

ORIGINAL RESEARCH

Exploring the Effectiveness of Self-and Other-Focused Happiness: The Moderating Role of Job Resources

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Purpose: This paper aims to redefine happiness goals and explore the conditions and mechanisms through which these redefined happiness goals influence work-related outcomes.

Methods: The study developed and validated scales for self-focused happiness and other-focused happiness through exploratory factor analyses of 244 employees and confirmatory factor analyses of 300 employees. The proposed theoretical model was subsequently tested using a time-lagged analysis with data from 556 supervisor-employee dyads.

Results: The findings provide strong evidence for the categorization of happiness goals into self-focused happiness and other-focused happiness. Furthermore, both self-focused and other-focused happiness significantly contribute to work-related vigor, subsequently influencing employee creativity. Additionally, the impact of these happiness goals on vigor and creativity is contingent upon the availability of job resources.

Conclusion: This study highlights the substantial role of self-focused and other-focused happiness in enhancing employee vigor and creativity. However, the extent of these effects depends on the level of available job resources. These outcomes carry notable implications for the fields of positive psychology, positive organizational behavior, and creativity.

Keywords: self-focused happiness, other-focused happiness, work-related vigor, job resources, creativity

Introduction

The pursuit of happiness has perennially been a central human aspiration. 1,2 In academia, this pursuit has been found to be a predictor of some outcomes. For example, Lin and Chan demonstrated that happiness motives influenced well-being outcomes.³ Gentzler et al found a correlation between happiness goals and an array of social and emotional outcomes in youth. Jia et al found that eudaimonic motivation predicted adolescents' positive affect and life satisfaction. 5

While prior research offers invaluable insights, it predominantly focuses on individual happiness, such as happiness motives³ and happiness goals, ⁴ overlooking instances where happiness goals revolve around the happiness of others. Additionally, prior research has largely examined the impact of the pursuit of happiness on life and affective outcomes, such as positive affect and life satisfaction,⁵ while rarely delving into its influence on work-related outcomes. Furthermore, the scientific exploration of the circumstances and mechanisms through which the pursuit of happiness yields desirable outcomes remains in its early stages. Therefore, in the following sections, we synthesize insights from the fields of psychology and organizational behavior, offering a fresh perspective on defining happiness goals, and report our findings on the conditions and mechanisms through which these redefined happiness goals can influence work-related outcomes.

Researchers posit that happiness comprises two components: an affective component and a meaning component.⁶ The affective component emphasizes individual needs, while the meaning component emphasizes transcending oneself.^{6,7} This paradigm suggests that aiding others in achieving happiness can become a personal objective. In light of this perspective, we propose that there are two goals toward which the pursuit of happiness can be directed: self-focused happiness, which pertains to personal well-being, and other-focused happiness, where fulfillment stems from the happiness of others.

Furthermore, goals shape the subjective meaning and value people attribute to events, thus molding their experiences.⁸ In this study, we consider work-related vigor, a positive affective response to one's ongoing interactions with significant elements in one's job and work environment,9 to be a work-related outcome. The study of work-related vigor has the potential to shed light on human goals at work, 10 and work-related vigor can often be considered an indicator of a person's optimal psychological functioning. 11,12 We believe that in order to achieve happiness goals, people engage in a variety of activities that can increase their work-related vigor.

While the pursuit of both self-focused and other-focused happiness can positively influence work-related vigor, we seek to ascertain under what circumstances one might have a stronger effect than the other. Prior research suggests that individual experiences within organizations are co-shaped by the interplay of individual characteristics and contextual factors. ¹³ The concept of vigor is rooted in conservation of resources theory. 9,11 One aim of this article is to discuss the differences in the impact of selffocused and other-focused happiness on work-related vigor when individuals have varying job resources. We argue that otherfocused happiness can only be achieved through other-focused behaviors, while self-focused happiness can be achieved through both self-focused and other-focused behaviors. Limited resources, such as time or energy, often lead to a competitive orientation among people, causing them to prioritize activities that are self-centered. 14,15 At this point, self-focused happiness may have a greater impact on work-related vigor than other-focused behaviors. However, resourcefulness can stimulate other-focused behaviors. 16 Under such conditions, the positive influence of other-focused happiness on work-related vigor significantly increases. Other-focused happiness can have a greater impact on work-related vigor than self-focused happiness.

While we have primarily focused on work-related vigor as a proximal psychological outcome of happiness goals, it could also serve as a conduit, transmitting the effects of happiness goals to downstream outcomes. In this study, we specifically examine employees' creativity, conceptualized as the production of novel and useful ideas, insights, or problem solutions. 17-19 We argue creativity is an important outcome to consider because it naturally emanates from employee vigor and plays a crucial role in enhancing employee performance and facilitating enterprise development. 11,20,21 The second objective of this article is to examine whether self-focused happiness and otherfocused happiness can influence employee creativity through work-related vigor.

Combining the above discussions, we further propose that the third objective of this article is to explore the differential impact of self-focused happiness and other-focused happiness on employee creativity through work-related vigor when work resources vary. We argue that when job resources are plentiful, other-focused happiness has a stronger indirect effect on employee creativity than self-focused happiness. In contrast, when job resources are scarce, selffocused happiness has a stronger indirect effect on employee creativity than other-focused happiness.

Our proposed model is presented in Figure 1. Through this research, we aim to make several significant theoretical and empirical contributions. Theory-wise, we utilize insights from psychology and organizational behavior to extend and

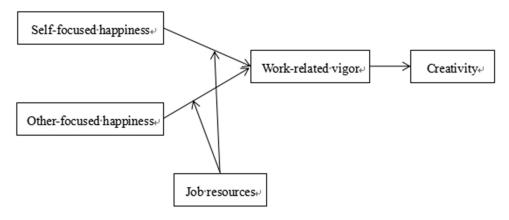


Figure I Theoretical Model.

enrich understanding of happiness experiences and innovation. Specifically, we introduce the concepts of self-focused and other-focused happiness, delineating their distinct processes and impacts, and thereby emphasizing the importance of differentiating between various means of pursuing happiness. On the empirical front, we investigate job resources as a moderating variable, underscoring that firms can indirectly influence the relationship between happiness goals and employees' work-related vigor and creativity by providing suitable job resources.

Literature Review and Model Development

Self- and Other-Focused Happiness

We define happiness goals as the objective of enhancing one's own happiness and that of others. Happiness is argued to be a comprehensive, subjective appraisal of the perceived quality of one's life. ^{6,22} It comprises two essential components: (1) an affective facet, denoted by a predominance of positive emotions over negative ones, and (2) a meaning facet, denoted by a sense of purpose and value permeating one's life. ^{6,23,24}

The affective component appears to be deeply anchored in the satisfaction of one's personal needs and desires, while the meaning component is often linked with engagement in causes that transcend the self. The meaning component is associated with performing positive acts for the benefit of others. Assisting others—including contributing to their happiness—instills a sense of meaning, which can indirectly boost the helper's own happiness. Therefore, individuals may perceive both personal happiness and the happiness of others as integral facets of their happiness goals.

