MINDFUL AND POSITIVE LEADERSHIP INTERVENTIONS: THE IMPACTS ON POSITIVE EXPERIENCES, TRAITS, AND BEHAVIORS

Laurent GIRAUD
Professeur agrégé des Universités
IAE Savoie Mont Blanc - IREGE

Soufyane FRIMOUSSE
Maître de conférences HDR
IAE de Corse – UMR Lisa - Università di Corsica

Yves LE BIHAN
Institut Français du Leadership Positif

INTRODUCTION

Positive psychology is defined as the "science of positive subjective experience, positive individual traits, and positive institutions" (Seligman & Csikszentmihalyi, 2000, p. 5). The reduction of unpleasant feelings and the enhancement of positive experiences, traits, and behaviors promote mental health and well-being (Donaldson *et al.*, 2015; Rashid, 2015), translating into better performance (Cameron *et al.*, 2011; Cooper *et al.*, 2019; Montano *et al.*, 2017).

Thus, positive leadership consists of leadership traits and behaviors that are beneficial to a leader, employees, and their organization as a whole (Malinga *et al.*, 2019). Although managers are in charge of the day-to-day activities of their human resources (Dany *et al.*, 2008), the process through which managers influence their workplaces remains understudied (Fischer *et al.*, 2017).

Positive psychology interventions (PPIs) are defined as "any intentional activity or method that is based on (a) the cultivation of positive subjective experiences, (b) the building of positive individual traits, or (c) the building of civic virtue and positive institutions" (Meyers *et al.*, 2013, p. 618). To date, empirical evidence of PPIs' effectiveness on work outcomes remain modest (Donaldson *et al.*, 2019). Identifying the impacts of PPIs and "clarifying [their] underlying processes" (Antoine *et al.*, 2018, p. 141) are a priority for the field of positive psychology (Kobau *et al.*, 2011). From that perspective, more empirical data seem to be needed (van Woerkom *et al.*, 2019). To fill this research gap, diversity in PPI content seems to be a relevant path to follow, as it is usually associated with rather positive benefits (Parks, 2015; Parks *et al.*, 2012; Thompson *et al.*, 2015).

Therefore, it would be interesting to analyze how a PPI particularly focusing on mindful leadership would affect positive experiences, traits, and behaviors. Indeed, mindfulness, the state of "being attentive to and aware of what is taking place in the present" (Brown & Ryan, 2003, p. 822), would support positive psychology to promote mental health and well-being for individuals (Brown *et al.*, 2013). Despite a significant scholar attention offered since the 1980s to mindfulness-based interventions (MBIs) testifying to their effectiveness (Pantaleno & Sisti, 2017), they remain seldom used in organizations (Bulzacka *et al.*, 2018). Up to now, PPIs have

been more investigated MBI. For example, as of February 9th, 2022, Google Scholar returned 2,200,000 results on the search for "Positive Psychology Interventions" versus 291,000 results for "Mindfulness-Based Interventions". Recent meta-analyses on MBIs in medical disciplines yet suggest that academics may soon consolidate the accumulated knowledge in order to better convince organizations (i.e. Goldberg *et al.*, 2022; Zhang *et al.*, 2021). We thus would like to provide our contribution to this research effort from the management perspective.

Moreover, Reb *et al.* (2020, p. 5) recall "the need for more work on mindfulness training that is tailored to workplace settings". Hence, the present paper investigates the effects of a leadership-focused positive intervention oriented toward mindfulness. We aim at analyzing the expected effects of such a combination on the positive experiences, traits, and behaviors, as perceived by managers and their employees. First, the literature review presents the main concepts that we mobilize. Then, the methodology of our empirical and longitudinal study is detailed. Finally, we present and discuss our results.

LITERATURE REVIEW

Positive psychology

Gable and Haidt (2005) define positive psychology as the study of the conditions and processes that contribute to the flourishing or optimal functioning of people, groups, and institutions and facilitate the individual capability to view the overarching functions of these phenomena by correctly balancing positive and negative interactions to prevent focusing on the "bad things" (Lopez *et al.*, 2018).

The field of positive psychology was renewed by the article by Seligman and Csikszentmihalyi (2000). For Seligman (2019), positive psychology has three objectives. First, to make psychology as much interested in human assets as in human weaknesses. Second, to be as interested in developing strengths as in repairing potential harm. And third, making individual lives more satisfying, drawing on natural gifts and talents. This field of study has rapidly developed, especially regarding the study of PPIs (Hendriks *et al.*, 2019). It has now reached a level that fosters

diverse streams of research, including a critical stream that discusses the underpinnings of PPIs (Wong & Roy, 2018).

Positive leadership

Even if the concept of leadership has aroused a great deal of interest among management scholars, few have departed from the principles of the traditional hierarchical and bureaucratic model. The different theories emphasize one or another facet of a conception of leadership that remains somehow "ideal" within a pyramidal logic. Only a few researchers have proposed an alternative approach. For instance, Pina e Cunha *et al.* (2020, p.343) propose a chapter on positive leadership and define it as an "umbrella for a wide range of leadership approaches and styles (e.g., humble leadership; ethical leadership; authentic leadership; servant leadership; responsible leadership; empowering leadership; virtuous leadership)".

Following a managerial influence, the academic literature has indeed been invited to study a construct labeled "positive leadership" which is supposed to correspond to the sum of virtuous ethics and inclusivity (Cissna & Chockman, 2020). According to other authors like Malinga *et al.* (2019, p. 223), "positive leadership consists of leadership traits (optimism and a 'can-do' mindset, altruism, and ethical orientation, and motivational characteristics) that a positive leader should possess, as well as specific leadership behaviors (creating a positive working environment, developing positive relationships, focusing on results, and engaging in positive communication with employees); and that these behaviors will, in turn, enhance certain leadership outcomes (such as enhanced overall productivity and performance levels, improved organizational citizenship behavior, and enhanced employee well-being) that are beneficial to the leader, his/her employees and the organization as a whole".

