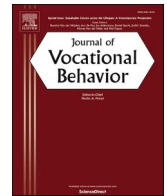




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Journal of Vocational Behavior

journal homepage: www.elsevier.com/locate/jvbStrengths-based leadership and employee work engagement: A multi-source study[☆]Jixin Wang^{a,*}, Marianne van Woerkom^{a,b}, Kimberley Breevaart^a, Arnold B. Bakker^{a,c}, Shiyong Xu^d^a Department of Psychology, Education, and Child Studies, Erasmus University Rotterdam, the Netherlands^b Department of Human Resource Studies, Tilburg University, the Netherlands^c Department of Industrial Psychology and People Management, University of Johannesburg, South Africa^d Center for Human Resources Development and Assessment, School of Labor and Human Resources, Renmin University of China, China

ARTICLE INFO

Keywords:

Job Demands-Resources theory
Leader-Member Exchange
Strengths-based leadership
Task performance
Work engagement

ABSTRACT

Strengths-based leadership helps employees identify, utilize, and develop their strengths. Does such leadership facilitate employee work engagement and performance? In this study, we integrate Job Demands-Resources (JD-R) and Leader-Member Exchange (LMX) theories to hypothesize that strengths-based leadership is positively related to employee task performance through employee work engagement, and that this effect is moderated by LMX quality. We collected survey data at two time points – with one month interval – from 556 Chinese workers and their managers ($N = 104$ teams). The results of path modelling showed that strengths-based leadership was positively related to supervisor-ratings of employee task performance via employee work engagement. As predicted, the positive relation between strengths-based leadership and employee work engagement was stronger when LMX was of high-quality. However, the predicted moderated-mediation effect was not supported. We discuss the implications of these findings for research on strengths-based leadership, as well as the practical implications.

An important task for leaders is to support employees in performing to the best of their abilities. According to the positive psychology literature, employees are more likely to reach optimal levels of performance at work when they focus on their strengths instead of their weaknesses (Linley, Govindji, & West, 2007). Strengths are an individual's specific characteristics, traits, and abilities that enable them to perform at their personal best (Wood, Linley, Maltby, Kashdan, & Hurling, 2011). For example, workers who have creativity as their signature strength are at their best when coming up with new solutions to tackle complex work problems, whereas workers who have perseverance as their strength are at their best when trying to reach long-term goals while facing setbacks. Strengths-based leaders facilitate employees' strengths use (Bakker & van Woerkom, 2018) by helping employees identify, utilize, and develop their strengths (Burkus, 2011; Ding, Yu, & Li, 2020; Linley et al., 2007; van Woerkom, Mostert, et al., 2016).

While strengths-based leadership is a relatively young field of study, it already shows the possible benefits of strengths-based

[☆] This research was supported by the Chinese Scholarship Council (No. 202006360023). Portions of these findings were presented as a presentation at the 10th European Conference on Positive Psychology (ECP 2022), Reykjavik, Iceland. We thank Chunmeng Yang, Wa Yang, and Bainan Zhang for their help with the data collection, and Wen Zhang for the back translation task. We have no conflicts of interest to disclose.

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<https://doi.org/10.1016/j.jvb.2023.103859>

Received 22 June 2022; Received in revised form 3 February 2023; Accepted 8 February 2023

Available online 16 February 2023

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leadership to both employees and organizations alike. For example, strengths-based leadership encourages employees to use their strengths, and employee strengths use facilitates innovative behavior and task performance (Ding & Yu, 2020a, b, 2021a; Ding et al., 2020; Ding & Quan, 2021). Our study specifically focuses on the impact of strengths-based leadership on employee task performance and aims to expand our understanding of this relationship by exploring an underlying mechanism (i.e., work engagement) and a boundary condition (i.e., LMX) using a two-wave lagged design.

Instead of being a static position, strengths-based leadership is a comprehensive process so that it is important to uncover the underlying psychological mechanisms through which strengths-based leadership translates into employee task performance (Day, Fleenor, Atwater, Sturm, & McKee, 2014). Previous research hints at the importance of strength-based leadership for employee performance (Ding et al., 2020; Ding & Yu, 2020b), yet is based on purely cross-sectional research. We build on this research studying the same relation in a two-wave lagged design and additionally answer the question how strengths-based leaders affect their employees' performance. Based on Job Demands-Resources (JD-R) theory (Bakker, Hetland, Olsen, & Espevik, 2022; Bakker, Demerouti, & Sanz-Vergel, 2023), we propose that strengths-based leadership serves as a key job resource that helps to increase employee work engagement and, in turn, their task performance.

In addition to studying how strengths-based leaders motivate employees to improve their task performance, it is also necessary to study under which conditions the effects are more effective, because research has shown that social context has a considerable influence on leadership effectiveness (Day, 2000; Oc, 2018). Leader-member exchange is an important situational factor that affects how employees interpret leaders' practices and gain reciprocal influence (Sherony & Green, 2002; Yukl & Van Fleet, 1992; Yunus & Ibrahim, 2015). Even though leadership is a social influence process involving at least two parties (Antonakis & Day, 2018), the role of employees in the leadership process has been largely ignored (Yun, Cox, & Sims, 2006). In our study, we argue that the quality of the exchange relationships between leaders and subordinates affects the way employees will respond to strengths-based leaders' behaviors.