Based on this understanding, we categorize happiness goals into two types: (1) the goal of self-focused happiness, which is centered around cultivating one's own happiness, and (2) the goal of other-focused happiness, defined by the aim to augment others' happiness. Given the positive correlation between the affective and meaning components of happiness, we propose that these two happiness goals are fundamentally intertwined. Individuals may simultaneously desire to enhance both their own and others' happiness.

While self-focused and other-focused happiness goals are intrinsically related, they are distinct from the similar constructs of hedonic and eudaimonic motives. Hedonic motives, eudaimonic motives, and self-focused happiness goals are all centered around the actors' desire to benefit themselves. However, whereas hedonic motives prioritize the pursuit of enjoyment and pleasure and avoidance of discomfort, ^{25–27} eudaimonic motives underscore the strive for self-actualization and the realization of one's true potential, ^{26,27} and self-focused happiness emphasizes the pursuit of both enjoyment and personal development. In contrast to all three, other-focused happiness involves aspiring to elevate the pleasure and development of others.

Prior research offers some preliminary support for this classification. Crocker and Canevello demonstrated that when individuals interact with others, they harbor self-image goals and compassion goals (eg, providing support for others).²⁸ Similarly, motives in informal mentoring scenarios have been segregated into self-focused and other-focused motives. The latter specifically targets improving the protégé's welfare.^{29–31}

Self- and Other-Focused Happiness and Work-Related Vigor: The Moderating Role of Job Resources

Work-related vigor encapsulates three key facets: physical strength, emotional energy, and cognitive vitality. 11,32 These facets interact and form a resource pool 11 whose level may be affected by subsequent resource-providing and resource-draining processes and events. 33

Drawing from happiness research, we argue that other-focused happiness is primarily achieved through participation in prosocial or helping activities,^{34,35} which impact resource-providing and resource-draining processes. Prosocial activities can foster high-quality relationships,³⁶ fortifying physiological resourcefulness by strengthening the cardiovascular, immune, and neuroendocrine systems,³⁷ and helping employees gain access to diverse information and viewpoints,³⁸ thereby enhancing their cognitive vitality. Additionally, focusing on how their actions benefit others can enhance employees' empathic abilities.^{36,39} Furthermore, the experience of helping others fosters other-focused attention, shielding employees from energy expenditure caused by personal problems, distress, and frustrations.³⁹ Therefore, other-focused happiness has the potential to increase employees' work-related vigor.

Conversely, self-focused happiness can be achieved through both self-focused and other-focused activities. It also influences employee vigor via resource provision and consumption processes. For instance, in their pursuit of personal growth, employees may engage in learning at work, which increases their exposure to many vital sources of information and enhances their cognitive vitality—a key component of vigor. 40 Employees may also partake in restorative activities, thereby replenishing their physical and mental energy reserves for work. 33,41 Additionally, employees can achieve self-focused happiness through positive reciprocal relationships, which in turn drive them to engage in other-focused behaviors. These other-focused behaviors can aid employees in gaining physical, cognitive, and emotional energy. 37,39,42 Consequently, self-focused happiness can also enhance employees' work-related vigor.

The influence of job resources on the relationship between happiness goals and work-related vigor is also important. We propose that job resources have a stronger impact on the correlation between other-focused happiness and workrelated vigor than on the link between self-focused happiness and work-related vigor. This is because other-focused activities are more bounded by job resources and likely gives the individual more leeway.⁴³

Building upon our prior assertions, it's important to note that while other-focused behaviors are a crucial means to realize other-focused happiness, achieving self-focused happiness depends on both self-focused and other-focused behaviors. Situations where job resources are scarce incites a competitive orientation, prompting individuals to withdraw from other-focused behaviors. 14,15 As a result, the positive impact of other-focused happiness on work-related vigor is considerably diminished, while the positive influence of self-focused happiness on work-related vigor declines only slightly.

When job resources are abundant, the dynamics may shift. This is primarily because resourcefulness (ie, a perceived state of abundant resources) can stimulate other-focused behaviors. ¹⁶ Under such conditions, the positive influence of the pursuit of otherfocused happiness on work-related vigor markedly increases, and the positive impact of self-focused happiness on work-related vigor only slightly increases. Therefore, when organizations furnish more job resources, other-focused happiness may have a stronger positive effect on work-related vigor than self-focused happiness.

Given the above considerations, we predict:

Hypothesis 1: The effects of self- or other-focused happiness on work-related vigor are moderated by job resources, such that (a) when job resources are plentiful, other-focused happiness has a stronger effect on work-related vigor than selffocused happiness, and (b) when job resources are scarce, self-focused happiness has a stronger effect on work-related vigor than other-focused happiness.

Work-Related Vigor and Creativity

Creativity is a function of cognitive flexibility as well as perseverance and persistence. ¹⁹ Work-related vigor belongs to the family of positive affects. 11 According to the broaden-and-build theory of positive affect, positive emotions are known to expand thought-action repertoires. 44,45 In the workplace context, work-related vigor broadens cognitive scope and promotes flexibility, 45,46 which aids in generating creative solutions. 19,47 In addition, work-related vigor entails the perceived abundance of physical, emotional, and cognitive resources, 48 thereby enabling employees to better handle the challenges inherent in creative activities. 47,49 Furthermore, work-related vigor can help individuals gain or build additional resources by initiating an upward spiral, 44,50,51 which is conducive to persisting at creative tasks. 45 For these reasons, we posit that work-related vigor is positively correlated with creativity.

Integrating the impacts of happiness goals on work-related vigor, we propose the following:

Hypothesis 2: Work-related vigor mediates the relationship between (a) self- and (b) other-focused happiness and employee creativity.

The Comprehensive Model

Hypothesis 1 proposes that job resources moderate the relationship between happiness goals and vigor. Specifically, when job resources are abundant, other-focused happiness exerts a stronger influence on work-related vigor than self-focused happiness. Conversely, when job resources are scarce, self-focused happiness has a stronger impact on work-related vigor than other-focused happiness. Hypothesis 2 proposes that work-related vigor mediates the relationship between happiness goals and employee creativity. Combining these predictions, we propose an overall model, which is as follows:

Hypothesis 3: The indirect effect of self- or other-focused happiness on employee creativity through work-related vigor is moderated by job resources, such that (a) when job resources are plentiful, other-focused happiness has a stronger indirect effect on employee creativity than self-focused happiness, and (b) when job resources are scarce, self-focused happiness has a stronger indirect effect on employee creativity than other-focused happiness.

