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A conservation of resources view of personal engagement in the development of innovative behavior and work-family conflict

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Abstract

Purpose – The purpose of this paper is to examine how personal engagement (PE) may be related with work-family conflict (WFC) and innovative behavior (IB) at the same time.
Design/methodology/approach – This study tested the proposed model using a longitudinal data with 1,501 employees from R&D departments in information technology industry of Greater China at multiple points (Time 1 to Time 3) in time over a ten-month period.
Findings – This study exhibits how charismatic leadership style, colleague support (CS), and s elf-esteem (SE) are capable of predicting the PE, which, in turn, positively related to the IB and the WFC.
Research limitations/implications – The present study proposed a model of the PE, but there are other variables that might also be important for the PE.
Practical implications – These finding suggests that managers not only must inspire and enable employees to apply their full energy to their work (e.g. PE), but must also alleviate the WFC.
Originality/value – The study drawn from Kahn's (1990) engagement theory and conservation of resources view to explain how the leadership style, CS, and SE can increase PE, which, in turn, increase positive organization behavior (IB) and negative organization behavior (WFC) at the same time.

Keywords Innovative behaviour, Work-family conflict, Conservation of resources theory, Personal engagement
Paper type Research paper

Introduction

Based on positive organizational psychology (Seligman and Csikszentmihalyi, 2000), positive organizational behavior (POB) has been employed to detect management questions, such as personal engagement (PE) (Salanova *et al.*, 2005). The PE generally represents that an organizational member harnesses his or her self into job role (Kahn, 1990). Many previous researchers also have claimed that PE drives employee-related outcomes, such as mental health, organizational citizenship behavior, and performance (de Sousa and van Dierendonck, 2014; Macey and Schneider, 2008). However, PE is often seen as affective commitment, and practitioners deem the introduction of PE to be just "putting old wine in new bottles" (Macey and Schneider, 2008). By contrast, the second category includes studies that define PE as "[…] a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli *et al.*, 2002, p. 74). Given the lack of universal agreement on the definition of PE, the first goal of this study is to present a third category that explains PE through Kahn's (1990) PE theory. In doing so, the infusion of theoretical or empirical research could provide a more comprehensive explanation extending the original concept of PE by Kahn (1990).

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Although past studies have proposed many insights about PE (Kahn, 1990; Macey and Schneider, 2008), they have also stressed the need to explore PE with its antecedents and outcomes in different work contexts. As a response to this concern, this work examines how PE may cause innovative behaviors (IBs) and work-family conflict (WFC) at work. In particular, innovation means how new ideas are yielded and implemented (Scott and Bruce, 1994) to oppose old norms and relate to risks (Sternberg, 2006). Therefore, it is important to understand why employees are willing to execute IBs (Perry-Smith, 2006).

Previous studies based on the POB view for PE are likely to see PE as a positive factor that increases employees' positive behaviors. However, past research has argued that "there are limits on the pool of energy and resources available to employees" (Macey and Schneider, 2008, p. 25). In other words, it is possible that an employee who expends significant amounts of energy and resources at work to achieve high PE may be left with little energy when he or she goes home, which may cause WFC. From the point of view of the conservation of resources (COR) view (Hobfoll, 1998), which states that the human resources of an employee are limited (e.g. energy and time), this work argues that an employee who invests many resources into his or her job to achieve high IBs may have to deal with considerable difficultly balancing requirements between job and family (e.g. high WFC) at the same time. Publications about IBs are gradually increasing (e.g. Liu *et al.*, 2011; Paulsen *et al.*, 2009, 2013), but few of them examine PE as an antecedent of IBs and WFC. Hence the second goal of this work, which is to examine how PE can influence IBs and WFC at the same time.

Finally, employees in Greater China meet with high job stress (Lu *et al.*, 2011), but over 95 percent of the studies on WFC or work stress ignore this fact by employing western samples (Kossek *et al.*, 2011). This reveals lack of knowledge on whether these empirical findings can be applied to the East sample. At present, Greater China accounts for more than 20 percent of the world's population, so by investigating the work-family concept in Greater China, this study is addressing a highly topical issue. In addition, Kahn (1990) originally described PE in terms of dynamic moments over time. Furthermore, this study employs a longitudinal approach to observe the dynamic processes of PE over a ten-month period from a Hierarchical Linear Model (HLM). HLM is often employed to test non-independent samples across different organizations (Raudenbush and Bryk, 2002).