Taken together, our study aims to make two contributions to the literature. First, we contribute to the literature on strengths-based leadership by uncovering the underlying causal mechanisms that explain how and when strengths-based leadership and employee performance are related, thereby providing more complete explanations about the phenomenon of strengths-based leadership (Fischer, Dietz, & Antonakis, 2017). Second, we aim to contribute to JD-R theory (Bakker & Demerouti, 2017) by answering the call by Bakker and Demerouti (2018) for more research on the role of leaders in facilitating employee work engagement. Specifically, we examine strengths-based leadership as a key resource that may help employees to feel engaged and perform well. We hereby also address the question by Bakker and van Woerkom (2018) of how leaders can help employees to play to their strengths to stay engaged and achieve work-related goals.

1. Strengths-based leadership

Strengths-based leadership is rooted in positive psychology and assumes that every employee has their own specific combination of signature strengths that allow them to perform at their personal best (Wood et al., 2011) and that magnifying these strengths instead of repairing weaknesses helps employees to be more productive and proficient (Seligman & Csikszentmihalyi, 2000). Strengths-based leaders help employees to identify, utilize and develop their strengths. Instead of ignoring weaknesses (Biswas-Diener, Kashdan, & Lyubchik, 2016), strengths-based leaders make weaknesses less relevant by allocating tasks according to employees' strengths, and by stimulating collaboration between team members who have complementary strengths (Linley & Harrington, 2006; van Woerkom, Mostert, et al., 2016). Previous studies showed that strengths-based leadership is associated with increased employee well-being, creativity, psychological well-being, and performance and with reduced burnout and absenteeism (Burkus, 2011; Ding et al., 2020; Ding & Yu, 2020b, 2021c). Recently empirical studies have also uncovered that self-efficacy (Ding & Quan, 2021) and psychological well-being (Ding & Yu, 2020a) mediate the positive relation between strengths-based leadership and employee innovative behavior. Additionally, there is some preliminary evidence using cross-sectional data suggesting that work-related well-being (Ding et al., 2020), and supervisor-subordinate guanxi (Ding & Yu, 2020b) may mediate the positive relation between strengths-based leadership and employee task performance. We aim to examine the process through which strengths-based leadership and employee task performance are related using more waves of data, because this will help us understand the psychological mechanisms that underlie this relation and with that expand the nomological net surrounding strengths-based leadership.

Strengths-based leadership is related to, but different from other positive leadership styles such as transformational leadership, authentic leadership, and humble leadership, as was also shown by Ding et al. (2020) who established the discriminant validity of strengths-based leadership relative to these leadership constructs. Whereas transformational leaders are considerate of employees' needs in general (Bass, 1990), and authentic and humble leaders are acceptant and appreciative of employees' strengths and weaknesses (Owens & Hekman, 2012; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008), strengths-based leaders actively support workers in identifying, using, and developing their strengths. Other potentially related leadership styles such as empowering leadership (Sims, Faraj, & Yun, 2009) and servant leadership (Greenleaf, 1998) do stress the importance of employee growth and development but do not specify whether this growth should be based on the remediation of deficits or the furthering of strengths.

2. Strength-based leadership and task performance

The positive psychology literature suggests that leaders may encourage their employees to use their strengths in various ways, and that strengths use fosters task performance — i.e., the effectiveness employees achieve in performing activities for the organization's technical core (Borman & Motowidlo, 1997). First, leaders may informally spot strengths in their employees by observing changes in employees' physical behaviors (e.g., more body gestures), facial expressions (e.g., more smiling), and voice (e.g., increased speed of

speech) when they use their strengths, and by discussing these observations with their employees (Biswas-Diener et al., 2016). Second, strengths-based leaders may help employees to formally identify their strengths by using strengths assessments such as the Values in Action (VIA) survey (Seligman, Park, & Peterson, 2004), or the Gallup StrengthsFinder tool (Rath, 2007). Third, leaders may conduct strengths-based performance appraisals that are focused on identifying, appreciating, and developing employees' qualities that are in line with the company goals (van Woerkom & Kroon, 2020) and match their different strengths to suitable work activities (Biswas-Diener, Kashdan, & Minhas, 2011). For example, leaders may assign negotiation tasks to an employee who has a strong sense of empathy, since empathy is crucial in fostering cooperation and reaching an agreement (Holmes & Yarhi-Milo, 2017; Key-Roberts, 2014). Additionally, strengths-based leaders may help employees to further the effective use of their strengths by discussing with them how to regulate their strengths in specific contexts (Biswas-Diener et al., 2011; Key-Roberts, 2014) and by warning them that overdoing a strength in the wrong situation may also derail their performance. For instance, they may discuss with an employee who has a strength in humor what effect their jokes had on others when attending a solemn occasion, since the use of humor may lead to unwelcome results in this specific context (Biswas-Diener et al., 2011).

By helping employees match their job with their strengths, strengths-based leaders help employees make better use of their abilities (Gist & Mitchell, 1992), which are known to be correlated with employee performance (Stajkovic & Luthans, 1998). Helping subordinates play to their strengths also stimulates employees' feelings of competence, thereby boosting their confidence and effectiveness in achieving their performance goals (Deci & Ryan, 2000; van Woerkom, Oerlemans, & Bakker, 2016), and making them more persistent in achieving their job tasks (Gist & Mitchell, 1992). Finally, strengths-based leaders help employees to further their strengths so that they can use them more effectively (Lavy & Littman-Ovadia, 2017; Peterson & Seligman, 2004), and help them to collaborate more effectively with co-workers by matching their strengths with co-workers who have complementary strengths (van Woerkom, Meyers, & Bakker, 2022).