Since line managers are in charge of operationally managing their employees (Dany *et al.*, 2008), they would be the first to influence their social climate through potentially positive and well-being-oriented practices (Veld & Alfes, 2017). Indeed, "well-being-oriented HRM practices increase [...] employee performance at the workplace, namely through influencing group feelings of social climate" (Cooper *et al.*, 2019, p. 85). Positive leadership would for instance be

shown to decrease discrimination while increasing well-being (Adams *et al.*, 2020) or safe working behaviors (Cheng *et al.*, 2020).

Although positive leadership has been conceptualized in various ways, several traits seem to be generally associated with what is supposed to compose a positive leader (Malinga *et al.*, 2019). In a promising attempt to synthesize the previous works, Frimousse *et al.* (2017) identified six main categories of traits and behaviors which may characterize best what positive leadership entails (see Appendix 1). (1) Generosity corresponds to the ability to serve and help others. The closest existing academic concept to generosity would be servant leadership followers before attending to the leader's own needs – an approach to positive leadership (Pina e Cunha *et al.*, 2020). Grant (2013) suggests that generosity contributes to well-being and positive emotions, and therefore predicts collective efficiency, employee commitment, and performance. (2) Empathy relates to the capacity to perceive, recognize, and sympathize with the suffering, pain, and emotions of others. Thus, a positive leader may also be an empathetic manager. Indeed, empathy has been associated with "stronger prosocial behavior and effectiveness in the workplace" (Clark *et al.*, 2019, p. 166). (3) Mindfulness translates the capacity to be attentive in the present moment to oneself, others, and one's environment: "A leader mindful of what he is and of what is going on around him will have a better understanding of events and be more competent to lead his team" (Audenaert *et al.*, 2016, p. 216). (4) Vigor "refers to individuals' feelings that they possess physical strength, emotional energy, and cognitive liveliness" (Shirom, 2011, p.50). In the instrument by Soufyane *et al.* (2017), only the last two dimensions are measured. They are particularly useful to positively communicate vivid visions in order to make followers feel capable and happy (Fiset & Boies, 2019). (5) Collective meaning entails the power to propose a plan and a contribution to positive social and moral interactions with others and to operate in a collective, mutual assisting mode (Guillard *et al.*, 2017). (6) Consonance indicates the possibility of acting authentically in accordance with one's strengths and values (Dietl & Reb, 2021). Empirically testing the measurement scale designed by Frimousse *et al.* (2017) would help scholars in progressing towards a finer conceptualization of what positive leadership more specifically entails. Indeed, this scale owns the particularity to include the generosity, empathy, and mindfulness dimensions.

Mindfulness in the workplace

Kabat-Zinn (1994) was one of the first scholars to integrate mindfulness into Western healing practices. He defines mindfulness as "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (p. 4). In the meantime, the conceptualizations of mindfulness used in management may have differed from the original Buddhist approach (Purser and Milillo, 2015). This mindful capacity to pay attention to the "here and now" requires a focus on internal experiences (thoughts, emotions, and physical sensations) as well as it seems to be conditioned by the context (Reina & Kudesia, 2020).

Mindfulness can enable an individual to refocus (Slutsky *et al.*, 2019) when taking a break (Chong *et al.*, 2020), trying to disconnect from work (Toniolo-Barrios & Pitt, 2020) or overcoming the impacts of the COVID-19 pandemic (Birk, 2021; Pattnaik & Jena, 2021). Such mindful abilities make it easier for individuals to apprehend urgent (Shapiro *et al.*, 2006), numerous (Kudesia *et al.*, 2022) or monotonous (Wihler *et al.*, 2022) tasks. Mindfulness also increases cooperation and agility in decision-making processes (Reitz *et al.*, 2020), particularly through constructive conflict management (Kay & Skarlicki, 2020).

Mindfulness would probably strengthen methods from positive psychology to promote a positive and collective response (Kudesia, 2019), and mindfulness training can sometimes be included in PPIs (Smirnova & Parks, 2017). Yet MBIs seem to remain seldom used in organizations (Bulzacka *et al.*, 2018). Therefore, the present study aims to contribute to the literature by uncovering the impacts of positive and mindful leadership interventions on the positive experiences, traits, and behaviors of managers and their employees. Our contribution from the mindfulness influence brings empirical knowledge which has been lacking on the specific impacts of PPIs (van Woerkom *et al.*, 2019).

Positive Psychology Interventions and Mindfulness-Based Interventions

Desmarais (2017) demonstrates that a PPI changed the perceptions of certain managers about their roles in and relationships to work. Along with these changes, emotional and cognitive skills were developed, such as better

communication skills (Mayfield *et al*., 2021), paying more attention to details, and improved decision-making abilities (Parsons *et al*., 2020). Similarly, Antoine *et al*. (2018) show that instances of PPIs increased levels of mindfulness and positive reappraisal. The impacts of these PPIs usually translate into better organizational effectiveness (Cameron *et al*., 2011).

PPIs can sometimes include mindfulness training (Smirnova & Parks, 2017). Byrne and Thatchenkery (2019, p. 16) describe how "mindfulness training develops a person's cognitive ability to focus more of their thoughts on the here and now, and to notice the nuances of what is happening in the present moment, vs. being caught in ruminations about the past or what might happen in the future". The main objective of MBIs is to teach trainees to "acknowledge discursive thoughts and cultivate the state of awareness without an immediate reaction" (Bulzacka *et al*., 2018, p. 75). It usually fosters creativity (Byrne & Thatchenkery, 2019) through creative process engagement (Cheung *et al*., 2020), communication (Mayfield *et al*., 2021), stress mastery, flexibility, and the ability to sustain attention (Bulzacka *et al*., 2018). Similarly, mindfulness helps managers feel more consonance and authenticity (Dietl & Reb, 2021) and that they are more inspired (Gonzalez, 2012). As a result, MBIs have a positive effect on the mental health of employees and their managers (Parsons *et al*., 2020) regardless of demographic characteristics such as age, gender, ethnicity, or educational level (Ashoori, 2020).

