



# Focusing on Strengths or Weaknesses? Using Self-Determination Theory to Explain Why a Strengths-based Approach Has More Impact on Optimal Functioning Than Deficit Correction

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## Abstract

This study sheds light on the strengths-based approach and the deficit correction approach regarding training and development at work. The former is operationalized by perceived organizational support for strength use (POSSU) and strengths use behaviors (SUB), and the latter through perceived organizational support for deficit correction (POSDC) and deficit correction behaviors (DCB). Using self-determination theory (SDT), we argue that both approaches might enhance employees' optimal functioning (i.e., task performance, contextual performance, and psychological well-being), by increasing autonomous motivation through need satisfaction and decreasing controlled motivation through need frustration. More precisely, this study tends to identify which approach has the most impact on performance and well-being within the workplace. Two independent samples were collected to test the proposed model: the first one explored the implication of POSSU and POSDC as antecedents of basic psychological needs, while the second examines SUB and DCB. In the first sample ( $N=341$ ), structural equation modeling (SEM) shows that POSSU increases autonomous motivation through need satisfaction and reduces controlled motivation by diminishing need frustration. While POSDC favors controlled motivation through need frustration. In the second sample ( $N=454$ ), SEM demonstrates that SUB increases autonomous motivation through need satisfaction and reduces controlled motivation by diminishing need frustration. While DCB favors controlled motivation through need frustration. Theoretical and practical implications are discussed.

**Keywords** Strengths-based approach · Deficit correction · Self-determination theory · Optimal functioning

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Human resource (HR) professionals and academics commonly agree that effective training and development practices are essential to support employees' career management and to ensure well-being and performance within the workplace (e.g., Marescaux et al., 2019). Training and development practices are usually based on fundamental assumptions and beliefs about human potential's nature, value, and instrumentality. Taken together, these beliefs and assumptions represent the "philosophy" (or the "approach") carried by HR decision-makers regarding training and development orientations (Meyers & van Woerkom, 2014).

If training and development practices may differ substantially between organizations (Marescaux et al., 2019; Meyers & van Woerkom, 2014), they are generally based on two alternative approaches: Either a deficit correction approach (van Woerkom et al., 2016) or a strengths-based approach (Peterson & Seligman, 2004). Weaknesses or (deficiencies) can be defined as ways of behaving, thinking, or feeling that do not come naturally to an individual, which he or she does not enjoy doing, but in which he or she can achieve competent functioning if trained accordingly (Quinlan et al., 2012). On the contrary, strength is defined as a "pre-existing capacity for a particular way of behaving, thinking, or feeling that is authentic and energizing to the user, and enables optimal functioning, development and performance" (Linley, 2008, p. 9). Thus, although a balanced approach focussing on both strengths and weaknesses would be ideal (Linley et al., 2006, 2009), with limited resources and increasing pressure to achieve organizational results, managers tend to prioritize either one or the other for training and development purposes (Meyers & van Woerkom, 2014).

According to Van Woerkom and colleagues (van Woerkom et al., 2016), a training and development approach promotes perceived organizational support and self-initiated striving. Organizational support is perceived when employees develop global beliefs concerning the extent to which the organization values their contributions and cares about their well-being (Eisenberger et al., 1986). On the one hand, organizations might give support to correct weaknesses. Perceived organizational support for deficit correction (POSDC) corresponds to employees' impressions of the degree to which the organization is directly helping them correct their weaknesses at work (van Woerkom et al., 2016). For instance, organizations may support employees by closing the gap between actual and desirable performance through training, coaching, or on-the-job learning processes. On the other hand, perceived organizational support for strengths use (POSSU) is reported when employees believe that the organization is actively supporting them to use and apply their strengths at work (Keenan & Mostert, 2013). For example, organizations might help employees identify their strengths, develop them, and use them, especially by matching work tasks and strengths (Dubreuil & Forest, 2017; Linley et al., 2006).

Self-initiated striving refers to the initiative that employees take to improve their current situation or create favorable new ones for themselves, rather than passively adapting to present conditions (Crant, 2000). The deficit correction approach encourages employees to actively engage in activities to reduce the impact of their weaknesses on their work experience, that is, deficit correction behavior (DCB). On the contrary, employees may proactively engage in activities to identify, develop, and use their strengths at work, that is, strengths use behaviors (SUB; Bakker & van Woerkom, 2018; van Woerkom et al., 2016).

In sum, when people are trained and developed mostly regarding their weaknesses, they tend to perceive organizational support for deficit correction and to act on deficit correction behaviors, while a strengths-based approach promotes perceived organizational support for strengths use and strengths use behaviors (Bakker & van Woerkom, 2018; Miglianico et al., 2019; van Woerkom et al., 2016).

Indeed, a balanced approach focusing on both strengths and weaknesses would be ideal for increasing employees' optimal functioning (Linley et al., 2006, 2009). Since managers and human resources professionals feel increasing pressure to achieve organizational results, they tend however to favor one or the other approach depending on their beliefs or philosophy on career development and talent management (Meyers & van Woerkom, 2014). This contrast is also reflected in the scientific literature where both approaches are generally presented as antagonistic and, therefore, their results are reported separately. Positive psychology specialists claim that the strengths-based approach has many benefits for workers' optimal functioning, especially performance (e.g., Dubreuil et al., 2016; Harzer & Ruch, 2012; Littman-Ovadia et al., 2017) and well-being (e.g., Forest et al., 2012, Harzer & Ruch, 2016, Littman-Ovadia & Steger, 2010). However, these studies might minimize the effect that deficit correction may have on employees' holistic development. For instance, several articles have demonstrated deficit correction effectiveness on task-related performance and employee engagement (Els et al., 2018; van Woerkom et al., 2016). Therefore, the above invites the scientific community to develop one (or more) conceptual framework that integrates both the strengths-based approach and deficits correction to compare their possible positive or negative consequences on employees' optimal functioning (Bakker & van Woerkom, 2018; Miglianico et al., 2019).

Theoretically, according to Bakker and van Woerkom (2018), both approaches' benefits result from the fact that they offer employees job resources. Job resources represent physical, social, or organizational aspects of the job that may be functional in achieving work goals, reducing job demands and the associated physiological and psychological costs, and stimulating personal growth and development (Demerouti et al., 2001). More precisely, both approach resources are perceived organizational support and self-initiated striving for strengths use or deficit correction (as described above). Nevertheless, this theoretical explanation does not unveil the underlying mechanisms involved, which significantly limits its conceptual validity (Ghielen et al., 2018; Miglianico et al., 2019; Quinlan et al., 2012). For many, self-determination theory (SDT; Deci & Ryan, 1985) could overcome this theoretical limit (Gradito Dubord et al., 2022; Kong & Ho, 2016; Miglianico et al., 2019). In the same vein, Trépanier et al. (2015) demonstrated that job resources generally contribute to psychological needs and the development of autonomous motivation. Yet the motivational implications of the resources of the strengths approach (and the correction of deficits) remain understudied (Kong & Ho, 2016; Miglianico et al., 2019). Regarding employees' development, could the strengths-based approach and deficit correction be conceptualized as significant antecedents of basic psychological needs and quality of work motivation as well?

Answering this question would benefit the existing literature on strengths, deficit correction, quality of work motivation, and employees' optimal functioning.

First, it would make it possible to integrate, for the first time, two complementary developmental approaches within a single theoretical model, thus providing a global portrait of the relationship between these two, some potential explanatory mechanisms, and employee functioning. Second, the present paper contributes to the theoretical knowledge on strengths and positive psychology at work. Drawing on SDT, we propose a motivational framework to shed light on the underlying mechanisms of the strength-based approach (and deficit correction). Since 2012, several systematic literature reviews have been carried out regarding the theoretical implications of the strength-based approach (Bakker & van Woerkom, 2018; Ghielen et al., 2018; Miglianico et al., 2019; Quinlan et al., 2012). They all conclude by claiming that future research must develop a more refined theoretical framework for a wider understanding of its positive effects at work. Since the positive activation model (Lyubomirsky & Layous, 2013) predicts that positive interventions trigger positive mental experiences (e.g., positive emotions, need satisfaction, and motivation), but their potential implication on human motivation remains insufficiently studied (Bakker & van Woerkom, 2018). The present paper directly addresses this issue.