Method

Samples and Procedures

We conducted a three-wave survey (Time 1, Time 2, and Time 3) using data collected from employees and their direct supervisors. The study was pre-registered at the following link: https://doi.org/10.17605/OSF.IO/VF7X9. To recruit participants, we reached out to several high-tech companies in Central China through our social networks. These companies provided ideal sample pools because employee creativity was highly valued and observable within their organizations. With the assistance of the human resources department staff, all data were collected on-site during working hours by either the authors or research assistants. The participants were informed about the purpose of the study, in accordance with the Declaration of Helsinki.

At Time 1, employees were asked to provide information regarding their self-focused happiness, other-focused happiness, job resources, and demographic details. A total of 701 completed questionnaires were received, constituting an 86% response rate. One month later, at Time 2, the same 701 employees were asked to report on their work-related vigor. We obtained 627 usable questionnaires devoid of missing data, corresponding to an 89% response rate. At Time 3, the immediate supervisors of these 627 employees were invited to evaluate the employees' creativity. We received usable responses from 165 supervisors, a response rate of 93%. By pairing the questionnaires using a unique identification code, we successfully matched the questionnaires of 556 employees with those of 165 direct supervisors.

The final sample of employees comprised 56.3% males, with 79.3% holding at least a college degree. Their average age was 31.98 years ($SD_{age} = 5.34$), and their average organizational tenure was 4.91 years ($SD_{tenure} = 4.08$). Among the supervisors, 60.0% were male, while 63.0% held at least a college degree. Their average age was 33.33 years ($SD_{age} = 8.14$), and their average organizational tenure was 10.60 years ($SD_{tenure} = 8.36$). No significant differences in terms of gender, age, education level, or organizational tenure were found between the final sample of employees and those who had dropped out at some point during the study.

Measures

Unless stated otherwise, all survey items were originally formulated in English. To ensure consistency in meaning, we followed Brislin's translation and back-translation procedure.⁵² Participants responded to all items on a seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree).

Self-Focused Happiness/Other-Focused Happiness (T1)

Due to the unavailability of existing measures, we followed Hinkin's scale development procedure to develop and validate the measures for self-focused happiness and other-focused happiness.⁵³ Drawing from the happiness literature^{54–56} and subjective well-being literature,^{4,5} we initially generated four items for each construct. The items for self-focused happiness included: "I strive to enhance my emotional well-being", "I seek greater happiness in life", "I aim to avoid unpleasant experiences", and "I try not to feel bad". The items for other-focused happiness were: "I strive to enhance the emotional well-being of others", "I seek to bring happiness to others", "I aim to help others avoid unpleasant experiences", and "I try to prevent others from feeling bad".

In the next phase, we enlisted the aid of 12 organizational behavior-specialized professors to assess the items' alignment with the constructs the items were intended to assess. These experts were asked to evaluate them using a 7-point scale, ranging from 1 (Item is an extremely poor match) to 7 (Item is an extremely good match). The results revealed strong alignment, with an average score of 6.13 for self-focused happiness items and 5.88 for other-focused happiness items. Furthermore, there was significant agreement among the evaluators for both measures, with interrater agreement values of 0.89 and 0.88 for self-focused happiness and other-focused happiness, respectively. This suggests that our measures possess robust content reliability.

Moreover, a different sample (n = 244, with 42.2% male participants, average age = 31.25 years, average tenure = 5.89 years) was used to assess the scales' factor structure. This data was collected via the Credamo platform. An exploratory factor analysis (EFA) revealed two factors with eigenvalues over 1.00. Both the self-focused happiness items (with factor loadings ranging from

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0.70 to 0.96) and the other-focused happiness items (with factor loadings ranging from 0.73 to 0.89) displayed satisfactory loadings. Additionally, the scales were highly internally consistency, with Cronbach's alpha coefficients of 0.868 for self-focused happiness and 0.881 for other-focused happiness. The correlation between the two measures was determined to be 0.35. Overall, these results corroborate the proposed factor structure of our measures.

In our final step, we tested the convergent and discriminant validity and the nomological network of the newly developed scales using a separate sample (n = 300). This sample was comprised of 47.3% male participants, with an average age of 32.75 years and an average tenure of 6.60 years. Data was collected via the Credamo platform. We first combined the self-focused happiness and other-focused happiness scales into a single factor for confirmatory factor analysis (CFA). Our findings indicated that a two-factor model fit the data significantly better than a one-factor model ($\Delta \chi^2(1) = 570.37$, p < 0.001).

Second, we considered hedonic and eudaimonic motives (hedonic motives $\alpha = 0.910$, eudaimonic motives $\alpha = 0.929$). Consistent with expectations, the self-focused happiness scale displayed positive correlations with both hedonic motives (r = 0.31, p < 0.001) and eudaimonic motives (r = 0.17, p < 0.001), while the other-focused happiness scale did not show significant correlations with hedonic motives (r = 0.02, p > 0.01) or eudaimonic motives (r = 0.00, p > 0.01). Furthermore, confirmatory factor analysis demonstrated that a four-factor model fit the data significantly better than alternative models (p < 0.001 for all model comparisons).

In addition, we gathered data from employees regarding their perceptions of emotional support from coworkers ($\alpha = 0.856$), ⁵⁷ self-sacrificial leadership ($\alpha = 0.909$), ⁵⁸ and relational conflict ($\alpha = 0.828$). ⁵⁹ In line with our expectations, we found that emotional support was positively correlated with other-focused happiness (r = 0.29, p < 0.001), but showed no correlation with self-focused happiness (r = -0.10, p > 0.01). Likewise, self-sacrificial leadership was positively associated with other-focused happiness (r = 0.28, p < 0.001), yet bore no relation to self-focused happiness (r = -0.38, p < 0.001). Interestingly, relational conflict was negatively correlated with other-focused happiness (r = -0.38, p < 0.001), but was positively correlated with self-focused happiness (r = 0.16, p < 0.001).

To further validate our measurement model, alternative model tests were conducted. The results consistently demonstrated that the five-factor measurement model, which included self-focused happiness, other-focused happiness, emotional support, self-sacrificial leadership, and relational conflict, provided a significantly better fit to the data compared to alternative models (p < 0.001 for all model comparisons). Taken together, these findings provide strong evidence for the discriminant validity, convergent validity, and criterion validity of our measures.

In our main study, the Cronbach's α coefficient for both scales was 0.915. Results of confirmatory factor analyses indicated that the two-factor measurement model fit the data well ($\chi^2 = 55.965$; df = 19; CFI = 0.989, TLI = 0.983, RMSEA = 0.059, SRMR = 0.019) and better than a one-factor model ($\Delta\chi^2(1) = 1312.5$, p < 0.001).