Recent meta-analyses suggest that PPIs have only had "small to moderate effects across desirable and undesirable work outcomes" (Donaldson *et al*., 2019, p. 128). Since diversity in the PPI content is related to stronger positive benefits (Parks, 2015; Parks *et al*., 2012; Thompson *et al*., 2015), blending a PPI with a focus on mindful and positive leadership (Malinga *et al*., 2019) is likely to have even stronger effects on positive traits, experiences, and behaviors. Indeed, mindfulness has been shown to have positive impacts on individual functional domains (i.e., attention, cognition, emotion, behavior, and physiology) as well as workplace outcomes related to performance, relationships, and well-being (Good *et al*., 2016).

Therefore, we aim to investigate the impacts of a PPI with the following hypothesis:

Hypothesis 1: A leadership- and mindfulness-focused PPI increases managers' positive leadership.

Mastering job stress

The natural response of an organism that receives a demand is called "stress", regardless of the nature of the demand (Cannon, 1915; Selye, 1976). For this kind of demand, the organism's reaction is always similar, whether apparent or not: heart rate, breathing, and perspiration increase. Of course, stress may rapidly recede. If it does not, it becomes part of a process requiring more specific attention to Selye's (1974) general adaptation syndrome. This syndrome is divided into three phases: *alarm*, *resistance*, and *exhaustion*. The ultimate point of this phase is the "total ruin of the organism due to the stressing agent" (Morin & Aubé, 2007, p. 148).

Job stress is a first-level outcome of one's organization and job (Parker & DeCotiis, 1983). It is related to "a person who is required to deviate from normal or self-desired functioning in the workplace as the result of opportunities, constraints, or demands relating to potentially important work-related outcomes" (Gaylin, 1979, p. 1). It differs from motivational arousal; since it is undesirable, it does not relate to a challenging and attainable objective and leads to individual dysfunctions (Parker & DeCotiis, 1983). At the same time, daily stresses are part of the working life and are not necessarily negative phenomena. Avoiding a demand that does not dissipate or fighting persisting stress may generate more defensive or apathetic coping mechanisms.

We posit that the eudaimonic approach to foster personal happiness (Ryff & Singer, 2013; Vittersø, 2016) should trigger and feed a virtuous circle. Indeed, the literature suggests that PPIs (Donaldson *et al*., 2019) and MBIs (Bulzacka *et al*., 2018) affect stress levels. For instance, a mindful individual appears to handle ambiguities (Chesley & Wylson, 2016) and stress (Haun *et al*., 2018) better. Indeed, the literature highlights that one's stress response is improved by mindfulness (Good *et al*., 2016). The increased self-regulation facilitated by mindfulness training has, for instance, been shown to decrease mental fatigue (Kudesia *et al*., 2022), buffer emotional exhaustion (Thoroughgood *et al*., 2020), and better manager stress (Montani *et al*., 2020).

Hypothesis 2: A leadership- and mindfulness-focused PPI decreases managers' perception of stress.

Perception of organizational justice

Organizational justice appears to be a key factor in performance at work (Colquitt *et al*., 2012) and is thus a requirement for organizations to function well (Greenberg & Colquitt, 2013). As a positive experience, perception of fairness is essential to foster employee commitment and other positive work behaviors (Greenberg, 1990). Adams (1963) argues that the concept of distributive justice expresses the perceived equity in distribution and rewards inside an organization with respect to the contributions made by employees. Thibaut and Walker (1975) observe that procedural justice, i.e., the perceived equity of the processes that lead to decision outcomes, is also an important dimension for maintaining a perception of fairness. Leventhal (1980) lists six rules for managers to respect: consistency, bias suppression, accuracy, correctability, representativeness, and ethicality.

Interactional justice concerns the quality of the treatment of employees during the implementation of the above processes (Steiner & Rolland, 2006). This type of justice consists of *informational justice*, i.e., providing individuals with relevant information—"an explanation for the decision" according to Bies and Moag (1986)—and *interpersonal justice,* which stresses the importance of treating employees with due respect—demonstrating "social sensitivity" (Bies & Moag, 1986)—when procedures are implemented. For a leader, then, encouraging a perception of fairness consists of establishing a context that can favorably respond to these forms of feelings of fairness (Cropanzano *et al*., 2011).

In their founding work, Crozier and Friedberg (1977) insist on a manager's role as an intermediary. Crozier and Friedberg (1977, p. 86) observe that a manager has the power of the **"**marginal secant", i.e., of an actor who is a stakeholder in several interconnected action systems and can thus play an "indispensable role as intermediary and interpreter between different and even contradictory logics of action". Therefore, we hypothesize that this managerial role as an "intermediary and interpreter" affects employees' feelings of organizational justice. A compassionate, empathetic leader should increase employees' perceptions that they are being treated fairly by procedures (Cropanzano, 2001).

Moreover, we suggest that a manager's capacity to feel compassion and empathy should make employees aware that they are being given special attention. Being offered special attention and observing that any difficulties at work are being considered likely generate a feeling of recognition among employees. Above all, a positive leader who is mindful and attentive to the point of being empathetic should not make any missteps in his or her practice of *leadership* (Stavros & Seiling, 2010); showing compassion and empathy should ensure that perceptions of favoritism do not exist (Fiester *et al*., 2010) and thereby prevent clashes with employees (Maertz & Kmitta, 2012). Perceptions of organizational justice should then be expressed. Compassion climate indeed enhances compassion received and given by employees (Nolan *et al*., 2022).

Hypothesis 3: A leadership- and mindfulness-focused PPI for managers increases the perception of organizational justice by their employees.

