2016

A self-determination perspective of strengths use at work: Examining its determinant and performance implications

Violet T. Ho
University of Richmond, vho@richmond.edu

Dejun Tony Kong

Recommended Citation

A self-determination perspective of strengths use at work: Examining its determinant and performance implications

Dejun Tony Kong[a]* and Violet T. Ho[b]

[a]Jepson School of Leadership Studies and Robins School of Business, University of Richmond, Richmond, VA 23173, USA; [b]Robins School of Business, University of Richmond, Richmond, VA 23173, USA

We investigate the role of strengths use in the workplace by drawing on self-determination theory (SDT) to propose that strengths use at work can yield performance benefits in terms of task performance and discretionary helping, and that the social context, in the form of leader autonomy support, can promote employees' strengths use. Further, consistent with an interactional psychology perspective, we contend that the relationship between autonomy support and strengths use will be stronger among individuals with strong independent self-construal. We tested the model using matched data from 194 employees and their supervisors and found evidence for the relevance of strengths use at work, even after accounting for the role of intrinsic motivation. In addition to providing practical implications on developing employee strengths use and how to do so, this study advances theory and research on workplace strength use, SDT, and positive organizational behavior.

Keywords: strengths use; intrinsic motivation; autonomy support; independent self-construal; performance

Over the last decade, the movement of positive psychology has renewed interest in positive psychological traits and states and underscored the need for 'massive research on human strengths and virtues' (Seligman & Csikszentmihalyi, 2000, p. 8; also see Peterson & Seligman, 2004). As noted by Seligman and Csikszentmihalyi (2000), 'individuals are now seen as decision makers, with choices, preferences, and the possibility of becoming masterful [and] efficacious' (p. 8). The implications of positive psychology for organizational behavior have been noticeable, as demonstrated by the development of positive organizational behavior (POB) as a field of study in management research (e.g. Cameron, Dutton, & Quinn, 2003), focusing on 'the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace' (Luthans, 2002, p. 59).

As reflected in the definition above, individuals' strengths, defined as characteristics that allow individuals to perform well or at their personal best (Wood, Linley, Maltby, Kashdan, & Hurling, 2011), make up a critical component that underlie the field of POB. However, although psychologists and practitioners have made some headway in examining individual strengths (e.g. Buckingham, 2007; Harzer & Ruch, 2012, 2013; Linley & Harrington, 2006), this construct has yet to garner much attention in organizational behavior research (for exceptions, see Clifton & Harter, 2003; Peterson & Park, 2006). More importantly, although the definition of POB asserts that employee strengths can be managed to yield performance improvement, few, if any, empirical studies have examined how organizations can promote employees' strengths use at work.

In part, this dearth of research on strengths use in the management literature may be due to the lack of a foundational framework on which theory-building on workplace strengths use can be advanced. Additionally, with the exception of a few studies (e.g. Avey, Luthans, Hannah, Sweetman, & Peterson, 2012; Dubreuil, Forest, & Courcy, 2014; Harzer & Ruch, 2014), there is little empirical evidence tying strengths use to individual- or organization-level performance benefits. Instead, prior research examining strengths use at work has focused primarily on employees' psychological well-being (e.g. life satisfaction, vitality, and positive and negative affect) as the main outcome (Forest et al., 2012; Littman-Ovadia & Steger, 2010; Wood et al., 2011).

We contend that establishing work performance as an additional consequence of strengths use has value for both research and practice. From a research standpoint, extending the reach of strengths use to encompass performance outcomes serves to enrich the nomological network of the strengths use construct, and also bolsters the key contention underlying POB – that employee

---

*Corresponding author. Email: tkong@richmond.edu
Both authors contributed to this article equally.

strengths can be managed for performance improvement, thereby providing impetus for organizational research on this topic. From a practical standpoint, demonstrating that strengths use can yield performance benefits will underscore the organizational imperative to understand and promote employees' strengths, and offer leaders an avenue through which they can manage employees' performance to enhance organizational effectiveness.

This study takes a first step in addressing the above issues by drawing on the established and validated self-determination theory (SDT) (Deci & Ryan, 1985, 2000) as a framework on which to develop a theoretically grounded model of workplace strengths use. Our model presents leader autonomy support as an antecedent of strengths use and, in line with organizational reality and the interactionist perspective of organizational behavior (Schneider, 1983), incorporates the moderating role of self-construal in this relationship. Additionally, our model examines the relation between strengths use and two forms of work-related performance – supervisor-rated task performance and contextual performance (specifically, discretionary helping), so as to address the dearth of empirical evidence demonstrating this link. It is worth noting that employee-rated strengths use and supervisor-rated performance are not tautological. Employee-rated strengths use captures employees' behavior of utilizing their individual strengths to achieve optimal performance at work based on their understanding of their own strengths and employee performance criteria, whereas supervisor-rated performance is supervisors' evaluation of their employees' actual performance based on their understanding of employee performance criteria. Thus, although employees' strengths use increases the likelihood that their task and contextual performance will be positively evaluated by their supervisor, it does not guarantee such a positive supervisory evaluation.

This study makes the following contributions to the POB and strengths use literature. First, we validate the organizational relevance of studying employee strengths use by demonstrating the performance outcomes ensuing from strengths use and provide empirical support for the fundamental premise underlying the definition of POB – that individual strengths can be measured, developed, and effectively managed for performance improvement. Second, although some researchers have noted that managers with a 'strengths approach' were more successful (Clifton & Harter, 2003), they have yet to specify what this approach really entails. By being one of the first studies to empirically examine the antecedents of strengths use, in the form of leader autonomy support moderated by individual self-construal, we offer preliminary insights into what really constitutes a 'strengths approach' to managing employees so as to yield performance benefits that further the organization's interests.

Finally, we enrich theoretical development in strengths use (and POB, more generally) using SDT as the foundation on which we build our proposed framework, thereby integrating two disparate streams of research. In doing so, we aim to further validate and legitimize the construct of strengths use in the POB literature and demonstrate its value over and above more traditional constructs such as intrinsic motivation.

