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

Laurent Giraud *,1, Soufyane Frimousse2 and Yves Le Bihan 3

1 Associate Professor, Toulouse School of Management, Toulouse 1 Capitole University – TSM Research (UMR CNRS 5303), France.
Associate researcher at the ESSEC Chair of change management.

2 Associate Professor HDR, IAE de Corse, France.
Associate researcher at the ESSEC Chair of change management.

3 French Institute of Positive Leadership, France.

*Corresponding author information: Laurent Giraud, TSM Research, 2, rue du Doyen Gabriel Marty 31042 TOULOUSE FRANCE (e-mail: laurent.giraud@tsm-education.fr).

Abstract:
The present paper investigates the effects of a positive and mindful leadership intervention on the positive experiences, traits and behaviors of managers and their employees.

The research design used is randomized pre-test/post-test with control group. A group of managers followed a 10-day Positive Psychology Intervention focusing on Positive Leadership. Data collected before (T1) and after (T2) the intervention shows that positive experiences and behaviors were increased while positive traits were developed by the participants and not by the control group.

More precisely, results indicate that after the intervention (at T2), managers felt more empathy, mindfulness and consonance while at the same time perceiving less stress. Similarly, at T2, employees confirm that their trained managers are more mindful and even add that their managers also show more collective meaning. Eventually, at T2, employees with PLX managers perceive better procedural justice and display more organizational civic virtues. Theoretical, empirical and managerial contributions of the study are discussed.

Keywords: positive psychology intervention; leadership; mindfulness; managers.

Data availability statement:
The data that support the findings of this study are available from Sanofi. Restrictions apply to the availability of these data, which were used under license for this study. Data are available from the authors with the permission of Sanofi.
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; B. Cooper et al., 2019; Montano et al., 2017).

Identifying the impacts of Positive Psychology Interventions (PPIs) and “clarifying [their] underlying processes” (Antoine et al., 2018, p. 141) are a priority for positive psychology (Kobau et al., 2011). In that perspective, more empirical data seems to be needed (van Woerkom et al., 2019).

To date, PPIs were shown to only have “small to moderate effects across desirable and undesirable work outcomes” (Donaldson et al., 2019, p. 128). Yet, diversity in the PPI content is associated with more positive benefits (Parks, 2015; Parks et al., 2012; Thompson et al., 2015). Therefore, it would be interesting to analyze how the mix between a PPI and a focus on mindful and positive leadership would more strongly affect positive experiences, traits and behaviors.

Indeed, mindfulness, the state of “being attentive to and aware of what is taking place in the present” (K. W. Brown & Ryan, 2003, p. 822) would support positive psychology in promoting mental health and well-being for the leaders. Despite their effectiveness, Mindfulness-Based Interventions (MBIs) remain seldom used in organizations (Bulzacka et al., 2018).

Moreover, Positive Leadership consists of leadership traits and behaviors that are beneficial to the leader, his/her employees and the organization as a whole (Malinga et al., 2019). In fact, while the managers are in charge of their human resources for day-to-day activities (Dany et al., 2008), the process through which leaders influence the work context yet remains understudied (Fischer et al., 2017).

The present paper hence investigates the effects of a leadership-focused Positive Psychology Intervention (PPI) on positive experiences, traits and behaviors as perceived by managers and employees.

The literature review will present the main concepts that we mobilize. Then, the methodology of our empirical and longitudinal study is detailed. Eventually, we present and discuss our results.

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”. This field of study has known a rapid development, notably regarding the study of PPIs (Hendriks et al., 2019). This science has now reached a level at which it affords to host a critical stream which, for instance, discusses the underpinnings of PPIs (Wong & Roy, 2018).

Positive psychology does not only consider the human being as an individual but also as a being who has relationships with others and is part of a social fabric. The potential
applications of positive psychology in businesses include: - improvement of lifelong satisfaction at work by helping people to experience authentic commitment and to contribute to their work; - improvement of organizations and societies through trust, communication and altruism between people; - improvement of the ethics of both employees and the firm.