Organizational Citizenship Behavior

Organizational citizenship behavior (OCB) is often associated with improving individual performance (Walz & Niehoff, 1996) through the presence of psychological safety (Frazier *et al*., 2017). Moreover, "OCB has become an important measure of a leader's effectiveness" (Podsakoff *et al*., 2018, p. 2). Thus, as Good *et al*. (2016) recall, a mindful and positive manager is likely to trigger OCBs.

Indeed, mindfulness makes people more other-oriented and helpful, even in their workplaces (Hafenbrack *et al*., 2020). Managerial empathy should provide effective support to manage employees' emotions (Audenaert *et al*., 2016; Knights, 2017) and, in some cases, to help build and maintain their happiness (Ulluwishewa *et al*., 2020). Therefore, employees should be encouraged to reciprocate in kind by adopting OCBs (Malinga *et al*., 2019). Indeed, mindfulness has been shown to be negatively correlated with unethical behaviors and should therefore be the basis for more positive behaviors (Wan *et al*., 2020).

Hypothesis 4: A leadership- and mindfulness-focused PPI for managers increases their employees' OCBs.

The hypotheses that we listed above are synthesized in Figure 1 and are empirically tested below. The expected relationships between the

PPIs are focused on mindfulness and positive leadership with positive leadership characteristics and perceived stress at a managerial level and with OCBs and perception of organizational justice at an employee level.

EMPIRICAL STUDY

A PPI focused on mindfulness- and positive leadership

The empirical study aims to follow the impact of a PPI focusing on mindfulness and positive leadership. This very intervention is called a positive leadership experience (PLX) and serves as a quasi-experimentation. Indeed, quasi-experimental designs (QEDs) are increasingly employed by interventional researchers in order "to achieve a better balance between internal and external validity" (Handley *et al*., 2018, p.5). In this case, the PLX intervention was conducted at Sanofi Pasteur, the global business unit for vaccines of the pharmaceutical giant Sanofi. We opted for a research design called *randomized pre-test/post-test with a control group* which entails a "random assignment to either experimental group receiving training or control group(s) not receiving training [where] control group(s) may receive no training or receive comparison training" (Eby *et al*., 2019, p. 159). Random assignment avoids "bias in the assignment of treatments to individuals" and consolidates the conclusions of our quasi-experimentation (Rosenbaum, 2015). In the present case, the control group did not receive any training.

The PPI under study is a corporate leadership training program based on the main positive psychology tools and meditation-based mindfulness training (Eby *et al*., 2019). It consists of 10 sessions, each lasting an hour and a half, to practice the following: gratitude, character strengths, positive emotions, best-self, empathy, and coping with emotions. The sessions also include a peer-sharing experience and a training course supervised by one of the co-authors trained in positive psychology.
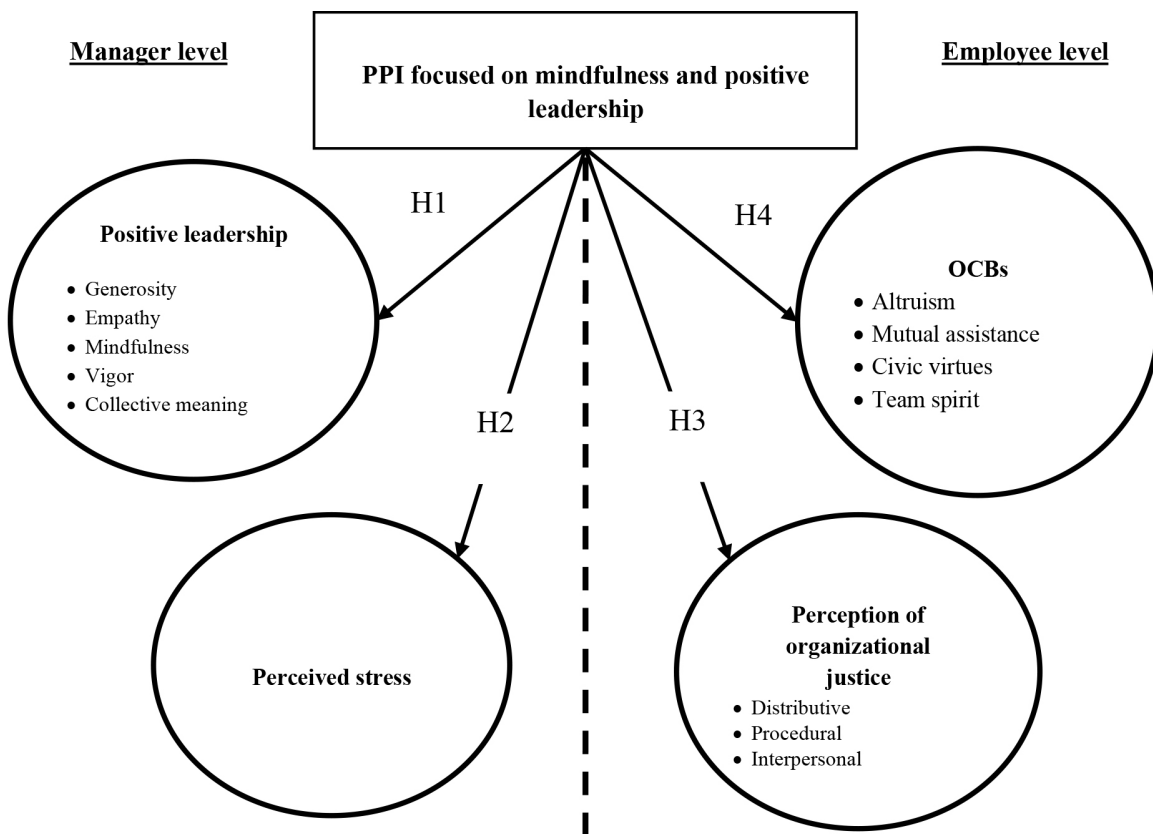

Figure 1. Theoretical model.