Strengths and strengths use

Strengths pertain to positive traits and/or psychological capacities refined with knowledge and skills (Clifton & Anderson, 2002; Proctor, Maltby, & Linley, 2011), and are 'natural capacities that we yearn to use, that enable authentic expression, and that energize us' (Govindji & Linley, 2007, p. 144). As such, they reflect a pre-existing capacity for a particular way of behaving, thinking, or feeling that is authentic and invigorating, and can enable optimal functioning, development and performance (Forest et al., 2012; Linley, 2008). Strengths, natural and coming from within (Linley & Harrington, 2006), are akin to personality traits and encompass the individual's virtues and positive character that shape his/her potential to make positive contributions (Littman-Ovadia & Steger, 2010; Peterson & Seligman, 2004).

Despite the growing interest in strengths and preliminary evidence indicating that strengths use, rather than one's knowledge of one's strengths, contributes to well-being (Govindji & Linley, 2007; Rath, 2007; Rath & Conchie, 2009), strengths research has primarily focused on one's possession and knowledge of strengths, with a comparative dearth of research examining the use of strengths (Harzer & Ruch, 2012, 2013). The few studies that have examined employees' strengths use have demonstrated its link to job satisfaction, well-being, and meaning in life (e.g. Forest et al. 2012; Harzer & Ruch, 2012, 2013; Littman-Ovadia & Steger, 2010). More recently, a study by Dubreuil et al. (2014) successfully linked strengths use to work performance, but their reliance on same-source data and self-reported performance measures renders inconclusive as to whether the observed link is indeed valid or an artifact of common-source bias. Research on the antecedents of strengths use is equally, if not more, scarce, with no published study yet to establish either situational or individual characteristics that promote strengths use at work or beyond. Thus, we address these research gaps by building on SDT to develop a model of strengths use at work.

Leader autonomy support and strengths use

Strengths use researchers have acknowledged the role of situational circumstances in constraining or facilitating strengths use (Harzer & Ruch, 2012, 2013). Although

there are multiple situational determinants of workplace experience (e.g. coworkers, work group norms, organizational culture and policies), the role of the leader is arguably one of the more critical elements, not least because she/he has formal authority in granting access to resources and opportunities that subordinates need. Leaders shape employees' job attitudes, cognitions, and behaviors (Avolio, Walumbwa, & Weber, 2009), and their behaviors are likely to affect employees' strengths use at work (Clifton & Harter, 2003). Owens, Johnson, and Mitchell (2013) contended that 'leaders who show humility by acknowledging the strengths and contributions of followers and being teachable will help foster the preconditions for employee engagement' (p. 1529).

SDT (Deci & Ryan, 1985, 2000) provides a cogent framework to examine strengths use, its antecedents, and outcomes. SDT posits that individuals engage in an activity because they find it interesting and pleasurable and thus have autonomous (vs. controlled) motivation (Deci & Ryan, 2000; Grant, 2008). In turn, autonomous motivation has been associated with positive attitudinal, well-being, and performance outcomes (see Gagné & Deci, 2005 for a review). We contend that because individuals feel good about themselves when using their strengths (Linley & Harrington, 2006), they become intrinsically motivated to do so (Linley, Nielsen, Wood, Gillett, & Biswas-Diener, 2010). Further, we propose that leaders influence employees' self-determined behaviors.

In the context of leadership, scholars have examined autonomy-supportive leadership styles as a driver of followers' self-determined behaviors (Deci, Connell, & Ryan, 1989; Gagné, 2009; Gagné & Deci, 2005). Autonomy support encompasses leader behaviors such as inquiring and acknowledging followers' feelings and perspectives, giving a meaningful rationale for a request, encouraging followers to exercise self-initiation and choice, and conveying confidence in their abilities (Deci & Ryan, 1987; Moreau & Mageau, 2012; Williams, Gagné, Ryan, & Deci, 2002). Such behaviors not only allow followers to exercise discretion in working in a way that is congruent with their values and interests, but also fulfill their needs for competence and relatedness by conveying the leader's confidence in and social support for them. In contrast, controlling behaviors, where leaders closely monitor followers' behaviors, force them to think and act in certain ways by means of coercion pressures, or use reward systems in manipulative ways tend to thwart followers' needs for autonomy, competence, and relatedness (Deci et al., 1989; Deci & Ryan, 1985, 2000). Not surprisingly, leaders who adopt autonomy-supportive behaviors help promote autonomous regulation among followers (Deci & Ryan, 1985, 2000). By extension, we expect that followers who receive autonomy support will not only be better able to regulate and

configure their work behaviors in a way that facilitates their strengths use, but also feel more confident and supported in using these strengths.

> Hypothesis 1: Leader autonomy support is positively related to strengths use.

Independent self-construal as a trait moderator

Individuals are likely to vary in the extent to which they react to leader autonomy support, according to interactionist perspective (Endler & Magnusson, 1976; Schneider, 1983). Although individuals are intrinsically driven to use their strengths, we contend that the extent to which they feel motivated to do so varies according to their dispositions. We focus on their independent self-construal as one relevant trait that moderates the degree to which leaders' autonomy support promotes strengths use.

Self-construal refers to one's thoughts, feelings, and actions regarding one's relationships to others and the self as distinct from others (Markus & Kitayama, 1991; Singelis, 1994). Individuals with an independent self-construal see themselves as fundamentally distinct from others and define themselves in terms of their own attributes, abilities, characteristics, and goals (Oyserman & Markus, 1996). This construct has high relevance for one's self-determination and in predicting whether autonomy support will promote strengths use, because independent self-construal determines the degree to which individuals value and desire expressing the self and realizing their internal attributes, including their strengths (Singelis, 1994). Those with high independent self-construal place more emphasis on having a sense of self-determination and feeling that they are autonomous and control their own destiny (Deci & Ryan, 1985). Because their personal attributes are highly salient to them and their self-esteem (Markus & Kitayama, 1991), individuals with high independent self-construal are expected to respond more strongly to the influence of autonomy support on their strengths use, as the provision of autonomy allows them the flexibility of applying their strengths to achieve personal goals.

More generally, this argument finds support in the person–environment fit literature, which purports that congruence between the person and the environment will result in positive outcomes (Edwards & Shipp, 2007). Because autonomy support is more consistent with or more desired by individuals with stronger independent self-construal, this congruence will promote greater strengths use among those individuals.