Several studies have found a positive relation between strengths use and performance (Harzer & Ruch, 2014; Lavy & Littman-Ovadia, 2017; van Woerkom, Oerlemans, & Bakker, 2016). In addition, two cross-sectional studies on strengths-based leadership and employee task performance showed preliminary evidence that these two constructs were indeed positively related, and they strongly suggested collecting data from different sources or time points to confirm this positive relation (Ding et al., 2020; Ding & Yu, 2020b). On the basis of this review, we propose:

Hypothesis 1. Strengths-based leadership at T1 is positively associated with supervisor-rated employee task performance at T2.

3. Strength-based leadership, work engagement and task performance

There are several reasons why employees are likely to become more engaged in their work when their leader shows more strengths-based leadership. First, workers who can play to their strengths feel excited and invigorated (Peterson & Seligman, 2004; van Woerkom, Oerlemans, et al., 2016), which aligns well with the definition of work engagement as an active, positive, work-related state that is characterized by vigor, dedication, and absorption (Schaufeli, Bakker, & Salanova, 2006). Second, by acknowledging and appreciating employees' strengths, aligning jobs with employees' strengths, and having discussions on strengths development, a strengths-based leader can be an important job resource of social support in the workplace, which is known to enhance employees' work engagement (for a meta-analysis, see Christian, Garza, & Slaughter, 2011). Third, by identifying, utilizing, and developing employees' strengths at work, strengths-based leaders support employees' strengths use, which will likely contribute to an increase in employees' work engagement. Because strengths-based leadership will make it more likely that employees work on tasks that are aligned with their strengths, and because strengths use is likely to increase intrinsic motivation (Peterson & Seligman, 2004) and feelings of competence (van Woerkom, Oerlemans, & Bakker, 2016), it is likely that employees become more dedicated and absorbed in their tasks (Thomas, 2009). Finally, strengths-based leaders create an environment that fits employees' needs and strengths, making it more likely that employees become vigorous and dedicated to work (van Woerkom, Oerlemans, & Bakker, 2016).

Previous studies indicated that perceived organizational support for strengths use – employees' beliefs of the extent to which the organization actively supports their usage of strengths at work – was positively related to work engagement (Keenan & Mostert, 2013; Meyers, Kooij, Kroon, de Reuver, & van Woerkom, 2020). Taken together, we hypothesize:

Hypothesis 2. Strengths-based leadership at T1 is positively associated with employee work engagement at T2.

Previous research focused mainly on job satisfaction as a mediator in the relation between strengths-based leadership and employee task performance (Ding et al., 2020; Zheng, Zhu, Zhao, & Zhang, 2015). While both job satisfaction and work engagement refer to pleasurable states, job satisfaction is a rather passive state whereas work engagement is a state of high activation (Bakker & Oerlemans, 2011). This also means that engaged employees are activated to invest their energy back into their work. As such, it is likely that the engagement resulting from strengths use will lead to positive action, resulting in higher performance. Engaged workers are enthusiastically involved in their work, and are more likely to experience positive feelings (e.g., joy and happiness; Bakker & Demerouti, 2008). This positive attitude helps to persist when confronted with work-related challenges (Bakker & Demerouti, 2017). Also, engaged employees are more likely to adopt a bottom-up approach to proactively optimize their job characteristics, which leads to improved performance (Bakker & Albrecht, 2018). For example, Lu, Wang, Lu, Du, and Bakker (2014) found that engaged Chinese employees showed more physical and relational job crafting over a three-month period. In a similar vein, but now using a three-year time interval, Harju, Hakanen, and Schaufeli (2016) found that Finnish employees who were more engaged in their work were more likely to proactively seek social and structural job resources. Thus, engaged employees are motivated to alter their job design with optimized job demands and resources, which helps to attain work goals and leads to improved performance (for meta-analyses, see

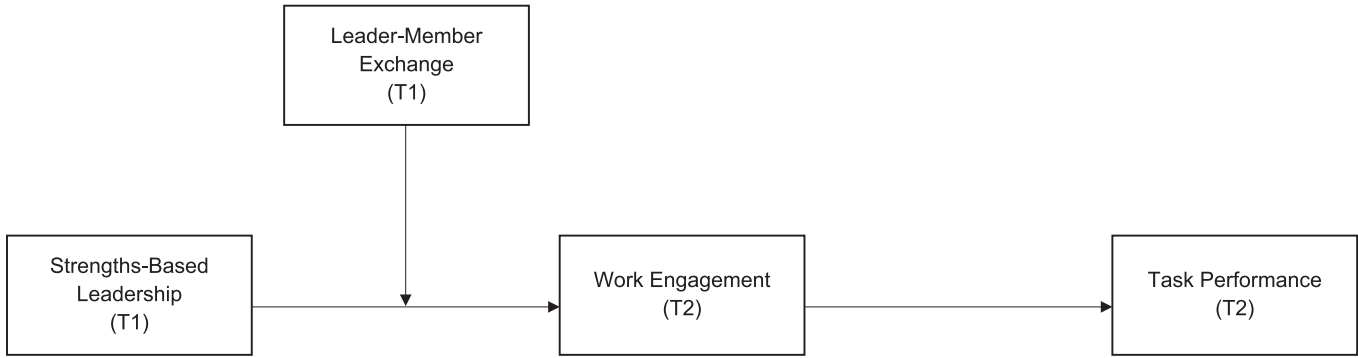


Fig. 1. The conceptual model of this study.

Oprea, Barzin, Virgă, Iliescu, & Rusu, 2019; Rudolph, Katz, Lavigne, & Zacher, 2017). Meta-analytic research has also supported the positive link between work engagement and job performance (Neuber, Englitz, Schulte, Forthmann, & Holling, 2022).

