareness and attention to team experiences through nonjudgmental sharing (Yu and Zellmer-Bruhn, 2018). In addition, mindful interventions can enhance positive team climate, social support, group cohesion and improve team cooperation and productivity by promoting a sense of connection and openness among members and weakening boundaries between titles and positions within a group.

Our findings revealed that organizational outcomes of mindfulness training have been studied the least when compared with the impact of mindfulness on the individual, job or teams. The reasons may be that most articles reviewed in this study focused more on individual and job-level outcomes than organizational-level outcomes of mindfulness training. We attributed this lack of finding to our database scoping. When mindfulness is investigated at the organizational level, the emphasis is placed on leadership. Mindfulness training can enhance leaders' behaviors by experiencing mindfulness, leaders pay more attention to employees' opinions and try to increase their awareness and openness to

employees. Mindfulness interventions also can promote positive organizational climate and workplace culture.

### **Implications for research and practice**

This study contributes to the literature on mindfulness-related training in the workplace by providing an overview of the scope of mindfulness practices and a comprehensive review of the outcomes of this intervention at the individual, group/team, job/work and organizational levels. As reflected from our research and in consistency with the extant literature, we found that mindfulness-related training has myriads of benefits at the psychological, physiological and performance level (Hyland *et al.*, 2015). It was also interesting to note that we found a proportionally higher number of studies at the individual level compared with the other levels. Because the research on mindfulness-related benefits is still burgeoning, we may assume that the impact at the more macro levels is largely underexplored. More studies are definitely warranted at the group/team and organizational levels to make a robust case for using this practice as an organization-wide intervention. Along similar lines, as suggested by other mindfulness scholars, there is still ambiguity on how the impact of mindfulness training may vary based on individual personality differences. It can be frustrating for both the employees and the interventionist if they are uncertain regarding the ultimate outcome of the intervention. Furthermore, many scholars have suggested that the conceptualization of mindfulness can distinctly vary from East to West (Christopher *et al.*, 2009; Hyland *et al.*, 2015). Therefore, this area is a fertile ground for many international HRD scholars to engage in cross-country and cross-cultural research as mindfulness interventions could be perceived differently by trainees from different cultures and countries.

Based on our integrative review of the literature, mindfulness training appears to have a significant impact on the work/job level too. Because employee productivity and performance are closely associated with mindfulness related training, mindfulness traits can be used as an appropriate assessment tool for recruiting, selecting and hiring decisions (Good *et al.*, 2016). To further explore organizational outcomes, more research can illustrate the relationships among leadership, job, group and organizational factors in relation to mindfulness training because these factors are all interrelated within an organizational environment.

Our review indicated that organizational culture and workplace climate can have a salient effect on the outcomes of mindfulness-related training. Top management and human resource professionals should be wary of the physical space and work design of their respective organizations as they become an advocate for such trainings. Related to this, many organizational researchers raised concern that modern workplaces are designed to promote nonstop thinking which may dissuade the mindful state (Mazmanian *et al.*, 2013). Therefore, organizations should contemplate borrowing design elements from monasteries and retreat centers to support mindfulness (Good *et al.*, 2016).

Despite the claimed benefits of mindfulness training, according to the research, only a handful of organizations have rolled-out this program for employees. One of the quintessential challenges of such interventions is sustaining the momentum once it has been introduced organization wide. We recommend that industry leaders and managers take a proactive approach and incorporate mindfulness-related practices as part of their professional development training for employees at all levels to improve personal and professional growth and performance. Organizations should not shy away from engaging the employees further by introducing them to training websites, sending out newsletters, and providing access to audiotapes so that they are willing to practice on their own even after the intervention ended (Pang and Ruch, 2019).

### Limitations and recommendations for future research

Historically, mindfulness meditation was practiced in mainstream medicine and psychology disciplines, however, applications of mindfulness have now mushroomed to other fields and are now being used as an intervention in organizational settings to improve the well-being of employees. To make the study more feasible considering time constraint, along with the search criteria, we may have missed relevant studies that could have been included for analysis in the study. Future research can include additional databases for a more comprehensive review. We may also have restricted ourselves from other relevant articles that are not published in English. Given that the notion of meditation and mindfulness has its roots in the East and the history can be traced back to Hinduism, Buddhism and Yoga (Selva, 2019), it would be worth including publications from other languages.