An example of the exercises occurring in these sessions is the "Workshop on Character Strengths". Firstly, every participant identifies their personal strengths. Secondly, individuals identify the top five strengths in their ranking as well as their three core strengths. Thirdly, participants identify a successful professional (preferably) or personal experience during which participants felt invested, enthusiastic and proud. Fourthly, participants exchange in couple and face-to-face about which feelings, satisfaction, and results they got from that very experience. There are actually two monologues of two minutes each. Individual A synthetically tells Individual B about his results and feelings and B writes down how A has concretely used one or several of his stated forces and spots the changes in his non-verbal expressions (facial expression, tone, and flow). Fifthly, B tells A what he noted on the use of A's forces in his words, his non-verbal language, the described situation. B does neither give advice nor interprets. A only listens. Finally, the two participants finally swap roles and repeat steps 4 and 5.

In summary, this training program supports participants by (1) developing their self-awareness and awareness of others, (2) teaching them to increase their constructive and empathetic interactions, and (3) reinforcing their mindful stability and emotional flexibility.

Sample

The data were collected in 2017 from a total of 243 (T1) and 208 (T2) Sanofi managers and employees working in the research and development department and other strategic areas, located on two Sanofi Pasteur sites of the Lyon (France) area. We would like to express our gratitude to the top management and all the volunteers who made this study possible. Tables 1 and 2 offer details of the studied sample, which was constructed jointly with the firm to ensure its representativity of the studied site. The intervention consisted of weekly training sessions for managers and employees that lasted an hour and a half each over four months. Data were collected just before (T1) and after (T2) the PPI.

Table 1. Managerial sample (mean scores with standard deviations in parentheses).

	PLX group	Control group
Number of managers	38 in T1, 36 in T2	26 in T1, 25 in T2
Age (years)	46 (6)	49 (8)
Women	72%	60%
Organizational tenure	15 (7)	16 (9)
Position tenure	5 (4)	4 (3)

Table 2. Employee sample (mean scores with standard deviations in parentheses).

	Employees whose managers belong to PLX group	Control group
Number of employees	92 in T1, 76 in T2	87 in T1, 71 in T2
Age (years)	45 (7)	44 (7)
Women	80.3%	74.6%
Organizational tenure	16 (8)	15 (8)
Position tenure	7 (6)	5 (5)

Measurement scales and data analysis

In order to avoid questionable measurement practices, we explained the construction of the main measurement scale on positive leadership at the end of the literature review with transparency (Flake & Fried, 2020). In this section, we also clarify the way data was analyzed. T-tests, principal component analyses, and Cronbach's alpha tests were performed using SPSS 26 software. Each comparison was made between the means of two groups, whether it was PLX managers versus ordinary managers or employees with PLX managers versus employees with ordinary managers. The details of the analyses appear in the next section.

Table 3. Measurement scales and summarized factor analysis.

Measured variable	Number of items	Validity confirmed	Reliability Cronbach's α
Positive leadership (Frimousse *et al*., 2017)			
Generosity	4	Yes	0.88
Empathy	5	Yes	0.91
Mindfulness	5	Yes	0.93
Vigor	5	Yes	0.89
Collective meaning	5	Yes	0.87
Consonance	4	Yes	0.85
Organizational justice (Colquitt, 2001)			
Distributive justice	4	Yes	0.96
Procedural justice	7	Yes	0.86
Interactional justice	4	Yes	0.88
Interpersonal justice	5	Yes	0.88
Organizational Citizenship Behaviors (Paillé, 2006)			
Altruism	2	Yes	0.75
Mutual assistance	4	Yes	0.72
Organizational civic virtues	4	Yes	0.75
Team spirit	3	Yes	0.70
Perceived Stress Scale (Cohen *et al*., 1983)	10	Yes	0.88

Six-point Likert (1932) scales were used for the respondents' answers. The items for the positive leader scale were constructed and presented by Frimousse *et al*. (2017) (see Appendix 1). Moreover, the validity and reliability of this measurement scale were confirmed in other contexts (Frimousse *et al*., 2020; Giraud *et al*., 2018). The perception of organizational justice was measured with the Colquitt scale (2001). The perception of stress was measured through the Perceived Stress Scale (PSS; Cohen *et al*., 1983). Finally, OCBs were measured with the scale developed by Paillé (2006). Table 3 summarizes the psychometric features of the measurement scales after each scale was subjected to a principal components analysis and reliability tests (Cronbach's α).

RESULTS

PLX managers

In Table 4, we present the attitudes before (T1) and after (T2) the PLX program and their significant changes according to T-tests. Even though all potential evolutions were tested, only the significant changes for PLX managers or employees with PLX managers are reported.

Employees with PLX managers

We present in Table 5 the significant changes from T1 to T2 for employees with PLX managers. No significant changes were found for employees with regular managers (control group). For employees with PLX managers, there were favorable movements in two more dimensions of stress than the PLX managers (procedural justice and organizational civic virtues). In T2, PLX employees with PLX managers feel more confident about handling their personal problems and state they are better able to control their tempers. Employees who have PLX managers, in contrast to the control group, perceive their manager to have greater mindfulness and collective awareness after the PLX program. This confirms managers' feelings on the same dimensions, which also improve (although the perception of better empathy only changes for managers).

Table 4. Significant changes in mean scores for managers (standard deviation). T-tests compared to the previous time period (* = p<0.05; ** = p<0.01; *** = p<0.001).