Taken together with the argument for **Hypothesis 2** which describes how strengths-based leadership contributes to employee work engagement, we argue that strengths-based leaders serve as an important key resource that contributes to workers' engagement, and that work engagement brings employees the energy and proactivity that allow them to perform better at work. More specifically, strengths-based leaders engage in supportive behaviors (e.g., acknowledging and appreciating employees' strengths), thereby enhancing employees' job resources and instilling engagement in their subordinates. In this way, strengths-based leaders increase employees' levels of energy and willingness to invest considerable effort in their work. Based on the reasoning above, we propose the following hypothesis:

Hypothesis 3. Employee work engagement at T2 mediates the relation between strengths-based leadership at T1 and supervisor-rated employee task performance at T2.

4. The moderating role of Leader-Member Exchange

Leader-Member Exchange (LMX) theory indicates that leaders have unique social exchange relationships with their employees. The quality of these relationships varies between different subordinates who share the same leader, ranging from low-quality to high-quality (Graen & Uhl-Bien, 1995; Liden, Sparrowe, & Wayne, 1997). The higher the quality of the LMX relationship, the more behavioral and emotional exchange it brings, which enhances mutual trust, respect and obligations between leaders and employees (Graen & Uhl-Bien, 1995). This suggests that employees in high-quality LMX relationships are more likely to trust that their strengths-based leader does not just want to make them run faster, but is genuinely interested in their needs and strengths (Graen & Uhl-Bien, 1995). Also, leaders in high-quality LMX relationships are more likely to provide resources to help employees grow and allocate job responsibilities in accordance with their strengths (Hobfoll, 1989; Johnson, Rogers, Stewart, David, & Witt, 2017). Accordingly, because employees in high-quality LMX relationships feel the communication channel between their leaders and themselves is open (Botero & Van Dyne, 2009), we argue that they are more likely to engage in an open dialogue with their leader about their strengths and how to make better use of it, leading to higher levels of work engagement.

In contrast to high-quality LMX relationships, low-quality LMX relationships are characterized by economical exchanges between leaders and their employees, making employees perform only according to their job requirements, and not going the extra mile (Graen & Uhl-Bien, 1995). Employees in a low-quality LMX relationship may interpret their leaders' efforts to utilize their subordinates' strengths as a way to push them to work harder and may refuse to expose themselves and their strengths authentically to their leaders. Also, in low-quality LMX relationships, leaders may find it more difficult to recognize their employees' strengths, even though they may invest the same effort in strengths-based leadership. The problem is that the impaired social relationship may obscure leaders' ability to objectively bring out the best in their employees. Indeed, Moore, Bakker, and van Mierlo (2022) found that employees were more likely to use their strengths and to thrive in their work (feel vital, learn) when there was considerable support for strengths use at the organizational level. Thus, strengths-based leadership may be less effective in low-quality LMX relationships, leading to reduced levels of employee work engagement. This leads to the final two hypotheses:

Hypothesis 4. The positive relation between strengths-based leadership at T1 and employee work engagement at T2 is moderated by Leader-Member Exchange at T1 in such a way that the relation is stronger when Leader-Member Exchange is high (vs. low).

Hypothesis 5. The indirect relation between strengths-based leadership at T1 and employee task performance at T2 via work engagement at T2 is moderated by Leader-Member Exchange at T1 in such a way that the indirect relation is stronger when Leader-Member Exchange is high (vs. low).

As shown in Fig. 1, we propose our conceptual model.

5. Method

5.1. Participants and procedure

We used convenience sampling to recruit our participants. Specifically, seven Chinese MBA students used snowball sampling to each distribute the questionnaires to around 100 workers and their direct supervisors in a variety of Chinese organizations that the seven MBA students or their friends or family members were currently working in. All participants were informed about the confidentiality and anonymity of the data. Participants worked in various sectors, with information technology (22.84%), manufacturing (14.75%), wholesale (13.85%), communication (11.51%) and hospitality (11.33%) representing the majority of sectors. The data was collected at two time points, with a one-month time lag, in line with previous studies on strengths-based leadership (Ding & Yu, 2020a, 2021a, 2021b, 2021c). We chose this time lag because we wanted to have fine-grained data on how leadership affects employee outcomes, and because it is likely that most workers will have several interactions with their leader over a one-month period (e.g., monthly meetings to allocate tasks or give feedback). Longitudinal studies on leadership use time lags ranging from one month to a year (Williams & Podsakoff, 1989; Wong & Giessner, 2018). Unfortunately, these time lags are more based on convenience than on theory (Epitropaki & Martin, 2004; Kenny, 1975) since the leadership field lacks theories that specify the time that is needed for leadership effects to occur. At T1 we collected demographic data from employees and their leaders, and employee ratings of strengths-based leadership and Leader-Member Exchange. At T2 we collected employee ratings of work engagement and supervisor ratings of

employee task performance.

Employees' questionnaires at T1 and T2 were matched with leaders' ratings based on the employee ID that was provided by both the supervisor and the employee. On average, each supervisor rated five ($SD = 1.93$) of their subordinates. We excluded participants who did not fill out the questionnaire at T1 ($N = 7$) or T2 ($N = 75$). In total, we obtained 556 employee questionnaires paired with 104 leaders for analysis.

The average age of the employees was 33.5 years old ($SD = 11.44$) and about half of the employees were female (51.8 %). Most of the participants were highly educated, with 52.9 % of the participants having received a bachelor's degree, and 9.9 % of the participants having received a master's degree or higher. On average participants had an organizational tenure of 4.7 years ($SD = 4.97$). The average age of the leaders was 37.61 years old ($SD = 5.13$) and about half of the leaders (51.0 %) were male. Most of the participants were highly educated, with 55.8 % of the participants having received a bachelor's degree, and 21.2 % of the participants having received a master's degree or higher. On average the leaders had 6.93 years ($SD = 4.80$) working experience in the organization.