## 1 Deficit Correction, Strengths-Based Approach, and Performance

Work performance can be understood by its two subdimensions. The first is task performance (intra-role), which represents the activities that transform raw materials into goods and services (Motowidlo & Van Scootter, 1994). The second is contextual performance (extra-role), referring to the organizational, social, and psychological context in which the technical core operates (Motowidlo & Van Scootter, 1994). Contextual performance is often studied through the prism of organizational citizenship behaviors, characterized by individual contributions that go beyond job demands (Organ & Ryan, 1995).

Some studies have investigated the relationship between deficit correction and work performance, but they concluded with mixed results. There are some reasons to believe that deficit correction might enhance performance in the workplace. For instance, Mohammed et al. (2019) found that POSDC, task performance, and contextual performance were positively associated. Moreover, according to Els and colleagues (Els et al., 2018), the more people engage in activities to correct their deficits, the more they tend to feel a sense of self-efficacy. However, in both studies, even if the results are significant, reported effect sizes are relatively low. On the contrary, van Woerkom and colleagues (van Woerkom et al., 2016) observed that deficit correction (POSDC) was not related to three indicators of task-related performance: self-rated performance, performance appraisal based on behaviors, and performance appraisal based on results. This might explain why Hiemstra and Van Yperen (2015) found that the deficit approach tends to have a low effect on effort intentions. In sum, given these mixed empirical observations, more studies are needed to investigate the relationship between deficit correction and performance.

Second, several studies have confirmed that a strengths-based approach is positively associated with task-related performance (Dubreuil et al., 2014, 2016; Harzer & Ruch, 2012; Littman-Ovadia et al., 2017; van Woerkom et al., 2016). For

example, one study reported that the strengths use approach was significantly associated with managers' performance review of employees (van Woerkom et al., 2016). This might be explained in part by the fact that strengths use enhances problem-solving efficiency (Macaskill & Denovan, 2013) and stimulates creativity (Cable et al., 2015; Lee et al., 2016). Furthermore, strengths use is also linked to contextual performance (Harzer & Ruch, 2016; Kong & Ho, 2016; Littman-Ovadia et al., 2017; van Woerkom et al., 2016). For instance, Littman-Ovadia and Lavy (2016) observed that strengths use promotes organizational citizenship behaviors and that positive emotions act as a mediating variable in this relationship (e.g., interest, joy, etc.). This effect is even more powerful regarding prosocial behaviors (e.g., altruism; Harzer & Ruch, 2016; Kong & Ho, 2016). In sum, the relationship between the strengths-based approach and work performance appears to be established in published studies, for both task-related performance and contextual performance.

### 1.1 Deficit Correction, Strengths-Based Approach, and Well-being

Seligman (2004) defined well-being as a happy, committed, and meaningful life. A happy life refers to a pleasant life that allows the individual to feel positive emotions, a committed life means having active contributions in different spheres of life (including work) while a meaningful life implies belonging and action, in the service of something or a cause that is believed to be greater than oneself. In other words, a happy life refers to the hedonic dimension of well-being, while an engaged and meaningful life refers to its eudaimonia dimension (Ryan et al., 2008).

No study has directly examined the relationship between the deficit correction approach and psychological or subjective well-being. However, some have studied the association between POS for deficit correction and several positive attitudes at work. For instance, POS for deficit correction is positively associated with vigor and dedication (van Woerkom et al., 2016), significantly predicted work engagement over time, and even better than POS for strengths use (Mphahlele et al., 2018). Considering that work engagement is the opposite of job burnout (Demerouti et al., 2001), POS for deficit correction is also negatively linked with exhaustion and cynicism (i.e., two subdimensions of work engagement; Els et al., 2018; van Woerkom et al., 2016). Deficit correction is also associated with job satisfaction, learning, and personal growth initiatives, and tends to reduce turnover intention (Els et al., 2018; Meyers et al., 2015).

About the strengths-based approach, some studies have looked at its direct associations with the hedonic and subjective nature of well-being (Deci & Ryan, 2008). Strengths use stimulates positive emotions (Harzer & Ruch, 2012; Littman-Ovadia et al., 2017), such as joy, interest, enthusiasm, and pride (Meyer & van Woerkom, 2017). The positive activity model supports these findings and suggests that positive actions, such as using one's strengths, initiates the sensation of a variety of positive emotions (Dubreuil et al., 2021; Lyubomirsky & Layous, 2013). This can even be observed by an increase in energy; according to Forest et al. (2012), people who use their strengths more intensely report more vitality, a dimension of work engagement (Schaufeli & Bakker, 2004).

Secondly, the strengths-based approach also contributes to a satisfactory and meaningful representation of the work experience, that is, eudemonic well-being. In an experimental study, Forest et al. (2012) observed a significant increase in psychological well-being at work in the experimental group (compared to the control group). Moreover, employees who mobilize their strengths at work report a higher level of satisfaction with life in general (Forest et al., 2012; Harzer & Ruch, 2016; Littman-Ovadia & Steger, 2010). In sum, by using their strengths, people experience personal growth and find more meaning in their life and work (Littman-Ovadia & Steger, 2010).

## 1.2 Strength-Based Approach, Deficit Correction, and Work Motivation

Although results indicate that both strengths-based and deficit correction approaches could have positive impacts on employees' performance and well-being, research findings are more abundant regarding the strengths-based approach's benefits. Thus, it remains unclear which one could have the most impact on employees' performance and well-being and this gap needs to be studied.

Moreover, reviewed studies focus predominantly only on results rather than exploring the underlying process behind both approaches. That is why systematic reviews on the matter concluded that a theoretical framework is still missing to support both approaches, and to shed light on their potential impacts on employees' functioning (Ghielen et al., 2018; Miglianico et al., 2019; Quinla et al., 2012). Some authors have proposed that both approaches might be represented as job resources, which are helpful to achieving organizational and personal work goals according to the job demands and resources model (Bakker & Demerouti, 2014; van Woerkom et al., 2016). However, another promising avenue of research lies in the exploration of the motivational process that possibly supports both approaches (Bakker & van Woerkom, 2018; Miglianico et al., 2019). According to Miglianico and colleagues (Miglianico et al., 2019), future research could fill this theoretical gap by using self-determination theory (SDT; Deci & Ryan, 2000).

Self-determination theory (SDT) is a macro-theory of human motivation proposed by Deci and Ryan (1985), that claims that human beings have at least three psychological needs. Needs are innate and universal psychological nutrients that are essential for ongoing psychological growth, integrity, and well-being (Deci & Ryan, 2000). These needs are autonomy (the need to act with volition and to feel self-ownership), competence (the need to do things efficiently and successfully), and relatedness (the need to feel closeness and belonging with others; Ryan & Deci, 2017). Research on SDT in the domain of work suggests that human resources interventions should aim simultaneously at increasing employees' needs satisfaction and decreasing employees' needs frustration (Marescaux et al., 2013).

From an organizational perspective, research has shown that perceived organizational support is a significant antecedent of employees' need satisfaction and tends to reduce their frustration (Forest et al., 2022; Gillet et al., 2012). Whether the nature of this support focuses primarily on strengths or weakness, employees tend to perceive that their organization generally support their career

development, thus representing a significant work-context resource (Bakker & van Woerkom, 2018; Miglianico et al., 2019). For this reason, we can reasonably argue that both perceived organizational support for strengths use and deficits correction are substantial antecedents of need satisfaction.