Theory and development of hypotheses

Kahn's PE theory

PE is defined as "the simultaneous employment and expression of a person's 'preferred self' in task behaviors that promote connections to work and to others, personal presence (physical, cognitive, and emotional) and active, full performances" (Kahn, 1990, p. 700). That is, an individual may invest all of his or her all energy into three psychological conditions, including physical, cognitive, and emotional, to achieve high performances.

Antecedents of PE

Three antecedents of PE were proposed by Kahn (1990), including meaningful, safe, and available. Kahn proposed that the three psychological conditions can drive PE. This work refers to the three conditions as psychological meaningfulness (the perception of the organization as committed to performing meaningful tasks), psychological safety (the perception of a social system related to support and the relationship with employees),

and psychological availability (the self-perceptions of confidence and self-consciousness) (Kahn, 1990, 1992). This study includes an antecedent from each of these categories: charismatic leadership style (CLS), colleague support (CS), and self-esteem (SE).

CLS. The psychological meaningfulness means the degree of consistency between the expected behaviors of a work group and an employee's behaviors. Organizational values can be transmitted from charismatic leaders to their followers if the behaviors are considered appropriate and relevant to a particular role (Shamir *et al.*, 1993), and if these leaders can make the personal values of their followers to become the values of the organization (Bono and Judge, 2003). thus clarifying the role of CLS. When an employee accepts that his or her self-worth corresponds with his or her organization's values, he or she will believe that his or her self-image is congruent with the expectations of an organization (Kahn, 1992). CLS was introduced by Bass (1985), and is described as that a supervisor (leader) utilizes four charismatic dimensions (intellectual stimulation, inspirational motivation, individual consideration, and idealized influence) to guide followers. Due to transformational processes of CLS, the expectations of an organization regarding the role of an employee is in harmony with his or her self-image (Kahn, 1992), and members tend to perceive a higher degree of meaning in their work and, in turn, exhibit a high level of PE. Thus:

H1. CLS at initial time (Time 1) may positively predict PE at second time (Time 2).

CS. Psychological safety means that an employee in supportive circumstances is willing to run a risk, reveal his or her true self, and not fear the consequences of failing (Kahn, 1990). The concept of CS, as discussed by Kahn (1990), develops through the interaction of employees with agents of the organization such as supervisors and colleagues. CS means that an employee believes that his or her organization has focussed on his or her well-being in mind (Eisenberger *et al.*, 1986). When an employee perceives a high degree of support from his or her organizations, he or she may have (cherish) positive expectations. Such an employee no longer worries about damaging outcomes to his or her self-image, status, or career, and is increasingly willing to fully commit himself to his or her job role (Edmondson, 1999). Thus:

H2. CS at initial point (Time 1) may positively predict PE at second point (Time 2).

SE. Psychological availability means that an employee believes he or she is prepared to engage themselves at a particular moment (Kahn, 1990). One of the key drivers of availability is an individual's confidence in performing his or her role performance (Kahn, 1990). The concept of SE, as discussed by Kahn (1990), is defined as an evaluation of self-worth and capability (Bergami and Bagozzi, 2000). An employee may be well adjusted, positive, and self-confident when he or she has high SE. An employee with a high SE can appraise demands and demonstrate the ability to handle these requirements, and, thus, he or she has more available resources to invest in his or her job role. Thus:

H3. SE at initial point (Time 1) may positively predict PE at second point (Time 2).

PE and IB

IBs means that an individual vigorously generates novel ideas and solutions (Scott and Bruce, 1994). When an individual is willing to put his or her cognitive, emotional, and physical resources simultaneously into job roles (PE), he or she will engage in IBs more

often than other individuals with low PE (Kahn, 1998, 2007). Because an individual who engages in IBs needs cognitive, emotional, and physical resources (e.g. generating ideas, coping with failures, and sharing ideas with others), the individual who is willing to invests his or her energy fully into job roles may guide his or her efforts and attention to generate more novel ideas (Shalley, 1995). In other words, an individual with a higher PE may have more resources to draw from and will therefore relate to IBs more actively (Scott and Bruce, 1994; Shalley and Gilson, 2004). Thus:

H4. PE at second point (Time 2) may positively predict IB at third point (Time 3).