Many scholars (Chang *et al.*, 2018) have insisted to visit the uncharted territory of yoga-based programs which has its origin well beyond academia and the western world. There has been increasing thrust to include yogic technologies that could throw further light on existing organizational theories and practices which perhaps is beyond the reach of the current research on mindfulness. Sadhguru Jaggi Vasudev (2016) is a realized Indian yogi and author who found the Isha Foundation, a nonprofit organization with over five million volunteers (Sadhguru and Subramaniam, 2017). This foundation is known for offering a yoga program appropriate for the competitive stressful modern life. As Chang *et al.* (2018) noted:

[. . .] it introduces participants to a comprehensive set of yoga, meditation, and breathing practices that align one's mind, emotion, body, and energy (prana) systems so that they function as a harmonious whole that brings about optimal human well-being and functioning (p. 4).

Further studies can include nonacademic and practitioners' journals in the search criteria which may help uncover the fascinating world of yoga and spirituality and its contribution to mindfulness research. This research can be expanded further by examining mindfulness as an antecedent, mediator, moderator and an outcome variable. Mindfulness can also be explored in relation to other fundamental work-related employee attitudes and behaviors as well as the difference in impact on generational groups and special populations. Future research can explore how differences in personality and traits can determine whether to use this as a possible intervention. More qualitative and mixed-method studies should be used to foster a more balanced methodological approach for investigating mindfulness in work settings. The concept can be further researched in a different country and cultural contexts across a wider span of industries to determine similarities and differences. With the growing number of measures of mindfulness, the instruments can be further validated across countries and cultures. It would also be important to know the prolonged impact of mindfulness training and the frequency with which this practice should be engaged in to maintain effectiveness. To encourage more even dissemination of research on mindfulness in the workplace and to reach a wider audience, researchers should target more business, as well as human resource management and development journals as outlets for publication considering the importance on work outcomes and well-being.

### References

- Andrews, M.C., Kacmar, K.M. and Kacmar, C. (2014), "The mediational effect of regulatory focus on the relationships between mindfulness and job satisfaction and turnover intentions", *Career Development International*, Vol. 19 No. 5, pp. 494-507.
- Aránega, A.Y., Sánchez, R.C. and Pérez, C.G. (2019), "Mindfulness' effects on undergraduates' perception of self-knowledge and stress levels", Vol. 101, pp. 441-446.