5.2. Measures

We followed the strict translation-back translation procedure (Brislin, 1970) to translate the original English version of our measures to Chinese. The first author translated the English scales into Chinese and a fellow Chinese PhD student who is fluent in English translated this Chinese scale back to the English version. Then we compared the scales and revised the Chinese translation to ensure the preciseness of our measurements. All items were measured on a 7-point Likert scale (ranging from 1 = strongly disagree to 7 = strongly agree), except for LMX, which was measured on a 5-point Likert scale (ranging from 1 = strongly disagree, 5 = strongly agree).

5.3. Strengths-based leadership

Strengths-based leadership was measured using eight items (see Table 4) adapted from the scale for perceived organizational support for strengths use (van Woerkom, Oerlemans, & Bakker, 2016). The items were slightly adapted to refer to the strengths use support provided by the leader instead of the strengths use support provided by the organization. For example, the item "This organization ensures that my strengths are aligned with my job tasks", was changed to "My leader ensures that my job tasks are aligned with my strengths". Cronbach's alpha of the strengths-based leadership scale was 0.97.

5.4. Work engagement

Work engagement was measured using the three-item version of the Utrecht Work Engagement Scale (UWES-3; Schaufeli, Shimazu, Hakanen, Salanova, & De Witte, 2019). These three items include: (1) "At my work, I feel bursting with energy" (vigor); (2) "I am enthusiastic about my job" (dedication); and (3) "I am immersed in my work" (absorption). Cronbach's alpha of the work engagement scale was 0.93.

5.5. Task performance

Task performance was measured using 3 items from a scale developed by Goodman and Svyantek (1999); see also (Xanthopoulos, Baker, Heuven, Demerouti, & Schaufeli, 2008). These are: "This employee achieves the objectives of the job", "This employee fulfils all the requirements of the job", and "This employee performs well in the overall job by carrying out tasks as expected". Cronbach's alpha of the task performance scale was 0.94.

5.6. Leader-Member Exchange

Leader-Member Exchange was measured using the seven items of the LMX-7 scale (Graen & Uhl-Bien, 1995). Examples of these items include "My leader is satisfied with what I do", "My leader understands my job problems and needs", and "I have enough confidence in my leader that I would defend and justify his/her decision if he/she were not present to do so". Cronbach's alpha of the Leader-Member Exchange scale was 0.92.

5.7. Strategy of analysis

First, we conducted confirmatory factor analysis to assess the model fit by using the root mean square error of approximation (RMSEA), comparative fit index (CFI), and Tucker-Lewis index (TLI), and the standardized root mean square residual (SRMR). Second, we conducted path modelling to test our hypotheses in Mplus (Muthén & Muthén, 1998-2017). Our data had a nested structure with employees ($N = 561$) nested in teams that were supervised by one and the same leader ($N = 104$), and the intra-class correlations for the study variables showed that a significant percentage of the variance within the variables was explained by the team level: 14.9 % for strengths-based leadership, 31.7 % for work engagement, 45.8 % for task performance, and 16 % for LMX. Since our model focused solely on the individual level, we used the TYPE = COMPLEX option in Mplus to control for team-level variance. Strengths-based leadership and LMX were mean-centered when testing the moderating effect of LMX (Hypothesis 4) and the moderated mediation effect of LMX (Hypothesis 5). In all analyses we controlled for age, education, and organizational tenure, because these demographic

variables were correlated with both/either employee work engagement and/or task performance.

6. Results

6.1. Descriptive statistics

Table 1 reports the means, standard deviations, and the correlations between the variables in our model. Correlations were in line with our expectations that strengths-based leadership and LMX were positively correlated with work engagement and task performance.

6.2. Measurement model

Confirmatory factor analyses showed that a four-factor model with strengths-based leadership, work engagement, task performance and LMX loading on four separate factors had a good fit to the data ($\chi^2(183) = 433.88, p < .001$; RMSEA = 0.050; CFI = 0.960; TLI = 0.954; SRMR = 0.026) (Hu & Bentler, 1998), and had a better fit than a three-factor model (Strengths-based leadership and LMX items were merged in one factor; $\chi^2(186) = 683.78, p < .001$; RMSEA = 0.069; CFI = 0.92; TLI = 0.91; SRMR = 0.038; $\Delta\chi^2(3) = 118.20, p < .001$), a two factor model (Strengths-based leadership and LMX items were merged in one factor, and work engagement and task performance were merged in one factor; $\chi^2(188) = 1043.30, p < .001$; RMSEA = 0.091; CFI = 0.863; TLI = 0.847; SRMR = 0.068; $\Delta\chi^2(5) = 154.73, p < .001$) or one factor model ($\chi^2(189) = 1808.35, p < .001$; RMSEA = 0.124; CFI = 0.741; TLI = 0.713; SRMR = 0.101; $\Delta\chi^2(9) = 547.27, p < .001$). To calculate the χ^2 difference test we used the MLR chi-square values and scaling correction factors provided by Mplus (Satorra & Bentler, 2010).

6.3. Hypotheses testing

Table 2 and Table 3 report the results of the analyses that were conducted to test the hypotheses. The results of model 2 (see Table 2) showed that the relation between strengths-based leadership at T1 and employee task performance at T2 was nonsignificant ($b = -0.05, SE = 0.05, p = .341, 95\% CI [-0.12, 0.03]$), thereby not supporting our first hypothesis. Further, our results of model 2 (see Table 3) showed that strengths-based leadership at T1 was positively associated with work engagement at T2 ($b = 0.32, SE = 0.06, p < .001, 95\% CI [0.23, 0.41]$), thereby confirming Hypothesis 2.