Positive psychology is interested in the positive aspects of human beings. It posits that there can be goodness in every human being. Positive psychology has humanist philosophical origins. Humanist psychology, too, has highlighted many of the same fundamentals as positive psychology: responsibility, hope, positive emotions, good mental health, the ability to maintain good-quality relationships, self-acceptance, etc. The humanist psychology stream of research, represented among others by Maslow (1972), demonstrated that a human being is also an individual who wants to achieve fulfilment through personal happiness and relationships with others. The impact of that school has gradually faded, but positive psychology found a new lease of life following publication of an article by Seligman and Csikszentmihalyi (2000). The positive psychology stream considers that alongside the many individual and collective problems encountered, a life develops that is full of meaning and potential (Lecomte, 2014). Positive psychology thus complements clinical psychology and psychopathology. Achor (2011) talks about the happiness advantage, a reference to the economic benefits for a firm that knows how to offer fulfilling working conditions. He in fact goes further arguing that a positive and committed brain is the biggest competitive advantage a business can have in today’s economy.

**Mindfulness**

Mindfulness is a usual training for PPIs (Smirnova & Parks, 2017). While Purser and Milillo (2015) suggest that conceptualizations of mindfulness used in management have sometimes differed considerably from the Buddhist approach, Brown and Ryan (2003, p. 822) define mindfulness as “being attentive to and aware of what is taking place in the present”. Paying attention to the “here and now” requires a focus on our internal experiences (thoughts, emotions, physical sensations) and external experiences, without worrying about the past or the future.

Mindfulness belongs to the field of acceptance and commitment therapies, which help individuals by strengthening and increasing psychological, emotional and behavioral flexibility (Desmarais, 2017; Hayes et al., 2006). Applied by a manager, mindfulness can enable the individual refocus (Slutsky et al., 2019). Such attentional abilities make it easier to handle all the tasks and urgent matters that have to be addressed (Shapiro et al., 2006). Mindfulness hence enables managers to consider emotions in interpersonal relationships while avoiding denial of the emotional dimension (repression) or excessive expression (decompensation)(Bishop et al., 2004).

Despite their effectiveness, Mindfulness-Based Interventions remain seldom used in organizations (Bulzacka et al., 2018). Mindfulness, the state of “being attentive to and aware of what is taking place in the present” (K. W. Brown & Ryan, 2003, p. 822), would yet support positive psychology in promoting a positive and collective response (Kudesia, 2019).

Actually, only a modestly sized literature database has accumulated on the impacts of Positive Psychology Interventions (van Woerkom et al., 2019). The present study aims at bringing its contribution by uncovering the impacts of positive and mindful leadership interventions on positive experiences, traits and behaviors for managers and their employees.
Positive Leadership

According to Malinga et al. (2019, p. 223), “positive leadership consists of leadership traits (optimism and a ‘can-do’ mind-set, altruism, an ethical orientation, and motivational characteristics); that a positive leader should possess, as well as specific leadership behaviours (creating a positive working environment, developing positive relationships, focusing on results, and engaging in positive communication with employees); and that these behaviours will in turn enhance certain leadership outcomes (such as enhanced overall productivity and performance levels, improved organisational citizenship behaviour, and enhanced employee well-being) that are beneficial to the leader, his/her employees and the organisation as a whole”.

The managers are now in charge of operationally managing the employees (Dany et al., 2008). Therefore, they are the first to influence social climate through potential 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” (B. Cooper et al., 2019, p. 85).

If positive leadership has been conceptualized in various ways, there are common traits associated with the Positive Leader (Malinga et al., 2019). In an attempt to synthesize previous works, Frimousse et al. (2017) identify six main categories of traits and behaviors belonging characterizing Positive Leadership (see Appendix 1): (1) Generosity: corresponds to the ability to serve and help others. In his book Give and Take, Grant (2013) shows that goodness and generosity, because they contribute to well-being and positive emotions, are good predictors of 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. A Positive Leader is indeed an empathetic manager. Empathy has indeed been associated with “stronger prosocial behavior and effectiveness in the workplace” (Clark et al., 2019, p. 166). (3) Mindfulness: means the strength to be fully and non-judgmentally attentive in the present moment to oneself, others and the 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” (Autissier et al., 2015, p. 216). (4) Inspiration: concerns the ability to persuade, motivate, and positively inspire others (Fiset & Boies, 2019). (5) Collective meaning: covers the power to propose to others a plan and a contribution to positive social and moral interactions, and to operate in a collective, mutual assistance mode (Guillard et al., 2017); (6) Consonance: indicates the possibility of acting authentically in accordance with one’s strengths and values (Dietl & Reb, in press).