From an individual perspective, to increase need satisfaction and decrease need frustration, in addition to organizational factors (e.g. POSDC and POSSU), Trépanier et al. (2015) argue that employees can also invest personal resources, which are both psychological and behavioral. Linley et al. (2010) observed that strengths use, in a clinical setting, promote patients' need satisfaction and, in turn, psychological well-being. Recently, a quasi-experimental study demonstrated that promoting strengths use through strengths-oriented feedback has significant effects on need satisfaction and well-being (Gradito Dubord et al., 2022). The authors also observed that the variation in participants' need satisfaction levels explained the increases in psychological well-being generated by the intervention. Regarding deficit correction, Hiemstra and Van Yperen (2015) showed that deficit correction behavior contributes to competence need satisfaction. To our knowledge, the potential implications of deficit correction behaviors on autonomy and relatedness need satisfaction have never yet been measured. However, deficit correction behaviors are generally based on the belief that personal skills are malleable and improvable (van Woerkom et al., 2016). This belief is also known as a growth mindset (Dweck & Yeager, 2019). In a randomized controlled experiment, Lou and Noels (2020) demonstrated that promoting a growth mindset can influence participants' sense of competence, relatedness, and autonomy. In sum, we argue that strength use and deficit correction behaviors are both significant employees' behavioral resources (Bakker & van Woerkom, 2018) and might contribute to need satisfaction in the workplace (Trépanier et al., 2015).

Basic psychological needs are also key elements to understand people's motivation quality. On the one hand, need satisfaction leads to autonomous motivation, which is when people are engaged in an activity with an internalized will. Autonomously regulated activities might be intrinsically motivated, that is when people are motivated by the inherent pleasure and satisfaction of an activity. It also happens that external regulation activities arise from autonomous motivation, that is, identified regulation. Identified regulation is the act of doing an activity because one identifies with its value or meaning, notwithstanding if the activity is pleasant or not. Here, it differs from intrinsic motivation because the activity is not necessarily done for pleasure, but instead, for its instrumental value (Gagné et al., 2015). In sum, when people believe they act of free will and according to their core values, they are autonomously motivated (Gagné & Deci, 2005). The current literature on strengths indicates that strengths use is associated with need satisfaction (Linley et al., 2010) and autonomous motivation (Kong & Ho, 2016). Furthermore, research showed that participants engaged in a strength-based intervention reported higher need satisfaction and well-being, and this relationship was mediated by autonomous motivation (Gradito Dubord et al., 2022). Thus, the reviewed literature indicates that both strengths-based and deficit correction approaches might represent need satisfaction antecedents and that need satisfaction leads to autonomous motivation.



Hypothesis 1a: Through greater need satisfaction, the strengths-based approach leads to greater autonomous motivation.

Hypothesis 1b: Through greater need satisfaction, deficit correction leads to greater autonomous motivation.

On the other hand, need frustration leads to controlled motivation, that is, externally regulated activities that are less or not at all self-determined. Its most obvious expression is extrinsic motivation by external regulation which is when a behavior is mainly controlled by whether material or external social contingencies are present (i.e., material, or social rewards and punishments; Gagné & Deci, 2005). Another type of controlled motivation is introjected regulation. In this case, the person is engaged in an activity mostly to not feel guilty, or anxious, or to prove his or her worth. Introjected regulation differs from extrinsic motivation by external regulation because, in the first case, pressure comes mostly within the person, not from external factors (Gagné & Deci, 2005). In sum, people who report controlled motivation usually engage in externally or introjected regulated activities to chase positive rewards and avoid negative ones, whether the pressure comes from outside or inside.

Hypothesis 2a: Through lower need frustration, the strengths-based approach leads to lower controlled motivation.

Hypothesis 2b: Through lower need frustration, deficit correction leads to lower controlled motivation.

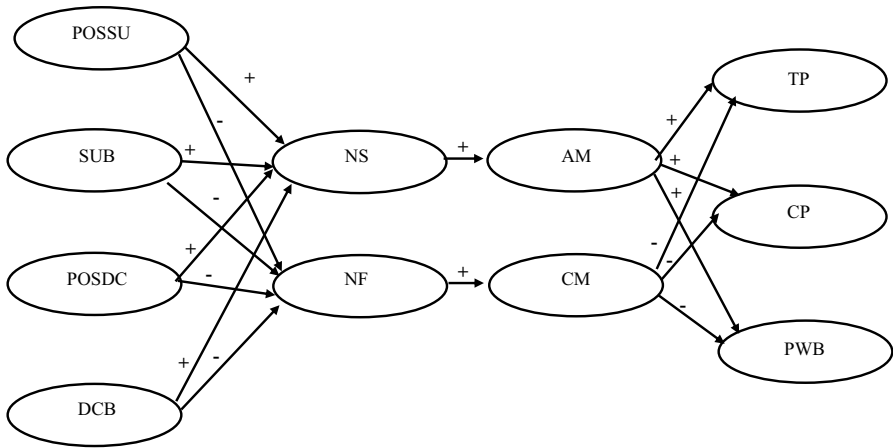
Finally, strengths-based and deficit correction approaches potential benefits are psychological well-being (e.g., Forest, Mageau et al., 2012; Govindji & Linley, 2007; Harzer & Ruch, 2016), task-related performance (e.g., Lavy & Littman-Ovadia, 2011; Littman-Ovadia et al., 2017; van Woerkom et al., 2016), and contextual performance (e.g., Harzer & Ruch 2016; Lavy & Littman-Ovadia, 2011; Kong & Ho, 2016). For that reason, the suggested model expects that work motivation is the explanatory process by which psychological needs are distinctively related to employee optimal functioning. Prior research has largely documented the following hypotheses (e.g., Gagné & Deci, 2005; Olafsen et al., 2017; Ryan & Deci, 2017).

Hypothesis 3a: Greater autonomous motivation will be positively related to positive work behaviors and psychological health.

Hypothesis 3b: Lower controlled motivation will be positively related to more positive work behaviors and psychological health.

Since the proposed model unveils two distinct dimensions of employees' experience (i.e., individual and organizational), two independent samples were collected in one cross-sectional study to test the discussed hypotheses: the first one explored the implications of POSSU and POSDC as antecedents of basic psychological needs while the second examines SUB and DCB as independent variables as presented in Fig. 1.





**Fig. 1** The proposed theoretical model. POSSU = Perceived organizational support for strengths use. SUB= Strengths use behaviors. POSDC = Perceived organizational support for deficit correction. DCB = Deficit correction behaviors. NS = Need satisfaction. NF= Need frustration. AM = Autonomous motivation. CM = Controlled motivation. TP= Task performance. CP = Contextual performance. PWB = Psychological well-being

## 2 Method

### 2.1 Participants

In sample 1, a total of 341 employees (75% women) working in HR were recruited within the Certified Human Resources Professionals of Québec (CHRP). All participants were recruited directly by the CHRP order through an email sent to a sample of 800 members. They were asked to participate in a study on quality of life at work. The email contained a brief description of the study and links redirecting participants to the agreement form and the online questionnaire. Participants' ages ranged from 20 years to 79 years; the mean age was 43.83 (SD = 10.10). Almost half of the respondents ( $N = 128$ ) held a bachelor's degree, while most respondents (81.6%) had served in their profession for more than 3 years. For both studies, the demographical and employee-related characteristics of the participants are described in Table 1.

In sample 2, participants were recruited through LinkedIn to participate in an intervention study on positive feedback including several measurement times. The data used in this sample are those of the first measurement time. A total of 478 employees from 12 different organizations agreed to respond to the questionnaire; 24 participants did not complete the questionnaire; hence their answers were removed from the final sample ( $N = 454$ ). The participants were predominantly French-speaking and came from Canada, France, and Belgium. Participants were mostly women (65%). Participants' ages ranged from 18 years to 65 years; the mean age was 41.83 (SD = 10.10), and 75% of the participants were younger than 44 years old. Most of the respondents (56%) held a bachelor's degree and had served in their profession for more than 3 years (51.6%).

