

Leader feedback and knowledge sharing: A regulatory focus theory perspective

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Abstract

This paper investigates the impact of leader feedback on followers' knowledge-sharing behavior through a regulatory focus theory perspective. Data were collected through an experiment with 129 college students. Results showed that compared with leader's prevention feedback style and negative feedback valence, promotion style and positive feedback valence inspire employee knowledge-sharing behavior better. These two positive relationships are mediated by promotion situational regulatory focus. The negative relationship between prevention leader feedback style and knowledge sharing is mediated by prevention situational regulatory focus, while negative leader feedback valence has its negative effect on knowledge sharing directly.

Keywords: leader feedback, knowledge sharing, regulatory focus, hierarchical regression analysis

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INTRODUCTION

Knowledge sharing (KS) among individuals is commonly considered the fundamental method for enterprises to exploit and capitalize on knowledge-based resources, and then to gain a sustainable competitive advantage (Grant, 1996; Spender & Grant, 1996; Davenport & Prusak, 1998; Damodaran & Olphert, 2000; Foss & Pedersen, 2002; Cabrera & Cabrera, 2005). Thus, understanding how organizational and individual factors influence KS is crucial and beneficial (Davenport & Prusak, 1998; Bock, Zmud, Kim, & Lee, 2005; Liu & Liu, 2011). The abundant literature sheds significant light on the various problems underlying KS in organizations (Hansen, Mors, & Lovas, 2005); however, surprisingly, only minimal literature exists that investigates the relationship between leader behavior and KS (Bryant, 2003; Connelly & Kelloway, 2003; Lin & Lee, 2004; Srivastava, Bartol, & Locke, 2006; Yang, 2007, 2010; Xue, Bradley, & Liang, 2010; Nguyen & Mohamed, 2011) given that leaders play an important role in effectively managing knowledge (Bryant, 2003).

In fact, leaders are critical to shaping KS behavior in work teams by signaling appropriate and normative followers' behavior (Carmeli, Gelbard, & Reiter-Palmon, 2013) and influencing the formation of KS norms and climate (Li, Shang, Liu, & Xi, 2013). Despite the enlightening empirical evidence that uncovered some of the relationships between leadership (e.g., empowering leadership, transformational leadership, leader roles) and KS, research that focuses on leader behavior directly related to the KS process, such as leader feedback, is lacking. A common action of a leader is to provide

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feedback to followers that reflects – behaviorally and verbally – his or her expectations to facilitate communication within the team under the prevalent adoption of team-base design in contemporary organizations; however, the relationship between leader feedback and KS still needs to be verified. To address this omission, the following research question is posed: How does leader feedback affect an employee's KS behavior?

In particular, a crucial question is whether it is enough for leaders to provide a certain amount of feedback to facilitate KS among employees. On the basis of existing findings on the motivational effects of leader feedback on employee behavior, the opinion is maintained that the relationship between leader feedback and KS is more complicated. As personal knowledge is perceived as a source of priority, advantage, and even power, individuals who face the risk of losing personal privilege over others are usually not willing to share without strong personal motivation (Ipe, 2003). Given that leader feedback functions as a key instrument in influencing an employee's motivation and behavior (Harackiewicz & Larson, 1986; Idson & Higgins, 2000; Förster, Grant, Idson, & Higgins, 2001; Gaddis, Connelly, & Mumford, 2004; Van-Dijk & Kluger, 2004; Belschak & Den Hartog, 2009; Kacmar, Wayne, & Wright, 2009), such feedback directly affects the manner in which employees regulate their behavior. However, the underlying psychological mechanisms that might vary for different people with dissimilar orientations remain unclear. Thus, drawing on a motivational perspective suggested by past scholars (Kark & Van-Dijk, 2007; Wang & Noe, 2010), the following two issues are addressed – and are two potential contributions that use regulatory focus theory as the theoretical foundation: (1) the relationship between leader feedback and KS is tested; and (2) the underlying psychological mechanisms are investigated to unearth the entire affecting process.

THEORETICAL DEVELOPMENT

How do organizational, team, and individual characteristics influence KS at the individual level? As reviewed by Small and Sage (2006) and Wang and Noe (2010), considerable research examined this question. However, limited studies investigated the relationship between leadership and KS. In line with the literature, Bryant (2003) laid a theoretical foundation for the promoting effect of leadership on individual KS. Empirical evidence showed that transformational and transactional leadership act as positive forces on KS (Chen & Barnes, 2006; Behery, 2008), similar to empowering leadership (Srivastava, Bartol, & Locke, 2006; