

Mindfulness Training: A Strategy to Enhance  
Leaders' Respectful Inquiry Behaviors

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### **Abstract**

Mindfulness is associated with a range of positive outcomes like enhance well-being and both physical and psychological health. Moreover, it has become popular to use mindfulness intervention at work to foster employee's performance and functioning. A rather new field of study in the area of mindfulness at work is the interpersonal effects of mindfulness and leadership behaviors. Respectful inquiry being the ability to actively listen and ask question has been shown to foster to benefit the leader followers' relationship and to fulfil followers' basic needs leading to positive outcomes such as greater followers' job satisfaction. The goal of this diary study is to research the influence of a mindfulness intervention on leader's respectful inquiry behavior and its consequent effects on followers' need of relatedness and job satisfaction. We hypothesized that the mindfulness intervention for leaders is positively associated to both the leader's listening and questioning behaviors. Moreover, we hypothesized that the intervention on leaders would lead to greater employees' fulfillment of need of relatedness and this relationship will be mediated by the leaders 'respectful inquiry. We explore whether employees' fulfilment of need of relatedness plays a mediating role in the relation between leaders' mindfulness intervention and employees job satisfaction based on the self-determination theory. The results of the study showed evidence of a relationship between leaders' state mindfulness and leaders' Respectful Inquiry.

Keywords: Mindfulness, meditation, leadership, respectful inquiry, relatedness

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When we think about mindfulness, a nonjudgmental awareness of the present moment (Brown & Ryan, 2003), we may think about a quiet stress-free place, maybe it is you sitting on the floor in a meditative posture, closing your eyes, controlling your breath, wearing comfortable clothes, being fully here and now. In other words, we think about a peaceful mind. It may not seem obvious how mindfulness relates to a fast-paced environment, such as the workplace, or to a mind that is busy, full with responsibilities, duties, tasks, and ideas, such as a leader's mind. Leadership is one of the most examined phenomena of the social sciences and a major issue for many organizations. As Bass and Bass (2008, p. 25) stated: "In industrial, educational, and military settings, and in social movements, leadership plays a critical, if not the most critical, role, and is, therefore, an important subject for study and research". A lot of the leadership research has focused on certain leadership styles, such as authentic leadership (Weiss, Razinskas, Backmann, & Hoegl, 2018), charismatic-transformational leadership (van Knippenberg & Sitkin, 2013) or positive leadership (Avolio & Gardner, 2005). Empirical research has demonstrated that effective leadership is associated with beneficial outcomes for followers such as satisfaction with supervisor, organizational commitment (Peus, Wesche, Streicher, Braun, & Frey, 2012), and employee engagement (Wang & Hsieh, 2013). Hence, leaders have become key figures for any organization.

Recently, scholars have started to consider not only the different leadership styles but also concrete leadership behaviors that are to be found among all different leadership styles (van Knippenberg & Sitkin, 2013). For instance, communication behaviors have been established as being a central piece of successful leadership. Wajcman and Rose (2011) reported that up to 80 % of managers' daily work is based on communication. Some of the most common concrete communication behaviors that have been studied by leadership scholars are listening and asking behaviors (van Quaquebeke & Felps, 2018). On the one hand, listening has been declared a "key management skill" by leadership scholars (Ewing & Banks, 1980). Also, empirical research has shown that followers are more prompt to be influenced by leaders who listen well (Ames, Maissen, & Brockner, 2012). On the other hand, the growing body of literature on asking questions emphasizes the importance for leaders to know how to ask the right question (Schein, 2013). The importance of such communication behaviors in a leadership context has been shown by Bechler and Johnson (1995) in a video coding study of group discussion. They concluded that participants are more likely perceived as leaders when they show question-

asking and listening behaviors. Taken together, both listening and question-asking are found to be important communication behaviors in a leader-follower context. In fact, van Quaquebeke and Felps (2018) coined the term Respectful inquiry for “the behavioral configuration of asking open questions combined with attentive listening”. Asking open questions and attentive listening are thought to be basic building blocks of leadership and together as Respectful Inquiry they constitute a powerful leadership technique that has been proposed to strongly motivate followers. Importantly, Respectful Inquiry has been theorized as showing intrapersonal outcomes such as fulfillment of followers’ need for relatedness and followers’ job satisfaction (van Quaquebeke and Felps, 2018).

However, little is known about the means to enhance Respectful Inquiry and thus leader-follower relationships at work. Given this lack of research, the main focus of this study is to investigate mindfulness as a potential means to enhance leaders’ attentive listening and open question asking behaviors. It is well known that mindfulness intervention, such as the MSBR (Kabat-Zinn, 1982), can be beneficial for individual well-being (Sedlmeier et al., 2012). Moreover, studies in an organizational context have shown that mindfulness can positively affect employees’ job satisfaction and job performance (Lomas et al., 2017). Recently, leadership research has started focusing on the intrapersonal outcomes of mindfulness showing, for example, that leaders trait mindful leadership positively affects followers’ performance and well-being (Reb, Narayanan, & Chaturvedi, 2014). As mindfulness interventions focus on training the abilities of being present and staying focused, they seem to be highly suitable for promoting Respectful Inquiry behaviors which require attention and awareness from the listener. Leaders and effective leadership are fundamental pieces of any organization which may promote positive outcomes for followers, leaders, and organizations. It is therefore important to focus on whether leaders can enhance their listening and open question asking skills through a self-administered mindfulness intervention. Moreover, the focus should be extended to how such interventions can show positive interpersonal effects such as followers’ fulfillment of need for relatedness and followers’ job satisfaction. For that, we conducted a randomized controlled field experiment combined with a diary study with leader-follower dyads who were assigned to an intervention and a wait-list control group. Research on mindfulness training for leaders is scarce. For instance, Nübold et al. (2019) identified leaders’ mindfulness as an antecedent of authentic leadership behavior in organizations. However, as Nübold et al. (2019) reported there is still much work to do regarding the design of such intervention studies in the mindfulness research. Nevertheless, they concluded that mindfulness

could be integrated as a building block of leadership development programs in organizations. A better understanding of the potential of mindfulness training for leaders is needed, with this study we aim to build upon and extend this line of work.

Our study makes several noteworthy contributions. First, by identifying mindfulness as a potential tool to improve leader’s Respectful Inquiry behaviors, we extend theory on mindfulness training in a leadership context to better understand the consequences of mindfulness practice on concrete communication behaviors. The insights gained through this study provide a step forward in the research on Respectful Inquiry (van Quaquebeke & Felps, 2018). Specifically, we identify mindfulness practice as a key mechanism through which leaders can enhance their Respectful Inquiry behaviors and positively affect their followers.

Similarly, we contribute to the emerging literature of mindfulness at work. Especially, we expand prior research by investigating how mindfulness may be reflected in concrete communication behaviors, which in turn, are expected to positively affect followers` need for relatedness and job satisfaction. I addition, we contribute to leadership research from a less traditional focus at the level of specific communication behaviors such as attentive listening and asking questions, showing how the quality of interpersonal communication can be improved in a way that positive outcomes for followers are achieved, and hence benefit the organization.

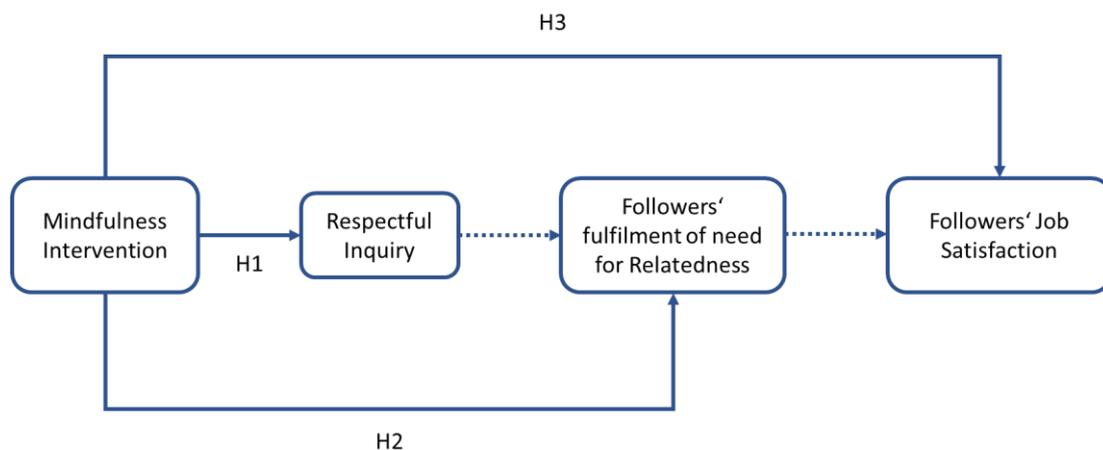


Fig 1. Path diagram showing the effect of the mindfulness intervention on the listening and open question asking behaviors of the leaders (Respectful Inquiry), the followers’ fulfillment of need relatedness and the followers’ job satisfaction. As well as mediating effects of Respectful Inquiry behaviors and followers’ fulfillment of need for relatedness

Our study also has important practical implications. As mindfulness-based interventions have been growing vastly in the past years, it is of high importance to provide evidence-based approaches for the potential implications of promoting mindfulness in organizations and,

accordingly, help organization to decide whether or not is it worthwhile to invest in mindfulness interventions. We suggest that beyond the benefits regarding stress reduction and individual's well-being, mindfulness may have positive effects on concrete communication behaviors and intrapersonal relationships. Therefore, self-administered mindfulness interventions may constitute an important instrument for developing effective leadership behaviors at work.

### *Mindfulness*

Being rooted in Eastern contemplative traditions, mindfulness has often been associated with mindfulness meditative practices, which are becoming more and more popular around the globe. However, mindfulness goes much beyond meditation. In the context of psychological research, mindfulness has been defined as a state of attention to and awareness of the present moment (Brown & Ryan, 2003). Put in other words, mindfulness can be seen as the process of paying attention to and observing without judgment what is happening in the present moment, this includes both internal and external stimuli (Glomb, Duffy, Bono, & Yang, 2011).

Research on mindfulness has shown that it positively impacts individuals well-being, health, and functioning (Chiesa & Serretti, 2010; Sedlmeier et al., 2012). Moreover, recent research suggests that mindfulness enhances interpersonal relationships, for example, increasing marital quality and enhancing people's ability to cope with relationship stress (Wachs & Cordova, 2007). Furthermore, it has been shown that mindfulness can be cultivated through diverse practices and training (Glomb et al., 2011).

Mindfulness interventions have long been used in the context of clinical psychology. For instance, Kabat-Zinn (1982) Mindfulness-Based Stress Reduction program (MSBR) has been used to treat conditions such as chronic pain, stress, anxiety, and depression (Ledesma & Kumano, 2009). The MBSR is a group-based program, that offers mindfulness meditation teaching and practice, guided by an experienced mindfulness teacher (Lomas et al., 2017). Mindfulness interventions have shown to be related to positive psychological and physical outcomes (Shapiro, Schwartz, & Bonner, 1998). Also, such mindfulness-based interventions have been adapted and transferred to the workplace (Hülshager, Alberts, Feinholdt, & Lang, 2013) showing to be positively related to individuals' increased mindfulness, mental health, functioning at work, subjective well-being, job satisfaction and job performance (for a review see Lomas et al., 2017). Furthermore, some scholars have provided evidence that mindfulness practice, through e.g. mindfulness-based interventions, can increase individual's dispositional mindfulness (Eberth & Sedlmeier, 2012; Quaglia, Braun, Freeman, McDaniel, & Brown, 2016).

Although there is strong evidence for many positive outcomes related to mindfulness at work, some scholars argue that it can also show unintended effects such as increased awareness of toxic work environment which may negatively impact employees' motivation, performance and intention to leave (Rupprecht et al., 2019).

#### *Mindfulness and Leadership*

Although mindfulness at work has shown to be beneficial for leaders (Donaldson-Feilder, Lewis, & Yarker, 2019), empirical research on the role of mindfulness in leadership remains scarce. There are a couple of studies linking trait mindfulness and different leadership styles such as authentic, transformational and servant leadership (Nübold, van Quaquebeke, & Hülshager, 2019; Reb et al., 2014; Verdorfer, 2016). Mindfulness interventions help to train attention and awareness, which are thought to be critical skills for today's leaders. They have been shown to enhance performance and well-being in leadership context (Donaldson-Feilder et al., 2019; Hougaard, Carter, & Coutts, 2016).

Besides being beneficial for leaders and the organization, mindfulness Interventions have proved to exert positive intrapersonal effects. Positive outcomes for employees such as higher performance, well-being, job satisfaction, and need satisfaction have been related to leaders' mindfulness interventions (Narayanan, Chaturvedi, Reb, & Srinivas, 2014). For instance, some studies have shown that leader's mental well-being as a consequence of mindfulness has a strong influence on employees' well-being and leaders' effectiveness (Roche, Haar, & Luthans, 2014). Additionally, mindfulness has been shown to enhance leaders' awareness towards others and to help people relate to others emotionally (Wachs & Cordova, 2007). Moreover, it has been shown that the quality of leader's attention and awareness affects followers' well-being and performance (Reb, Sim, Chintakananda, & Bhave, 2015). Non-judgmental awareness may be beneficial for interpersonal interactions between leaders and followers. Followers may feel safe about expressing their own opinions and ideas resulting in improved leader-follower relationships and employee productivity (Reb et al., 2015). Given that effective leadership depends on the quality of the relationship between leaders and their followers it stands to reason that mindfulness as a means to improve social interaction may facilitate effective leadership (Reb et al., 2014, p. 38).

#### *Respectful Inquiry*

van Quaquebeke and Felps (2018) defined Respectful Inquiry as "the multidimensional construct of asking questions in an open way and subsequently listening attentively". Moreover, they theorized that, within a leader-follower relationship, the following components are

combined into this multidimensional construct: attentive listening, asking questions and question openness. Most importantly, they argue that there is a motivational power in asking open questions and listening. In other words, From van Quaquebeke and Felps (2018) point of view, the most valuable benefits of leaders asking questions and listening is that these behaviors can motivate followers by fulfilling their basic psychological needs.

#### *Attentive Listening*

Listening as a psychological concept has gained a lot of attention in the past years, in part, because people seemed to be aware of the possible positive effects of listening (Beukeboom, 2009). van Vuuren, Jong, and Seydel (2007) conducted a survey and showed that listening was the second most important factor of leader communication style for follower commitment. Empirical research in work context indicates that listening is an important factor for the supervisor-employee relationship with both work-related attitudinal (Ellinger, Ellinger, & Keller, 2003) and behavioral implications (Lloyd, Boer, Keller, & Voelpel, 2015) such as perceived leadership effectiveness (Johnson & Bechler, 1998) and overall job satisfaction (Brownell, 1990). For instance, effective listening has been shown to be an important factor for the achievement of successful communication and the development of healthy working relationships (Aggarwal, Castleberry, Ridnour, & Shepherd, 2005).

Leadership research has shown that followers are more prompt to be influenced by leaders who listen well (Ames et al., 2012). For instance, (Lloyd et al., 2015) have found that supervisor's listening efforts affect the employees' perception about their supervisors active listening and that these perceptions are associated to emotional exhaustion, citizenship behaviors, and turnover intention. Being attentive while listening is thought to have positive implications for the listening process. Attentiveness encourages a positive perception of the listener, intimacy and an atmosphere to safety speak openly (Beukeboom, 2009). Moreover, Bodie (2012) argues that listening to employees fosters the creation and maintenance of strong leader-followers partnerships (Lloyd 2017). Taken together, these findings indicate that appropriate leaders' listening behaviors may lead to positive interpersonal and intrapersonal outcomes.

#### *Asking open questions*

A question is defined by Stewart and Cash (2014, p. 79) as "any statement or nonverbal act that invites an answer". A question is meant to lead to a verbal response from the person being questioned. Schein (2013) argue that in order to improve communication and build

positive relationships between leaders and followers asking is more suitable than telling, therefore, it is especially important for leaders to learn to ask better questions.

Encouraging work relationship has shown to be an outcome of leaders asking questions in a respectful manner (van Quaquebeke & Felps, 2018). In today's complex and culturally diverse work environment there is a need to know how to ask questions in order to build relationships based on mutual respect, in particular, knowing how to ask the right questions (Schein, 2013). The way leaders communicate with their followers is crucial for the quality of their relationship, fostering work-related outcomes as followers' satisfaction, commitment, and performance (Fix & Sias, 2006; Penley, Alexander, Jernigan, & Henwood, 1991). Additionally, asking questions has been hypothesized to foster employee motivation (van Quaquebeke & Felps, 2018), as well as to promote employee participation (Austermann). Empirical leadership research hints to positive effects of asking questions. For instance, in a study (Bechler & Johnson, 1995) it was found that in a group discussions context those who ask and listen are more likely to be perceived as leaders. Another study in leadership has shown that "Leaders who ask for input and then follow up to see if progress is being made are seen as people who care" (Goldsmith & Morgan, 2004).

#### *Respectful Inquiry and Mindfulness*

Following the definition given by (van Quaquebeke & Felps, 2018), Respectful Inquiry is formally the behavioral configuration of asking open questions combine with attentive listening. Mindfulness, characterized by full attention to the present moment and acceptance or a non-judgmental attitude, seems especially appropriate to increase Respectful Inquiry behaviors. For example, (Brownell, 1985) argued that individuals with the ability to focus in the here and now are less prompt to be distracted by thoughts or rumination. This is an essential criterion for effective listening. Additionally, in a more recent study, Arendt, Verdorfer, and Kugler (2019) examined how leaders' dispositional mindfulness is reflected in communication behaviors that influence followers' perceptions and satisfaction with their leaders. They showed that, indeed, perceived mindfulness in communication mediates the relationship between leaders' dispositional mindfulness and followers' degree of satisfaction with their leaders. Also, there is empirical evidence supporting the idea that mindfulness interventions may lead to improved listening skills through dispositional mindfulness (Chambers, Lo, & Allen, 2008). In other words, mindfulness training may help leaders to be more attentive and to listen better.

In sum, we propose that a mindfulness intervention may increase leaders' Respectful Inquiry behaviors, that is, open question asking and attentive listening behavior.

*Hypothesis 1:* The mindfulness intervention will have a positive impact on leaders' Respectful Inquiry behaviors.

#### *Respectful Inquiry and the SDT*

Self-Determination Theory (SDT) is a theory of human motivation. Being used on a broad variety of fields some sub-theories have been elaborated. In the same way that a plant needs sunlight and water, (Deci & Ryan, 1991) argue that humans have at least three universal and basic psychological needs that are essential for personal growth, integrity and well-being: needs for autonomy, competence, and relatedness. Factors that foster autonomy, competence, and relatedness are, therefore, expected to enhance well-being (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). Assuming that humans are always seeking to fulfill their basic needs, research has shown that leaders are a crucial source of needs satisfaction for followers in a work environment (Kovjanic, Schuh, Jonas, van Quaquebeke, & van Dick, 2012; Reb et al., 2015; van Quaquebeke & Eckloff, 2010). Drawing on the Self-Determination Theory, van Quaquebeke and Felps (2018) argue that Respectful Inquiry is expected to satisfy the followers' basic psychological needs and to finally lead to improved follower satisfaction. Therefore, attentive, non-judging leaders who can focus on the present moment and communicate showing attentive listening and open asking behaviors are likely to elicit positive reactions on their followers by satisfying their basic psychological needs.

#### *Mindfulness and the FULFILLMENT OF NEED FOR RELATEDNESS*

Leaders' Respectful Inquiry behaviors such as attentive listening and open question asking, which we hypothesized are enhanced through mindfulness practice, are thought to have a positive effect on followers' need for relatedness. Followers may experience a feeling of being valued and respected when they perceived that their leaders are paying attention with an accepting, non-judging attitude (Reb et al., 2014). Furthermore, this kind of leader communication behavior may foster a feeling of psychological safety and intimacy in their followers (Ashford et al., 2009; Lloyd et al., 2015) as well as a feeling of being cared about (Van Quaquebeke and Felps, 2016) which has empirically been linked with relatedness (Reis et al., 2000). The need for relatedness refers to feeling that one is close and connected to significant others. Attention and awareness from leaders are perceived from followers as respect, interest, acknowledgment, and appreciation (Reb et al., 2014; Reb et al., 2015). It increases followers' self-esteem, commitment, and engagement (Reb et al., 2015). van Quaquebeke and Felps (2018) theorized that when leaders engage in Respectful Inquiry they

lead bidirectional conversations with dyadic contributions, producing a feeling of belongingness in the followers. Individuals who have their relatedness need met, feel secure and safe in their environment and in their relationships with others. Thus, leaders' mindfulness will likely beneficially influence their communication, in turn, resulting in an enhancement of followers' experience of relatedness. (Arendt et al., 2019)Based on theory and prior research, we propose that a mindfulness intervention for leaders should exert beneficial effects on followers' fulfillment of need for relatedness via leaders' listening and question-asking behavior. Taken together, the above suggests the following hypotheses:

*Hypothesis 2:* The positive effect of the mindfulness intervention on followers' experience of relatedness will be mediated by the leaders' Respectful Inquiry behavior.

#### *Mindfulness and JOB SATISFACTION*

Job satisfaction has been defined as a positive emotional state resulting from the appraisal of one's job or job experience (Luthans, 2002). Over the last decades, job satisfaction has been one of the most researched constructs in the field of organizational psychology due to its implication with job-related outcomes such as turnover, absenteeism, performance, and burnout (Badran & Kafafy, 2008).

Drawing at the STD it has been argued that individuals who experience that their psychological basic needs have been met, are more satisfied (Gagné & Deci, 2005). In line with this reasoning individuals who experience that their need relatedness has been for should feel more satisfied with their jobs. van Quaquebeke and Felps (2018) theorized that the experience of relatedness, among the other psychological needs, improves employees satisfaction. In other words, employees' who experience a greater sense of belongingness to their organizations are expected to be more satisfied with their jobs due to their greater commitment and alignment with the organization's objectives. Furthermore, empirical evidence in the mindfulness literature has also supported a link between mindfulness, need satisfaction, and job satisfaction. For instance, in a study by Hülshager et al. (2013), the authors showed how a mindfulness intervention can lead to an increase in job satisfaction. Moreover, Reb et al. (2014) found that leader mindfulness was a predictor of follower psychological need satisfaction that, in turn, was positively related to job satisfaction. The results of the above mention studies show how the positive effects of leaders' mindfulness training can transfer into followers' job satisfaction. Furthermore, (Ryan & Deci, 2000) infer that leaders who engage in mindfulness communication may help satisfy followers' basic needs leading to increased satisfaction. Finally, (Maslach, Schaufeli, & Leiter, 2001) argue that effective leader behaviors combine

with employees' feeling of worthiness and respect leads employees to feel more satisfied. Thus, we propose that the positive effect of the mindfulness intervention on followers' job satisfaction will be mediated by followers' fulfillment of the need for relatedness.

*Hypothesis 3:* The effect of the mindfulness intervention on followers' job satisfaction will be mediated by the followers' fulfillment of relatedness.

## METHOD

### Participants

A total of 79 dyads consisting of one leader and one follower participated on a voluntary basis with the incentive to get one-month free access to a mindfulness meditation application. Part of the data (50 dyads) were collected last year. The initial sample comprised a greater number of dyads, which was reduced to 50 due to missing data. In our final sample, the average age of the followers was of 32.12 years ( $SD=12.26$ ), 42 were women, 23 were men, and the remaining 14 did not give information about gender. Leaders' mean age was 39.86 ( $SD=12.26$ ), the leaders' sample consisted of 44 women and 29 men, the remaining 6 people did not give information about their gender. Additionally, on average followers' have already worked at the company for 7.89 years ( $SD=7.89$ ) and leaders for 12.87 years ( $SD=10.07$ ). Leaders and their followers were recruited from various organizations of Germany, Spain, Colombia, and the Netherlands, by using different strategies such as posting online in Facebook, LinkedIn, Reddit, and asking friends and family. Participants came from diverse areas of the industry, such as human health and social activities, real estate activities, accommodation and food service activities among others.

### Design and Procedure

We conducted an experimental diary study with two conditions. Leaders on the experimental condition would receive a 30-day mindfulness intervention while leaders on the control condition would not receive the mindfulness intervention. Leaders, as well as their followers, had received online surveys every Friday for four weeks. The study had a longitudinal design. Based on this, causal conclusions can be drawn from our study, which has to be taken into account for the interpretation of the results.