**Table 1** Characteristics of the participants in samples 1 and 2

Items	Categories	Sample 1 (n = 341)		Sample 2 (n = 454)	
		Frequency	%	Frequency	%
Gender	Male	93	27%	157	35%
	Female	248	73%	293	65%
Age	18–24 years	20	6%	48	11%
	25–34 years	68	20%	172	38%
	35–44 years	94	28%	133	28%
	45–54 years	89	26%	59	13%
	55 years and more	70	20%	42	10%
Year(s) worked for current employer	0–1 year	53	15%	136	30%
	1–2 years	52	15%	53	12%
	2–3 years	40	12%	56	12%
	3–4 years	25	8%	27	6%
	4–5 years	25	7%	20	4%
	More than 5 years	146	43%	162	36%
Highest qualification	High school	6	2%	15	4%
	Post high school	49	15%	45	10%
	Bachelor’s degree	192	56%	272	60%
	Master’s degree	78	23%	113	25%
	Doctoral degree	15	4%	4	1%

**2.2 Instrument**

In both samples, all measures were translated into French using a back translation procedure (Vallerand, 1989), apart from the work motivation scale (MWMS) which is already validated in 26 languages (Gagné et al., 2015). Tables 2 and 3 present the means, standard deviations, and correlations of all scales used in this study.

**Table 2** Sample 1 = Descriptive statistics and correlations of the scales (n = 341)

Variables	M	SD	1	2	3	4	5	6	7	8
1. POSSU	5.18	1.33	-	-	-	-	-	-	-	-
2. POSDC	3.71	1.33	0.20**	-	-	-	-	-	-	-
3. NS	5.39	0.84	0.60**	0.04	-	-	-	-	-	-
4. NF	2.94	0.91	-0.41**	-0.12*	-0.46**	-	-	-	-	-
5. AM	5.46	1.26	0.59**	0.12*	0.62**	-0.34**	-	-	-	-
6. CM	3.85	0.98	-0.03	0.19**	-0.05	0.28**	-0.10	-	-	-
7. TP	4.35	0.45	0.30**	0.07	0.45**	-0.22**	0.39**	-0.10	-	-
8. CP	3.33	0.55	0.34**	0.18**	0.59**	-0.19**	0.45**	0.04	0.29**	-
9. PWB	4.02	0.51	0.47**	0.16**	0.68**	-0.47**	0.53**	-0.03	0.35**	0.54**

\*\*  $p < .001$  \*  $p < .05$  two-tailed). POSSU: Perceived organizational support for strengths use. POSDC: Perceived organizational support for deficit correction. NS: Need satisfaction. NF: Need frustration. AM: Autonomous motivation. CM: Controlled motivation. TP: Task performance. CP: Contextual performance. PWB: Psychological well-being

**Table 3** Sample 2=Descriptive statistics and correlations of the scales ( $n=454$ )

Variables	M	SD	1	2	3	4	5	6	7	8
1. SUB	5.39	0.84		-	-	-	-	-	-	-
2. DCB	5.25	0.91	0.44**		-	-	-	-	-	-
3. NS	5.39	0.70	0.65**	0.08		-	-	-	-	-
4. NF	3.78	0.98	-0.36**	-0.11*	-0.43**		-	-	-	-
5. AM	5.53	1.05	0.57**	0.13*	0.60**	-0.34**		-	-	-
6. CM	4.20	0.91	-0.11*	0.04	-0.09	0.39**	-0.08		-	-
7. TP	4.10	0.50	0.33**	0.32*	0.37**	-0.28**	0.25**	-0.03		-
8. CP	3.95	0.65	0.25**	0.28**	0.31*	-0.12*	0.22**	-0.04	0.39**	
9. PWB	3.89	0.62	0.55**	0.25**	0.59**	-0.54**	0.55**	-0.25**	0.54**	0.41**

\*\*  $p < .001$  \*  $p < .05$  two-tailed). SUB: Strengths use behaviors. DCB: Deficit correction behaviors. NS: Need satisfaction. NF: Need frustration. AM: Autonomous motivation. CM: Controlled motivation. TP: Task performance. CP: Contextual performance. PWB: Psychological well-being

### 2.2.1 Strengths Use and Deficit Correction

Perceived organizational support for strengths use (POSSU), deficit correction behaviors (DCB), strengths use behaviors (SUB), and perceived organizational support for deficit correction (POSDC) were measured with the Strengths Use and Deficit Correction Scale (SUDCO) (van Woerkom et al., 2016); 24 items were used on a seven-point scale ranging from 1 (rarely) to 7 (almost always). In sample 1, the POSSU (e.g., “This organization allows me to do what I am good at”; 6 items;  $\alpha=0.94$ ) and POSDC (e.g., “In this organization, I receive training to improve my weak points”; 6 items;  $\alpha=0.89$ ) subscales were used, while in sample 2, the SUB (e.g., “I capitalize on my strengths at work”; 6 items;  $\alpha=0.90$ ) and DCB (e.g., “At work, I focus on developing the things I struggle with”; 6 items;  $\alpha=0.90$ ) subscales were employed.

### 2.2.2 Basic Psychological Needs

The Balanced Measure of Psychological Needs Scale (BMPN; Sheldon & Hilpert, 2012) was used to measure need satisfaction (NS) and need frustration (NF). On a seven-point scale ranging from 1 (totally disagree) to 7 (totally agree), respondents reported how much they approved each statement. First, this scale has nine items to measure the satisfaction of the need for autonomy (e.g., “I am successfully completing difficult tasks and projects”; 3 items; sample 1  $\alpha=0.76$ ; sample 2  $\alpha=0.69$ ), competence (e.g., “I am good at the things I do in my job”; 3 items; sample 1  $\alpha=0.80$ ; sample 2  $\alpha=0.72$ ), relatedness (e.g., “At work, I feel part of a group”; 3 items; sample 1  $\alpha=0.73$ ; sample 2  $\alpha=0.68$ ). In both studies, the latent construct of need satisfaction was computed using average scores of the three subscales. Second, this scale also has nine items to measure frustration of the need for competence (e.g., “I experience some kind of failure, or was unable to do well at something”; 3

items; sample 1  $\alpha=0.75$ ; sample 2  $\alpha=0.72$ ), autonomy (e.g., “I have to do things against my will”; 3 items; sample 1  $\alpha=0.72$ ; sample 2  $\alpha=0.73$ ), relatedness (e.g., “I feel lonely”; 3 items; sample 1  $\alpha=0.70$ ; sample 2  $\alpha=0.68$ ). Prior research has shown that need satisfaction and frustration were better represented as distinct factors (Bartholomew et al., 2011) using exploratory factor analysis to demonstrate. In both studies, the latent variable of need frustration was constructed using average scores of the three subscales.

### 2.2.3 Quality of Work Motivation

Work motivation was assessed with the Multidimensional Work Motivation Scale (Gagné et al., 2015). Participants reported their principal motives for doing their job on a seven-point scale ranging from 1 (not at all for this reason) to 7 (exactly for this reason). In both studies, all 19 items were used, and confirmatory factorial analyses showed a four factors structure. For a matter of internal reliability, 10 items were retained to create four construct variables: external regulation (3 items; sample 1  $\alpha=0.74$ ; sample 2  $\alpha=0.76$ ; e.g., “Because others will reward me financially only if I put enough effort in my job”), introjected regulation (2 items; sample 1  $\alpha=0.71$ ; sample 2  $\alpha=0.79$  e.g., “Because I have to prove to myself that I can”), identified regulation (2 items; sample 1  $\alpha=0.82$ ; sample 2  $\alpha=0.72$  e.g., “Because putting efforts in this job aligns with my values”), and intrinsic motivation (3 items; sample 1  $\alpha=0.96$ ; sample 2  $\alpha=0.82$ ; e.g. “Because my work is stimulating”). We follow the same procedure as Trépanier et al. (2015) and Gradito Dubord et al. (2022). In both studies, the latent construct of autonomous motivation was calculated using mean scores of the intrinsic motivation and identified regulation, and the latent construct of controlled motivation was assessed using mean scores of the introjected and external regulation subscales.

### 2.2.4 Task Performance/Contextual Performance

Task performance was measured using a 4-items abbreviated version of the In-Role Behaviors Scale (IRBS) proposed by Williams and Anderson (1991). On a five-point scale from 1 (never) to 5 (all the time), participants rated how often they meet work requirements (4 items; sample 1  $\alpha=0.79$ ; sample 2  $\alpha=0.75$ ; “Adequately completes assigned duties”, “Fulfills responsibilities specified in the job description”). Contextual performance was assessed with the Organizational Citizenship Behavior Items proposed by Lee and Allan (2002). On a five-point scale from 1 (never) to 5 (all the time), participants rated how often they engage in extra-role behaviors. This scale measured employees’ organizational citizenship behaviors toward other individuals (OCBI; 8 items; sample 1  $\alpha=0.82$ ; sample 2  $\alpha=0.79$  “You help others who have been absent”) and their organization (OCBO; 8 items; sample 1  $\alpha=0.86$ ; sample 2  $\alpha=0.90$ ; “You defend the organization when other employees criticize”). Motowidlo and Van Scooter (1994) showed that task performance and contextual performance contribute independently to overall performance and, therefore, should be measured separately. Once again, in both studies, mean scores of OCBI and OCBO subscales were used as indicators of the latent construct of contextual performance.

### 2.2.5 Psychological Well-Being

Psychological well-being was measured using the third factor 7-items subscale of the General Health Questionnaire (GHQ; Golberg & Hillier, 1979). On a five-point scale from 1 (never) to 5 (all the time), participants rated their overall beliefs regarding their psychological, social, and day-to-day functioning (7 items; sample 1  $\alpha=0.83$ ; sample 2  $\alpha=0.85$  “Have you been managing to keep yourself busy and occupied?”, “You have been able to enjoy your normal day-to-day activities?”). Using the GHP as a measure of psychological well-being has been supported by prior research (Montazeri et al., 2003; Vanhoutte, 2014).

## 3 Results

### 3.1 Statistical Analyses

To test the proposed model (see Fig. 1), structural equation modeling (SEM) was performed using the maximum likelihood estimation procedure in SPSS AMOS (Finch et al., 2016). Four indexes were employed to estimate how computed models fit the observed data: the Comparative Fit Index (CFI), the Tucker Lewis Index (TLI), the Root Mean Square Error of Approximation (RMSEA) and its confidence interval (CI), and the Standardized Root Mean Square Residual (SRMR). Scores of 0.90 (or higher) regarding the CFI and TLI, and scores of 0.08 (or below) concerning the RMSEA and SRMR, suggest an appropriate fit to the data (Byrne, 2016). In both studies, constructed variables were used to represent the latent constructs illustrated in Fig. 1. A traditional item-based approach was executed to avoid potential risks associated with items parceling (Bandalos & Finney, 2001; Matsunaga, 2008).

### 3.2 Sample 1

#### 3.2.1 Preliminary Analyses

Before conducting the main analyses, data were examined for multivariate normality, missing values, and confirmatory factorial analysis (CFA). First, the Mardia’s coefficient (Mardia, 1970), a multivariate measure of kurtosis, was significant (i.e., the critical ratio is greater than 1.96). This might indicate that the data may not be normally distributed. However, this observation might be explained by the sample size (Stevens, 2009). Therefore, it is recommended that the significance test be used in conjunction with descriptive statistics, namely the kurtosis values for individual variables (Stevens, 2009; Byrne, 2016) suggests that kurtosis is more relevant than skewness in the context of SEM, because kurtosis impacts tests of variances and covariances, whereas skewness has a greater impact on means. In this context, kurtosis values greater than 3.00 in magnitude would indicate that a variable is not normally distributed (Westfall & Henning,

2013), which was not the case for the variables used in this sample. Therefore, we conclude that multivariate normality was not an issue in the present study. Second, Little's MCAR test (Little, 1988) was performed to see if missing values were completely missing at random, and the test was not significant. A measurement model (M1) was built to examine if the observed variables loaded on their respective latent factor. The latter provided appropriate fit indexes:  $\chi^2 = 830.52$ ,  $df = 379$ ;  $p < .001$ ; CFI = 0.91; TLI = 0.90; RMSEA = 0.06, [CL = 0.53 – 0.064]; SRMR = 0.06).

Second, two models were compared to see if need satisfaction and need frustration are indeed different concepts. On the one hand, we created a first model (M2a), which included two second-order factors (1- need satisfaction with three first-order factors: autonomy, competence, and relatedness; and 2- need frustration with three first-order factors: autonomy, competence, and relatedness)  $\chi^2 = 221.55$  ( $df = 97$ ); CFI = 0.93; TLI = 0.91; RMSEA = 0.061 [CI = 0.051–0.072]; SRMR = 0.054). On the other hand, we built a second model (M2b), which incorporated three second-order factors (1-need for autonomy with two first-order factors: satisfaction and frustration, 2- need for competence with two first-order factors: satisfaction and frustration, and 3- need for relatedness with two first-order factors: satisfaction and frustration).  $\chi^2 = 229.89$  ( $df = 99$ ); CFI = 0.90; TLI = 0.891; RMSEA = 0.069 [CI = 0.052–0.073]; SRMR = 0.08. Findings revealed that the former offers a substantially better fit to the data than the latter ( $\Delta\chi^2[df = 4] = 3.93$ , *ns.*). Thus, it appears that need satisfaction and need frustration should be characterized as separate concepts, at least in this sample.

Third, we executed a MANOVA to foresee if the variables used in this sample diverged considerably regarding participants' background (e.g., gender, age, experience), but no significant effects were found. Thus, demographic information was removed from the additional analysis.

Fourth, given the relatively high correlations between some variables (see Table 1), the variance inflation factors (VIFs) were examined to see whether multicollinearity might be problematic for the model. The VIF statistics for all variables were between 1.3 and 2.8, indicating that multicollinearity was not a problem (to detect problems with multicollinearity, the threshold usually is  $VIF > 10$ , while sometimes a more conservative  $VIF > 5$  is used, see Cohen et al., 2013; Dormann et al., 2013).

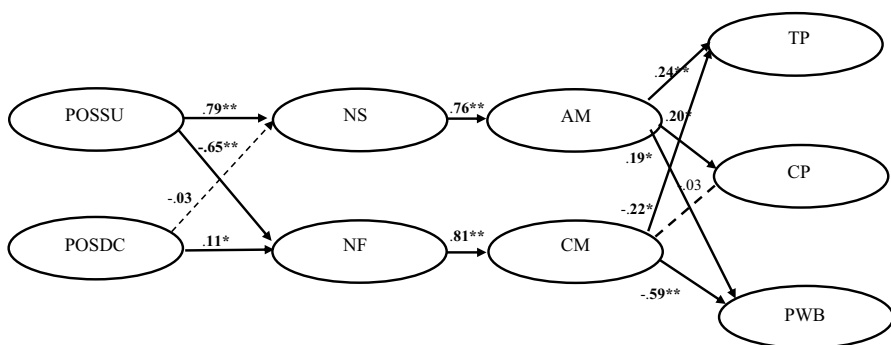
Finally, given that all data were self-reported, we then ran a single factor model (M3) to test for common method bias (CMB). This model provided a poor fit to the data:  $\chi^2 = 3608,96.52$ ,  $df = 464$ ;  $p < .001$ ; CFI = 0.71; TLI = 0.69; RMSEA = 0.131, [CL = 0.121–0.138]; SRMR = 0.124), suggesting that CMB was unlikely to distort the interpretation of relationships among the studied variables. Also, we performed Harman's one-factor test for CMB (Fuller et al., 2016). The latter examines how much common variance might exist in a single dimension using all the items measuring the constructs of the variables. If the total variance extracted by one factor exceeds 50%, common method bias is present. Regarding this first sample, the total variance extracted by one factor is 24%.