Our third hypothesis stated that work engagement would mediate the relation between strengths-based leadership and employee task performance. The results of model 2 (see Table 3) showed that strengths-based leadership was indeed positively related to employee work engagement ($b = 0.32, SE = 0.06, p < .001, 95\% CI [0.23, 0.41]$), and the results of model 3 (see Table 2) showed that employee work engagement was positively related to employee task performance ($b = 0.09, SE = 0.03, p < .05, 95\% CI [0.03, 0.14]$). Additionally, in support of Hypothesis 3, employee work engagement mediated the relation between strengths-based leadership and employee task performance ($b = 0.03, SE = 0.01, p < .05, 95\% CI [0.01, 0.05]$). Finally, the results of model 3 (see Table 2) showed that there was no direct relation between strengths-based leadership and employee task performance ($b = -0.07, SE = 0.06, p = .214, 95\% CI [-0.17, 0.02]$), meaning that engagement fully mediates this relation rather than partially mediates this relation where both direct relation and mediated effects exist.

Our fourth hypothesis stated that LMX would moderate the relation between strengths-based leadership and employee work engagement, in such a way that this relation became stronger when LMX was high (vs. low). The results of the model 3 (see Table 3) showed the interaction between strengths-based leadership and LMX was positively related to employee work engagement ($b = 0.08, SE = 0.03, p < .05, 95\% CI [0.03, 0.13]$). This hypothesis was supported (see Fig. 2). Specifically, the association between strengths-based leadership and employee work engagement was stronger when LMX was high (+1SD; $b = 0.40, SE = 0.010, p < .001, 95\% CI [0.24, 0.55]$) in comparison with the association when LMX was low (-1SD; $b = 0.37, SE = 0.09, p < .001, 95\% CI [0.22, 0.52]$). LMX

Table 1
Means, standard deviations, and correlations between the study variables.

Variable	M	SD	1.	2.	3.	4.	5.	6.	7.
1. Gender	1.52	0.50							
2. Age	33.12	7.56	-0.04						
3. Education	3.61	0.84	-0.10*	-0.30**					
4. Organizational tenure	4.70	4.97	-0.01	0.55**	-0.14**				
5. Strengths-based leadership	5.48	1.01	-0.11**	-0.09*	0.10*	-0.05			
6. Work engagement	4.83	1.17	-0.04	-0.16**	0.28**	-0.04	0.35**		
7. Task performance	5.47	0.93	-0.05	-0.07	0.19**	0.09*	0.12**	0.15**	
8. Leader-Member Exchange	3.91	0.61	-0.12**	-0.09*	0.11**	-0.03	0.83**	0.33**	0.12**

Note. N = 556. All measures except for gender, age, education, organizational tenure, and Leader-Member Exchange were measured on a 7-point Likert scale, while LMX was measured on a 5-point Likert scale.

*** $p < .001$.

* $p < .05$.

** $p < .01$.

Table 2
Results of direct and mediation effects.

Predictor	Task performance					
	Model 1		Model 2		Model 3	
	<i>b</i> *	<i>SE</i>	<i>b</i> *	<i>SE</i>	<i>b</i> *	<i>SE</i>
Intercept	1.20	0.63	1.44***	0.40	1.28**	0.44
Age	-0.03	0.02	-0.03	0.02	-0.02	0.02
Education	0.06***	0.02	0.07***	0.02	0.05*	0.02
Organizational tenure	0.05*	0.02	0.05*	0.02	0.05	0.02
Strengths-based leadership			-0.05	0.05	-0.07	0.06
Work engagement					0.09*	0.03
R ²	0.01		0.01*		0.01	

Note. *N* = 556. Results of analyses without the control variables age, educational level, and organizational tenure were not substantially different.

* *p* < .05.

** *p* < .01.

*** *p* < .001.

Table 3
Results of moderation effects.

Variable	Work engagement					
	Model 1		Model 2		Model 3	
	<i>b</i> *	<i>SE</i>	<i>b</i> *	<i>SE</i>	<i>b</i> *	<i>SE</i>
Intercept	3.51***	0.38	1.82***	0.44	1.61**	0.47
Age	-0.12	0.06	-0.10	0.06	-0.10	0.06
Education	0.25***	0.06	0.23***	0.06	0.23***	0.06
Organizational tenure	0.06	0.06	0.06	0.05	0.057	0.05
Strengths-based leadership			0.32***	0.06	0.26**	0.08
Leader-Member Exchange					0.09	0.08
Strengths-based leadership × Leader-Member Exchange					0.08*	0.03
R ²	0.09*		0.17***		0.18***	

Note. *N* = 556. Results of analyses without the control variables age, educational level, and organizational tenure were not substantially different.

* *p* < .05.

** *p* < .01.

*** *p* < .001.

Table 4
Strengths-based leadership scale.

Items
1. My leader knows when I am at my best.
2. My leader focuses on what I am good at.
3. My leader appreciates my strengths.
4. My leader helps me to discover my strengths.
5. My leader helps me to do my job in a manner that best suits my strong points.
6. My leader gives me the opportunity to do what I am good at.
7. My leader ensures that my job tasks are aligned with my strengths.
8. My leader discusses with me how I can further my strengths.

did not moderate the indirect effect of strengths-based leadership on task performance via work engagement, thereby not providing support for our fifth hypothesis. The indirect association between strengths-based leadership and employee task performance was nonsignificant, either when LMX was high (+1SD; *b* = 0.02, *SE* = 0.02, *p* = .430, 95 % CI [-0.02, 0.05]), or when LMX was low (-1SD; *b* = 0.01, *SE* = 0.02, *p* = .426, 95 % CI [-0.01, 0.04]).