> Hypothesis 2: Independent self-construal strengthens the relationship between leader autonomy support and strengths use.

Strengths use, task performance, and helping

Building on Dubreuil et al.'s (2014) preliminary findings, we contend that the benefits of strengths use will extend beyond employees' perceived performance to supervisor-rated task performance. First, employees who use their strengths experience enhanced energy and engagement (Dubreuil et al., 2014; Forest et al., 2012; Wood et al., 2011), which then facilitates task performance (Christian, Garza, & Slaughter, 2011). Second, strengths use enhances employees' self-esteem (Wood et al., 2011), which in turn facilitates task performance (Judge & Bono, 2001). Third, strengths use can increase employees' harmonious passion (Dubreuil et al., 2014; Forest et al., 2012), which then enhances task performance (Ho & Pollack, 2014; Ho, Wong, & Lee, 2011).

> Hypothesis 3: Strengths use is positively related to supervisor-rated task performance.

We also expect strengths use to facilitate contextual performance, particularly discretionary helping behaviors. Our choice of helping behaviors is based on the numerous studies examining helping behaviors within the framework of SDT (e.g. Gagné, 2003; Raub & Robert, 2010; Weinstein & Ryan, 2010). Strengths use increases one's positive affect (Forest et al., 2012; Wood et al., 2011), which in turn enhances one's willingness to help others (Berkowitz, 1972; Isen & Levin, 1972). Additionally, because strengths use energizes the individual (Dubreuil et al., 2014), it provides resources that one can use to help others.

> Hypothesis 4: Strengths use is positively related to supervisor-rated helping behaviors.

Intrinsic motivation and strengths use

Central to SDT is the concept of intrinsic motivation, which represents the strongest form of self-determination whereby individuals autonomously pursue an activity because they find it inherently interesting and derive satisfaction from doing it (Deci & Ryan, 1985). To the extent that the work context satisfies employees' needs of autonomy, relatedness, or competence, employees will have enhanced intrinsic motivation, which in turn yields positive outcomes such as better work attitudes and behaviors (Gagné & Deci, 2005). Although this suggests that intrinsic motivation plays a similar role as strengths use in our framework by linking leaders' autonomy support to followers' behaviors, we contend that the two constructs are distinct and that intrinsic motivation translates autonomy support into strengths use.

Both strengths use and intrinsic motivation are key concepts in positive psychology and POB in that they are related to the notion of eudaimonia (Waterman,

1993), defined as 'living a complete human life, or the realization of valued human potentials' (Ryan, Huta, & Deci, 2008, p. 140). However, the two constructs are distinct in that strengths use represents what Aristotle deemed as the 'doing' part of eudaimonic living, which involves 'engaging one's best human capacities by actively pursuing virtues and excellences' (Ryan et al., 2008, p. 143). Essentially, strengths use captures *how* people do their work and the extent to which their work allows them to pursue their virtues and strengths, thereby reflecting the 'doing' aspect of eudaimonic living.

In contrast, intrinsic motivation represents the 'reasoning' part of eudaimonic living, capturing the underlying reasons *why* people do their work. Part of living well involves 'actively and explicitly striving for what is truly worthwhile and is of inherent or intrinsic human worth (Ryan et al., 2008, p. 145). To the extent that people pursue their work voluntarily because they believe that it is worthwhile and inherently fulfilling, they are likely to have eudaimonia. We contend that strengths use is a more proximate predictor of task performance and helping than intrinsic motivation. Insofar as individuals are able to use their strengths in the execution of their tasks and engagement in helping, this allows them to deploy their resources optimally, which not only facilitates task performance but also allows them to allocate some resources to helping. In contrast, although individuals with intrinsic motivation may enjoy their work, such enjoyment does not endow them with the resources or abilities necessary for successfully performing those tasks. Thus, we expect that intrinsic motivation (capturing the 'reasoning' part of eudaimonic living and *why* people do work) will determine their strengths use (capturing the 'doing' part of eudaimonic living and *how* people do work), consistent with the theory of planned behavior (Ajzen, 1991) where behaviors are preceded by cognition.

> Hypothesis 5: Intrinsic motivation is positively related to strengths use.

Integrating Hypothesis 5 with the role of autonomy support in driving intrinsic motivation as elaborated earlier (e.g. Gagné & Deci, 2005), we then expect intrinsic motivation to be the mediating mechanism between autonomy support and strengths use.

> Hypothesis 6: Intrinsic motivation mediates the relationship between autonomy support and strengths use.

Similarly, a joint consideration of Hypothesis 5 and the hypothesized relationships between strengths use and task performance and helping (Hypotheses 3 and 4) leads us to propose the following two mediating hypotheses that capture the role of strengths use in translating intrinsic motivation into task performance and helping.

Hypothesis 7: Strengths use mediates the relationship between intrinsic motivation and task performance.

Hypothesis 8: Strengths use mediates the relationship between intrinsic motivation and helping.

Method

Participants

We collected data in the USA through StudyResponse, a non-profit organization that recruits participants for academic research by distributing e-mail requests for completing online surveys and offering compensation in exchange (e.g. Montes & Zweig, 2009; Piccolo & Colquitt, 2006). StudyResponse invited 355 employees to participate in this study, together with their supervisors who were invited to provide performance data (task performance and helping behaviors). We matched one supervisor with one employee rather than a group of employees to ensure independence of observations. After eliminating unpaired responses, we had a final sample size of 194 (54.6%). The average organizational tenure of the employee respondents was 9.62 years, and 107 of them (55.2%) were male. Majority (79.9%) were Caucasian, 5.7% Asian/Pacific Islander, 5.2% African American, 5.2% Hispanic, 2.1% Native American, and the remaining 2.1% of other ethnicities. Among those who reported education (190 participants), 25.8% had high school diplomas, 52.1% had Bachelor's degrees, 18.4% had Master's degrees, and 3.7% had doctoral degrees. A wide variety of professions was represented, including consulting, education, engineering, manufacturing, and technology.

Measures

Participants responded to all the items on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*) unless stated otherwise.