### 3.2.2 Model Testing

We tested a model with the hypothesized paths through path analysis using perceived organizational support for strengths use (POSSU) and perceived organizational support for deficit correction (POSDC) as independent variables (M4). POSSU and POSDC, as well as need satisfaction and need frustration, and autonomous and controlled motivation were allowed to covary. Overall, the hypothesized model did provide a particularly good fit to the data  $\chi^2=639.47$  ( $df=310$ ); CFI=0.94; TLI=0.93; RMSEA=0.056 [CI=0.050–0.062]; SRMR=0.07. Moreover, by reversing the independent variables (POSSU, POSDC) and the three dependent variables (PWB, TP, CP), an alternative model (A1) was created to argue the directionality of the proposed model (e.g., see Olafsen et al., 2018). The results did not indicate a satisfactory fit to the data  $\chi^2=1000,09$  ( $df=308$ ); CFI=0.88; TLI=0.89; RMSEA=0.060 [CI=0.055–0.065]; SRMR=0.082. Thus, it was concluded that M3 (as illustrated in Fig. 2) represents a better fit to the data than the latter alternative model; hence supporting the proposed directionality.

Most results supported our hypotheses. More precisely, perceived organizational support for strength use (POSSU) was significantly associated with greater need satisfaction ( $\beta=0.79$ ,  $SE=0.11$ ,  $p < .01$ ), and lower need frustration ( $\beta = -0.65$ ,  $SE=0.10$ ,  $p < 0.01$ ). The relationship between POSDC and need satisfaction did not appear to reach significance ( $\beta = -0.03$ ,  $SE=0.04$ ,  $p > .05$ ); yet it was positively associated with need frustration ( $\beta=0.11$ ,  $SE=0.06$ ,  $p < .05$ ). Need satisfaction was significantly related to greater autonomous motivation ( $\beta=0.76$ ,  $SE=0.10$ ,  $p < .01$ ) as expected. Inversely, need frustration was positively associated with controlled motivation ( $\beta=0.81$ ,  $SE=0.12$ ,  $p < .01$ ). Overall, these results support hypotheses 1a and 2a, but did not support hypotheses 1b and 2b.

Finally, empirical support was found for Hypotheses 3a and 3b. As such, autonomous motivation was significantly related to greater psychological well-being ( $\beta=0.19$ ,  $SE=0.04$ ,  $p < .05$ ), task performance ( $\beta=0.24$ ,  $SE=0.07$ ,  $p < .01$ ) and



**Fig. 2** Sample 1 ( $n = 341$ ) Model \*\* $p < .001$  \* $p < 0.05$ . POSSU = Perceived organizational support for strengths use. POSDC = Perceived organizational support for deficit correction NS = Need satisfaction. NF= Need frustration. AM = Autonomous motivation. CM = Controlled motivation. TP= Task performance. CP = Contextual performance. PWB = Psychological well-being



contextual performance ( $\beta = 20$ ,  $SE = 0.09$ ,  $p < .01$ ), while the opposite pattern was found for controlled motivation (psychological well-being:  $\beta = -0.59$ ,  $SE = 0.12$ ,  $p < .01$ ; task performance:  $\beta = -0.22$ ,  $SE = 0.08$ ,  $p < .05$ ) with the exception of contextual performance for which the path did not reach significance ( $\beta = -0.03$ ,  $SE = 0.04$ ,  $p > .05$ ).

Given the results of this first sample, it was judged necessary to gather additional empirical evidence from a different sample to increase the validity of our findings. To achieve this, a second sample was conducted to observe if the behavioral dimensions of both approaches lead to the same results.

### 3.3 Sample 2

#### 3.3.1 Preliminary Analyses

Before conducting the main analyses, data were examined for multivariate normality, missing values, and confirmatory factorial analysis (CFA). First, the Mardia's coefficient (Mardia, 1970), a multivariate measure of kurtosis, was significant (i.e., the critical ratio is greater than 1.96). This might indicate that the data may not be normally distributed. However, this observation might be explained by the sample size (Stevens, 2009). Therefore, it is recommended that the significance test be used in conjunction with descriptive statistics, namely the kurtosis values for individual variables (Stevens, 2009; Byrne, 2016) suggests that kurtosis is more relevant than skewness in the context of SEM, because kurtosis impacts tests of variances and covariances, whereas skewness has a greater impact on means. In this context, kurtosis values greater than 3.00 in magnitude would indicate that a variable is not normally distributed (Westfall & Henning, 2013), which was not the case for the variables used in this sample. Therefore, we conclude that multivariate normality was not an issue in the present study. Second, Little's MCAR test (Little, 1988) was performed to see if missing values were completely missing at random, and the test was not significant. A measurement model (M5) was built to examine if the observed variables loaded on their respective latent factor. The latter provided appropriate fit indexes:  $\chi^2 = 590.23$ ,  $df = 263$ ;  $p < .001$ ; CFI = 0.93; TLI = 0.911; RMSEA = 0.055, [CL = 0.049–0.060]; SRMR = 0.065).

Second, as we did in sample 1, two models were compared to see if need satisfaction and need frustration are indeed different concepts. On the one hand, we created a first model (M6a), which included two second-order factors (1- need satisfaction with three first-order factors: autonomy, competence, and relatedness; and 2- need frustration with three first-order factors: autonomy, competence, and relatedness)  $\chi^2 = 118.343$  ( $df = 51$ ); CFI = 0.94; TLI = 0.92; RMSEA = 0.056 [CI = 0.051–0.061]; SRMR = 0.054). On the other hand, we built a second model (M6b), which incorporated three second-order factors (1-need for autonomy with two first-order factors: satisfaction and frustration, 2- need for competence with two first-order factors: satisfaction and frustration, and 3- need for relatedness with two first-order factors: satisfaction and frustration).  $\chi^2 = 113.33$  ( $df = 49$ ); CFI = 0.91; TLI = 0.88; RMSEA = 0.056 [CI = 0.050–0.069]; SRMR = 0.075. Findings revealed that the

former offers a substantially better fit to the data than the latter ( $\Delta\chi^2[\text{df}=2]=5.17$ , *ns.*). Once again, in this sample, it appears that need satisfaction and need frustration should be characterized as separate concepts, at least in this second sample as well.

Third, we conducted a MANOVA to see if the variables used in this second sample diverged considerably regarding participants' background (e.g., gender, age, experience). More specifically to this sample, we verified whether there were any significant differences in relation to the organization from which the participants came. Because no significant effects were found, demographic information was removed from additional analysis.

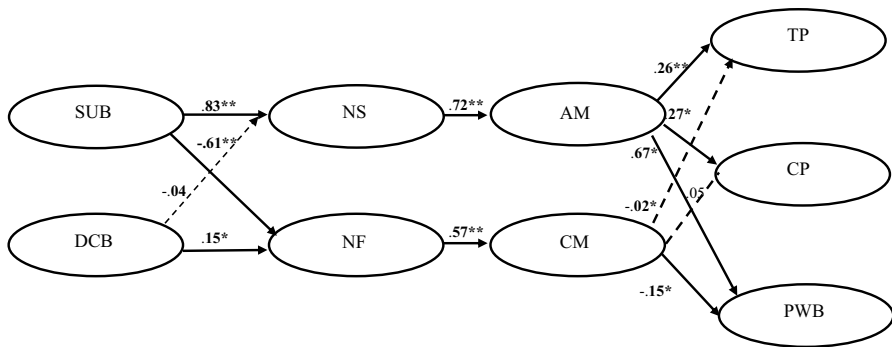
Fourth, given the relatively high correlations between some variables (see Table 3), the variance inflation factors (VIFs) were examined to see whether multicollinearity might be problematic for the model. The VIF statistics for all variables were between 1.1 and 2.3, indicating that multicollinearity was not a problem.