Participants were approached in a standardized way. Recruiters stayed neutral about mindfulness practices to avoid expectations bias from the participants. They were told that the study focused on leadership and mindfulness without further information regarding Respectful Inquiry behaviors. After recruitment participants were randomly assigned to either the control

or the experimental condition. First, participants had to fill a baseline questionnaire with demographic questions, work-related questions, questions about personal characteristics, and questions to assess previous mindfulness experience. After that, data from participants were collected, with a 5 to 10 minutes questionnaire, at four different points in time. Reminders to fill up the questionnaires were sent to participants via email and they could do so only during the next 2 days after the questionnaire was sent.

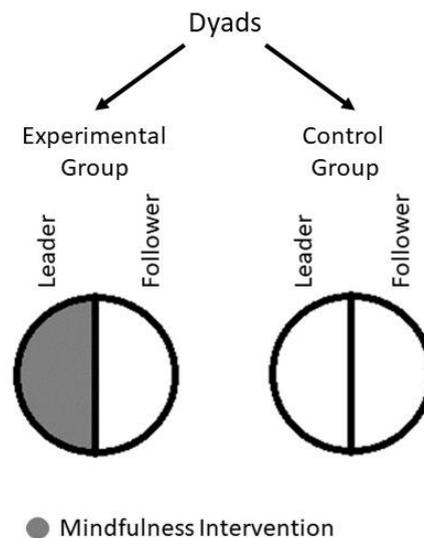


Fig.2. Diagram of the experimental design. Only the leaders on the experimental group will receive the mindfulness intervention

### Mindfulness Meditation Application

The tool used for the intervention was the Headspace application. Headspace provides guided meditations courses. The first sessions are accompanied by video and graphics to help explain the concepts. It is structured in levels; each level has 10 sessions and the time of the sessions can be customized. One must complete one level in order to advance to the next one. The application saves user's progress keeping track of the completed sessions and the time spent meditating.

Headspace offers meditation options for any time of the day. In the section of the application called "library," the users can choose between different categories such as stress and anxiety, falling asleep and waking up, personal growth, work and productivity among others. Under these categories they find different courses which try target a special issue. For example, under the category work and productivity there are courses about finding focus, prioritization, listening to others and creativity.

During each session, the user is guided through a meditation focusing on different aspects. I will explain the structure of a session based on the four pillars of mindfulness training proposed by Hougaard et al. (2016). First the application invites the user to sit in a comfortable position, to be relaxed and finally to close the eyes and breath through the nose (anatomy). Then, users are guided to be attentive and aware of their breath, to observe it, monitor it without control it with commands such as “take a deep breath noticing how does the chest expand”. Headspace also uses counting to help users maintaining the focus on their breath. It uses phrases such as “if your mind is wandering just go back to counting your breath” and “if you lose your count, start at one again”. And finally, distractions, as describe by Hougaard et al. (2016) “distractions, is everything that is not the breath, sound, thoughts, bodily sensations and so on”. Headspace guides the user to see distractions such as thought as “something simply going by” without sticking to a thought or a feeling. Distraction should then be acknowledged without judgment and users are asked to shift their attention back to the breath whenever they encounter a distraction.

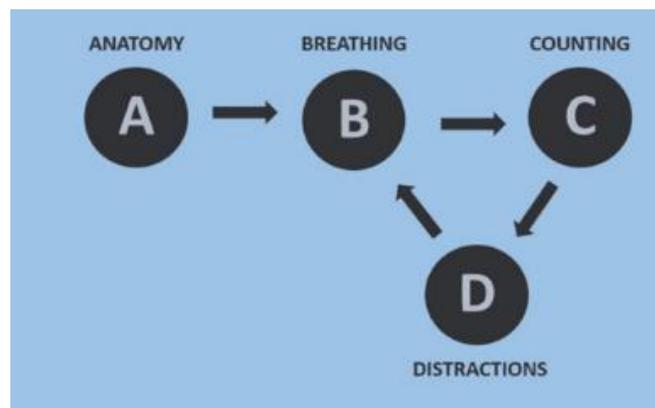


Fig 3. The four pillars of mindfulness training Hougaard et al. (2016)

Meditation is a technique used to develop mindfulness (Brown, Ryan, & Creswell, 2007). The mindfulness intervention used in the actual study intends to help people develop mindfulness via guided meditation with the help of the Headspace App. The benefits of using an application against more conventional mindfulness interventions such as the MBSR program (Kabat-Zinn, 1982, 1990) is that it can better fit the requirements of the working population (such as fit mindfulness practice in a busy schedule, being able to practice mindfulness almost everywhere. It is self-training, it does not involve group meetings or contact with a mindfulness trainer or coach. Moreover, self-trained intervention has the advantage that it is coast and time-effective for employees and organizations (Hülsheger, Feinholdt, & Nübold, 2015).

**Scales**

Data collection consisted of a baseline questionnaire followed by weekly questionnaires that had to be answered for 5 weeks. The baseline questionnaire consisted of baseline measures and demographic data. It had to be completed in order to start with the weekly questionnaires and before the intervention group received the mindfulness intervention. In the weekly questionnaire, the following constructs were assessed:

**Weekly Mindfulness.** Leaders' weekly mindfulness was measured with a short version of the Mindful Attention Awareness Scale (MAAS) from (Brown & Ryan, 2003). This scale has been already used in the organizational context, for example, to check for the effects of a mindfulness intervention on recovery from work (Hülshager et al., 2015). The short version of the scale consists of 5 items designed to assess individual differences in the frequency of mindfulness over time. A sample item is "(this week) I found it difficult to stay focused on what happened". The items were answered on a 5-point frequency scale, ranging from 1 (never) to 5 (almost always). Cronbach's alpha for weekly measures ranged from .75 to .80.

**Leaders' Weekly Empathic Listening.** Leaders' empathic listening was measured with an adjusted weekly version of the Active Empathic Listening (AEL) scale (Drollinger et al., 2006). The scale consists of 11 items designed to assess the factors sensing, processing and responding. For the modified weekly version only 6 items were used. A sample item is "(in the last week) I assured my subordinate that I am listening by using verbal acknowledgments". The items were answered on a 5-point frequency scale, ranging from 1 (strongly disagree) to 6 (strongly agree). Cronbach's alpha for weekly measures ranged from .61 to .76.

**Respectful Inquiry.** Leaders' Respectful Inquiry behaviors were measured with the Respectful Inquiry Scale adapted to a weekly basis. The scale consists of 9 items designed to assess the frequency of the behaviors as well as attentive listening and open question asking. A sample item is "(this week, when your subordinate answered one of your questions, how often) did you keep eye-contact with your subordinate?". The items were answered on a 5-point frequency scale ranging from 1 (never) to 5 (almost always). Cronbach's alpha for weekly measures ranged from .61 to .80.

**Followers' weekly fulfillment of the Need for Relatedness.** Followers' fulfillment of the need for relatedness was measured with a modified Work-related Basic Need Satisfaction Scale (van den Broeck, Vansteenkiste, Witte, Soenens, & Lens, 2010); the scale was adjusted for weekly measurement. The original scale consists of 18 items designed to assess the needs relatedness, competence, and autonomy. For the modified version only 2 items were used. A sample item is "(in the last week) I did not feel connected with other people at my job". The

items were answered on a 5-point frequency scale ranging from 1 (never) to 5 (almost always). Cronbach's alpha for weekly measures ranged from .31 to .61.

**Followers' weekly Job Satisfaction.** Followers' job satisfaction was measured with a modified weekly version of the job satisfaction Index (Brayfield & Rothe, 1951) adapted to weekly measurement. The scale consists of 5 items designed to assess followers' feelings about their job. A sample item is "(this week) I felt fairly satisfied with my present job". The items were answered on a 5-point frequency scale ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha for weekly measures ranged from .62 to .84.

### **Strategy of analysis**

We used Multilevel Analysis to examine both the within and between effects of the mindfulness intervention on leaders and followers. The MLmed macro (Rockwood, 2017) was conducted to check for potential mediation effects. Our data set had a multilevel structure, given that weekly measurements were nested within persons. Multilevel models are models that vary in more than one level, they are commonly used for nested data i.e. for designs where data of participants are organized in more than one level (Hayes, 2006). In the present study, we measured the same variables several times within the same individuals, having a two-level design where weekly measurements are nested within individuals. Furthermore, we will test "indirect effects" (multilevel mediation effects) with the MLMED Macro developed by (Rockwood & Hayes, 2017).