7. Discussion

In this study, we investigated the relation between strengths-based leadership and employee task performance through employee work engagement, and the moderating role of LMX in this relationship. Although we did not find a direct effect of strengths-based leadership on employee performance, we did find an indirect effect through increased employee work engagement. Previous cross-sectional research suggested that strengths-based leadership was correlated with employee-rated task performance via work-related well-being (Ding et al., 2020), and supervisor-subordinate guanxi (Ding & Yu, 2020b). We were the first to conduct a two-wave

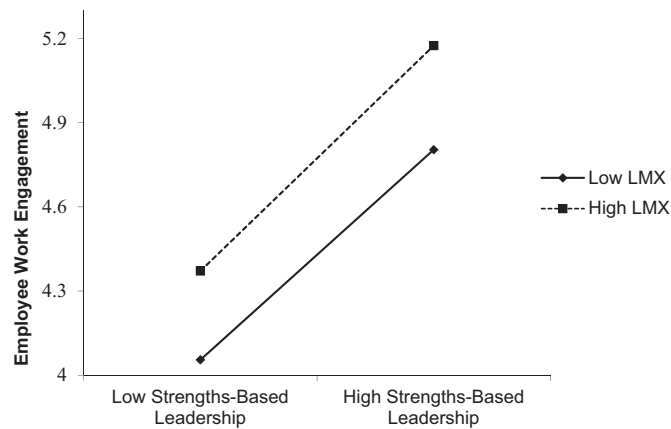


Fig. 2. The moderating effect of LMX on the relation between strength-based leadership and employee work engagement.

and multi-source study to replicate the findings from cross-sectional studies on the relation of strengths-based leadership and employee task performance and found this relation to be insignificant. Second, we contribute to these findings by discovering that work engagement also transmits the positive effect of strengths-based leadership on employee task performance, indicating that strengths-based leadership functions as a key job resource that enhances work engagement, and in turn performance (Bakker & Demerouti, 2017, 2018).

We found that strengths-based leadership at T1 was not directly related to leader-rated employee task performance at T2, which is in contrast with two earlier cross-sectional studies that reported a positive relation between strengths-based leadership and employee-rated task performance (Ding et al., 2020; Ding & Yu, 2020b). Possibly, whereas strengths-based leaders help employees get more engaged and energized by reallocating tasks to suit their employees' strengths (Key-Roberts, 2014; Linley et al., 2007; van Woerkom, Oerlemans, & Bakker, 2016), it may take more time before employee strengths use pays off in terms of higher performance levels, which is also visible for their leader. For example, an employee with a strong sense of humor may get energized when they can make jokes with customers or co-workers, but to achieve performance improvement, they first need to figure out the appropriate contexts to use their humor. Whereas we measured strengths-based leadership and employee task performance one month apart from each other, it may take more time for employees to translate their increased engagement into their work performance. Another reason why we did not find a direct relation between strengths-based leadership and task performance could be that even when the leader encourages the employee to use their strengths and tries to do everything in their power to match the employee's tasks with their strengths, the leader may not be powerful enough to change the tasks that the employee is expected to do, and therefore task performance may also not change. Finally, the difference in methodology that each study adopted might explain the discrepancies in study results. To test the strengths-based leadership-task performance link, Ding et al. (2020) and Ding and Yu (2020b) used cross-sectional research which is useful for identifying associations (Mann, 2003; Stevens et al., 2020), but also produces biased correlations (Lindell & Whitney, 2001) and biased mediation effects (Maxwell, Cole, & Mitchell, 2011). In comparison, our two-wave study is better suited to test the hypothesized causal relationships (Ployhart & Ward, 2011) and takes into consideration the relationship between past and future behavior (Gollob & Reichardt, 1987). Also, in contrast to our study where we used leader ratings of employee performance, Ding et al. (2020) and Ding and Yu (2020b) used employee self-ratings of task performance, which tend to be more lenient than other-ratings (Janssen & van der Vegt, 2011). Lastly, using cross-sectional data collected from the same participants brings common method variance, causing the observed relations to either inflate or deflate (Chang, van Witteloostuijn, & Eden, 2010; Podsakoff & Organ, 1986).

Even though we did not find a moderating effect of LMX on the indirect relationship between strengths-based leadership and employee task performance via work engagement, we did find a small positive moderating effect of LMX in the relationship between strengths-based leadership and work engagement. This suggests that although all employees seem to benefit from a strengths-based approach by their leader, those in a higher quality LMX relationship seem to benefit slightly more. This finding is in line with previous research that reported a moderating role of LMX in the relationship between other positive leadership styles such as ethical leadership and authentic leadership and outcomes such as relational identification, self-efficacy, and work engagement (Naem, Weng, Hameed, & Rasheed, 2020; Niu, Yuan, Qian, & Liu, 2018). When there is a high quality of relationship between leaders and employees, it is more likely that employees interpret the efforts of their leader to support them in using their strengths as genuine ways to boost their well-being and performance. Also, a high-quality LMX relationship may cause employees to be more open in conversations with their leader about their strengths and vulnerabilities, thereby giving the leader better opportunities to support employees' strengths use. Our study contributes to the literature by showing that besides job characteristics (i.e., job autonomy, role overload, job demands; Ding & Quan, 2021; Ding & Yu, 2021a, 2021c), and employee personality traits (i.e., core self-evaluation; Ding & Yu, 2021d), LMX can also moderate the effectiveness of strengths-based leadership.