Positive Psychology and Mindfulness Interventions

Desmarais (2017) demonstrates that a PPI changed the perception of managers about their role and their relationship to work. Along with these changes, new emotional and cognitive skills were developed. Similarly, Antoine et al. (2018) show that positive psychology interventions increased the levels of mindfulness and positive reappraisal. This kind of aftermaths of PPIs usually translates into better organizational effectiveness (Cameron et al., 2011).

PPIs can include mindfulness trainings (Smirnova & Parks, 2017). Byrne & Thatchenkery (2019, p. 16) recall that “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 mindfulness-based interventions is to teach the trainee to 
“acknowledge discursive thoughts and cultivate the state of awareness without immediate 
reaction” (Bulzacka et al., 2018, p. 75). It usually helps with attention, creativity, (Byrne & 
Thatchenkery, 2019), mastering of stress, flexibility as well as the ability to sustain attention 
(Bulzacka et al., 2018). Similarly, mindfulness helps the manager in feeling more consonance 
and authenticity (Dietl & Reb, in press) as well as more inspiring (Gonzalez, 2012).

As of now, meta-analyses suggest that PPIS only have a “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), a mix between a Positive Psychology Intervention (PPI) and a focus 
on Positive Leadership (Malinga et al., 2019) is likely to yield even stronger effects on 
positive traits, experiences and behaviors.

We therefore investigate the impacts of a PPI in the line of the following hypotheses.

**Hypothesis 1:** A leadership-focused PPI on managers increases their Positive Leadership.

**Mastering of job stress**

The natural response of the organism that receives a demand is named « stress », regardless of 
the nature of the demand (Cannon, 1915; Selye, 1974). For this kind of demands, the 
organism’s reaction is always similar, may it be apparent or not: the heart rate, breathing and 
perpiration rise for example. Of course, this stress may rapidly recede. If not, it becomes part 
of a process requiring a more particular attention to Selye’s (1974) general adaptation 
syndrome. This syndrome is divided in three phases: alarm, resistance and exhaustion. In the 
end, the ultimate point of this phase is the “total ruin of the organism in front of the stressing 

Job stress is a first-level outcome of the organization and job (Parker & De Cotiis, 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 a motivational arousal 
as it is undesirable, as it does not relate to a challenging and attainable objective and as it 
leads to individual dysfunctions (Parker & De Cotiis, 1983). At the same time, daily stresses 
are part of work life and are not necessarily negative phenomena. Avoiding a demand that 
does not dissipate, or fighting a persisting stress, may both lead to more defensive or apathetic 
coping mechanisms.

We posit that this eudaimonic approach fostering personal happiness (Ryff & Singer, 2013; 
Vittersø, 2016) should trigger and feed a virtuous circle. The literature indeed suggests that 
positive psychology (Donaldson et al., 2019) and mindfulness (Bulzacka et al., 2018) 
interventions affect stress levels. For instance, a mindful individual appears to better handle 
ambiguities (Chesley & Wyolson, 2016) and stress (Haun et al., 2018).

**Hypothesis 2:** A leadership-focused PPI on managers decreases their perception of stress.

**Perception of organizational justice**

Organizational justice appears to be a key factor in performance at work (Colquitt et al., 
2012) and thus a requirement for organizations to function well (Greenberg & Colquitt, 2013).
As a positive experience, the perception of fairness is essential to foster employee commitment and other positive work behaviors (Greenberg, 1990). Adams (1963) argues that distributive justice expresses the perceived equity in distribution and rewards inside an organization, according 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 in maintaining the 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 implementation of the above processes (Steiner & Rolland, 2006). This type of justice consists of informational justice, which is the fact of giving individuals relevant information – “an explanation for the decision” in the words of Bies and Moag (1986) and interpersonal justice which stresses the importance of treating employees with due respect when procedures are implemented, or showing “social sensitivity” as Bies and Moag (1986) say. For a leader, then, encouraging a perception of fairness consists of establishing a context that can respond favorably to these forms of feelings of fairness (Cropanzano et al., 2011).