Finally, we executed a single factor model (M7) to test for common method bias (CMB). This model provided a poor fit to the data:  $\chi^2 = 2671,63$ ,  $\text{df} = 324$ ;  $p < .001$ ;  $\text{CFI} = 0.62$ ;  $\text{TLI} = 0.75$ ;  $\text{RMSEA} = 0.133$ ,  $[\text{CL} = 0.127\text{--}0.136]$ ;  $\text{SRMR} = 0.114$ , suggesting that CMB was unlikely to distort the interpretation of relationships among the studied variables. We also performed the Harman's one-factor test for common method variance bias (Fuller et al., 2016), and the total variance extracted by one factor is 39%; hence not reaching the 50% threshold.

### 3.3.2 Model Testing

We tested a model with the hypothesized paths through path analysis using strengths-use behavior (SUB) and deficit correction behavior as independent variables (M8). SUB and DCB as well as need satisfaction and need frustration, and autonomous and controlled motivation were allowed to covary. Overall, the hypothesized model did provide a particularly good fit to the data  $\chi^2 = 721.40$  ( $\text{df} = 443$ );  $\text{CFI} = 0.92$ ;  $\text{TLI} = 0.93$ ;  $\text{RMSEA} = 0.058$  [ $\text{CI} = 0.051\text{--}0.059$ ];  $\text{SRMR} = 0.065$ . Moreover, by reversing the two independent variables (SUB, and DCB) and the three dependent variables (PWB, TP, CP), an alternative model (A2) was created to argue the directionality of the proposed model (e.g., see Olafsen et al., 2018). The results did not indicate a satisfactory fit to the data  $\chi^2 = 1259,09$  ( $\text{df} = 445$ );  $\text{CFI} = 0.87$ ;  $\text{TLI} = 0.88$ ;  $\text{RMSEA} = 0.075$  [ $\text{CI} = 0.065\text{--}0.076$ ];  $\text{SRMR} = 0.095$ . Thus, it was concluded that M8 (as illustrated in Fig. 3) represents a better fit to the data than the latter alternative model; hence supporting the former directionality.

Most results supported our hypotheses. More precisely, strength use behavior (SUB) was significantly associated with greater need satisfaction ( $\beta = 0.83$ ,  $\text{SE} = 0.15$ ,  $p < .01$ ), and lower need frustration ( $\beta = -0.61$ ,  $\text{SE} = 0.12$ ,  $p < .01$ ). The relationship between DCB and need satisfaction did not appear to reach significance ( $\beta = -0.04$ ,  $\text{SE} = 0.02$ ,  $p > .05$ ); yet it was positively associated with need frustration ( $\beta = 0.15$ ,  $\text{SE} = 0.09$ ,  $p < .05$ ). Need satisfaction was significantly related to greater autonomous motivation ( $\beta = 0.72$ ,  $\text{SE} = 0.12$ ,  $p < .01$ ) as expected. Inversely, need frustration was positively associated with controlled motivation ( $\beta = 0.57$ ,  $\text{SE} = 0.09$ ,  $p < .01$ ). As observed in sample 1, these results support hypotheses 1a and 2a, but did not support hypotheses 1b and 2b.



**Fig. 3** Sample 2 ( $n = 454$ ) Model  $**p < .001$   $*p < 0.05$ . SUB= Strengths use behaviors. DCB = Deficit correction behaviors. NF= Need frustration. AM = Autonomous motivation. CM = Controlled motivation. TP= Task performance. CP = Contextual performance. PWB = Psychological well-being

Finally, empirical support was found for Hypotheses 3a and 3b. As such, autonomous motivation was significantly related to greater psychological well-being ( $\beta = 0.67$ ,  $SE = 0.15$ ,  $p < .05$ ), task performance ( $\beta = 0.26$ ,  $SE = 0.11$ ,  $p < .01$ ) and contextual performance ( $\beta = .27$ ,  $SE = 0.12$ ,  $p < .05$ ), while controlled motivation was significantly associated with lower psychological well-being ( $\beta = -0.15$ ,  $SE = 0.08$ ,  $p < .05$ ). However, the path for contextual performance ( $\beta = -0.05$ ,  $SE = 0.04$ ,  $p > .05$ ) and task performance ( $\beta = -0.02$ ,  $SE = 0.03$ ,  $p > .05$ ) did not reach significance.

## 4 Discussion

Although strengths-based approach impacts on workers' optimal functioning are widely documented (Schutte & Malouff, 2019), little is known about its comparison with the traditional deficit correction approach regarding training and development (Meyers & van Woerkom, 2014). Each approach might offer developmental resources that help employees to thrive (Bakker & van Woerkom, 2018). Yet, it remains unclear which approach leads to greater employees' optimal functioning, and our study directly addresses this issue.

Using Self-Determination Theory, we suggested a theoretical framework that might shed light on the differential relationships between the strengths-based approach (perceived organizational for strengths use (POSSU) and strength use behaviors (SUB)), the deficit correction approach (perceived organizational for deficit correction (POSDC), and deficit correction behavior (DCB)) and employee optimal functioning (psychological well-being (PWB), task performance (TP), and contextual performance (CP)), by exploring the explanatory value of psychological needs and work motivation. The latter initially argued that both approaches (POSSU, SUB, POSDC, and DCB) could promote positive manifestations of optimal functioning at work (PWB, TP, and CT) by increasing need satisfaction and autonomous motivation while reducing need frustration and controlled motivation. Empirical

results from both samples partially support the proposed theoretical model: the strengths-based approach (POSSU in sample 1; SUB in sample 2) had a positive and significant effect on psychological needs and work motivation, whereas results showed that deficit correction (POSDC in sample 1; DCB in sample 2) not only has no significant effect on need satisfaction, but it also tends to significantly favor need frustration.

#### 4.1 Theoretical Contributions

First, one of the major theoretical contributions of this study is that drawing on SDT, it has given a motivational framework to explain the strengths-based approach underlying mechanisms, which was lacking in the literature. Since 2012, several systemic literature reviews have been done regarding the theoretical implications of a strengths-based approach (Bakker & van Woerkom, 2018; Ghielen et al., 2018; Miglianico et al., 2019; Quinlan et al., 2012). They all conclude by claiming that future research must develop a more refined theoretical framework for a wider understanding of its positive effects at work. The current study specifically addresses this issue. In sum, the current study gives possible answers to the following question: how does the strengths-based approach enhance optimal functioning at work?: It facilitates need satisfaction and autonomous motivation while preventing need frustration and controlled motivation. In this regard, the current study also contributes to the literature on the strengths-based approach by optimizing the operationalization of the latter. We validated van Woerkom and colleagues' (van Woerkom et al., 2016) research efforts by testing the scale they proposed within two French samples, and the results support the internal validity of the scale.

Second, this article also sheds light on the deficit correction approach. This study corroborates prior research that has studied the potential benefits of deficit correction (e.g., Els et al., 2018; Mphahlele et al., 2018). Although reported effect sizes are relatively low, in both studies, inter-variable correlations (see Tables 2 and 3) indicate that POSDC and DCB are positively linked to psychological well-being and contextual performance (task performance is only positively associated with DCB in sample 2). These results support van Woerkom and colleagues' (van Woerkom et al., 2016) study which has not found a significant effect between POSDC and three different indicators of task-related performance.

Moreover, the current research has tried to validate a theoretical framework examining POSDC and DCB associations on employees' optimal functioning. Surprisingly, SEM results indicate that POSDC and DCB do influence need satisfaction, but they had a significant and positive effect on need frustration. However, these results do not represent sufficient evidence to rule out the necessity to study deficit correction and its possible consequences. These results highlight above all the necessity to control for the quality of the support offered to employees to reduce the impact of their weaknesses on their work; otherwise, this construct is more akin to work demands than job resources (Demerouti et al., 2001). Indeed, deficit correction should generate opportunities for growth and development. Therefore, we must find new criteria that ensure the quality of deficit corrections to prevent need frustration as observed in this study. For instance,

research on change-oriented feedback (i.e., which relates to deficit correction) reveals that feedback must exhibit the following characteristics: empathy, choice of solutions, clear and achievable goals, no personal comment, tips, and a respectful tone of voice (Carpentier & Mageau, 2013).