Leader autonomy support

Participants indicated their supervisor's autonomy support by responding to Moreau and Mageau's (2012) 9-item Autonomy Support Scale. Sample items include 'My supervisor gives me many opportunities to make decisions in my work' and 'Within certain limits, my supervisor gives me the freedom to choose how and when I will execute my tasks.' Based on factor analysis, we dropped one item with a low factor loading score: 'My supervisor understands that at times the things that I have to do are not pleasant.' Participants' responses were averaged ($\alpha = 0.85$).

Strengths use

We measured participants' strengths use at work using Govindji and Linley's (2007) 14-item Strengths Use Scale adapted for the work context. Govindji and Linley's scale has been validated in prior studies (e.g. Proctor et al., 2011; Wood et al., 2011). Sample items include 'When doing my job, I am regularly able to do what I do best' and 'When doing my job, I use my strengths every day' ($\alpha = 0.94$).

Intrinsic motivation

Participants indicated their intrinsic motivation on a 7-point rating scale from 1 (*not at all*) to 7 (*exactly*), using three items from Gagné et al.'s (2010) Motivation at Work Scale. Sample items include 'I'm doing my current job because I enjoy this work very much' and 'I'm doing my current job because I have fun doing my job' ($\alpha = 0.94$).

Independent self-construal

Participants indicated their independent self-construal by responding to an abridged six-item scale from Singelis's (1994) original Independent Self-Construal Scale. Sample items include 'I enjoy being unique and different from others in many respects' and 'My personal identity, independent of others, is very important to me' ($\alpha = 0.77$).

Work outcomes

We used four items from Williams and Anderson's (1991) seven-item In-role Performance Scale and the three items of helping behaviors from Williams and Anderson's (1991) seven-item Interpersonal Organizational Citizenship Behavior Scale to measure employees' task performance and helping behaviors, respectively. Factor analysis results showed that three of the task performance items (two of which were reverse-scored) did not load onto the same factor as the other four items and were thus excluded. Supervisors rated respondents' task performance with the four items ('adequately completes assigned duties'; 'fulfills responsibilities specified in job description'; 'performs tasks that are expected of him/her'; and 'meets formal performance requirements of the job') and helping behaviors with the three items ('helps others who have been absent'; 'helps others who have heavy workloads'; and 'goes out of way to help new employees'). We averaged participants' responses on the respective scales of task performance and helping (αs = 0.87 and 0.83, respectively).

Control variables

Finally, following previous research (e.g. Tsui & O'Reilly, 1989), we included gender (1 = male, 0 = female) and organizational tenure (in years) as control variables.

Results

Measurement model

First, we tested the hypothesized measurement model in LISREL 8.80 (Jöreskog & Sörbom, 2006). We contrasted the hypothesized six-factor measurement model with more parsimonious five-factor models to confirm that the six factors – autonomy support, strengths use, intrinsic motivation, independent self-construal, task performance, and helping – were distinct from one another (see Anderson & Gerbing, 1988). The six-factor model had a reasonably good fit to the data, according to Bentler and Bonnett's (1990) and Kline's (2005) recommendations of the cutoff values of the fit indices: $\chi^2(650) = 1304.01$, CFI = 0.96, IFI = 0.96, NNFI = 0.96, and RMSEA = 0.07. All the factor loadings were |0.49| or above. We also contrasted the six-factor model with various five-factor models and found that the six-factor model fit the data significantly better than any of the five-factor models ($\Delta\chi^2$s ≥ 95.08, df = 5, ps < 0.001). Therefore, we concluded that the six factors – autonomy support, strengths use, intrinsic motivation, independent self-construal, task performance, and helping – were distinct from one another.

Hypothesis testing

Like other organizational studies, we tested our hypotheses using path analysis, given that task performance and helping were two positively correlated outcome variables. Table 1 presents the descriptive statistics and correlations; all key variables were positively correlated.

Table 1. Descriptive statistics and correlations.

| Variable	M	SD	1	2	3	4	5	6	7
1. Autonomy support	3.98	0.56							
2. Strengths use	4.10	0.59	0.60***						
3. Intrinsic motivation	5.12	1.40	0.45***	0.60***					
4. Independent self-construal	3.90	0.58	0.49***	0.64***	0.47***				
5. Task performance	4.48	0.53	0.38***	0.44***	0.23**	0.34***			
6. Helping behaviors	4.00	0.74	0.35***	0.30***	0.15*	0.27***	0.53***		
7. Gender	0.55	0.50	−0.14*	−0.18*	−0.01	−0.10	−0.32***	−0.21**	
8. Organizational tenure	9.62	6.77	0.05	−0.04	−0.00	0.05	0.06	0.11	0.00

Note: N = 194.
*p < 0.05; **p < 0.01; ***p < 0.001.
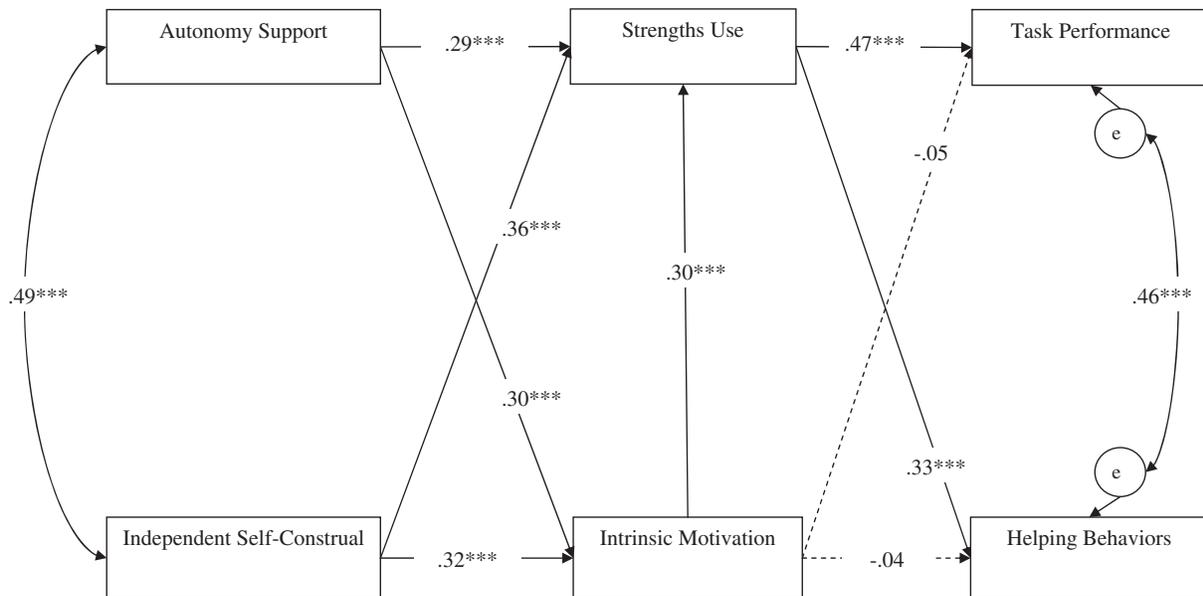
Figure 1. Results of path analysis (main relationships only).
Note: N = 194. $\chi^2(4) = 13.56$, GFI = 0.98, CFI = 0.98, IFI = 0.98, SRMR = 0.05. Standardized regression coefficients and error correlations are presented. *p < 0.05; **p < 0.01; ***p < 0.001.