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

Moreover, we think that a manager’s capacity to feel compassion and empathy should make employees aware that they are being paid special attention. Being paid special attention and seeing that any difficulties at work are taken into consideration is likely to generate a feeling of recognition. Above all, a Positive Leader who is mindful and attentive to the point of being empathetic should not make any missteps in the practice of leadership (Stavros & Galloway Seiling, 2010), since showing compassion and empathy should ensure that there is no room for perceptions of favoritism (Fiester et al., 2010) and avoid clashes with employees (Maertz & Kmitta, 2012). Perceptions of organizational justice should then be granted.

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

Organizational Citizenship Behavior

Organizational Citizenship Behavior is often associated with a better 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). In that sense, a mindful and positive manager is likely to trigger OCBs in his team.

Positive and mindful leaders resemble spiritual leaders (Spector, 2014), mainly because they display empathy to the employees working with them. A spiritual leader promotes employees’ happiness by listening and paying attention to their needs (Beazley, 2002; Voyynet Fourboul, 2016). Employees can go to him/her when they have problems. Showing empathy should
enable a manager to understand his/her staff better and provide better support for managing their emotions (Audenaert et al., 2016; Knights, 2017). Therefore, employees should be encouraged to go the extra-mile in return and adopt OCBs (Malinga et al., 2019).

**Hypothesis 4:** A leadership-focused PPI on managers increases their employees’ OCBs.

The above-listed hypotheses are synthetized in the Figure 1 below and will be tested empirically.

Figure 1: Theoretical model

---

**Empirical study**

A Positive Psychology Intervention focused on mindful and Positive Leadership

The empirical study aims at following the impact of a Positive Psychology Intervention (PPI) focusing on mindful and positive leadership. It is called “PLX”, standing for Positive Leadership eXperience. It 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 control group* where there was 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). In the present case, the control group did not receive 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 lasting one hour and a half in order to practice the following tools: 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 an expert trained in positive psychology. In a nutshell, this training programme supports participants in (1) developing self-awareness and awareness of others, (2) learning to increase constructive and empathetic interactions, as well as in (3) reinforcing attentional stability and emotional flexibility.

Sample

The data were collected in 2017 from #243 Sanofi volunteers, managers and employees, belonging to the Research and Development department and to other strategic functions 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 to make this study possible.

Table 1 and Table 2 give details of the studied sample which was constructed jointly with the firm to ensure it was representative of the studied site. The intervention consists in training sessions of 1h30 per week during four months for managers and employees. Data were collected just before (T1) and just after (T2) the PPI.

Table 1: Sample of managers (mean scores with standard deviation indicated in parentheses).

<table>
<thead>
<tr>
<th></th>
<th>PLX Group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>38 in T1, 36 in T2</td>
<td>26 in T1, 25 in T2</td>
</tr>
<tr>
<td>Age (years)</td>
<td>46 (6)</td>
<td>49 (8)</td>
</tr>
<tr>
<td>Women</td>
<td>72.2%</td>
<td>60%</td>
</tr>
<tr>
<td>Organizational tenure</td>
<td>15 (7)</td>
<td>16 (9)</td>
</tr>
<tr>
<td>Position tenure</td>
<td>5 (4)</td>
<td>4 (3)</td>
</tr>
</tbody>
</table>

Table 2: Sample of employees (mean scores with standard deviation indicated in parentheses).