## **Results**

### **Descriptives**

Intercorrelation between study variables, means, and standard deviation are depicted in Table 1. There was a positive correlation between leaders' weekly state mindfulness and leaders' weekly Respectful Inquiry ( $r = .36, p < .01$ ). Moreover, followers' need for relatedness correlates positively with followers' job satisfaction ( $r = .54, p < .01$ ). Finally, Leaders' age positively correlates with followers' age ( $r = .53, p < .01$ ). In the present analysis, leaders' state mindfulness was treated as a level 1 predictor, while leaders' Respectful Inquiry, followers' need for relatedness and job satisfaction were treated as dependent variables. The relative amount of between-person and within-person variance of dependent variables were examined by the Intraclass Correlation Coefficient (Bliese, 2000). Respectful Inquiry showed an ICC of .44 indicating that 44% of the variance in leaders' Respectful Inquiry was between persons and 56% of the variance was within-person. Moreover, followers' need for satisfaction

showed an ICC of .37 indicating that 37% of the variance was between person and 63% of the variance was within-person. Finally, followers` job satisfaction showed an ICC of .62, This indicates that 62% of variance in followers `job satisfaction was between person, while 38% results from within-person variation.

Table 1

*Intercorrelation between study variables*

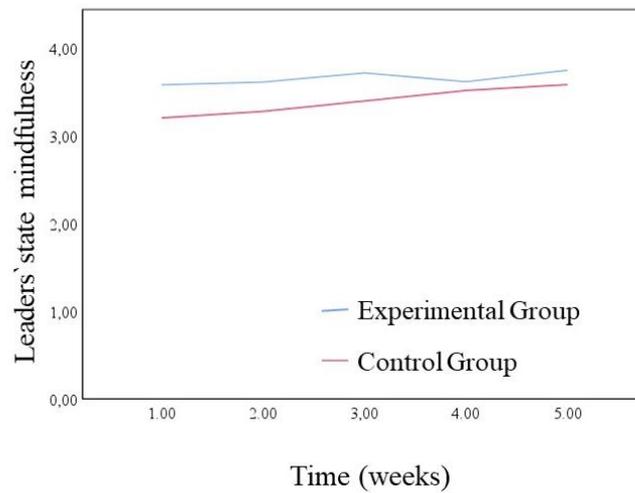
		Baseline and Weekly Questionnaires										
		<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
Baseline Questionnaire												
1 age of leader		39.86	12.27	-								
2 age of follower		32.14	9.32	.53**	-							
3 gender of leader		-	-	-.12*	.07	-						
4 gender of follower		-	-	-.24**	-.18	-.18	-					
5 group		-	-	.00	.05	.14**	.18**	-				
Weekly Questionnaires												
6 Leader mindfulness		3.51	.66	.14*	.06	-.04	-.17*	.05	$\alpha = .82$			
7 FNR		3.81	.70	-.04	.16*	-.06	-.12	.10	.08	$\alpha = .43$		
8 FJS		3.55	.60	.13	.07	-.08	-.02	.06	.04	.54**	$\alpha = .70$	
9 Respectful Inquiry		3.45	.50	.12	.16*	-.06	-.26**	.04	.36**	.06	.07	$\alpha = .70$

Gender was coded as x for female and x for male. Moreover, groups were coded as 1 for control group and 0 for experimental group. FNR indicates the followers` need for relatedness and FJS indicates the followers` job satisfaction. The correlations depicted on the table were conducting using the mean scores of the variables across weeks.

**Manipulation check**

In a first step, we conducted a manipulation check, by investigating changes of leaders` weekly mindfulness over time in both the experimental and control group. We compared the null model (M0), only including leader` weekly mindfulness, with a model which included time as a level 1 predictor with a fixed effect (model 1). Model fit of model 1 displayed a significantly smaller likelihood ratio compared to MO ( $X^2 (1) = 5.25, p < .01$ ). Then we allowed the effect to vary, that is, including a random effect for time as level 1 predictor (model 2). Model fit of model 2 displayed no significant smaller likelihood ratio compared to M1 ( $X^2 (2) = 5.26, p > .05$ ) Then, as a final step, we included the group variable (condition) as a moderator of the within-person relationship between time and weekly mindfulness. Model fit of model 4 displayed a significantly smaller likelihood ratio compared to model 3 ( $X^2 (3) = 8.9, p < .01$ ) Model 4 (Table 2) revealed that there was a significant positive relationship between time and leaders` mindfulness (see fig. 4). Furthermore, a random slope parameter for time and time-by-condition cross-level interaction was included (Model 2). The results showed no significant interaction between time and condition. There was no difference between control

and experimental group concerning state mindfulness. Therefore, we conclude that there are no differences resulting from the mindfulness intervention among the experimental and the control group. The manipulation in the present study did not show to be successful.



**Fig 4.** Interaction effect of mindfulness training and time (state mindfulness as a function of condition and weeks of study).

Table 2

*Multilevel model predicting weekly mindfulness*

	Mindfulness Intervention														
	M0			M1			M2			M3			M4		
Fixed Effects	Estimate	SE	t	Estimate	SE	t	Estimate	SE	t	Estimate	SE	t	Estimate	SE	t
Intercept	3.49**	.07	46.73	3.36**	.09	37.04	3.35	.10	32.26	3.36	.10	32	3.79**	.34	11.09
Time				.047*	.02	2.30	.05	.02	2.5	.05	.02	2.31	.07*	.37	-.52
Condition													-.19	.03	2.21
Time x Condition															
Condition															
Time x Condition															
Residual	.16	.02		.15	.02		.14	.02		.17	.02		.17	.02	
Intercept	.28	.06		.28	.06		.46	.12		.27	.10		.31	.09	
-2*LL	352.32			347.07			341.45			334.60			328.70		
df	3			4			6			7			10		

\*\*p<.01; \*p<.05

To proceed with a meaningful analysis of the data, the independent variable condition (i.e., the mindfulness intervention) will be replaced with leaders' state mindfulness for the testing of all hypotheses (H1, H2, and H3) including condition as a predictor variable. Therefore, hypothesis 1 will test whether leaders' weekly mindfulness is related to followers' weekly ratings of Respectful Inquiry. Hypothesis 2 will test whether followers' weekly ratings of Respectful Inquiry mediates the relation between leaders' state mindfulness and followers'

weekly need for satisfaction. Finally, hypothesis 3 will test whether followers’ need for relatedness mediates the relation between state mindfulness and followers’ job satisfaction.

Hypothesis 1 proposed that state mindfulness positively relates to a leaders’ Respectful Inquiry behaviors. The null model (model 0 of table 3) was run entering Respectful Inquiry as a dependent variable. Subsequently, state mindfulness was entered as a predictor in a random intercept-fixed slope model (model 1 of table 3). Model fit of Model 1 showed a significantly smaller likelihood ratio compared to the null model ( $X^2(1) = 26, p=.01$ ). Therefore, Hypothesis 1 was confirmed. Taken together, these results confirm that leaders’ state mindfulness positively predicts leaders’ Respectful Inquiry.

Table 3

*Multilevel model predicting leaders’ Respectful Inquiry*

		Respectful Inquiry	
		M0	M1
Effects	Fixed		
	Intercept	3.47**	2.48**
	State Mindfulness		.28**
Effects	Random		
	Residual	.14	.12
	Intercept	.11	.096
	-2*LL	273.774	247.542
	<i>df</i>	3	4

\*\*p<.01; \*p<.05

For the remaining hypotheses (H2 and H3), we conducted a multilevel mediation analysis using MLMed (Rockwood, 2017) to examine the potential mediating role of leaders’ Respectful Inquiry and followers’ need for relatedness. Hypothesis 2 proposed that leaders’ state mindfulness was positively associated with followers’ need for relatedness and this effect will be mediated by leaders’ Respectful Inquiry. Followers’ need for relatedness was entered as the independent variable, leaders’ Respectful Inquiry as a mediator, and Leaders’ state mindfulness as a dependent variable. Contrary to our hypothesis, leaders’ Respectful Inquiry was not found to be a mediator neither at the within-person level (estimate = .002,  $p > .05$ ) nor at the between-person level (estimate = .019,  $p > .05$ ). Moreover, the results showed that leaders’ mindfulness is not a predictor for followers’ need for relatedness (estimate = .054,  $p > .05$ ).