- Atkins, P.W.B. and Parker, S.K. (2012), "Understanding individual compassion in organizations: the role of appraisals and psychological flexibility", *Academy of Management Review*, Vol. 37 No. 4, pp. 524-546.
- Baer, R.A., Smith, G.T., Hopkins, J., Krietemeyer, J. and Toney, L. (2006), "Using self-report assessment methods to explore facets of mindfulness", *Assessment*, Vol. 13 No. 1, pp. 27-45.
- Bakker, A.B., Demerouti, E. and Euwema, M.C. (2005), "Job resources buffer the impact of job demands on burnout", *Journal of Occupational Health Psychology*, Vol. 10 No. 2, pp. 170-180.
- Bostock, S., Crosswell, A.D., Prather, A.A. and Steptoe, A. (2019), "Mindfulness on-the-go: effects of a mindfulness meditation app on work stress and well-being", *Journal of Occupational Health Psychology*, Vol. 24 No. 1, pp. 127-138.
- Briner, R. and Denyer, D. (2012), "Systematic review and evidence synthesis as a practice and scholarship tool", in Rousseau, D. (Ed.), *The Oxford Handbook of Evidence-Based Management*, oxford University Press, Oxford, pp. 112-129.
- Brown, K.W. and Ryan, R.M. (2004), "Perils and promise in defining and measuring mindfulness: Observations from experience", *Clinical Psychology: Science and Practice*, Vol. 11, pp. 242-248.
- Chang, T.F., Askun Celik, D. and Klatt, S. (2018), "From mindfulness to oneness: inner engineering" of the complex adaptive human system", *Academy of Management Proceedings*, Vol. 2018 No. 1, p. 11819.
- Chaskalson, M. (2011), "The mindful workplace: developing resilient individuals and resonant organizations with MBSR".
- Chin, B., Linsay, E.K., Greco, C.M., Brown, K.W., Smyth, J.M., Wright, A.G.C. and Creswell, J.D. (2019), "Psychological mechanisms driving stress resilience in mindfulness training: a randomized controlled trial", *Health Psychology*, Vol. 38 No. 8, pp. 759-768.
- Christopher, M.S., Christopher, V. and Charoensuk, S. (2009), "Assessing 'Western' mindfulness among Thai Theravada Buddhist monks", *Mental Health, Religion and Culture*, Vol. 12, pp. 303-314.
- Dane, E. and Brummel, B.J. (2014), "Examining workplace mindfulness and its relations to job performance and turnover intention", *Human Relations*, Vol. 67 No. 1, pp. 105-128.
- Davidson, R.J. and Kaszniak, A.W. (2015), "Conceptual and methodological issues in research on mindfulness and meditation", *American Psychologist*, Vol. 70 No. 7, pp. 581-592.
- Epel, E., Daubenmier, J., Moskowitz, J.T., Folkman, S. and Blackburn, E. (2009), "Can meditation slow rate of cellular aging? Cognitive stress, mindfulness, and telomeres", *Annals of the New York Academy of Sciences*, Vol. 1172 No. 1, pp. 34-53.
- Garg, N. (2017), "Workplace spirituality and employee well-being: an empirical exploration", *Journal of Human Values*, Vol. 23 No. 2, pp. 129-147.
- Gaspar, I., Martinho, M.L. and Lima, M. (2018), "Exploring the benefits of a mindfulness program for Portugese public healthcare workers", *Current Psychology*, doi: [10.1007/s12144-018-9987-3](https://doi.org/10.1007/s12144-018-9987-3).
- Good, D.J., Lyddy, C.J., Glomb, T.M., Bono, J.E., Brown, K.W., Duffy, M.K. and Lazar, S.W. (2016), "Contemplating mindfulness at work: an integrative review", *Journal of Management*, Vol. 42 No. 1, pp. 114-142.
- Gupta, M., Kumar, V. and Singh, M. (2014), "Creating satisfied employees through workplace spirituality: a study of the private insurance firms in Punjab (India)", *Journal of Business Ethics*, Vol. 122 No. 1, pp. 79-88.
- Hölzel, B.K., Carmody, J., Vangel, M., Congleton, C., Yerramsetti, S.M., Gard, T. and Lazar, S.W. (2011), "Mindfulness practice leads to increases in regional brain gray matter density", *Psychiatry Research: Neuroimaging*, Vol. 191 No. 1, pp. 36-43.
- Hülshager, U.R., Alberts, H.J.E.M., Feinholdt, A. and Lang, J.W.B. (2013), "Benefits of mindfulness at work: the role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction", *Journal of Applied Psychology*, Vol. 98 No. 2, pp. 310-325.