Job Resources (T1)

We measured job resources using the four-item scale used by Du et al.⁶⁰ This scale includes two subscales: feedback and social support. A sample item from the feedback subscale is: "I receive sufficient information about the results of my work". A sample item of the social support subscale is: "If necessary, I can ask my colleagues for help". The Cronbach's α of this scale was 0.894.

Work-Related Vigor (T2)

We measured vigor using the Shirom-Melamed Vigor Measure (SMVM),⁹ which asks respondents to indicate how often they experience each of several feeling states in the last 30 days. This scale consists of three subscales: physical strength (five items; eg, "At work, I feel full of pep"), emotional energy (four items; eg, "I feel able to be sensitive to the needs of coworkers and customers"), and cognitive liveliness (five items; eg, "At work, I feel I can think rapidly"). Responses ranged from 1 (never or almost never) to 7 (always or almost always). The Cronbach's α coefficient for this scale was 0.950.

Employee Creativity (T3)

We evaluated employee creativity using the 4-item scale developed by Farmer et al. 61 An example item from this scale is: "This employee seeks new ideas and ways to solve problems". The Cronbach's α for this scale was 0.901.

Control Variables (T1)

In our study, we controlled for employee gender (0 = male, 1 = female), age (in years), education level (rated from 1 for a college degree or lower to 4 for a doctoral degree), and organizational tenure (in years). This was based on the understanding that males and females may exhibit different average levels of physical vigor and emotional energy. Furthermore, age has been found to be associated with vigor. Also, factors such as organizational tenure and level of education may potentially impact creativity. Notably, even though we factored in these variables while testing our hypothesized model, the results remained consistent when these variables were excluded.

Analytic Strategy

We utilized Mplus8 and RStudio software for hypothesis testing. Considering the nested structure of our data, we implemented a mixed-effects regression model to account for non-independent influences within teams. ⁶² To evaluate whether self-focused and other-focused happiness exert different effects on work-related vigor conditionally, we conducted a difference test at both "higher" and "lower" values of job resources. ⁶³ This test essentially compares the disparity between coefficient estimates on dependent variables from an identical sample.

To assess the indirect effects, we incorporated estimates of both self-focused and other-focused happiness on vigor, along with vigor on employee creativity, into the Monte Carlo simulation. An indirect effect is deemed to be present if the resultant 95% confidence intervals (CIs) exclude zero. In order to investigate whether self- and other-focused happiness have distinct indirect effects on employee creativity, we applied the Monte Carlo simulation approach, running 20,000 repetitions, to examine the 95% CIs at both "higher" and "lower" job resource values.

Results

The descriptive statistics for and correlations between the variables are presented in Table 1.

Preliminary Analyses

Prior to hypothesis testing, we conducted confirmatory factor analyses. The results showed that the hypothesized five-factor model (self-focused happiness, other-focused happiness, job resources, work-related vigor, and employee creativity) demonstrated a good fit with the data ($\chi^2 = 361.325$; df = 142; CFI = 0.974; TLI = 0.968; RMSEA = 0.053; SRMR = 0.053) and exhibited better fit than alternative models. These findings support the factorial validity of the measures. To address potential common method bias, we performed a common method bias test following Podsakoff et al.⁶⁴ We added a latent common method factor to the same-source four-factor model and found that the addition of this factor did not improve the fit ($\Delta\chi^2(15) = 19.779$, p > 0.05). Thus, there is no evidence of common method bias in this study.

Test of Hypotheses

To investigate Hypothesis 1, which suggests that the influence of self- or other-focused happiness on work-related vigor is contingent upon job resources, we conducted an analysis examining the effects of self-focused happiness, other-

Table I Means, Standard Deviations, and Correlations Among Variables									
	Variable	м	SD		2	3			

Variable	M	SD	ı	2	3	4	5	6	7	8	9
I. Gender	0.44	0.496	1.000								
2. Age	31.98	5.339	−0.05 I	1.000							
3. Education	1.94	0.598	0.069	-0.118**	1.000						
4. Organizational tenure	4.91	4.083	0.038	0.597**	-0.125**	1.000					
5. Self-focused happiness	4.58	0.917	0.016	-0.012	-0.012	0.046	1.000				
6. Other-focused happiness	4.18	0.901	0.019	0.017	-0.050	0.092*	0.384**	1.000			
7. Job resources	4.26	0.908	-0.038	0.008	0.015	0.032	0.329**	0.370**	1.000		
8. Work-related vigor	4.28	0.803	-0.070	-0.023	-0.046	0.012	0.452**	0.386**	0.370**	1.000	
9. Employee creativity	5.00	0.951	0.063	-0.033	0.006	0.021	0.221**	0.235**	0.206**	0.260**	1.000

Notes: N=556; all variables are unstandardized. Gender: 0 = male; 1 = female. Education: 1 = college degree or lower; 2 = bachelor's degree; 3 = master's degree; 4 = doctorate degree. *p < 0.05, *** p < 0.01.

focused happiness, the interaction term between self-focused happiness and job resources, and the interaction term between other-focused happiness and job resources on work-related vigor. The results, presented in Table 2, support our hypotheses. We found significant positive relationships between both self-focused happiness and work-related vigor (β = 0.279, p < 0.001) and other-focused happiness and work-related vigor ($\beta = 0.166$, p < 0.01). Additionally, both interaction terms, that is, the interactions between self-focused happiness and job resources ($\beta = 0.132$, p < 0.05) and between other-focused happiness and job resources ($\beta = 0.275$, p < 0.01), significantly predicted work-related vigor.

Additional analysis using a difference test demonstrated that under conditions of scarce job resources, the impact of self-focused happiness on work-related vigor was significantly stronger than the effect of other-focused happiness (difference = 0.243, p < 0.05; see Table 3). However, when job resources were abundant, there was no significant difference between the effects of other-focused happiness and self-focused happiness on work-related vigor (difference = 0.017, p > 0.05). As a result, Hypothesis 1a was not supported, while Hypothesis 1b received support.

Our Hypothesis 2 proposed that the relationship between self-focused and other-focused happiness and employee creativity would be mediated by work-related vigor. As expected, a positive correlation was observed between workrelated vigor and employee creativity ($\beta = 0.237$, p < 0.01). Utilizing Monte Carlo simulations, we found, consistent with Hypothesis 2a, a positive indirect effect of self-focused happiness on employee creativity, mediated by work-related vigor (indirect effect = 0.066, 95% CI = [0.032, 0.107]). Likewise, the indirect effect of other-focused happiness on

Table 2 Path Analysis Results

Variable	Work-Rela	ted Vigor	Creativity		
	β	SE	β	SE	
Gender	-0.110	0.063	0.140	0.084	
Age	-0.005	0.009	-0.009	0.010	
Education	-0.036	0.052	0.023	0.068	
Organizational tenure	0.001	0.013	0.007	0.014	
Self-focused happiness	0.279***	0.041	0.100*	0.044	
Other-focused happiness	0.166**	0.050	0.128**	0.047	
Job resources	0.126**	0.042	0.155**	0.045	
Self-focused happiness * Job resources	0.132*	0.060	0.006	0.096	
Other-focused happiness * Job resources	0.275***	0.060	0.010	0.074	
Work-related vigor			0.237***	0.058	

Notes: N=556; β coefficients are unstandardized. *p < 0.05. **p < 0.01. ***p < 0.001.