PE and WFC

Past studies have shown that such individuals would divert family resources to achieve better results in the workplace, believing that such an investment would increase their profits and make them better family providers in the long run. To understand why an individual gets highly engaged in his or her work role at the cost of spending more energy and time, this work borrows from COR view to be the underpinnings for the inference between PE and WFC. Based on the Hobfoll's (1998) COR theory, an individual may purposely obtain resources, and invest these to acquire extra resources. An individual may invests excessive resources into work to perform their jobs exceptionally well to obtain pay and status (Salanova *et al.*, 2005). Alternatively, an individual's multiple role involvements (e.g. being a good worker or a good father/mother) may have high conflicts because of limited resources (e.g. time and energy). Past study has found that individuals may decrease family role resources to achieve job needs (Eagle *et al.*, 1997), because these investments can acquire pecuniary support to maintain the family needs in a long run. Therefore, to understand why an individual is highly engaged in his or her work roles to cause low resources (e.g. energy and time) for other roles, this work borrows from the COR theory to infer the relationship between the PE and WFC.

The WFC is described as a "form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect" (Greenhaus and Beutell, 1985, p. 777). The WFC contains three dimensions, including time based, strain based, and behavior based. The time based means that an individual spends time in one role because he or she takes away from time in another role. The strain based means that an individual with high strain in one role may carry the strain to the other role, thus making it difficult to fulfill obligations in the other role. The behavior based means that a certain kind of behavior is expected from the individual in one role, while the same behavior is unsuitable for fulfilling obligations in another role. According to the COR theory described earlier, an individual who invests more resources in the workplace, and is likely to invest fewer psychological resources with their family role. Thus, when an individual's PE is high, he or she may pay much attention and invest many resources in his or her work that he or she has little resources to invest home role to cause high WFC. Thus:

H5. PE at second point (Time 2) may positively predict WFC at third point (Time 3).

Methodology

Our conceptual model (Figure 1) starts from CLS, CS and SE based on the PE conceptualization to IB and WFC.

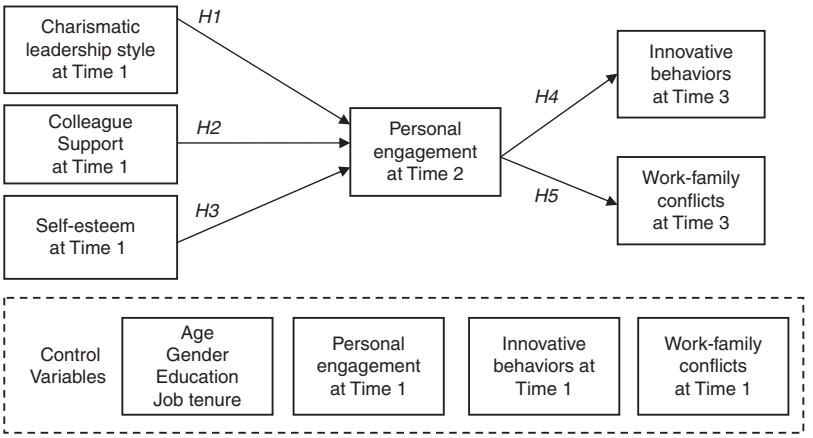

Figure 1.
Research model of this study

Subjects and procedures

This study collected data in the three phases over a ten-month period from the R&D employees in Greater China information technology (IT) businesses to test our theoretical model. This study relied on the help of the supervisors of these IT businesses, who corresponded with the supervisors of these IT businesses in order to recruit voluntary participants in the survey.

At initial point (Time 1), we asked about 211 supervisors of the R&D team to join in this study and to recruit their employees of departments. The sample included 1,700 different employees from 155 different R&D teams. The employees were asked to answer questions about their assessment of CLS, CS, SE, PE, IB, and WCF. This study collected 1,650 samples with the response rate 97 percent. At a second point in time (Time 2), we received 1,606 samples with a response rate of 94.4 percent. The second survey of employees with the assessment of PE was taken five months after the initial point (Time 1). Ten months later, in the final phase (Time 3), this study collected the respondents who had assessed IB and WFC. The final usable sample was 1,501 employees from 155 different R&D teams, representing an 88.3 percent.