	PLX managers (38 in T1, 36 in T2)		Control group (26 in T1, 25 in T2)	
	T1	**T2**	**T1**	**T2**
Empathy	**4.37 (0.44)**	**4.62 (0.48)*****	4.47 (0.50)	4.49 (0.60)
Mindfulness	**4.35 (0.60)**	**4.59 (0.48)***	4.45 (0.52)	4.62 (0.58)
Consonance	**4.23 (0.51)**	**4.65 (0.49)*****	4.39 (0.43)	4.30 (0.48)
Perceived stress	**3.33 (0.65)**	**2.76 (0.62)*****	3.03 (0.63)	2.81 (0.53)

Our data shows that the impacts of the PLX program seem particularly powerful on managers, the group in which we observe the largest number of changes, with some displaying the highest statistical significance in the whole study (*** = p<0.001). First, three dimensions of the positive leader scale show a significant change from T1 to T2 (empathy, mindfulness, and consistency). Second, on the PSS scale, only the PLX managers' score displays a significant decrease in perceived stress (*** = p<0.001). In addition, the data also shows that standard deviations between T1 and T2 were minor, i.e., the answers provided by managers are rather consistent with their opinions and the PPI had similar impacts on managers.

Table 5. Significant changes in mean scores for employees (standard deviations indicated in parentheses). T-tests compared to the previous wave (* = p<0.05; ** = p<0.01).

	Employees with PLX managers (54 in T1, 49 in T2)		Control group (55 in T1, 46 in T2)	
	T1	**T2**	**T1**	**T2**
Mindfulness	**3.89 (0.94)**	**4.37 (1.06)****	4.19 (0.87)	4.40 (0.84)
Collective meaning	**4.30 (1.03)**	**4.68 (0.80)***	4.62 (0.70)	4.84 (0.75)
Procedural justice	**3.31 (0.73)**	**3.68 (0.68)****	3.46 (0.67)	3.61 (0.55)
Organizational civic virtues	**3.37 (0.75)**	**3.71 (0.65)****	3.43 (0.70)	3.58 (0.74)

In addition, we observe that employees with a PLX manager perceive greater procedural justice and display more organizational civic virtues; thus, it is possible to infer that managers and employees were now involved in a fairer and less stressful environment. Additionally, our data show that employees observe changes in their managers' behaviors, control their stress levels better and develop OCBs. Similar to managers, the employees with PLX managers reduced their standard deviations on the 4 key items in T2; therefore, the answers they provided in the questionnaire after the activities were more consistent among this group.

Lasting effects of positive psychology and mindfulness exercises

Data measured at T2 suggest that the feedback from managers who followed the PLX program is encouraging. We can observe that most of them seem to have adopted positive leadership practices.

Degree of participation in the PLX program

As the descriptive measures below suggest, managers seem to be engaged with the PLX program in the following ways:

– Across the whole 10-session program, **80.7% of managers practiced mindfulness exercises at least 3 days per week on average.** The most representative group practiced them three days per week (34.6%).

– A total of **92.3% of managers practiced mindfulness meditation exercises for more than five minutes per day on average.** The most representative group (30.8%) practiced them for a duration of five to ten minutes.

– We observe that the PLX program had a long-lasting impact: once it was over, **61.4% of managers practiced the mindfulness exercises at least three days per week on average.** The most representative group practiced them three to five days per week (57.6%).

Managers' favorite practices

Below, Table 6 lists the most effective applied practices for well-being according to the 36 PLX managers at T2. Our results show that there is a mix of internal and external focus in the practices of the managers exposed to the PLX program, with 77% of the occurrences in internal settings; for example, taking a break before or after a meeting or engaging in mindful breathing exercises. On the other hand, we find that 33% of the occurrences are related to an external setting, such as spreading kindness or encouraging positive speaking and mutual support.

Table 6. The most effective practices applied for well-being according to the 36 PLX managers at T2 (number of occurrences in answers to a multiple-choice question).

Statement	Occurrences	Percentage
Taking a break before or after a meeting.	20	17%
Focusing on the positive.	19	17%
Mindfulness breathing exercises (3 min.).	18	16%
Being aware of my responses in stressful situations with the employees I manage.	12	10%
Emotional/sensorial scan.	10	9%
Spreading kindness.	10	9%
Mindfulness breathing exercises (10 min.).	9	8%
Encouraging mutual help and support.	9	8%
Encouraging positive speaking.	8	7%

Table 7. The most effective practices to improve relationships with teams according to the 36 PLX managers at T2 (number of occurrences in answers to a multiple-choice question).

Statement	Occurrences	Percentage
Encouraging positive speaking.	17	15%
Encouraging mutual help and support.	17	15%
Thank-you visits to team members.	16	14%
Focusing on the positive.	14	13%
Being aware of my responses in stressful situations with the employees I manage.	12	11%
Spreading kindness.	12	11%
Mindfulness breathing exercises (3 min).	8	7%
Writing down 3 positive experiences a day.	8	7%
Keeping a gratitude journal.	8	7%

Additionally, Table 7 lists the most effective practices to improve relationships with teams according to the 36 PLX managers at T2. Our results show that after PLX managers became aware of the importance of assertive communication; 37% of the occurrences were linked to the importance of communication (*encouraging positive speaking*, *being aware of my responses in stressful situations with the employees I manage,* and *spreading kindness*).

DISCUSSION

Overall, our research reveals that the leadership- and mindfulness-focused PPI in this study generated positive experiences, traits, and behaviors with long-lasting impacts on both managers and employees.

The PPI in this study

First, we first confirm that the leadership- and mindfulness-focused PPI developed the positive

traits of managers (**Hypothesis 1** is confirmed). Indeed, our results suggest that according to the managers, the PPI increased (1) their empathy and consonance, (2) their collective awareness, and (3) their mindfulness (this same result is also supported by data collected at the employee level).

If the concept still has to be clarified, a positive leader seems to contribute to improving employees' health and effectiveness by listening to them and paying more attention to their feelings. This type of leadership may bring people closer rather than separating them (Beazley & Gemmill, 2002), yielding a positive impact on the firm (Guest, 2017). Accordingly, PPIs appear to contribute to *organizational development* (Cheung-Judge & Holbeche, 2011), where leaders influence workplace contexts (Fischer *et al.*, 2017) to foster positive experiences through, for example, psychological safety (Fischer *et al.*, 2017).