Abbreviation: SE, standard error.

Table 3 Summary of Conditional Direct and Indirect Effects

Independent Variable	Moderator	Stage		Effect			
	Job Resources	First (P _{x-m})	Second (P _{m-y})	Indirect (P _{x-m} ×P _{m-y})	95% CI of Indirect Effect		
Self-Focused Happiness	High (+1 SD)	0.399***	0.237***	0.095	[0.044, 0.155]		
	Low (-I SD)	0.160*	0.237***	0.038	[0.005, 0.080]		
	Difference (high- low)	0.239*		0.057	[0.0049, 0.123]		
Other-Focused Happiness	High (+1 SD)	0.416***	0.237***	0.099	[0.046, 0.163]		
	Low (-I SD)	-0.083	0.237***	-0.020	[-0.060, 0.015]		
	Difference (high- low)	0.499***		0.118	[0.051, 0.204]		
Difference (High _{other} - High _s	0.017		0.004	[-0.044, 0.054]			
Difference (Low _{self} - Low _{othe}	0.243*		0.058	[0.009, 0.120]			

Notes: N = 556. *p < 0.05. ****p < 0.001. Px-m= self-/ other- focused happiness on work-related vigor; Pm-v = work-related vigor on creativity.

Abbreviation: Cl. Confidence interval.

employee creativity via work-related vigor was also positive (indirect effect = 0.039, 95% CI = [0.013, 0.073]). Hence, both Hypotheses 2a and 2b were corroborated.

Hypothesis 3 suggested differential indirect effects of self-focused happiness and other-focused happiness on employee creativity. Specially, when job resources are plentiful, other-focused happiness has a stronger indirect effect on employee creativity than self-focused happiness. Conversely, when job resources are scarce, self-focused happiness has a stronger indirect effect on employee creativity than other-focused happiness. As shown in Table 3, under conditions of low job resources, self-focused happiness exerts a stronger indirect influence on creativity via work-related vigor than other-focused happiness does (difference = 0.058, 95% CI = [0.009, 0.120]). However, in the context of high job resources, no significant difference was found between the indirect effects of self-focused happiness and other-focused happiness on employee creativity through work-related vigor (difference = 0.004, 95% CI = [-0.044, 0.054]). Therefore, Hypothesis 3a was not substantiated, while Hypothesis 3b was supported.

Discussion

In this paper, we distinguish happiness goals into self-focused happiness and other-focused happiness. Through a multi-source and multi-time point survey, we found that both self-focused and other-focused happiness have a positive impact on work-related vigor. The specific effects of these happiness goals on vigor are contingent upon the availability of job resources. Specifically, when job resources are scarce, self-focused happiness has a stronger effect on work-related vigor than other-focused happiness. However, when job resources are abundant, there is no significant difference between the effects of other-focused happiness and self-focused happiness on employee creativity. Work-related vigor mediates the relationship between self-focused happiness and creativity as well as the relationship between other-focused happiness and creativity.

Further, the indirect effect of self- or other-focused happiness on employee creativity through work-related vigor is moderated by job resources. Specifically, under conditions of low job resources, self-focused happiness exerts a stronger indirect influence on creativity via work-related vigor than other-focused happiness does. However, in the context of high job resources, no significant difference was found between the indirect effects of self-focused happiness and other-focused happiness on employee creativity through work-related vigor. We seek explanations for two non-significant hypotheses and suggest that they may be due to the fact that when job resources are not considered, the influence of self-focused happiness on work-related vigor surpasses the impact of other-focused happiness.

Theoretical Contributions

Our research makes significant contributions to the fields of positive psychology, positive organizational behavior, and creativity. First, in the realm of positive psychology, our study introduces a new taxonomy of happiness goals. Previous research, such as the work of Crocker et al, 65 has highlighted the innate nature of both self-interest and concern for others. With the growing interest in positive psychology, there has been increased attention to the pursuit of happiness. However, prior categorizations of happiness goals, such as the distinction between hedonic and eudaimonic goals, 27 predominantly focus on self-centered pursuits and fail to capture individuals' concern for the happiness of others. In our study, we put forth a novel conceptualization of happiness goals, differentiating between self-focused happiness and other-focused happiness based on their distinct foci. Furthermore, we demonstrated the conceptual and psychological differences associated with these two types of happiness goals, thereby enriching the understanding of and development of research on happiness experiences.

Furthermore, our research augments the currently underdeveloped literature regarding links between happiness goals and work-related outcomes. While happiness has been a subject of study for many years, ⁶⁶ the impact of happiness goals on employee work-related outcomes remains a largely unexplored issue. Although previous research has investigated how happiness goals influence broader outcomes, ^{3,67} researchers have yet to incorporate an affective perspective into their theories about happiness goals. In addition, the conditions under which happiness goals substantially influence outcomes have not been thoroughly examined. The present research aims to illuminate the effect of happiness goals on employee creativity from the perspective of work-related vigor, and underscores the crucial moderating role of job resources. Thus, we are charting a new path for theory and research in the domain of happiness and work-related matters.

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Third, we answer calls to further investigate vigor's nomological network. 11,48 Scholars have studied the antecedents of vigor from different perspectives. 45,49,68 Vigor is related to motivational processes. 11,32,48 While other researchers have argued that vigor is a prerequisite for work motivation, 11,32 the role of happiness goals in promoting work-related vigor has not been examined previously. Importantly, our study elucidates the differential contributions of self- and other-focused happiness to work-related vigor through the introduction of job resources which sets the stage for further enhancing the understanding of the complex processes underlying work-related vigor.

Finally, we make novel contributions to creativity research. While previous studies have identified numerous antecedents of employee creativity, there is a lack of understanding regarding the connections between non-work-motivated antecedents and creativity outcomes. We address this gap by specifically exploring the reasons why employees' happiness goals precipitate creativity. Additionally, we focus on investigating the role of intervening variables, such as job resources, and provide insights into how happiness goals may impact employee creativity in the workplace. It is important to note that our argument, which suggests that vigor as an activated positive affect state promotes creativity not only through promoting cognitive flexibility but also through promoting perseverance, is not in conflict with the two-path model of creativity proposed by De Dreu et al. ¹⁹ This is because the model acknowledges that, besides hedonic tone and activation, other dimensions of mood states (eg, regulatory focus) may also be relevant to creativity.