- 
- Hyland, P.K., Lee, R.A. and Mills, M.J. (2015), "Mindfulness at work: a new approach to improving individual and organizational performance", *Industrial and Organizational Psychology*, Vol. 8 No. 4, pp. 576-602.
- Irving, J.A., Dobkin, P.L. and Park, J. (2009), "Cultivating mindfulness in health care professionals: a review of empirical studies of mindfulness-based stress reduction (MBSR)", *Complementary Therapies in Clinical Practice*, Vol. 15 No. 2, pp. 61-66.
- Jensen, C.G., Vangkilde, S., Frokjaer, V. and Hasselbalch, S.G. (2012), "Mindfulness training affects attention – or is it attentional effort?", *Journal of Experimental Psychology: General*, Vol. 141 No. 1, pp. 106-123.
- Jha, A.P., Stanley, E.A., Kiyonaga, A., Wong, L. and Gelfand, L. (2010), "Examining the protective effects of mindfulness training on working memory capacity and affective experience", *Emotion*, Vol. 10 No. 1, pp. 54.
- Jones, S.M., Bodie, G.D. and Hughes, S.D. (2019), "The impact of mindfulness on empathy, active listening, and perceived provisions of emotional support", *Communication Research*, Vol. 46 No. 6, pp. 838-865.
- Kersemaekers, W., Rupperecht, S., Wittmann, M., Tamdjidi, C., Falke, P., Donders, R. and Speckens, K.N. (2018), "A workplace mindfulness intervention may be associated with improved psychological well-being and productivity, a preliminary field study in a company setting", *Frontiers in Psychology*, Vol. 9, p. 195.
- Keyworth, C., Knopp, J., Roughley, K., Dickens, C., Bold, S. and Coventry, P. (2014), "A mixed-methods pilot study of the acceptability and effectiveness of a brief meditation and mindfulness intervention for people with diabetes and coronary heart disease", *Behavioral Medicine*, Vol. 40 No. 2, pp. 53-64.
- Kozasa, E.H., Sato, J.R., Lacerda, S.S., Barreiros, M.A.M., Radvany, J., Russell, T., Sanches, L.G., Mello, L.E.A.M., Amaro Jr (2012), "Meditation training increases brain efficiency in an attention task", *NeuroImage*, Vol. 59 No. 1, pp. 745-749.
- Kurash, C. and Schaul, J. (2006), "Integrating mindfulness meditation within a university counseling center setting", *Journal of College Student Psychotherapy*, Vol. 20 No. 3, pp. 53-67.
- Leroy, H., Anseel, F., Dimitrova, N.G. and Sels, L. (2013), "Mindfulness, authentic functioning, and work engagement: a growth modeling approach", *Journal of Vocational Behavior*, Vol. 82 No. 3, pp. 238-247.
- Lutz, A., Slagter, H.A., Dunne, J.D. and Davidson, R.J. (2008), "Attention regulation and monitoring in meditation", *Trends in Cognitive Sciences*, Vol. 12 No. 4, pp. 163-169.
- Lyddy, C., Schachter, Y., Reyer, A. and Julliard, K. (2016), "Transfer of mindfulness training to the work setting: a qualitative study in a health care system", *Journal of Continuing Education in the Health Professions*, Vol. 36 No. 4, pp. 240-248.
- Mahon, M.A., Mee, L., Brett, D. and Dowling, M. (2017), "Nurses perceived stress and compassion following a mindfulness meditation and self compassion training", *Journal of Research in Nursing*, Vol. 22 No. 8, pp. 572-594, doi: [10.1177/1744987117721596](https://doi.org/10.1177/1744987117721596).
- Mazmanian, M., Orlikowski, W.J. and Yates, J. (2013), "The autonomy paradox: the implications of mobile email devices for knowledge professionals", *Organization Science*, Vol. 24 No. 5, pp. 1337-1357.
- Orellana-Rios, C.L., Radbruch, L., Kern, M., Regel, Y.U., Anton, A., Sinclair, S., et al. (2017), "Mindfulness and compassion-oriented practices at work reduce distress and enhance self-care of palliative care teams: a mixed-method evaluation of an 'on the job' program", *BMC Palliative Care*, Vol. 17 No. 1, p. 3.
- Pang, D. and Ruch, W. (2019), "Fusing character strengths and mindfulness interventions: benefits for job satisfaction and performance", *Journal of Occupational Health Psychology*, Vol. 24 No. 1, pp. 150-162.