<table>
<thead>
<tr>
<th></th>
<th>Employees with managers belonging to PLX Group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>92 in T1, 76 in T2</td>
<td>87 in T1, 71 in T2</td>
</tr>
<tr>
<td>Age (years)</td>
<td>45 (7)</td>
<td>44 (7)</td>
</tr>
<tr>
<td>Women</td>
<td>80.3%</td>
<td>74.6%</td>
</tr>
<tr>
<td>Organizational tenure</td>
<td>16 (8)</td>
<td>15 (8)</td>
</tr>
<tr>
<td>Position tenure</td>
<td>7 (6)</td>
<td>5 (5)</td>
</tr>
<tr>
<td>Directly managing staff</td>
<td>94.4%</td>
<td>84%</td>
</tr>
</tbody>
</table>
Measures
Six-point Likert (1932) scales were used for the respondents’ answers. The items for the Positive Leader scale were built and presented in the book chapter by Frimousse et al. (2017) (see Appendix 1). In the meantime, this measurement scale was already confirmed to be valid and reliable in other contexts (Frimousse et al., in press; Giraud et al., 2018). The perception of organizational justice was measured with the scale of Colquitt (2001). The perception of stress was measured through the Perceived Stress Scale (Cohen et al., 1983). Eventually, the Organizational Citizenship Behaviors 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 $\alpha$).

Table 3: Measurement scales and summarized factor analysis.

<table>
<thead>
<tr>
<th>Variable measured</th>
<th>Number of items</th>
<th>Validity confirmed</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Leader (Frimousse et al., 2017)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generosity</td>
<td>4</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.88</td>
</tr>
<tr>
<td>Empathy</td>
<td>5</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.91</td>
</tr>
<tr>
<td>Mindfulness</td>
<td>5</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.93</td>
</tr>
<tr>
<td>Inspiration</td>
<td>5</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.89</td>
</tr>
<tr>
<td>Collective meaning</td>
<td>5</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.87</td>
</tr>
<tr>
<td>Consonance</td>
<td>4</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.85</td>
</tr>
<tr>
<td>Organizational justice (Colquitt, 2001)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distributive justice</td>
<td>4</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.96</td>
</tr>
<tr>
<td>Procedural justice</td>
<td>7</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.86</td>
</tr>
<tr>
<td>Interactional justice</td>
<td>4</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.88</td>
</tr>
<tr>
<td>Interpersonal justice</td>
<td>5</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.88</td>
</tr>
<tr>
<td>Organizational Citizenship Behaviors (Paillé, 2006)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altruism</td>
<td>2</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.75</td>
</tr>
<tr>
<td>Mutual assistance</td>
<td>4</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.72</td>
</tr>
<tr>
<td>Organizational civic virtues</td>
<td>4</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.75</td>
</tr>
<tr>
<td>Team spirit</td>
<td>3</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.70</td>
</tr>
<tr>
<td>Perceived Stress Scale (Cohen et al., 1983)</td>
<td>10</td>
<td>Yes</td>
<td>Cronbach’s $\alpha$ = 0.88</td>
</tr>
</tbody>
</table>

Data analysis
Each time, we compare the means of two groups, whether it was PLX managers versus ordinary managers or employees with PLX managers versus employees with ordinary managers. All of our analyses (T-tests, Principal Components Analysis, Cronbach’s Alpha were performed on the SPSS 26.0.0 software.

Results
It should be noted that all potential evolutions were tested: only significant changes for the PLX managers or employees with PLX managers are reported in the present article.
PLX Managers

Table 4 presents significant changes in attitude between before (T1) and after (T2) the PLX programme, according to T-tests.

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).

<table>
<thead>
<tr>
<th></th>
<th>PLX managers (38 in T1, 36 in T2)</th>
<th>Control group (26 in T1, 25 in T2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T1</td>
<td>T2</td>
</tr>
<tr>
<td>Empathy</td>
<td>4.37 (0.44)</td>
<td>4.62 (0.48)***</td>
</tr>
<tr>
<td>Mindfulness</td>
<td>4.35 (0.60)</td>
<td>4.59 (0.48)*</td>
</tr>
<tr>
<td>Consonance</td>
<td>4.23 (0.51)</td>
<td>4.65 (0.49)***</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>3.33 (0.65)</td>
<td>2.76 (0.62)***</td>
</tr>
</tbody>
</table>

The impact of the PLX programme seems particularly powerful for managers, the group in which we observe the largest number of changes, some of them displaying the highest statistical significance in the whole study (***) = p<0.001).