Practical Implications

Our study also has important implications for practice. First, employees and organizations should recognize the potential impact of happiness goals on work-related outcomes. Our findings suggest that both self-focused and other-focused happiness act as critical catalysts for fostering positive affects such as vigor, which subsequently enhance creativity. Therefore, it is essential for employees to prioritize the pursuit of happiness in their work, and organizations should cultivate a culture that underlines the significance of pursuing happiness.

Second, as self-focused happiness and other-focused happiness influence employee vigor and creativity in different ways depending on the availability of job resources, organizations aiming to boost employee creativity can strategically implement a mix of happiness goals and job resources. In particular, assigning fewer job resources to individuals with a high level of motivation to pursue self-focused happiness and extending more resources to those with high other-focused happiness goals might help amplify overall innovation within the organization.

Lastly, the findings of this study underscore the significance of employees' vigor. Managers should take into account strategies to enhance and maintain high levels of vigor among employees. This can be achieved through various means, such as providing freedom and supervisor support, fostering high-quality connections within the workplace, and encouraging employees to take regular micro-breaks and utilize effective work-related strategies. 41,72

Limitations and Future Research

Although our study possessed several strengths, we acknowledge certain limitations. First, it is important to recognize that culture exerts a significant influence on individuals' values, motives, and behaviors.³¹ Western cultures often emphasize individuality and self-actualization, while Chinese culture places greater emphasis on relationship harmony and interdependence.^{6,27,50} As our research was conducted in China, the cross-cultural applicability of our research findings is limited. In addition, our samples come from several high-tech companies in Central China, and we cannot ensure that the research hypothesis holds true for employees from other industries or organizations. Therefore, we encourage further studies to replicate these findings in diverse contexts.

Second, although our study employed a longitudinal design to examine our hypothesis, we acknowledge that establishing causal relationships is fraught with difficulty in non-experimental research. In addition, because employees provided information regarding self-focused happiness, other-focused happiness, job resources, and work-related vigor, this method may lead to common method bias. Finally, the use of new scales and the selection of control variables may also affect the research results. Therefore, we suggest that future studies use more rigorous designs to test our hypotheses.

Third, as previously discussed, our conceptual model prioritizes the influence of self-focused and other-focused happiness on employee creativity. Still, it's pertinent to recognize that these two types of happiness goals may also affect other work-related outcomes. Furthermore, while creativity is often examined as a singular concept, there is potential

merit in distinguishing it into radical and incremental creativity⁷³ a differentiation not accounted for in this study. Consequently, future research should persist in probing the effect of happiness goals in the workplace.

Conclusion

The pursuit of happiness is an eternal theme. Despite a mounting body of research, this study has developed somewhat at odds with the happiness literature, in that it reclassifies happiness goals and explores their impact on work-related outcomes. Our key takeaway is that self- and other-focused happiness can indeed contribute to employee vigor and creativity, but the size of the effect depends on the level of job resources. Our results have valuable implications for theory as well as practice.

Data Sharing Statement

The data presented in this study are available on request from the corresponding author.

Ethics Statement

The studies involving human participants were reviewed and approved by Ethics Committee of Huazhong University of Science and Technology.

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Disclosure

The authors report no conflicts of interest in this work.

References

- 1. Frank EL, Matta FK, Sabey TB, Rodell JB. What does it cost you to get there? The effects of emotional journeys on daily outcomes. *J Appl Psychol.* 2022;107(7):1203–1226. doi:10.1037/apl0000908
- Kryza-Lacombe M, Tanzini E, O'Neill S. Hedonic and eudaimonic motives: associations with academic achievement and negative emotional states among urban college students. J Happiness Stud. 2019;20(5):1323–1341. doi:10.1007/s10902-018-9994-y
- Lin L, Chan HW. The associations between happiness motives and well-being in China: the mediating role of psychological need satisfaction and frustration. Front Psychol. 2020;11:2198. doi:10.3389/fpsyg.2020.02198
- Gentzler AL, DeLong KL, Palmer CA, Huta V. Hedonic and eudaimonic motives to pursue well-being in three samples of youth. *Motiv Emot.* 2021;45(3):312–326. doi:10.1007/s11031-021-09882-6
- Jia N, Li W, Zhang L, Kong F. Beneficial effects of hedonic and eudaimonic motivations on subjective well-being in adolescents: a two-wave cross-lagged analysis. J Posit Psychol. 2022;17(5):701–707. doi:10.1080/17439760.2021.1913641
- Sääksjärvi M, Hellén K, Desmet P. The "you and I" of happiness: investigating the long-term impact of self-and other-focused happiness-enhancing activities. Psychol Market. 2017;34(6):623–630. doi:10.1002/mar.21010
- 7. Baumeister RF, Vohs KD, Aaker JL, Garbinsky EN. Some key differences between a happy life and a meaningful life. *J Posit Psychol*. 2013;8 (6):505–516. doi:10.1080/17439760.2013.830764
- 8. Canevello A, Crocker J. How self-image and compassionate goals shape intrapsychic experiences. Soc Personal Psychol Compass. 2015;9 (11):620–629. doi:10.1111/spc3.12206
- Shirom A. Feeling vigorous at work? The construct of vigor and the study of positive affect in organizations. In: Perrewe PL, Ganster DC, editors.
 Emotional and Physiological Processes and Positive Intervention Strategies. Vol. 3. Emerald Group Publishing Limited; 2003:135–164. doi:10.1016/S1479-3555(03)03004-X
- 10. Carmeli A, Ben-Hador B, Waldman DA, Rupp DE. How leaders cultivate social capital and nurture employee vigor: implications for job performance. *J Appl Psychol.* 2009;94(6):1553–1561. doi:10.1037/a0016429
- 11. Shirom A. Vigor as a positive affect at work: conceptualizing vigor, its relations with related constructs, and its antecedents and consequences. *Rev Gen Psychol.* 2011;15(1):50–64. doi:10.1037/a0021853
- 12. Shirom A, Toker S, Melamed S, Berliner S, Shapira I. Burnout and vigor as predictors of the incidence of hyperlipidemia among healthy employees. *Appl Psychol.* 2013;5(1):79–98. doi:10.1111/j.1758-0854.2012.01071.x
- Spreitzer G, Sutcliffe K, Dutton J, Sonenshein S, Grant AM. A socially embedded model of thriving at work. Organ Sci. 2005;16(5):537–549. doi:10.1287/orsc.1050.0153

Xu et al Dovepress

14. Levontin L, Ein-Gar D, Lee AY. Acts of emptying promote self-focus: a perceived resource deficiency perspective. *J Consum Psychol*. 2015;25 (2):257–267. doi:10.1016/j.jcps.2014.08.001