Main-effect relationships

Figure 1 presents the path analysis results. Inclusion of gender and organizational tenure did not change the result patterns. Therefore, for the sake of parsimony, we excluded these two control variables in the final models. The model presented in Figure 1 fit the data well: $\chi^2(4) = 13.56$, GFI = 0.98, CFI = 0.98, IFI = 0.98, SRMR = 0.05.

Autonomy support was positively related to strengths use ($\beta = 0.29$, $p < 0.001$), supporting Hypothesis 1. Autonomy support was also positively related to intrinsic motivation ($\beta = 0.30$, $p < 0.001$), replicating Guay, Boggiano, and Vallerand's (2001) finding. Intrinsic motivation was positively related to strengths use ($\beta = 0.30$, $p < 0.001$), supporting Hypothesis 5. In terms of performance outcomes ensuing from strengths use, we found that strengths use was positively related to both task performance ($\beta = 0.47$, $p < 0.001$) and helping behaviors ($\beta = 0.33$, $p < 0.001$), thus supporting Hypotheses 3 and 4, respectively. With strengths use accounted for, intrinsic motivation was not directly related to either task performance ($\beta = -0.05$, $p = 0.50$) or helping behaviors ($\beta = -0.04$, $p = 0.61$).

Mediation relationships

To test the mediating hypotheses (Hypotheses 6–8), we used Hayes's (2013) SPSS macro script PROCESS (Paradigm 4 for mediation tests), which estimated the indirect effect, standard error, and 95% bias-corrected confidence interval based on 1000-replication bootstrapping. First, intrinsic motivation mediated the relationship between autonomy support and strengths use (indirect effect = 0.19, bootstrap SE = 0.04, bootstrap 95% CI [0.12, 0.28]), supporting Hypothesis 6. Consistent with Hypotheses 7 and 8, strengths use mediated the relationships between intrinsic motivation and task performance (indirect effect = 0.10, bootstrap SE = 0.02, bootstrap 95% CI [0.06, 0.15]) and between intrinsic motivation and helping (indirect effect = 0.10, bootstrap SE = 0.04, bootstrap 95% CI [0.03, 0.18]).

Moderation relationships

To test the moderating role of independent self-construal, we centered the variables of autonomy support and independent self-construal before creating their interaction term (Aiken & West, 1991). Results are presented in Figure 2, which shows that although the interaction term significantly predicted intrinsic motivation ($\beta = 0.18$, $p < 0.01$), it did not predict strengths use ($\beta = -0.02$, $p = 0.68$), thus failing to support Hypothesis 2. To explore the significant interactive relationship pertaining to intrinsic motivation, we conducted simple slope tests (Aiken & West, 1991; Dawson, 2014), which indicated that the relation between autonomy support and intrinsic motivation was stronger when independent self-construal was high (+1 SD) ($\beta = 0.50$, $p < 0.001$) than when independent self-construal was low (−1 SD) ($\beta = 0.22$, $p < 0.01$) (see Figure 3).
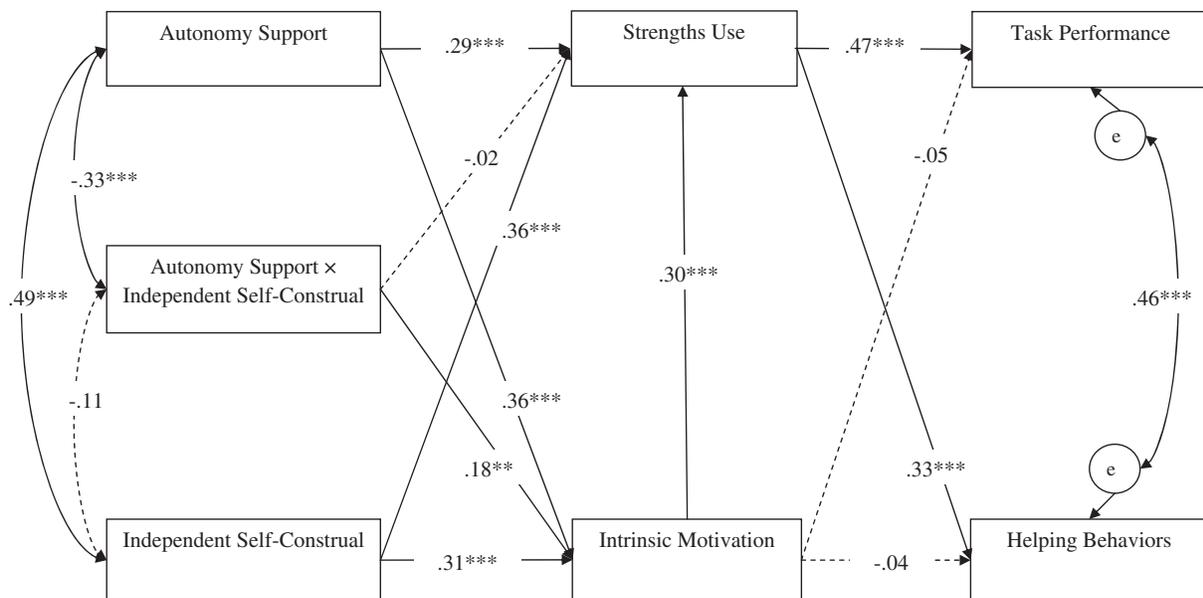