We found LMX did not moderate the full indirect process between strengths-based leadership and task performance via work engagement. It might be that the interplay between LMX and strengths-based leadership mainly influences the thoughts and feelings of

employees, which may not directly translate into actions and results that can be observed by supervisors (Carpenter, Berry, & Houston, 2014; Demerouti & Cropanzano, 2010).

7.1. Limitations and suggestions for future research

Our study has several limitations. First, although we used two waves of data in our study, ideally three waves are needed to test any moderated mediation model. Despite the solid theoretical foundation of our model, future research is needed to further establish causality by collecting data at three time points. A study design that includes three waves of data might also point out whether strengths-based leadership eventually does translate into higher performance. For future studies it would also be useful to develop theories that specify the time needed for strengths-based leadership effects to occur and include different time lags when measuring the effects of strengths-based leadership, to shed light on how much time it may take for strengths-based leadership practices to be effective for employees. Of course, to provide evidence of the causal effects of strengths-based leadership, field experiments that include a training in strengths-based leadership and that measure the effect of this training in terms of employee engagement and performance are needed as well.

Second, our convenience sampling method limits the generalizability of our research results, since our sample has a higher educational level (77 % of the employee participants have a bachelor's or higher degree) compared to that of the general workforce in China, which has 9.91 average years of schooling for people aged 12 and above, meaning that most Chinese workers have had only one year of senior high school education (Ning, 2021). However, our convenience sample also contributed to the heterogeneity of our sample in comparison to data collected only from one company (Demerouti & Rispens, 2014). Also, it is unclear whether our findings which are based on Chinese data, are generalizable to Western cultures. Employees in collectivistic countries such as China may resist to focus on their strengths because this can be considered as rude and immodest (Biswas-Diener et al., 2016). However, previous research also confirmed that perceived organizational support for strengths use is positively associated with employee well-being across different cultures (Meyers et al., 2019). Also, we used snowball sampling to collect data which makes it likely that employees and leaders with better mutual relationships (Kowald & Axhausen, 2012) filled out the questionnaires. Future studies should therefore collect data from multiple whole teams so that employees and leaders with all levels of LMX can participate.

Third, like most leadership studies, we only measured the effect of strengths-based leadership, and we did not include other (positive) leadership styles, such as transformational leadership (Bass, 1990), empowering leadership (Sims et al., 2009) or humble leadership (Owens & Hekman, 2012), that may also include support, encouragement, and positive feedback. Building on the study by Ding et al. (2020), which showed that these leadership constructs are associated with but different from strengths-based leadership, future research could focus on the incremental value of strengths-based leadership beyond other leadership styles.

Fourth, we also encourage future research to use leader-rated strengths-based leadership and objective measures of strengths-based leadership behaviors in laboratory studies or quasi-experimental designs (e.g., using videos or voice recordings of team meetings, emails or text messages; Martinko, Harvey, Brees, & Mackey, 2013; Tepper, Simon, & Park, 2017) to observe and analyze actual behaviors of strengths-based leaders. Also, we suggest including both leader-rated LMX and follower-rated LMX since leaders and followers may have different opinions of their mutual relationship (Gerstner & Day, 1997).

7.2. Practical implications

Our research indicates that strengths-based leadership helps to boost employee work engagement and in turn employee task performance. Focusing on employee strengths is not something that may come natural to leaders, because managers may be focused on preventing performance problems, and may therefore focus on remediating employee deficits (van Woerkom, Oerlemans, & Bakker, 2016). Organizations should therefore invest in developing strengths-based leaders by offering training and coaching and by implementing strengths-based HR practices related to recruitment, performance appraisal, and development that provide guidance to their leaders (van Woerkom & Meyers, 2015). Further, HR managers need to convince leaders of the value of strengths-based practices such as giving more positive feedback compared to negative feedback, openly discussing strengths with employees, encouraging employees to set using strengths as one of their performance goals (Fredrickson & Losada, 2005; van Woerkom & Kroon, 2020), and actively spotting strengths in meetings with employees and praising employees' strengths when the work is done (van Woerkom & Meyers, 2015). Finally, HR managers also need to convince leaders to invest in high-quality LMX relationships with all their subordinates, since this will strengthen the positive effect of strengths-based leadership on employee work engagement. To strengthen the relation between leaders and their employees, they can support leaders in creating opportunities to get to know their employees, also in informal situations, appreciating differences between their different employees, and providing individual attention and coaching to every employee, thereby providing fertile ground for a strengths-based leadership approach.

8. Conclusion

This study indicates that strengths-based leadership can act as an important job resource that contributes to employee performance by increasing employees' work engagement. At the same time, this study shows that not all employees benefit equally from strengths-based leadership, and that employees in a high-quality LMX relationship benefit more from a strengths-based leader in terms of how engaged they feel in their work. Based on the results of this study, we therefore recommend organizational decision makers to invest in leadership development to support their leaders in playing to the strengths of their employees and to develop high-quality relationships with all of them.

CRedit authorship contribution statement

Jixin Wang: Conceptualization, Methodology, Writing, Formal analysis, Investigation.
 Marianne van Woerkom: Conceptualization, Methodology, Writing, Formal analysis.
 Kimberley Breevaart: Conceptualization, Methodology, Writing, Formal analysis.
 Arnold B. Bakker: Conceptualization, Methodology, Writing.
 Shiyong Xu: Investigation.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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