First, three dimensions of the Leader+ scale a shows significant change between T1 and T2 (Empathy, Mindfulness and Consonance).

Second, on the PSS scale, only the PLX managers’ score displays a significant decrease in perceived stress (***) = p<0.001).

Employees with PLX managers

Table 5 presents significant changes between T1 and T2 for employees with PLX managers. No significant changes were found with employees under regular managers.

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

<table>
<thead>
<tr>
<th></th>
<th>Employees with PLX managers (54 in T1, 49 in T2)</th>
<th>Control group (55 in T1, 46 in T2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T1</td>
<td>T2</td>
</tr>
<tr>
<td>Mindfulness</td>
<td>3.89 (0.94)</td>
<td>4.37 (1.06)***</td>
</tr>
<tr>
<td>Collective meaning</td>
<td>4.30 (1.03)</td>
<td>4.68 (0.80)***</td>
</tr>
<tr>
<td>Procedural justice</td>
<td>3.31 (0.73)</td>
<td>3.68 (0.68)***</td>
</tr>
<tr>
<td>Organizational civic virtues</td>
<td>3.37 (0.75)</td>
<td>3.71 (0.65)***</td>
</tr>
</tbody>
</table>
For employees with PLX managers, there were favorable movements in two other dimensions of stress. In T2, PLX employees with PLX managers feel more confident about handling their personal problems, and say they are more able to control their temper.

Employees who have a PLX manager perceive greater Mindfulness and Collective meaning in their manager after the PLX programme. Yet, it is not the case for the employees in the control group. This confirms managers’ feelings on the same dimensions, which have improved (although perception of better Empathy only changes for managers).

In addition, we observe that employees with a PLX manager perceive greater procedural justice and display more organizational civic virtues.

Our data show that employees to better observe changes in their manager’s behavior, control their stress better and develop organizational citizenship behavior.

**Positive psychology and mindfulness exercises (measured at T2)**

Data suggest that the feedback from managers who have followed the PLX programme is encouraging. Most of them have internalized positive leadership practices.

**Degree of participation to the PLX programme**

Managers almost fully engaged with the PLX programme.

- Across the whole 10-session programme, **80.7% of managers practiced the mindfulness exercises at least 3 days a week on average**. The most representative group practiced them three days a week (34.6%).
- **92.3% of managers practiced the mindfulness meditation exercises for more than five minutes a day on average**. The most representative group (30.8%) practiced them for durations of five to ten minutes.
- We observe that the PLX programme has a long-lasting impact: once it was over, **61.4% of managers practiced the mindfulness exercises at least three days a week on average**. The most representative group practiced them three to five days a week (57.6%).

**Managers’ favorite practices**

Below, the Table 6 lists the most effective practices to apply for well-being, according to the 36 PLX managers at T2.

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

<table>
<thead>
<tr>
<th>Practice</th>
<th>Occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking a break before or after a meeting</td>
<td>20</td>
</tr>
<tr>
<td>Focusing on the positive</td>
<td>19</td>
</tr>
<tr>
<td>Mindfulness breathing exercises (3 min)</td>
<td>18</td>
</tr>
<tr>
<td>Being aware of my responses in stressful situations with the employees</td>
<td>12</td>
</tr>
<tr>
<td>Emotional/sensorial scan</td>
<td>10</td>
</tr>
</tbody>
</table>
Eventually, the Table 7 lists the most effective practices to improve relationships with teams according to the 36 PLX managers at T2.