- 15. Roux C, Goldsmith K, Bonezzi A. On the psychology of scarcity: when reminders of resource scarcity promote selfish (and generous) behavior. *J Consum Res.* 2015;42(4):615–631. doi:10.1093/jcr/ucv048
- 16. Orazi DC, Chen J, Chan EY. To erect temples to virtue: effects of state mindfulness on other-focused ethical behaviors. *J Bus Ethics*. 2021;169 (4):785–798. doi:10.1007/s10551-019-04296-4
- Amabile TM. The social psychology of creativity: a componential conceptualization. J Pers Soc Psychol. 1983;45(2):357–376. doi:10.1037/0022-3514.45.2.357
- 18. Baas M, De Dreu CK, Nijstad BA. A meta-analysis of 25 years of mood-creativity research: hedonic tone, activation, or regulatory focus? *Psychol Bull*. 2008;134(6):779–806. doi:10.1037/a0012815
- 19. De Dreu CK, Baas M, Nijstad BA. Hedonic tone and activation level in the mood-creativity link: toward a dual pathway to creativity model. *J Pers Soc Psychol.* 2008;94(5):739–756. doi:10.1037/0022-3514.94.5.739
- Anderson N, Potočnik K, Zhou J. Innovation and creativity in organizations: a state-of-the-science review, prospective commentary, and guiding framework. J Manage. 2014;40(5):1297–1333. doi:10.1177/0149206314527128
- 21. Jia N, Luo X, Fang Z, Liao C. When and how artificial intelligence augments employee creativity. *Acad Manage J.* 2023. doi:10.5465/amj.2022.0426
- 22. Diener E, Sandvik E, Pavot W. Happiness is the frequency, not the intensity, of positive versus negative affect. In: Diener E, editor. Assessing Well-Being. Social Indicators Research Series. Vol. 39. Springer; 1991:213–231. doi:10.1007/978-90-481-2354-4 10
- 23. Lyubomirsky S. Hedonic adaptation to positive and negative experiences. In: Folkman S, editor. Oxford Handbook of Stress, Health, and Coping. New York: Oxford University Press; 2011:200–224.
- 24. Lyubomirsky S, Lepper HS. A measure of subjective happiness: preliminary reliability and construct validation. Soc Indic Res. 1999;46 (2):137–155. doi:10.1023/A:1006824100041
- 25. Huta V. Eudaimonic and hedonic orientations: theoretical considerations and research findings. In: Vittersø J, editor. *Handbook of Eudaimonic Well-Being. International Handbooks of Quality-of-Life.* Springer; 2016:215–231. doi:10.1007/978-3-319-42445-3 15
- 26. Huta V, Ryan RM. Pursuing pleasure or virtue: the differential and overlapping well-being benefits of hedonic and eudaimonic motives. *J Happiness Stud.* 2010;11(6):735–762. doi:10.1007/s10902-009-9171-4
- 27. Li W, Zhang L, Li C, Zhu N, Zhao J, Kong F. Pursuing pleasure or meaning: a cross-lagged analysis of happiness motives and well-being in adolescents. J Happiness Stud. 2022;23(8):3981–3999. doi:10.1007/s10902-022-00576-5
- 28. Crocker J, Canevello A. Creating and undermining social support in communal relationships: the role of compassionate and self-image goals. J Pers Soc Psychol. 2008;95(3):555–575. doi:10.1037/0022-3514.95.3.555
- 29. Allen TD, Poteet ML, Burroughs SM. The mentor's perspective: a qualitative inquiry and future research agenda. *J Vocat Behav.* 1997;51(1):70–89. doi:10.1006/jvbe.1997.1596
- 30. Janssen S, van Vuuren M, de Jong MDT. Motives to Mentor: self-focused, protégé- focused, relationship-focused, organization-focused, and unfocused motives. *J Vocat Behav.* 2014;85(3):266–275. doi:10.1016/j.jvb.2014.08.002
- 31. Liu Y, Abi Aad A, Maalouf J, Abou Hamdan O. Self- vs. other-focused mentoring motives in informal mentoring: conceptualizing the impact of motives on mentoring behaviours and beneficial mentoring outcomes. *Hum Resource Dev Int.* 2021;24(3):279–303. doi:10.1080/13678868.2020.1789401
- 32. Shirom A. Explaining vigor: on the antecedents and consequences of vigor as a positive affect at work. *Posit Organ Behav.* 2007;86–100. doi:10.4135/9781446212752.n7
- 33. Sonnentag S, Niessen C. Staying vigorous until work is over: the role of trait vigour, day-specific work experiences and recovery. *J Occup Organ Psychol.* 2008;81(3):435–458. doi:10.1348/096317908X310256
- 34. De Dreu CK, Nauta A. Self-interest and other-orientation in organizational behavior: implications for job performance, prosocial behavior, and personal initiative. *J Appl Psychol*. 2009;94(4):913–926. doi:10.1037/a0014494
- 35. Grant AM. Relational job design and the motivation to make a prosocial difference. Acad Manage Rev. 2007;32(2):393-417. doi:10.5465/amr.2007.24351328
- 36. Stephens JP, Heaphy E, Dutton JE. High-quality connections. In: Cameron KS, Spreitzer GM, editors. *The Oxford Handbook of Positive Organizational Scholarship*. New York, NY: Oxford University Press; 2012:385–399.
- 37. Heaphy ED, Dutton JE. Positive social interactions and the human body at work: linking organizations and physiology. *Acad Manage Rev.* 2008;33 (1):137–162. doi:10.5465/amr.2008.27749365
- 38. Baker W, Dutton JE. Enabling positive social capital in organizations. In: Dutton JE, Ragins BR, editors. *Exploring Positive Relationships at Work: Building a Theoretical and Research Foundation.* Mahwah. NJ: Erlbaum; 2007;325–345.
- 39. Grant AM, Sonnentag S. Doing good buffers against feeling bad: prosocial impact compensates for negative task and self-evaluations. *Organ Behav Hum Decis Process*. 2010;111(1):13–22. doi:10.1016/j.obhdp.2009.07.003
- 40. Fritz C, Lam CF, Spreitzer GM. It's the little things that matter: an examination of knowledge workers' energy management. *Acad Manage Perspect*. 2011;25(3):28–39. doi:10.5465/amp.25.3.zol28
- 41. Zacher H, Brailsford HA, Parker SL. Micro-breaks matter: a diary study on the effects of energy management strategies on occupational well-being. *J Vocat Behav.* 2014;85(3):287–297. doi:10.1016/j.jvb.2014.08.005
- 42. Carmeli A, McKay AS, Kaufman JC. Emotional intelligence and creativity: the mediating role of generosity and vigor. *J Creat Behav.* 2014;48 (4):290–309. doi:10.1002/jocb.53
- 43. Batson CD. How social an animal? The human capacity for caring. Am Psychologist. 1990;45(3):336-346. doi:10.1037/0003-066X.45.3.336
- 44. Fredrickson BL. The role of positive emotions in positive psychology: the broaden-and-build theory of positive emotions. *Am Psychologist*. 2001;56(3):218–226. doi:10.1037/0003-066X.56.3.218
- 45. Shraga O, Shirom A. The construct validity of vigor and its antecedents: a qualitative study. *Hum Relat.* 2009;62(2):271–291. doi:10.1177/0018726708100360
- 46. ten Brummelhuis LL, Bakker AB. Staying engaged during the week: the effect of off-job activities on next day work engagement. *J Occup Health Psychol.* 2012;17(4):445–455. doi:10.1037/a0029213