Furthermore, Hypothesis 3 proposed that leaders' state mindfulness was positively associated with followers' job satisfaction and this effect will be mediated by followers' need for relatedness. Followers' job satisfaction was entered as the independent variable, followers' need for relatedness as a mediator, and Leaders' state mindfulness as a dependent variable. Contrary to our hypothesis, followers' need for relatedness was not found to be a mediator neither at the within-participant level (estimate = - .001,  $Z = -.060$ ,  $p > .05$ ) nor at the between-participant level (estimate = .076,  $Z = 1.041$ ,  $p > .05$ ). Moreover, the results showed that leaders' mindfulness is not a predictor for followers' job satisfaction (estimate = .0508,  $p > .05$ ) but followers' need for relatedness was shown to predict followers' job satisfaction (estimate = .182,  $p < .01$ ).

### Discussion

Communication is a very important part of a leader's role (van Quaquebeke & Felps, 2018). Although some research on Respectful Inquiry has been done, it remains largely unknown how leaders can improve their attentive listening and open questioning behaviors. Mindfulness, on the other hand, is a practice of non-judgmental awareness of present-moment experiences (Kabat-Zinn, 1982). Research over the last decades has shown the beneficial effects of mindfulness on health, well-being and psychological functioning (Shapiro, Carlson, Astin, & Freedman, 2006). The purpose of the current study was to investigate the effects of a self-administered mindfulness intervention on leaders' Respectful Inquiry, followers' fulfillment of the need for relatedness and followers' job satisfaction. Furthermore, we sought to find further insights about the mediation effects of leaders' Respectful Inquiry and followers' need for relatedness. Therefore, we tested the effects of a mindfulness intervention in an experimental diary study with a control and an experimental group. The findings of the study were mixed, showing some insights about the importance of state mindfulness and its relationship with Respectful Inquiry behaviors. On the other hand, the study did not provide support for all proposed hypotheses.

The growth curve showed an increase in leaders' state mindfulness in both control and experimental group, rendering the intervention effect non-significant. Although state mindfulness was slightly higher for leaders' in the experimental group, this difference was not significant. One explanation for the non-significant difference can be that all participants became more aware of their mindfulness related behaviors through the questions themselves. For example, for participants of the control condition, questions such as "I forget a person's name almost as soon as I've been told it", may have led to self-reflexion about their mindfulness

state (Davidson & Kaszniak, 2015), leading them to be more attentive when communicating with their followers. In the ideal case, as done by medical studies, an intervention should be done with a double-blind placebo-controlled design (Davidson & Kaszniak, 2015, 2015). Nevertheless, in the present study participants knew whether they were assigned to the meditation condition or the waitlist group. Moreover, the wait-list control group design is prompt to expectation biases and experimenter demand (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008). Expectation bias happens when an individual's expectation about an outcome influence perception of one's own or other's behaviors (Williams, Popp, Kobak, & Detke, 2012). In the same line of thought, experimenter demand effects denote changes in participant's behavior due to cues about what constitutes appropriate behavior (Zizzo, 2010).

Before concluding that the mindfulness intervention is not successful at all, we propose that it may take more longer mindfulness-practice time for its effects to show. A similar approach was taken by (Howells, Ivrtzan, & Eiroa-Orosa, 2016) in their study they argued that conducting a follow up directly after the intervention was probably too soon to capture all effects. Therefore, they encourage the inclusion of multiple follow-up phases for future studies. Another factor to consider is the length of the intervention. The intervention' duration was of 1 month with short practice sessions of 5 to 10 minutes. It may not have been enough for the leaders to experience increase mindfulness and enhance Respectful Inquiry behaviors or for followers to perceived effects such as job satisfaction and need for relatedness. For instance, Hülshager et al. (2015) faced a similar problem. Their participants underwent a 2-weeks intervention with an average practice of 10.5 minutes, which did not seem to be intensive enough to show the desired effects on psychological detachment. Moreover, some argue that the benefits of mindfulness practice may take several years to be achieved (Davidson & Kaszniak, 2015).

By focusing on the relationship between leaders' state mindfulness and leaders' Respectful Inquiry we found out that state mindfulness significantly correlates with Respectful Inquiry. Such promising results suggest that mindfulness, as well as the means to enhance it, deserve more attention in the leadership literature and by those seeking to enhance their communication abilities. Mindfulness has the potential to enhance active listening and open questioning behaviors by engaging leaders in self-awareness and present moment focus. As van Quaquebeke and Felps (2018) argued attentive listening and open questioning behaviors have been shown to positively impact the relationship between leaders and followers. Mindfulness and Respectful Inquiry have not been empirically addressed in the leadership literature before.

These outcomes contribute to overall organizational functioning. Finally, our mediation hypothesis (H2 and H3), proposing that Respectful Inquiry mediates the relationship between leaders' mindfulness and followers' need for relatedness, as well as between leaders' mindfulness and followers' job satisfaction did not show any significant results. More research is needed in this area to understand the mechanism linking leaders' mindfulness with followers' outcomes.

### **Limitations and Future Research**

As in most studies, several limitations should be taken into consideration when interpreting the results. As the present study is an experimental study conducted in the field, there are still several external factors that were not possible for us to control. For example, in this study setting the participants could start the study whenever they got recruited, meaning that not everybody started with the intervention at the same time. As a consequence, many factors such as whether differences, historical events, confounding, attrition, holidays, special dates (among others) may have an influence on participants during the time of the study (Barry, 2005; Campbell, 1957; Christ, 2007; Halperin, Pyne, & Martin, 2015). Another aspect is the use of self-reports for the measurement of mindfulness state and other variables. Retrospective self-reports are prompt to bias such as common method bias, which is a critical problem in the behavioral research and one of the main sources of measurement error (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Self-reports on mindfulness probably reflect different processes at different levels of training (Davidson & Kaszniak, 2015). In other words, the quality of data obtained with self-reports from practitioners with no or little mindfulness experience may be different from the data obtained from long-time practitioners. Further research should explore measurement options different from self-reports such as experience sampling and ecological momentary assessment (Dockray et al., 2010).

By the end of 2013, it was estimated that 1.85 billion smartphones were in use around the globe. Moreover, smartphone users engage most of the time with applications (Khalaf, 2013). This makes Headspace a great tool for training mindfulness for today's smartphones culture, especially since time commitment is such a big issue for the feasibility of mindfulness in everyday life (Sears, Kraus, Carlough, & Treat, 2011), particularly for leaders. Other studies have used Headspace as an intervention method with success (e.g. Howells et al. 2016), also with leader samples (Nübold et al), showing that the effects of such a brief intervention are comparable with other forms of positive intervention. The positive aspects of Headspace for the user are the ease of use, the flexibility of time and space, amongst others. On

the other hand, it represents a challenge when it comes to the internal validity of the study. For example, it has been shown that it is not easy to know to what extent participants comply with the instructions given by an App such as the one used for this study (Davidson & Kaszniak, 2015). Moreover, the time that the participants in the control group dedicated to practice mindfulness can only be addressed by asking them. An ideal approach would allow for the experimenter to have greater control over content and duration of the session, as well as detailed information about duration, time of day, functions used and frequency of usage among others (Parks, Della Porta, Pierce, Zilca, & Lyubomirsky, 2012). Finally, a meta-analysis conducted by Sin and Lyubomirsky (2009) identifies self-administered interventions as the least effective delivery format. It would be interesting to combine them with e.g. face-to-face training to see what kind of outcome can be achieved. Therefore, future research should try study designs which allow for comparison of self-training mindfulness interventions with other interventions such as traditional mindfulness interventions, traditional organizational stress management interventions, or recovery training programs (Hahn, Binnewies, Sonnentag, & Mojza, 2011).