Figure 2. Results of path analysis (main and interactive relationships).
Note: $N = 194$. $\chi^2(6) = 25.40$, GFI = 0.97, CFI = 0.95, IFI = 0.96, SRMR = 0.05. Standardized regression coefficients and error correlations are presented. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
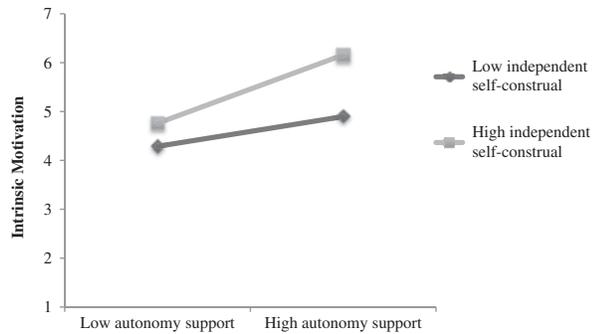
Figure 3. Independent self-construal as a moderator for the relationship between leader autonomy support and intrinsic motivation.

Discussion

Given the growing interest in POB and the dearth of empirical research on strengths use in the workplace, we sought to examine strengths use among employees, the antecedent role of leader autonomy support moderated by individuals' independent self-construal, and the work outcomes deriving from strengths use. Further, we contrasted strengths use with intrinsic motivation, a widely studied motivation factor derived from SDT, so as to differentiate between the two constructs and establish the relationship between them. Our findings indicate that leaders' autonomy support was indeed positively related to intrinsic motivation and subsequent strengths use of their employees. Independent self-construal did not moderate the relation between autonomy support and strengths use, but strengthened the relationship between autonomy support and intrinsic motivation.

Overall, the findings of the current study offer strong support for the contention that individuals' strengths can indeed be managed for performance improvement. More specifically, it offers a concrete idea of what constitutes a 'strengths-based' managerial approach and underscores the performance benefits that organizations can derive from effectively developing employees' strengths use. These findings shed light on strengths use research and SDT.

Theoretical contributions
Strengths use at work

Although the concept of strengths is central to the field of POB and has been the subject of numerous popular press publications, few organizational behavior studies have examined strengths use in work settings. We found that strengths use yields the purported performance benefits that underlie the definition of strengths, and such strength use can be managed. The fact that the empirical findings support our proposed framework highlights the predictive value and functionality of the model, thereby contributing to theory-building on workplace strengths use.

Several findings in the current study warrant further discussion. First, the findings – (1) strengths use is positively related to supervisor ratings of task performance and discretionary helping and (2) strengths use mediates the links between intrinsic motivation and these two forms of performance – provide evidence for the instrumental value of investing in employees' strengths use. Although the key tenet in POB is that individual strengths can be developed and managed for performance improvement, this has been a taken-for-granted assumption in the literature. By explicitly testing and validating this assumption, the present study offers evidence that individuals who get to use their strengths more do indeed function more optimally and deliver better performance.

Beyond illustrating the performance advantages of strengths use, our study also offers insights into how leaders can develop employees' strengths use, specifically by highlighting the promotive role of leader autonomy support. Given the lack of empirical research on contextual drivers of workplace strengths use, this finding is noteworthy in making headway in establishing the forms of leader actions necessary for fostering strengths use and in concretizing the more abstract notion of strength-based approach to leadership. Also of note is the finding that individuals' self-construal did not moderate the relationship between leader autonomy support and strengths use, suggesting that leader autonomy support has universal efficacy in promoting strengths use. This not only supports the contention in SDT that autonomy support promotes self-determination, but also highlights the reach and criticality of such leadership behaviors in developing employees' strength use.

SDT

Although SDT provides the foundational framework for the development of the conceptual model, the empirical findings also serve to inform and extend the theory. Most noteworthy is the finding that when both strengths use and intrinsic motivation were modeled as predictors of task performance and helping, the former was a more proximate predictor of these outcomes than the latter, indicating that strengths use mediated the relation between intrinsic motivation and employee behaviors. Considering that one of the fundamental tenets of SDT is that intrinsic motivation facilitates performance (e.g. Cerasoli, Nicklin, & Ford, 2014), the present findings are novel and important. Strengths use, which captures *how* employees do their work, appears to be a more proximate predictor of task performance and helping than intrinsic motivation, which captures *why* employees work. This sheds light on the process through which

intrinsic motivation translates into performance benefits, an area that is not as well-understood in the current SDT literature.

Another finding that contributes to SDT is the moderating role of independent self-construal in the relationship between autonomy support and intrinsic motivation. Although prior research has demonstrated the positive link between autonomy support and intrinsic motivation (e.g. Deci & Ryan, 1987), few studies have investigated the critical contingencies for this relationship. Our study provides a nuanced perspective incorporating independent self-construal and suggests that intrinsic motivation is not a mere function of leader autonomy support, but also hinges upon how employees define themselves.

Practical implications

Our findings also provide practical implications. Most evident is the fact that strengths use does indeed yield performance benefits, suggesting that in addition to (or instead of) enhancing employees' intrinsic motivation, managers may find it productive to design or allocate work responsibilities based on employees' strengths. Alternatively, if task redesign is not a viable option, managers may seek to hire individuals who possess strengths that are in line with work demands.

Managers can further develop employees' strengths use through the adoption of autonomy-supportive behaviors, such as providing employees flexibility in deciding how to meet work goals, conveying confidence in their abilities, and providing meaningful rationale for work requests. To the extent that employees feel that they are competent in performing their job duties on their own volition, this will facilitate their strengths use and intrinsic motivation.

Limitations

Our study has a few limitations. First, although the positioning of the variables is theoretically derived based on SDT and studies in strengths use, we cannot draw definitive conclusions about causality because of the cross-sectional nature of our data-set. For instance, it is conceivable that employees who are intrinsically motivated or have more opportunities to use their strengths may perceive stronger leader autonomy support. Likewise, employees who perform well may perceive themselves as using more strengths or having stronger intrinsic motivation. As such, future research is needed to establish the direction of causality through a longitudinal and/or experimental approach.