This study additionally examined PE, IB, and WFC at Time 1 to be control variables for PE at Time 2 and IB and WFT at Time 3, because this study wants to control for past levels of PE, IB, and WFC when testing the hypotheses.

Totally, 51 percent of the subjects are female and their average age is 35 years. The average job tenure is 1.8 years, and 59 percent of the subjects have college education.

Measures

This study employed seven-point Likert scales to measure the constructs and employed the backward translation to confirm translation quality (Reynolds *et al.*, 1993).

Charismatic leadership. This study employed Multifactor Leadership Questionnaire (MLQ Form 5X, Bass and Avolio, 1995) to measure the four dimensions of transformational leadership, including intellectual stimulation, inspirational motivation, individualized consideration, and idealized influence.

CS. This study employed Eisenberger *et al.*'s (2001) organizational support scale, but one item (e.g, … show little concern for me) was removed due to its perceived vagueness in our pilot study.

SE. This study employed Bergami and Bagozzi's (2000) scale to measure SE. Example item is "I feel as smart as others."

PE. Few existing measures of PE have fully reflected Kahn's (1990) work. Therefore, this study needed to adopt a measure that mapped Kahn's conceptualization more precisely. This study employed 18 items to measure PE. The 18 items include six items of physical engagement validated by Brown and Leighs (1996), six items of emotional engagement validated by Russell and Barrett (1999), and six items related to cognitive engagement validated by Rothbard (2001). Example item is "At work, my mind is focused on my job."

IB. This study employed Scott and Bruce's (1994) scale to measure IBs. A sample item is "I generate creative ideas at work."

WFC. This study employed six three-item validated by Carlson *et al.* (2000) to measure WFC. Example item is "My work keeps me away from my family activities more than I would like."

Control variable. To account for heterogeneity in the individual differences, this study controlled for age, gender, education, job tenure, PE at Time 1, IB at Time 1, and WFC at Time 1.

Data analysis (Table I)

Validation of data structure. This study used confirmatory factor analysis (CFA) to confirm the validity of the six constructs. The composite reliability, average variance extracted, RMR, RMSE, CFI, GFI, and NFI are all greater than the fit indexes suggested by Fornell and Lacker (1981). The study used the χ^2 difference test to confirm discriminant validity. Collectively, these figures suggested that the hypothesized CFA model in this study fitted well within the collected empirical data.

Analysis and model development. The data of this study was gathered from the nested structure, such that multiple employees were within their work organizations. This work employed HLM technique to test hypotheses in our model, because HLM can account for little independence among different organizations (Raudenbush and Bryk, 2002). For example, employees that come from the same work group may score highly similar perceptions of CS rather than independence, because these employees immerse in the atmosphere of the same group, which violates the independent assumption of statistics (Fornell and Lacker, 1981).

This study employed random and slope model to assess CLS, CS, and SE in PE. The results are presented as Model 1 in Table II. The CLS ($\gamma = 0.34$, $p < 0.01$), OS ($\gamma = 0.31$, $p < 0.01$), SE ($\gamma = 0.27$, $p < 0.01$) significantly related to PE and explained 40 percent of the variance in PE. This work then tested the effect of PE on IB and WFC by using a random slope model. Models 2 and 3 in Table II, respectively, explained 35 percent of the variance in IB and 40 percent of the variance in WFC. PE significantly predicted IB ($\gamma = 0.40$, $p < 0.01$) and WFC ($\gamma = 0.42$, $p < 0.01$). The results provided support for *H1-H5*. Finally, the path coefficients were all significant, supporting the ability of our proposed model.

To examine whether PE mediated the antecedents (CLS, CS, and SE) and outcomes (IB and WFC), this work employed the "mediated moderation" procedures (Baron and Kenny, 1986, p. 1179). The analysis results revealed that PE is a mediating variable.

Discussion

This study provided an illustrative example of how Kahn's PE theory can be extended to explain the IB and WFC of employees from a COR perspective.