**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).**

<table>
<thead>
<tr>
<th>Practice</th>
<th>Occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encouraging positive speaking</td>
<td>17</td>
</tr>
<tr>
<td>Encouraging mutual help and support</td>
<td>17</td>
</tr>
<tr>
<td>Thank-you visits to team members</td>
<td>16</td>
</tr>
<tr>
<td>Focusing on the positive</td>
<td>14</td>
</tr>
<tr>
<td>Being aware of my responses in stressful situations with the employees I manage</td>
<td>12</td>
</tr>
<tr>
<td>Spreading kindness</td>
<td>12</td>
</tr>
<tr>
<td>Mindfulness breathing exercises (3 min)</td>
<td>8</td>
</tr>
<tr>
<td>Writing down 3 positive experiences a day</td>
<td>8</td>
</tr>
<tr>
<td>Keeping a gratitude journal</td>
<td>8</td>
</tr>
<tr>
<td>Writing down 3 positive experiences a day</td>
<td>8</td>
</tr>
</tbody>
</table>

**Discussion**

Our study confirms that Positive Psychology Interventions impact positive experiences, traits and behaviors with long-lasting aftermaths both for managers or employees.

**The Positive Psychology Intervention under study**

We first confirm the PPI under study develop the positive traits of the managers (**H1 confirmed**). Indeed, our results suggest that a Positive Psychology Intervention increased (1) the managers’ empathy and consonance (according to the managers themselves), (2) the manager’s collective meaning (according to the managers again) and (3) the managers’ mindfulness (according to both the employees and the managers).

A Positive Leader will thus contribute to improving employees’ health and effectiveness by listening to them and paying more attention to their feelings. This type of spiritual leader makes people feel more valuable by listening to them and putting their needs before his own, and also The Positive Leader constructs a community by facilitating teams, constructing a relational universe that brings people closer rather than separating them (Beazley, 2002). This mechanism ultimately has a positive impact on the firm (Guest, 2017). In that sense, PPIs then appear to contribute to organizational development (Cheung-Judge & Holbeche, 2011) where leaders do influence the work context (Fischer et al., 2017) to grant positive experiences like psychological safety for instance (Frazier et al., 2017).

Moreover, our study identifies the positive psychology and mindful operational exercises that managers seem to particularly appreciate whether it is 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 a better team functioning (i.e. encouraging positive speaking, encouraging mutual help).
and support and thank-you visits to team members). The sustainable use of those positive psychology and mindfulness exercises confirms that they are synonymous with positive experiences (Chong et al., in press).

**Mastering of job stress**

Our study also suggests that PPIs increase the positive experiences like a better mastering of stress. Indeed, managers who were subject to the PLX intervention did master their stress better afterwards (H2 confirmed). This result contributes to the evolution of the stress literature which is now more oriented towards work tensions and burnout (Bliese et al., 2017). We confirm that the PPI is a useful tool to improve mental health and well-being (Donaldson et al., 2015; Rashid, 2015), especially when combined with MBI and regarding the management of stress (Eby et al., 2019).

**Employees’ positive experiences and behaviors**

Moreover, our work shows that the development of positive traits of the manager is associated with more positive experiences and behaviors from the employees’ side. Our results show that employees’ perception of procedural justice increases with a PLX manager (H3 confirmed), parallely to a similar increase in the display of civic virtues (a dimension of OCB – H4 confirmed). Therefore, we suggest that mindfulness provides managers with a better grasp of their feelings and those of the people working with them, and this serves to improve perception of procedural justice for instance. The associated increase in both perception of procedural justice and the display of civic virtues would corroborate Colquitt et al. (2012)’s idea that justice is a key factor in organizational performance. Indeed, OCB can be considered as a key performance indicator. Most importantly, as an individual’s perception 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 perceptions of justice.

Like proponents of mindfulness, through our results testifying to 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) recall, “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 Galloway Seiling (2010, p. 136) consider that one of the priorities for a leader is “to do no harm” in practicing leadership. We thus confirm that the characteristics and development of a good leader like positive psychology and mindfulness concern more than the sole work environment (Hammond et al., 2016).

Eventually, as employees initiate further OCBs (H4 confirmed), our results suggest that positive attitudes at work can be mutually nourishing: they initiate a virtuous circle that is conducive to better individual and collective performance (Cameron et al., 2011). This observation lends support to promoters of the eudaimonic approaches that put the accent on personal happiness and fulfilment (Ryff & Singer, 2013; Vittersø, 2016), and also admirers of spiritual leadership who believe that “transformational leadership is placed in a virtuous framework” (Voynnet Fourboul, 2016, p. 123).
Conclusion

Empirical contributions
Our article first provides an empirical contribution by successfully testing the validity and the reliability of the Positive Leader measurement scale (Frimousse et al., 2017) on a sample of managers and employees. By the way, we bring data where both the managers and their employees were able to give their views on the manager’s positive traits.