Second, although we reduced common-source bias using supervisor-rated task performance and helping measures, the other variables were self-reported by participants due to the nature of these variables. Notwithstanding, the fact that we found a significant relationship from the interaction of autonomy support and independent self-construal to intrinsic motivation suggests that such bias should not be a threat, given that the bias works against the detection of moderating effects (Conway & Lance, 2010; Evans, 1985).

Third, in order to reduce participants' potential boredom and fatigue, we did not collect data regarding supervisor–employee dyad tenure, which might influence supervisory judgment of employee performance/behaviors. However, given that previous studies have shown non-significant correlations between dyad tenure and work performance/behaviors and between dyad tenure and leader–member relationships (e.g. Duarte, Goodson, & Klich, 1994; Moss, Sanchez, Brumbaugh, & Borkowski, 2009), we have some confidence that supervisor–employee dyad tenure should not significantly affect our findings either.

Finally, over two thirds of the participants in the current study had at least a Bachelor's degree, which suggests that the sample may not be representative of the larger population, which in turn may affect the generalizability of our findings.

Directions for future research

Several other research avenues are worth exploring. First, we urge researchers to further investigate the relationship of strengths use (vs. intrinsic motivation) with other forms of work behaviors. Doing so will not only advance scientific knowledge on strengths use, but also highlight the practical value of promoting strengths use in the workplace.

Second, researchers should further examine the determinants of strengths use at work. Building on SDT, future research may explore whether other leader behaviors that satisfy employees' needs for autonomy, competence, or relatedness will facilitate their intrinsic motivation and strengths use, and if so, whether any factor moderates these relationships. We also expect various factors at multiple levels to influence strengths use. For example, potential organization-level determining factors include human resource management practices that may enable employees to feel empowered to use their strengths, while individual-level determinants may include personality traits.

Finally, although previous studies have primarily examined the main effects of strengths use on various psychological states and behaviors, strengths use may also play a moderator role in the relationships between various psychological states and work behaviors. For example, strengths use may strengthen the relationship between trust and cooperation in workgroup settings. Studies exploring the moderating role of strengths use would further enrich the body of knowledge on strengths use.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing the interpreting interactions*. Newbury Park: Sage.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*, 179–211.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*, 411–423.

Avey, J. B., Luthans, F., Hannah, S. T., Sweetman, D., & Peterson, C. (2012). Impact of employees' character strengths of wisdom on stress and creative performance. *Human Resource Management Journal, 22*, 165–181.

Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: Current theories, research, and future directions. *Annual Review of Psychology, 60*, 421–449.

Bentler, P. M., & Bonnett, D. G. (1990). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin, 88*, 588–606.

Berkowitz, L. (1972). Social norms, feelings, and other factors affecting helping and altruism. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 6, pp. 63–108). New York, NY: Academic Press.

Buckingham, M. (2007). *Go put your strengths to work*. New York, NY: Free Press.

Cameron, K. S., Dutton, J. E., & Quinn, R. E. (2003). *Positive organizational scholarship: Foundations of a new discipline*. San Francisco, CA: Berrett-Koehler.

Cerasoli, C. P., Nicklin, J. M., & Ford, M. T. (2014). Intrinsic motivation and extrinsic incentives jointly predict performance: A 40-year meta-analysis. *Psychological Bulletin, 140*, 980–1008.

Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology, 64*, 89–136.

Clifton, D., & Anderson, E. (2002). *StrengthsQuest: Discover and develop your strengths, in academics, career, and beyond*. Washington, DC: The Gallup Organization.

Clifton, D., & Harter, J. K. (2003). Investing in strengths. In K. Cameron, J. Dutton, & R. Quinn (Eds.), *Positive organizational scholarship: Foundations of a new discipline* (pp. 111–121). San Francisco, CA: Barrett-Kochler.

Conway, J., & Lance, C. (2010). What reviewers should expect from authors regarding common method bias in organizational research. *Journal of Business and Psychology, 25*, 325–334.

Dawson, J. F. (2014). Moderation in management research: What, why, when, and how. *Journal of Business and Psychology, 29*, 1–19.

Deci, E. L., Connell, J. P., & Ryan, R. M. (1989). Self-determination in a work organization. *Journal of Applied Psychology, 74*, 580–590.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum.

Deci, E. L., & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology, 53*, 1024–1037.

Deci, E. L., & Ryan, R. M. (2000). The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227–268.

Duarte, N. T., Goodson, J. R., & Klich, N. R. (1994). Effects of dyadic quality and duration on performance appraisal. *Academy of Management Journal, 37*, 499–521.

Dubreuil, P., Forest, J., & Courcy, F. (2014). From strengths use to work performance: The role of harmonious passion, subjective vitality, and concentration. *The Journal of Positive Psychology, 9*, 335–349.

Edwards, J. R., & Shipp, A. J. (2007). The relationship between person-environment fit and outcomes: An integrative theoretical framework. In C. Ostroff & T. A. Judge (Eds.), *Perspectives on organizational fit* (pp. 209–258). San Francisco, CA: Jossey-Bass.

Endler, N. S., & Magnusson, D. (1976). Toward an interactional psychology of personality. *Psychological Bulletin, 83*, 956–974.

Evans, M. G. (1985). A Monte Carlo study of the effects of correlated method variance in moderated multiple regression analysis. *Organizational Behavior and Human Decision Processes, 36*, 305–323.

Forest, J., Mageau, G. A., Crevier-Braud, L., Bergeron, E., Dubreuil, P., & Lavigne, G. L. (2012). Harmonious passion as an explanation of the relation between signature strengths' use and well-being at work: Test of an intervention program. *Human Relations, 65*, 1233–1252.

Gagné, M. (2003). The role of autonomy support and autonomy orientation in prosocial behavior engagement. *Motivation and Emotion, 27*, 199–223.

Gagné, M. (2009). A model of knowledge-sharing motivation. *Human Resource Management, 48*, 571–589.

Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior, 26*, 331–362.

Gagné, M., Forest, J., Gilbert, M.-H., Aubé, C., Morin, E., & Malorni, A. (2010). The motivation at work scale: Validation evidence in two languages. *Educational and Psychological Measurement, 70*, 628–646.

Govindji, R., & Linley, P. A. (2007). Strengths use, self-concordance and well-being: Implications for strengths coaching and coaching psychologists. *International Coaching Psychology Review, 2*, 143–153.