Moreover, our study identifies the positive psychological and mindful operational exercises that managers seem to particularly appreciate, whether for their own well-being (i.e., *taking a break before or after a meeting*, *focusing on the positive* and *mindfulness breathing exercises*) or for improved team function (i.e., *encouraging positive speaking*, *encouraging mutual help* and *support and thank-you visits to team members*). PLX managers' ongoing use of these positive psychology and mindfulness exercises confirms that they are synonymous with positive experiences (Chong *et al.*, 2020).

Mastering job stress

Our study also suggests that PPIs increase positive experiences through a better mastery of stress. Indeed, managers who were subject to the PLX intervention managed their stress better afterward, **confirming Hypothesis 2**. This result contributes to the evolution of the stress literature, which is now more oriented toward work tension and burnout (Bliese *et al.*, 2017). We confirm that a PPI is a useful and a possibly sustainable tool for improving mental health and well-being (Donaldson *et al.*, 2015; Rashid, 2015), especially when combined with a mindfulness approach focused on stress management (Eby *et al.*, 2019). This managerial tool seems to foster a more stable and agreeable workplace.

Employees' positive experiences and behaviors

Moreover, our work shows that developing the positive traits of managers is associated with more positive experiences and behaviors from the employee perspective. Our results show that employees' perceptions of procedural justice increase with a PLX manager, **confirming Hypothesis 3**. This also parallels a similar increase in employees' displays of civic virtues, which are dimensions of OCB, thereby **confirming Hypothesis 4**. Therefore, we suggest that mindfulness provides managers with a better grasp of their feelings and of those of the people working with them, which serves to improve, for example, the perceptions of procedural justice. The associated increase in both perceptions of procedural justice and displays of civic virtues corroborates Colquitt *et al.*'s (2012) suggestion that justice is a key factor in organizational performance. Indeed, OCB can be considered a key performance indicator. Most importantly, as individual perceptions of justice can change (Jones & Skarlicki, 2013) and as HR tasks are increasingly delegated to operational managers (Dany *et al.*, 2008), we confirm that it is the role of managers to protect employees' perceptions of justice.

Akin to proponents of mindfulness, through our results demonstrating the effects of PPIs, we confirm that being positive and mindful is vital for a good manager. Indeed, as Autissier *et al.* (2015, p. 216) suggest, "a leader mindful of what he is and of what is going on around him will have a better understanding of events and be more competent to lead his team". Stavros and Seiling (2010, p. 136) argue that one of the priorities for a leader is "to do no harm" in practicing leadership. Thus, we confirm that the characteristics and development of a good leader, based on positive psychology and mindfulness, are more important than a work environment alone (Hammond *et al.*, 2017).

Additionally, as employees initiate further OCBs, **confirming Hypothesis 4**, our results suggest that positive attitudes at work can be mutually nourishing: they initiate a virtuous circle that is conducive to improving individual and collective performance (Cameron *et al.*, 2011). This observation supports eudemonic approaches that accentuate personal happiness and fulfillment (Ryff & Singer, 2013; Vittersø, 2016) and which defend that "transformational leadership

is placed in a virtuous framework" (Fourboul, 2016, p. 123).

Finally, our descriptive results show an increase in managers' favorite practices in terms of their complementary dimensions (Anālayo, 2020), whether internal (taking a break before or after a meeting, focusing on the positive, mindful breathing exercises) or external (spreading kindness, encouraging mutual help and support and positive speaking). This reveals a possible link between the search for an equilibrium of the internal and the external dimensions of mindfulness. Our data may actually highlight the sought-after balance between personal values (internal locus) the leadership style (external locus) (Bruno & Lay, 2008).

CONCLUSION

Empirical contributions

First, our article provides an empirical contribution by successfully testing the validity and reliability of the positive leader measurement scale (Frimousse *et al*., 2017) with a sample of managers and employees. Additionally, the collected data validated the meaningfulness of this scale for both managers and their employees.

Second, we provide the literature with longitudinal data to assess the positive traits and behaviors of managers before and after a PPI blended with an MBI, from both employees' and managers' viewpoints. We therefore provide elements to better understand MBIs in context (Kabat-Zinn, 2003).

Third, we add data from an actual quasi-experiment to the existing field of knowledge regarding PPIs, which has thus far remained marginal (Grant & Wall, 2009).

Finally, we introduce data from a French territory that was somehow missing in the field of positive psychology despite its global expansion (Hendriks *et al*., 2019, p. 3).

Theoretical contributions

First, our paper presents a supplementary empirical test of the positive leadership scale (Frimousse *et al*., 2017). As academic research

on the concept of positive leadership is instilled by practitioners, we brought some elements helping in the deciphering of this construct. Our results suggest that the empathy, mindfulness, and consonance dimensions of this scale are relevant to observing the aftermaths of a leadership-focused PPI. Yet, we found no significant relationships as to the other dimensions of the scale, suggesting that they would deserve further theoretical and methodological reflections. The longitudinal dimension of our work already tested the validity of the empathy, mindfulness, and consonance constructs as measured by Frimousse *et al*. (2017) because it allowed us to "test the sensitivity of the measurement instruments over time" (Leonard-Barton, 1990, p. 253).

Second, our efforts join the growing attention of academics and practitioners on spiritual (Spector, 2014) and positive (Caza & Cameron, 2008) approaches to leadership. Our article hence contributes to positive organizational scholarship (Pina e Cunha *et al*., 2020) by proposing a measurement scale for positive leadership. In fact, our study shows that a positive leader has a significant impact on employee attitudes in terms of their perceptions of justice and organizational civic virtues (Fischer *et al*., 2017).