Since the application's language is English, our sample consists of individuals with a middle to high degree of English knowledge. Moreover, the present study consisted of a self-selected sample. Respondents in a self-selected sample are often aware of the activities they are engaging in (Lyubomirsky et al., 2011) and may, therefore, show bias that results in higher reported state mindfulness. Furthermore, the nature of the study allowed leaders to choose their followers, so that they have probably chosen someone they get along with, again leading to bias (Donaldson & Grant-Vallone, 2002). However, the demographic data for our sample showed that the sample was in fact quite diverse; participants ranged in age from xx to xx years and were stemming from xx countries. Anyway, further research should investigate the effects of mindfulness among other languages (Silvestre-López, 2016) and other industries (Reb, Narayanan, Chaturvedi, & Ekkirala, 2017) to strengthen the external validity of the study.

### **Practical Implications**

The present research on mindfulness and leadership point out an association between leaders' state mindfulness and leaders' Respectful Inquiry behaviors. If leaders can engage in more mindfulness practices they may enhance their active listening and open questioning behaviors. Therefore, both the leader-follower relationship and the employees' contribution to the organization may improve (van Quaquebeke & Felps, 2018). Future research may incorporate additional variables into their study designs, such as well-being, turn over

intention, attrition rate, success at work in order to shed further light on how mindfulness can relate to different work-related outcomes.

### **Conclusion**

In conclusion, this study contributes to both the mindfulness literature and the leadership literature by showing that state mindfulness is linked to leaders' Respectful Inquiry behaviors. Moreover, the study gave us insights about the challenges that are faced when conducting such longitudinal study with self-trained mindfulness intervention and self-reports as measurement methods. From this, we can conclude that there is still much work to do in the field of mindfulness research for us to get a real insight about the extent of the interpersonal and intrapersonal effects that may emerge as a result of mindfulness training.

## REFERENCES

- Aggarwal, P., Castleberry, S. B., Ridnour, R., & Shepherd, C. D. (2005). Salesperson empathy and listening: impact on relationship outcomes. *Journal of Marketing Theory and Practice, 13*(3), 16–31.
- Ames, D., Maissen, L. B., & Brockner, J. (2012). The role of listening in interpersonal influence. *Journal of Research in Personality, 46*(3), 345–349.
- Arendt, J. F. W., Verdorfer, A. P., & Kugler, K. G. (2019). Mindfulness and Leadership: Communication as a Behavioral Correlate of Leader Mindfulness and Its Effect on Follower Satisfaction.
- Austermann, L. *ASKING QUESTIONS TO PROMOTE EMPLOYEE PARTICIPATION*: TU Dortmund University.
- Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly, 16*(3), 315–338.
- Badran, M., & Kafafy, J. (2008). The effect of job redesign on job satisfaction, resilience, commitment and flexibility: the case of an Egyptian public sector bank. *International Journal of Business Research, 8*(3), 27–41.
- Barry, A. E. (2005). How attrition impacts the internal and external validity of longitudinal research. *Journal of School Health, 75*(7), 267–271.
- Bass, B. M., & Bass, R. (2008). *Handbook of leadership: Theory, research, and application*: Free Press.
- Bechler, C., & Johnson, S. D. (1995). Leadership and listening: A study of member perceptions. *Small Group Research, 26*(1), 77–85.
- Beukeboom, C. J. (2009). When words feel right: How affective expressions of listeners change a speaker's language use. *European Journal of Social Psychology, 39*(5), 747–756.
- Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. 07879522.
- Bodie, G. D. (2012). Listening as positive communication. *The positive side of interpersonal communication, 109–125*.
- 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.
- Brown, K. W., Ryan, R. M., & Creswell, J. D. (2007). Mindfulness: Theoretical Foundations and Evidence for its Salutary Effects. *Psychological Inquiry, 18*(4), 211–237.  
<https://doi.org/10.1080/10478400701598298>
- Brownell, J. (1985). A model for listening instruction: Management applications. *The Bulletin of the Association for Business Communication, 48*(3), 39–44.

- Brownell, J. (1990). Perceptions of effective listeners: A management study. *The Journal of Business Communication* (1973), 27(4), 401–415.
- Campbell, D. T. (1957). Factors relevant to the validity of experiments in social settings. *Psychological bulletin*, 54(4), 297.
- Chambers, R., Lo, B. C. Y., & Allen, N. B. (2008). The impact of intensive mindfulness training on attentional control, cognitive style, and affect. *Cognitive therapy and research*, 32(3), 303–322.
- Chiesa, A., & Serretti, A. (2010). A systematic review of neurobiological and clinical features of mindfulness meditations. *Psychological medicine*, 40(8), 1239–1252.
- Christ, T. J. (2007). Experimental control and threats to internal validity of concurrent and nonconcurrent multiple baseline designs. *Psychology in the Schools*, 44(5), 451–459.
- Davidson, R. J., & Kaszniak, A. W. (2015). Conceptual and methodological issues in research on mindfulness and meditation. *American psychologist*, 70(7), 581.
- Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. 08032169.
- Dockray, S., Grant, N., Stone, A. A., Kahneman, D., Wardle, J., & Steptoe, A. (2010). A comparison of affect ratings obtained with ecological momentary assessment and the day reconstruction method. *Social Indicators Research*, 99(2), 269–283.
- Donaldson, S. I., & Grant-Vallone, E. J. (2002). Understanding self-report bias in organizational behavior research. *Journal of Business and Psychology*, 17(2), 245–260.
- Donaldson-Feilder, E., Lewis, R., & Yarker, J. (2019). What outcomes have mindfulness and meditation interventions for managers and leaders achieved? A systematic review. *European Journal of Work and Organizational Psychology*, 28(1), 11–29.
- Eberth, J., & Sedlmeier, P. (2012). The effects of mindfulness meditation: a meta-analysis. *Mindfulness*, 3(3), 174–189.
- Ellinger, A. D. [Andrea], Ellinger, A. E. [Alexander], & Keller, S. B. (2003). Supervisory coaching behavior, employee satisfaction, and warehouse employee performance: A dyadic perspective in the distribution industry. *Human resource development quarterly*, 14(4), 435–458.
- Ewing, D., & Banks, P. (1980). Listening and responding to employees' concerns. *Harvard Business Review*, 58(1), 101–114.
- Fix, B., & Sias, P. M. (2006). Person-centered communication, leader-member exchange, and employee job satisfaction. *Communication Research Reports*, 23(1), 35–44.
- Fredrickson, B. L., Cohn, M. A., Coffey, K. A., Pek, J., & Finkel, S. M. (2008). Open hearts build lives: Positive emotions, induced through loving-kindness meditation, build consequential personal resources. *Journal of personality and social psychology*, 95(5), 1045.

- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26(4), 331–362. Retrieved from <https://onlinelibrary.wiley.com/doi/full/10.1002/job.322>
- Glomb, T. M., Duffy, M. K., Bono, J. E., & Yang, T. (2011). Mindfulness at work. In *Research in personnel and human resources management* (pp. 115–157). Emerald Group Publishing Limited.
- Goldsmith, M., & Morgan, H. (2004). Leadership Is a Contact Sport: The " Follow-up Factor. *Management Development* [http://www. strategybusiness. com/article/04307](http://www.strategybusiness.com/article/04307).
- Hahn, V. C., Binnewies, C., Sonnentag, S., & Mojza, E. J. (2011). Learning how to recover from job stress: Effects of a recovery training program on recovery, recovery-related self-efficacy, and well-being. *Journal of occupational health psychology*, 16(2), 202.
- Halperin, I., Pyne, D. B., & Martin, D. T. (2015). Threats to internal validity in exercise science: a review of overlooked confounding variables. *International Journal of Sports Physiology & Performance*, 10(7).
- Hayes, A. F. (2006). A primer on multilevel modeling. *Human communication research*, 32(4), 385–410.
- Hougaard, R., Carter, J., & Coutts, G. (2016). Mindful leadership: Achieving results by managing the mind. *Leader to Leader*, 2016(79), 49–56.
- Howells, A., Ivtzan, I., & Eiroa-Orosa, F. J. [Francisco Jose] (2016). Putting the ‘app’ in happiness: A randomised controlled trial of a smartphone-based mindfulness intervention to enhance wellbeing. *Journal of Happiness Studies*, 17(1), 163–185.
- Hülshager, U. R., Alberts, H. J., Feinholdt, A., & 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*, 98(2), 310.
- Hülshager, U. R., Feinholdt, A., & Nübold, A. (2015). A low-dose mindfulness intervention and recovery from work: Effects on psychological detachment, sleep quality, and sleep duration. *Journal of Occupational and Organizational Psychology*, 88(3), 464–489.
- Johnson, S. D., & Bechler, C. (1998). Examining the relationship between listening effectiveness and leadership emergence: Perceptions, behaviors, and recall. *Small Group Research*, 29(4), 452–471.
- Kabat-Zinn, J. (1982). An outpatient 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.
- Khalaf, S. (2013). Flurry five-year report: It’s an app world. The web just lives in it. *Flurry blog*.
- Kovjanic, S., Schuh, S. C., Jonas, K., van Quaquebeke, N., & van Dick, R. (2012). How do transformational leaders foster positive employee outcomes? A self-determination-based