Grant, A. M. (2008). Does intrinsic motivation fuel the prosocial fire? Motivational synergy in predicting persistence, performance, and productivity. *Journal of Applied Psychology, 93*, 48–58.

Guay, F., Boggiano, A. K., & Vallerand, R. J. (2001). Autonomy support, intrinsic motivation, and perceived competence: Conceptual and empirical linkages. *Personality and Social Psychology Bulletin, 27*, 643–650.

Harzer, C., & Ruch, W. (2012). When the job is a calling: The role of applying one's signature strengths at work. *The Journal of Positive Psychology, 7*, 362–371.

Harzer, C., & Ruch, W. (2013). The application of signature character strengths and positive experiences at work. *Journal of Happiness Studies, 14*, 965–983.

Harzer, C., & Ruch, W. (2014). The role of character strengths for task performance, job dedication, interpersonal facilitation, and organizational support. *Human Performance, 27*, 183–205.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford.

Ho, V. T., & Pollack, J. M. (2014). Passion isn't always a good thing: Examining entrepreneurs' network centrality and financial performance with a dualistic model of passion. *Journal of Management Studies, 51*, 433–459.

Ho, V. T., Wong, S., & Lee, C. H. (2011). A tale of passion: Linking job passion and cognitive engagement to employee work performance. *Journal of Management Studies, 48*, 26–47.

Isen, A. M., & Levin, P. F. (1972). Effect of feeling good on helping: Cookies and kindness. *Journal of Personality and Social Psychology, 21*, 384–388.

Jöreskog, K. G., & Sörbom, D. (2006). LISREL (Version 8.8) [Computer software]. Chicago, IL: Scientific Software International.

Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluation traits – Self-esteem, generalized self-efficacy, locus of control, and emotional stability – With job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology, 86*, 80–92.

Kline, R. B. (2005). *Principles and practice of structural equation modeling*. New York, NY: Guilford.

Linley, P. A. (2008). *Average to A+: Realizing strengths in yourself and others*. Coventry: CAPP Press.

Linley, P. A., & Harrington, S. (2006). Strengths coaching: A potential-guided approach to coaching psychology. *International Coaching Psychology Review, 1*, 37–46.

Linley, P. A., Nielsen, K. M., Wood, A. M., Gillett, R., & Biswas-Diener, R. (2010). Using signature strengths in pursuit of goals: Effects on goal progress, need satisfaction, and well-being, and implications for coaching psychologists. *International Coaching Psychology Review, 5*, 6–15.

Littman-Ovadia, H., & Steger, M. F. (2010). Character strengths and well-being among volunteers and employees: Toward an integrative model. *The Journal of Positive Psychology, 5*, 419–430.

Luthans, F. (2002). Positive organizational behavior: Developing and managing psychological strengths. *Academy of Management Executive, 16*, 57–72.

Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224–253.

Montes, S. D., & Zweig, D. (2009). Do promises matter? An exploration of the role of promises in psychological contract breach. *Journal of Applied Psychology, 94*, 1243–1260.

Moreau, E., & Mageau, G. A. (2012). The importance of perceived autonomy support for the psychological health and work satisfaction of health professionals: Not only supervisors count, colleagues too! *Motivation and Emotion, 36*, 268–286.

Moss, S. E., Sanchez, J. I., Brumbaugh, A. M., & Borkowski, N. (2009). The mediating role of feedback avoidance behavior in the LMX-performance relationship. *Group & Organization Management, 34*, 645–664.

Owens, B. P., Johnson, M. D., & Mitchell, T. R. (2013). Expressed humility in organizations: Implications for performance, teams, and leadership. *Organization Science, 24*, 1517–1538.

Oyserman, D., & Markus, H. R. (1996). The self as social representation. In S. Moscovici & U. Flick (Eds.), *Psychology of the social* (pp. 38–70). Berlin: Rowohlt.

Peterson, C., & Park, N. (2006). Character strengths in organizations. *Journal of Organizational Behavior, 27*, 1149–1154.

Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. New York, NY: Oxford University Press.

Piccolo, R. F., & Colquitt, J. A. (2006). Transformational leadership and job behaviors: The mediating role of core job characteristics. *Academy of Management Journal, 49*, 327–340.

Proctor, C., Maltby, J., & Linley, P. A. (2011). Strengths use as a predictor of well-being and health-related quality of life. *Journal of Happiness Studies, 12*, 153–169.

Rath, T. (2007). *StrengthsFinder 2.0.* New York, NY: Gallup Press.

Rath, T., & Conchie, B. (2009). *Strength based leadership: Great leaders, teams, and why people follow*. New York, NY: Gallup Press.

Raub, S., & Robert, C. (2010). Differential effects of empowering leadership on in-role and extra-role employee behaviors: Exploring the role of psychological empowerment and power values. *Human Relations, 63*, 1743–1770.

Ryan, R. M., Huta, V., & Deci, E. L. (2008). Living well: A self-determination theory perspective on eudaimonia. *Journal of Happiness Studies, 9*, 139–170.

Schneider, B. (1983). Interactional psychology and organizational behavior. *Research in Organizational Behavior, 5*, 1–13.

Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*, 5–14.

Singelis, T. M. (1994). The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin, 20*, 580–591.

Tsui, A. S., & O'Reilly, C. A., III. (1989). Beyond simple demographic effects: The importance of relational demography in superior-subordinate dyads. *Academy of Management Journal, 32*, 402–423.

Waterman, A. S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology, 64*, 678–691.

Weinstein, N., & Ryan, R. M. (2010). When helping helps: Autonomous motivation for prosocial behavior and its influence on well-being for the helper and recipient. *Journal of Personality and Social Psychology, 98*, 222–244.

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management, 17*, 601–617.

Williams, G. C., Gagné, M., Ryan, R. M., & Deci, E. L. (2002). Facilitating autonomous motivation for smoking cessation. *Health Psychology, 21*, 40–50.

Wood, A. M., Linley, P. A., Maltby, J., Kashdan, T. B., & Hurling, R. (2011). Using personal and psychological strengths leads to increases in well-being over time: A longitudinal study and the development of the strengths use questionnaire. *Personality and Individual Differences, 50*, 15–19.