Third, this study compared the strengths-based and deficit correction approach at work. First, correlations show that POSSU (Tables 2 and 3) and SUB (Table 3) had stronger associations with psychological needs, quality of work motivation, and employees' optimal functioning than POSDC and DCB. Second, SEM results support the idea that only the strengths-based approach satisfied SDT's postulates. In sum, these results are among the first to support the argument held by positive psychology that a strengths-based approach might lead to more optimal functioning at work than deficit correction (Peterson & Seligman, 2004).

Fourth, this present study contributes to the existing literature on Self-Determination Theory. To begin, the latter supports prior research (Bartholomew et al., 2011; Sheldon & Hilpert, 2012; Trépanier et al., 2015) by emphasizing the relevance of studying psychological need satisfaction and frustration as separated concepts. While previous research has conceptualized need frustration as need satisfaction deficiency (e.g., van der Elst et al., 2012), our findings indicate that this representation may be deficient to reveal employees' quality of life. In other words, not feeling autonomous, efficient, and connected is not the same as experiencing repression, incompetence, and rejection. In sum, need satisfaction and need frustration seem to be separate mental experiences coming from distinct antecedents and resulting in different consequences.

Furthermore, the present study provides valuable information on the precursors (organizational and personal) of need frustration and satisfaction. Regarding the organizational environment, much attention has been directed to the relationship between autonomy support, perceived organizational support (POS), and psychological needs (e.g., Gillet et al., 2012). By demonstrating that POSSU (i.e., a specified type of POS related to the context of training and development) is an antecedent of need satisfaction and need frustration, our results emphasize the necessity of improving our comprehension of the work environment to enhance employees' work experiences. Moreover, the current study presented an individual factor, SUB (i.e., a set of specified employees' behaviors applied to the context of training and development), as an antecedent of need satisfaction and need frustration. Indeed, to increase need satisfaction and decrease need frustration, in addition to organizational factors, Trépanier and colleagues (Trépanier et al., 2015) argued that employees might also invest personal resources, which can be both psychological and behavioral. Therefore, this study advances that individual behaviors (i.e., SUB) should also be included as psychological needs' antecedents. In sum, this study contributes to SDT by proposing POSSU and SUB as environmental and behavioral antecedents of need satisfaction and need frustration at work.

## 4.2 Limitations and Future Research

Although this paper gives relevant information to understand the implication of psychological needs and work motivation in the relationships between POSSU, SUB, POSDC, DCB, and employees' optimal functioning, several limitations should be

mentioned. First, it must be acknowledged that the samples used in this study are relatively small ( $N_1 = 344$ ;  $N_2 = 454$ ). Although power analysis revealed a minimum sample size of 273 to detect an effect based on the proposed model's parameters, it is still possible that the nonsignificant effects observed in this study could be explained by a lack of statistical power. Future studies should validate the proposed model using larger and maybe more diversified samples (albeit we had employees from 12 different organizations).

Second, the cross-sectional design used in this study prohibits any assumptions about causality. For instance, perhaps employees' functioning (e.g., task performance) influences how they evaluate the context of their work (perceived organizational support for strengths use). However, the present study proposed a structural sequence supported by several empirical proofs within the SDT literature (Deci & Ryan, 2000; Ryan & Deci, 2017): contextual and individual factors  $\rightarrow$  psychological needs  $\rightarrow$  work motivation  $\rightarrow$  employee's functioning. Longitudinal research designs using at least four-time points have validated the latter sequence (Olafsen et al., 2017, 2018). Moreover, we also tested an alternative model in each sample, which did not demonstrate a satisfactory fit to the data; hence supporting the directionality argued in the present study. Future studies should validate the proposed model in this study also using longitudinal and quasi-experimental research designs.

Third, common method bias (CMB) might have tainted our findings considering that the data were self-reported. However, it would have been challenging to assess several variables used in this study with other procedures (psychological experiences and states such as need satisfaction/frustration and perceived organizational support; Spector, 2006). Moreover, several actions were taken to reduce CMB. From a procedural point of view, the data was gathered through a general data collection (i.e., a study on quality of life at work in sample 1; and an intervention study on positive feedback in sample 2). Thus, several variables unrelated to the present study were assessed and mixed with the present studies' variables. Using this method, the scales used in the present study were physically distanced, hence reducing participants' focus on the current studies' variables, which can reduce respondents' tendency to use previous answers to answer subsequent questions (Podsakoff et al., 2012). From a statistical point of view, in both studies, we ran a single-factor model which presented a poor fit to the data (Podsakoff et al., 2003), and, even more, Harman's one-factor tests were conducted which indicated acceptable total variance extracted in both samples (Fuller et al., 2016). In short, the technical and statistical precautions put forward in this study suggest that the current results were not overly affected by CMB. Future research should apply objective methods (e.g., peer and supervisor ratings) to measure some variables used in this study, such as strengths use behaviors, deficit correction behaviors, task performance, and contextual performance, combined with physical indications of workers' well-being (e.g., physiological markers of stress) to increase the validity of the suggested theoretical framework.

Fourth, the proposed model's external validity should be questioned since this study used two samples composed of French-speaking employees (mostly women) working in the business domain, from Canada, France, and Belgium. Therefore, subsequent studies are required to verify the suggested model validity in additional populations working in different countries, industries, and occupational groups.

### 4.3 Practical Implications and Conclusion

This study advises organizations to focus on employees' strengths, rather than weaknesses, to improve their functioning at work. According to Marescaux and colleagues (Marescaux et al., 2013, 2019), to ensure employees' well-being and performance, HR practices must increase need satisfaction and decrease need frustration. Therefore, this study supports the idea that training and development practices should focus mainly on strengths identification and use. Organizations might help employees to identify and use their strengths by investing in psychometrics tools, offering strengths-based training/coaching, and implementing a strengths-oriented culture.

Nevertheless, based on our results, we cannot conclude that developmental practices must necessarily exclude any activity that corrects weaknesses. Indeed, the latter remains essential to reduce the anxiety associated with the performance of an uncontrolled task. Our conclusions highlight above all the clumsiness of organizations regarding the application of this practice. In this sense, our conclusions indicate to organizations that inefficient management of deficits correction can systematically generate frustration, reduce the quality of motivations, and diminish optimal functioning.

The current study's findings might also help managers in their day-to-day activities. Because managers are well placed to get to know their employees' strengths and weaknesses, they might organize work-related tasks accordingly to everyone's strengths. Managers can also give descriptive feedback based on employees' strengths to improve well-being and performance (Carpentier & Mageau, 2013, 2016). In short, with limited resources and increasing pressure to achieve organizational results, managers should invest in practices that are proven to meet employees' needs and maximize return on investment; that is, focusing on employees' strengths rather than weaknesses.

Moreover, our research guides employees on where to invest their time and energy at work. It highlights the idea that when an employee proactively engages in activities that promote his or her strengths, he or she also favors need satisfaction and autonomous motivation, avoids need frustration and controlled motivation, and, therefore, enhances his or her optimal functioning at work.

Finally, our findings and recommendations are in line with the emergence of positive psychology which continues to inspire and influence managerial practices since Martin E. P. Seligman and Mihaly Csikszentmihalyi (2000; p. 5) predicted that "the next century will see a science and profession that will come to understand and build the factors that allow individuals, communities, and societies to flourish".

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**Data Availability** The ethical approval obtained to conduct this study forbids any type of data sharing.



## Declarations

The ethical committee of the *Université du Québec à Montréal* (CERPE UQAM) has approved the present research (approval number: 4377).

All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent was obtained from all individual participants included in the study.

**Conflict of Interest** No potential conflict of interest was reported by the authors.

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