Table I.
Means, standard deviations, and correlation of individual-level variables

	M	SD	CLS1	CS1	SE1	PE2	IB3	WFC3	PE1	IB1
CLS1	3.51	0.88								
CS1	3.42	0.82	0.25*							
SE1	3.32	0.81	0.23*	0.24*						
PE2	3.50	0.99	0.71**	0.61**	0.56**					
IB3	3.15	0.88	0.32*	0.38*	0.33*	0.55**				
WFC3	3.01	0.85	0.37*	0.41	0.29*	0.52**	0.33*			
PE1	2.51	0.76	0.51**	0.51**	0.45**	0.63**	0.38*	0.39*		
IB1	2.32	0.71	0.25*	0.31*	0.22*	0.40*	0.61**	0.25*	0.30*	
WFC1	2.22	0.73	0.22*	0.27*	0.18*	0.38*	0.25*	0.59**	0.38*	0.35*

Notes: $n = 1{,}501$. CLS, charismatic leadership style at Time 1; CS1, colleague support at Time 1; SE1, self-esteem at Time 1; PE1, personal engagement at Time 1; PE2, personal engagement at Time 2; IB1, innovative behaviors at Time 1; IB3, innovative behaviors at Time 3; WFC1, work-family conflicts at Time 1; WFC3, work-family conflicts at Time 3. *$p < 0.05$; **$p < 0.01$

Level and variable	Personal engagement (null model) γ	*t*-ratio	Personal engagement (Model 1) γ	*t*-ratio	Innovative behavior (Model 2) γ	*t*-ratio	Work-family conflicts (Model 3) γ	*t*-ratio
Intercept	3.510**	43.303	3.49**	41.83	3.5**	63.50	3.512**	72.16
Variables								
CLS			0.34**	6.56				
CS			0.31**	4.012				
SE			0.27**	3.894				
PE					0.40**	15.465	0.42	19.235
n (Level 1)	1,501		1,501		1,501		1,501	
n (Level 2)	149		149		149		149	
Model deviance	2,595.46		1,397.21		3,111.23		3,221.34	
R^2			0.40		0.35		0.40	

Notes: CLS, Charismatic leadership style; CS, colleague support; SE, self-esteem; PE, personal engagement. *$p < 0.05$; **$p < 0.01$

Table II.
Test results of hierarchical regression models

Academic contribution

First, this study extends Kahn's (1990) work of PE by including antecedents of PE and its outcomes (IB and WFC). This work also provides a good articulation of PE, and validates Kahn's (1990) psychological conditions of meaningfulness, safety, and availability. This work employs Kahn's (1990) work to identify three key antecedents of PE in this research: CLS, CS, and SE. Besides, using longitudinal data over a ten-month period also responds to Kahn's (1990) call of developing a dynamic process model.

Second, past studies argue that PE can predict positive employee behaviors. In contrast, this study demonstrates that PE associates both with positive consequences (e.g. IB) and with negative consequences (e.g. WFC). Consistent with COR view, this study indicates that PE may not always be a good thing to advance PE literatures.

Practical contribution

First, our findings reveal that PE can increase IB and deteriorate WFC. These findings suggest that managers should invest resources to increase PE of employees rather than spreading them over various practices. This study also shows that high levels of CLS, CS, and SE can predict PE.

Although there are many management practices that can advance job behaviors, PE offers an extra benefit for these practices. For example, the human resource manager should recruit new employees who have high SE and then employ CLS and CS to foster their perceptions of PE. In addition, CLS should be integrated into education courses to advance followers' PE.

This work yields a novel question of whether an employee can have high PE without meeting with adverse effects (e.g. WFC). Practically, managers need to develop work-family programs (e.g. flexible hours) to achieve balance between engagement and family life (Carlson *et al.*, 2010), and thus alleviating the adverse consequences of PE.

Limitations and further research

The present study proposed a model of PE, but there are other key constructs that are crucial for PE. For example, trust may be an issue for psychological safety, and therefore future research should explore how trust can be employed as a predictor of PE.

This work employed the R&D employees in Greater China as our empirical sample, and the generalization of this study may be specific to the Greater China culture. Previous studies have argued that using specific subjects is acceptable if the goal of the theoretical model is to test a theory (Calder *et al.*, 1981). Future studies can be carried out applying our model on different subjects to confirm our conclusions.

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