- analysis of employees' needs as mediating links. *Journal of Organizational Behavior*, 33(8), 1031–1052.
- Ledesma, D., & Kumano, H. (2009). Mindfulness-based stress reduction and cancer: A meta-analysis. *Psycho-Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer*, 18(6), 571–579.
- Lloyd, K. J., Boer, D., Keller, J. W., & Voelpel, S. (2015). Is my boss really listening to me? The impact of perceived supervisor listening on emotional exhaustion, turnover intention, and organizational citizenship behavior. *Journal of Business Ethics*, 130(3), 509–524.
- Lomas, T., Medina, J. C., Ivztan, I., Rupprecht, S., Hart, R., & Eiroa-Orosa, F. J. [Francisco José] (2017). The impact of mindfulness on well-being and performance in the workplace: An inclusive systematic review of the empirical literature. *European Journal of Work and Organizational Psychology*, 26(4), 492–513.
- Luthans, F. (2002). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior*, 23(6), 695–706.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual review of psychology*, 52(1), 397–422.
- Narayanan, J., Chaturvedi, S., Reb, J. M. [Jochen Matthias], & Srinivas, E. (2014). Examining the role of trait mindfulness on turnover intentions and job performance: The mediating role of emotional exhaustion. *Mindfulness*.
- Nübold, A., van Quaquebeke, N., & Hülshager, U. R. (2019). Be (com) ing Real: a Multi-source and an Intervention Study on Mindfulness and Authentic Leadership. *Journal of Business and Psychology*, 1–20.
- Parks, A. C., Della Porta, M. D., Pierce, R. S., Zilca, R., & Lyubomirsky, S. (2012). Pursuing happiness in everyday life: The characteristics and behaviors of online happiness seekers. *Emotion*, 12(6), 1222.
- Penley, L. E., Alexander, E. R., Jernigan, I. E., & Henwood, C. I. (1991). Communication abilities of managers: The relationship to performance. *Journal of management*, 17(1), 57–76.
- Peus, C., Wesche, J. S., Streicher, B., Braun, S. [Susanne], & Frey, D. (2012). Authentic leadership: An empirical test of its antecedents, consequences, and mediating mechanisms. *Journal of Business Ethics*, 107(3), 331–348.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879.
- Quaglia, J. T., Braun, S. E. [Sarah], Freeman, S. P., McDaniel, M. A., & Brown, K. W. (2016). Meta-analytic evidence for effects of mindfulness training on dimensions of self-reported dispositional mindfulness. *Psychological assessment*, 28(7), 803.

- Reb, J., Narayanan, J. [Jayanth], & Chaturvedi, S. [Sankalp] (2014). Leading mindfully: Two studies on the influence of supervisor trait mindfulness on employee well-being and performance. *Mindfulness*, 5(1), 36–45.
- Reb, J., Narayanan, J. [Jayanth], Chaturvedi, S. [Sankalp], & Ekkirala, S. (2017). The mediating role of emotional exhaustion in the relationship of mindfulness with turnover intentions and job performance. *Mindfulness*, 8(3), 707–716.
- Reb, J., Sim, S., Chintakananda, K., & Bhave, D. P. (2015). Leading with mindfulness: Exploring the relation of mindfulness with leadership behaviors, styles, and development. *Mindfulness in organizations: Foundations, research, and applications*, 256–284.
- Reis, H. T., Sheldon, K. M., Gable, S. L., Roscoe, J., & Ryan, R. M. (2000). Daily well-being: The role of autonomy, competence, and relatedness. *Personality and social psychology bulletin*, 26(4), 419–435.
- Roche, M., Haar, J. M., & Luthans, F. (2014). The role of mindfulness and psychological capital on the well-being of leaders. *Journal of occupational health psychology*, 19(4), 476.
- Rockwood, N. J., & Hayes, A. F. (Eds.) (2017). *MLmed: An SPSS macro for multilevel mediation and conditional process analysis*.
- Rupprecht, S., Falke, P., Kohls, N., Tamdjidi, C., Wittmann, M., & Kersemaekers, W. (2019). Mindful leader development: How leaders experience the effects of mindfulness training on leader capabilities. *Frontiers in psychology*, 10, 1081.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, 55(1), 68.
- Schein, E. H. (2013). *Humble inquiry: The gentle art of asking instead of telling*: Berrett-Koehler Publishers.
- Sears, S. R., Kraus, S., Carlough, K., & Treat, E. (2011). Perceived benefits and doubts of participants in a weekly meditation study. *Mindfulness*, 2(3), 167–174.
- Sedlmeier, P., Eberth, J., Schwarz, M., Zimmermann, D., Haarig, F., Jaeger, S., & Kunze, S. (2012). The psychological effects of meditation: A meta-analysis. *Psychological bulletin*, 138(6), 1139.
- Shapiro, S. L., Carlson, L. E., Astin, J. A., & Freedman, B. (2006). Mechanisms of mindfulness. *Journal of clinical psychology*, 62(3), 373–386.
- Shapiro, S. L., Schwartz, G. E., & Bonner, G. (1998). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of behavioral medicine*, 21(6), 581–599.
- Silvestre-López, A.-J. (2016). The discourse of mindfulness: what language reveals about the mindfulness experience. *New insights into the analysis of medical discourse in professional, academic and popular settings*, 173–198.

- Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of clinical psychology, 65*(5), 467–487.
- Stewart, C. J., & Cash, W. B. (2014). *Interviewing: Principles and practices* (Fourteenth Edition). Dubuque: McGraw-Hill Education.
- Van den Broeck, A., Vansteenkiste, M., Witte, H. de, Soenens, B., & Lens, W. (2010). Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the Work-related Basic Need Satisfaction scale. *Journal of Occupational and Organizational Psychology, 83*(4), 981–1002.
- Van Knippenberg, D., & Sitkin, S. B. (2013). A critical assessment of charismatic—transformational leadership research: Back to the drawing board? *The Academy of Management Annals, 7*(1), 1–60.
- Van Quaquebeke, N., & Eckloff, T. (2010). Defining respectful leadership: What it is, how it can be measured, and another glimpse at what it is related to. *Journal of Business Ethics, 91*(3), 343–358.
- Van Quaquebeke, N., & Felps, W. (2018). Respectful inquiry: A motivational account of leading through asking questions and listening. *Academy of Management Review, 43*(1), 5–27.
- Van Vuuren, M., Jong, M. D. T. de, & Seydel, E. R. (2007). Direct and indirect effects of supervisor communication on organizational commitment. *Corporate Communications: An International Journal, 12*(2), 116–128.
- Verdorfer, A. P. (2016). Examining mindfulness and its relations to humility, motivation to lead, and actual servant leadership behaviors. *Mindfulness, 7*(4), 950–961.
- 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.
- Wajcman, J., & Rose, E. (2011). Constant connectivity: Rethinking interruptions at work. *Organization Studies, 32*(7), 941–961.
- Wang, D.-S., & Hsieh, C.-C. (2013). The effect of authentic leadership on employee trust and employee engagement. *Social Behavior and Personality: an international journal, 41*(4), 613–624.
- Weiss, M., Razinskas, S., Backmann, J., & Hoegl, M. (2018). Authentic leadership and leaders' mental well-being: An experience sampling study. *The Leadership Quarterly, 29*(2), 309–321.
- Williams, J. B., Popp, D., Kobak, K. A., & Detke, M. J. (2012). P-640-The power of expectation bias. *European Psychiatry, 27*, 1.
- Zizzo, D. J. (2010). Experimenter demand effects in economic experiments. *Experimental Economics, 13*(1), 75–98.