Second, we bring longitudinal data collected over four months showing that the effects of a Positive Psychology Intervention are long-lasting, both for employees and managers.

Thirdly, we provide a quasi-experimentation which has somehow been lacking to the management literature (A. M. Grant & Wall, 2009).

Eventually, we bring data from the French territory which was somehow missing in the field of positive psychology even though it is expanding globally (Hendriks et al., 2019, p. 3).

Theoretical contributions
First, the present application of the Positive Leadership scale (Frimousse et al., 2017) illustrates the growing interest by academics and practitioners in a spiritual (Spector, 2014) and positive (Caza & Cameron, 2008) approach to leadership. It contributes to the Positive Organizational Scholarship (Caza & Cameron, 2008) by proposing a measurement scale for Positive Leadership. In the meantime, our study shows that the Positive Leader has a significant impact on employee attitudes in terms of perception of justice and organizational civic virtues (Fischer et al., 2017).

Second, our research contributes to the theoretical models of Positive Organizational Scholarship (Caza & Cameron, 2008) by suggesting that a leadership-focused PPI impact both managers and employees. We parallelly contribute to the literature on empathy which still deserves further investigation (Clark et al., 2019).

Managerial contributions
Firstly, our results suggest that it would be in firms’ interests to introduce interventions in positive and mindful leadership (Kets de Vries, 2014). More generally, our research encourages to rethink the initial training and continuing professional development of leaders through positive psychology and contemplative practices such as mindfulness meditation (Hafenbrack, 2017).

Secondly, our study details the positive psychology and mindful exercises that managers seem to appreciate the most whether it is for their own well-being or for a better team functioning. Other managers can therefore easily and practically be inspired to implement similar positive interventions in their own organizations to improve performance (Cameron et al., 2011).

Limitations
The first limitation of the present study is the fact that there exists a plethora of factors that could have affected the PPI like the industry, the location, the scheduling, etc (Knight et al., 2017). The control group was useful to alleviate this limit.
The second limitation of this study lies in the fact that except from the data on Positive Leadership, the primary data come from a single source: a questionnaire given to the respondents. This limitation corresponds to what is called the 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 respectively, (2) administering the same questionnaire several times, (3) guaranteeing anonymity for respondents so they will feel comfortable answering freely, (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 for the next part of our action-research. It would also have been difficult in our study to administer our questionnaire several times. However, the last three ways to reduce the common method bias were applied here: respondent anonymity was scrupulously respected, the scales of measurement were carefully selected from all available scales, and finally the items were presented in order. The impact of the common method bias should thus remain limited.

**Perspectives for future research**

Our study first suggests that future inquiry by Positive Organization Scholarship (Caza & Cameron, 2008) should focus on Positive Leadership (Malinga et al., 2019) as a promising field of investigation. A test in other settings would here be welcome as organizational and national cultures may interfere with the PPIs and the conceptualization itself (Malinga et al., 2019). Future research on leadership-focused PPIs could also explore the possible individual differences in their effects (Antoine et al., 2018).

Another suggestion would be to compare objective performance data (sales revenues, productivity, staff turnover, absenteeism, commitment and satisfaction at work, etc) with perceived behavioral changes in Positive Leadership traits and behaviors or measuring the links between the traits and behaviors of the Positive Leader (Malinga et al., 2019).

Furthermore, it seems necessary to understand why only managers’ mindfulness was identified as improved from both the managers and their employees. On the opposite, evolutions in empathy, consonance and collective meaning were spotted from only one of the two sides. Additional testing of the Positive Leadership scale (Frimousse et al., 2017) seems to also be required to confirm its full relevance.

Finally, future research could focus on possible Collective Positive Leadership like Yu and Zellmer-Bruhn (2018) conceptualized team mindfulness.
Appendices

Appendix 1: Measurement items for 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 to 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/ Inspiration
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 meaning
I consider that 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.
References