47. Schmitt A, Belschak FD, Den Hartog DN. Feeling vital after a good night's sleep: the interplay of energetic resources and self-efficacy for daily proactivity. *J Occup Health Psychol.* 2017;22(4):443–454. doi:10.1037/ocp0000041

- 48. Little LM, Nelson DL, Wallace JC, Johnson PD. Integrating attachment style, vigor at work, and extra-role performance. *J Organ Behav*. 2011;32 (3):464–484. doi:10.1002/job.709
- 49. Kark R, Carmeli A. Alive and creating: the mediating role of vitality and aliveness in the relationship between psychological safety and creative work involvement. *J Organ Behav.* 2009;30(6):785–804. doi:10.1002/job.571
- 50. Hoppe A, Toker S, Schachler V, Ziegler M. The effect of change in supervisor support and job control on change in vigor: differential relationships for immigrant and native employees in Israel. *J Organ Behav.* 2017;38(3):391–414. doi:10.1002/job.2151
- 51. Armon G, Melamed S, Shirom A. The relationship of the Job Demands-Control-Support Model with vigor across time: testing for reciprocality. Appl Psychol. 2012;4(3):276–298. doi:10.1111/j.1758-0854.2012.01074.x
- 52. Brislin RW. A culture general assimilator: preparation for various types of sojourns. Int J Intercultur Relat. 1986;10(2):215–234. doi:10.1016/0147-1767(86)90007-6
- 53. Hinkin TR. A brief tutorial on the development of measures for use in survey questionnaires. *OrganRes Methods*. 1998;1(1):104–121. doi:10.1177/109442819800100106
- 54. Dambrun M, Ricard M. Self-centeredness and selflessness: a theory of self-based psychological functioning and its consequences for happiness. *Rev Gen Psychol.* 2011;15(2):138–157. doi:10.1037/a0023059
- 55. Gros L, Debue N, Lete J, Van De Leemput C. Video game addiction and emotional states: possible confusion between pleasure and happiness? Front Psychol. 2020;10:2894. doi:10.3389/fpsyg.2019.02894
- 56. Hills P, Argyle M. The Oxford Happiness Questionnaire: a compact scale for the measurement of psychological well-being. *Pers Individ Dif.* 2002;33(7):1073–1082. doi:10.1016/S0191-8869(01)00213-6
- 57. Methot JR, Lepine JA, Podsakoff NP, Christian JS. Are workplace friendships a mixed blessing? Exploring tradeoffs of multiplex relationships and their associations with job performance. *Pers Psychol.* 2016;69(2):311–355. doi:10.1111/peps.12109
- 58. De Cremer D, Knippenberg D. Charismatic leadership, collective identification, and leadership effectiveness: the interactive effects of leader self-sacrifice and self-confidence. *Organ Behav Hum Decis Process*. 2004;95(2):140–155. doi:10.1016/j.obhdp.2004.04.002
- 59. Tjosvold D, Law KS, Sun H. Effectiveness of Chinese teams: the role of conflict types and conflict management approaches. *Manage Organ Rev.* 2006;2(2):231–252. doi:10.1111/j.1740-8784.2006.00040.x
- 60. Du D, Derks D, Bakker AB, Lu CQ. Does homesickness undermine the potential of job resources? A perspective from the work–home resources model. *J Organ Behav*. 2018;39(1):96–112. doi:10.1002/job.2212
- 61. Farmer SM, Tierney P, Kung-McIntyre K. Employee creativity in Taiwan: an application of role identity theory. *Acad Manage J.* 2003;46 (5):618–630. doi:10.5465/30040653
- 62. Muthén B, Muthén BO. Statistical Analysis with Latent Variables. New York: Wiley; 2009.
- 63. Cohen J, Cohen P, West SG, Aiken LS. Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences. 3rd ed. Lawrence Erlbaum; 2003
- 64. Podsakoff PM, MacKenzie SB, Lee JY, Podsakoff NP. Common method biases in behavioral research: a critical review of the literature and recommended remedies. J Appl Psychol. 2003;88(5):879–903. doi:10.1037/0021-9010.88.5.879
- 65. Crocker J, Canevello A, Brown AA. Social motivation: costs and benefits of selfishness and otherishness. *Ann Rev Psychol.* 2017;68(1):299–325. doi:10.1146/annurev-psych-010416-044145
- Mogilner C, Kamvar SD, Aaker J. The shifting meaning of happiness. Soc Psychol Personal Sci. 2011;2(4):395–402. doi:10.1177/ 1948550610393987
- 67. Zeng Z, Chen H. Distinct associations of hedonic and eudaimonic motives with well-being: mediating role of self-control. *Int J Environ Res Public Health*. 2020;17(15):5547. doi:10.3390/ijerph17155547
- 68. Carmeli A, Spreitzer GM. Trust, connectivity, and thriving: implications for innovative behaviors at work. *J Creat Behav.* 2009;43(3):169–191. doi:10.1002/j.2162-6057.2009.tb01313.x
- 69. Ng TW, Yim FH, Zou Y, Chen H. Receiving developmental idiosyncratic deals over time: showing innovative behavior is key. *J Vocat Behav.* 2021;130:103630. doi:10.1016/j.jvb.2021.103630
- Atwater L, Carmeli A. Leader-member exchange, feelings of energy, and involvement in creative work. *Leadersh Q.* 2009;20(3):264–275. doi:10.1016/j.leaqua.2007.07.009
- 71. Quinn RW, Dutton JE. Coordination as energy-in-conversation. Acad Manage Rev. 2005;30(1):36-57. doi:10.5465/amr.2005.15281422
- 72. De Bloom J, Kinnunen U, Korpela K. Recovery processes during and after work. J Occupat Environ Med. 2015;57(7):732–742. doi:10.1097/JOM.0000000000000475
- 73. Madjar N, Greenberg E, Chen Z. Factors for radical creativity, incremental creativity, and routine, noncreative performance. *J Appl Psychol*. 2011;96(4):730–743. doi:10.1037/a0022416

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