- Pawar, B.S. (2016), "Workplace spirituality and employee well-being: an empirical examination", *Employee Relations*, Vol. 38 No. 6, pp. 975-994.
- Petchsawang, P. and McLean, G.N. (2017), "Workplace spirituality, mindfulness meditation, and work engagement", *Journal of Management, Spirituality and Religion*, Vol. 14 No. 3, pp. 216-244.
- Ray, J.L., Baker, L.T. and Plowman, D.A. (2011), "Organizational mindfulness in business schools", *Academy of Management Learning and Education*, Vol. 10, pp. 188-203.
- Reb, J., Narayanan, J., Chaturvedi, S. and Ekkirala, S. (2017), "The mediating role of emotional exhaustion in the relationship of mindfulness with turnover intentions and job performance", *Mindfulness*, Vol. 8 No. 3, pp. 707-716.
- Rumbles, S. and Rees, G. (2013), "Continuous changes, organizational burnout and the implications for HRD", *Industrial and Commercial Training*, Vol. 45 No. 4, pp. 236-242.
- Rupprecht, S. and Walach, H. (2016), "Mindfulness at work: how mindfulness training may change the way we work", in Wiencke M., Cacace M., Fischer S. (Eds), *Healthy at Work*, Springer, Cham. pp. 311-328.
- Sadhguru, J.V. and Subramaniam, A. (2017), *Adiyogi: The Source of Yoga*, Harper Collins, Uttar Pradesh.
- Schaufeli, W.B., Bakker, A.B. and Van Rhenen, W. (2008), "How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism", *Journal of Organizational Behavior*, Vol. 30 No. 7, pp. 893-917.
- Schuh, S.C., Zheng, M.X., Xin, K.R. and Fernandez, J.A. (2017), "The interpersonal benefits of leader mindfulness: a serial mediation model linking leader mindfulness, leader procedural justice enactment, and employee exhaustion and performance", *Journal of Business Ethics*, Vol. 156 No. 4, pp. 1007-1025.
- Selva, J. (2019), "History of mindfulness: from east to west and religion to science", available at: <https://positivepsychology.com/history-of-mindfulness/>
- Shamekhi, A. and Bickmore, T. (2015), "Breathe with me: a virtual meditation coach", in Brinkman W. Broekens, J. and Heylen D. (Eds), *Intelligent Virtual Agents: Proceedings of the 15th International Conference on Intelligent Virtual Agents*, Springer. Cham. pp. 279-282.
- Sheep, M.L. (2006), "Nurturing the whole person: the effects of workplace spirituality in a society of organizations", *Journal of Business Ethics*, Vol. 66 No. 4, pp. 357-375.
- Shonin, E., Gordon, W.V., Dunn, T.J., Singh, N.N. and Griffiths, M.D. (2014), "Meditation awareness training (MAT) for work-related wellbeing and job performance: a randomised controlled trial", *International Journal of Mental Health and Addiction*, Vol. 12 No. 6, pp. 806-823.
- Siegel, R.D., Germer, C.K. and Olendzki, A. (2009), "Mindfulness: What is it? Where did it come from?", in Didonna, F. (Ed.), *Clinical Handbook of Mindfulness*, Springer. New York, NY, pp. 17-35.
- Silver, J., Caleshu, C., Casson-Parkin, S. and Ormond, K. (2018), "Mindfulness among genetic counselors is associated with increased empathy and work engagement and decreased burnout and compassion fatigue", *Journal of Genetic Counseling*, Vol. 27 No. 5, pp. 1175-1186.
- Sirgy, M.J. and Jackson, P.A. (2015), "How to enhance the well-being of healthcare service providers and their patients? A mindfulness proposal", *Frontiers in Psychology*, Vol. 6, p. 276, doi: [10.3389/fpsyg.2015.00276](https://doi.org/10.3389/fpsyg.2015.00276).
- Slutsky, J., Chin, B., Raye, J. and Creswell, J.D. (2019), "Mindfulness training improves employee well-being: a randomized controlled trial", *Journal of Occupational Health Psychology*, Vol. 24 No. 1, pp. 139-149.
- Smith, S.A. (2014), "Mindfulness-based stress reduction: an intervention to enhance the effectiveness of nurses' coping with work-related stress", *International Journal of Nursing Knowledge*, Vol. 25 No. 2, pp. 119-130.
- Sutcliffe, K.M., Vogus, T.J. and Dane, E. (2016), "Mindfulness in organizations: a cross-level review", *Annual Review of Organizational Psychology and Organizational Behavior*, Vol. 3 No. 1, pp. 55-81.