Fourthly, our research contributes to the theoretical models of positive organizational scholarship (Pina e Cunha *et al*., 2020) by suggesting that leadership-focused PPIs impact both managers and employees.

Eventually, we contribute to the literature on empathy, which still merits further investigation (Clark *et al*., 2019), particularly regarding the potential of empathetic leadership (Jian, 2021).

Managerial contributions

First, our results suggest that it would be advantageous for firms to introduce interventions to encourage positive and mindful leadership (de Vries, 2014). More generally, our research encourages us to rethink the initial training and continuing professional development of leaders by considering positive psychology and contemplative practices, such as mindfulness meditation (Hafenbrack, 2017). Additionally, we would like the results and the theoretical framework expressed in this project to facilitate a stronger focus on the importance of training in not only hard skills but also soft skills, i.e., on positive leadership, among the leaders inside organizations

to improve their positive impacts on the development of activities.

Second, our study sheds light on the positive psychological and mindful exercises that managers seem to appreciate the most, whether for their own well-being or for a better team functioning. Therefore, other companies can be easily and practically inspired to gradually implement and introduce similar positive interventions to improve the performance (Cameron *et al*., 2011) and the well-being of their employees.

Limitations

As any scientific piece of research, our article possesses limits which need to be acknowledged (Hoekstra & Vazire, 2021). The first limitation of the present study is the potential plethora of factors that could affect the specific PPI under study, such as industry, location, and scheduling, (Knight *et al*., 2017). However, the control group helped alleviate this limitation.

The second limitation of this study is that except for the data on positive leadership, the primary data come from a single source: a questionnaire given to the respondents. This limitation corresponds to common method bias, which arises when the same questionnaire is used to measure both the dependent and independent variables of a model. Having a single source is a frequent limitation in studies, and its impact can be mitigated by (1) collecting data from different sources for the dependent and independent variables, (2) administering the same questionnaire several times, (3) guaranteeing the anonymity of respondents so that they feel comfortable providing their answers, (4) using robust scales of measurement, and (5) ordering the items so that the dependent variables can be clearly distinguished from the independent variables (Podsakoff *et al*., 2003). Although it was not always possible to collect the data from several sources, we intend to do so in future research. Moreover, it would have been difficult to administer our questionnaire several times in our study. However, the final three methods to reduce common method bias were applied. Respondent anonymity was respected, the scales of measurement were carefully selected from all available scales, and finally, the items were presented in a clear order. Thus, the impact of common method bias should be limited.

A third limitation is the restricted collection points of longitudinal data. The four months of the PPI intervention and quasi-experimentation suggest that participants' learning could be embedded over time. If a higher number of repeated observations on at least one of the major constructs would have been preferable (Ployhart and Vandenberg, 2010, p. 97), our access to the field did not allow for a third collection point to verify the anchoring on positive experiences, traits, and behaviors. To compensate for this limitation, the repetition of observations already increases the reliability of our study (Willett, 1989). Moreover, our longitudinal approach remains beneficial to the study of such a complex organizational phenomenon like a PPI (Mohammed & Marhefka, 2020), notably to validate the senses of causality (Shaver, 2020), at least conceptually (d'Arcimoles & Trébucs, 2005).

Perspectives for future research

First, our study suggests that future inquires by positive organization scholarship (Caza & Cameron, 2008) should target positive leadership (Malinga *et al*., 2019) as a promising field of investigation. Evaluations in other settings would be welcome, as organizational and national cultures may interfere with PPIs and their actual conceptualizations (Malinga *et al*., 2019). Future research on leadership-focused PPIs could also explore the possible individual differences in their effects (Antoine *et al*., 2018).

Second, it seems necessary to understand why only managers' mindfulness was identified as improved by both managers and their employees. In contrast, evolutions in empathy, consonance, and collective awareness were described by only one of the two sides. Additional testing of the positive leadership scale (Frimousse *et al*., 2017) appears essential to confirm the relevance of its conceptualization.

Further assessment of the nature of the links between the traits and behaviors of a positive leader (Malinga *et al*., 2019) would also be useful to better decipher the multiple impacts of leadership traits. Another suggestion would be to compare objective performance data (such as sales revenues, productivity, staff turnover, absenteeism, commitment, and satisfaction at work) with perceived behavioral changes in positive leadership traits and behaviors.

Finally, future research could try to further define *collective positive leadership* and *individual positive leadership*, as well as their linkages. Similarly, it would be interesting to understand whether, when and how PPIs can develop *team mindfulness* beyond *individual mindfulness* (Liu *et al.*, 2020; Liu *et al.*, in press).

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APPENDICES

Appendix 1. Measurement items of the positive leadership scale (Frimousse *et al*., 2017).

1/Generosity

I consider the interests of the employees under my management before my own interests.

I do everything I can to help the employees under my management.

I put my own interests aside to meet their needs.

I go the extra mile to meet their demands.

2/Empathy

I'd be the first person the employees under my management would go to if they were in great difficulty.

I help the employees under my management deal with their emotions.

I'm good at helping the employees under my management understand their emotions.

I can help them get over difficult emotions.

I show them compassion.

3/Mindfulness

I'm aware of what's going on around me.

I clearly anticipate the consequences of my decisions.

I'm very attentive to what's going on.

I'm in touch with what's going on.

I know what is going to happen.

4/Vigor

I make strong arguments to get the employees under my management to do things.

I encourage them to aim big for our organization.

I'm good at persuading the employees under my management.

I'm very persuasive.

I have a good technique for getting the employees under my management to do things.

5/Collective awareness

I think the organization should have a moral role in society.

I think our organization should function like a community.

I see our organization as able to make a positive contribution to society.

I encourage the employees under my management to show team spirit and solidarity at work.

I'm preparing the organization to have a positive impact in the future.

6/Consonance

I act in accordance with my values, even at personal cost.

I'm aware of my own emotions and their effects.

I know my strengths and my limitations.

I'm well aware of my value and my abilities.