- 
- Swanson, R.A. (1999), "Foundations of performance improvement and implications for practice", *Advances in Developing Human Resources*, Vol. 1 No. 1, pp. 1-45.
- Tang, Y.Y. and Posner, M.I. (2014), "Training brain networks and states", *Trends in Cognitive Sciences*, Vol. 18, pp. 345-350, doi: [10.1016/j.tics.2014.04.002](https://doi.org/10.1016/j.tics.2014.04.002).
- Torraco, R.J. (2005), "Writing integrative literature reviews: guidelines and examples", *Human Resource Development Review*, Vol. 4 No. 3, pp. 356-367.
- Torraco, R.J. (2016), "Writing integrative literature reviews: using the past and present to explore the future", *Human Resource Development Review*, Vol. 15 No. 4, pp. 404-428.
- Van Gordon, W., Shonin, E., Sumich, A., Sundin, E. and Griffiths, M.D. (2013), "Meditation awareness training (MAT) for psychological wellbeing in a sub-clinical sample of university students: a controlled pilot study", *Mindfulness*, Vol. 5, pp. 381-391, doi: [10.1007/s12671-012-0191-5](https://doi.org/10.1007/s12671-012-0191-5).
- Walach, H., Buchheld, N., Buttenmüller, V., Kleinknecht, N. and Schmidt, S. (2006), "Measuring mindfulness – the freiburg mindfulness inventory (FMI)", *Personality and Individual Differences*, Vol. 40 No. 8, pp. 1543-1555.
- Walach, H., Nord, E., Zier, C., Dietz-Waschkowski, B., Kersig, S. and Schüpbach, H. (2007), "Mindfulness-based stress reduction as a method for personnel development: a pilot evaluation", *International Journal of Stress Management*, Vol. 14 No. 2, pp. 188-198.
- Warriner, S., Hunter, L. and Dymond, M. (2016), "Mindfulness in maternity: evaluation of a course for midwives", *British Journal of Midwifery*, Vol. 24 No. 3, pp. 188-195.
- Wisner, B., Jones, B. and Gwin, D. (2010), "School-based meditation practices for adolescents: a resource for strengthening self-regulation, emotional coping, and self-esteem", *Children and Schools*, Vol. 32, pp. 150-159.
- Wolever, R.Q., Bobinet, K.J., McCabe, K., Mackenzie, E.R., Fekete, E., Kusnick, C.A. and Baime, M. (2012), "Effective and viable mind-body stress reduction in the workplace: a randomized controlled trial", *Journal of Occupational Health Psychology*, Vol. 17 No. 2, pp. 246-258.
- Yu, L. and Zellmer-Bruhn, M. (2018), "Introducing team mindfulness and considering its safeguard role against conflict transformation and social undermining", *Academy of Management Journal*, Vol. 61 No. 1, pp. 324-347.
- Zivnuska, S., Kacmar, K.M., Ferguson, M. and Carlson, D. (2013), "Mindfulness at work: employee impacts and organizational attitudes", *Manuscript presented at Western Academy of Management, Santa Fe, NM*.

### Further reading

- Lindsay, E.K., Cin, B., Greco, C.M., Young, W., Wright, A.G.C. and Creswell, J.D. (2018), *Journal of Personality and Social Psychology*, Vol. 115 No. 6, pp. 944-973.
- Malinowski, P. and Lim, H.J. (2015), "Mindfulness at work: positive affect, hope, and optimism mediate the relationship between dispositional mindfulness, work engagement, and well-being", *Mindfulness*, Vol. 6 No. 6, pp. 1250-1262.
- Shonin, E. and Van Gordon, W. (2015), "Managers' experiences of meditation awareness training", *Mindfulness*, Vol. 4, pp. 899-909.

### Corresponding author

Karen R. Johnson can be contacted at: [karen.johnson@unt.edu](mailto:karen.johnson@unt.edu)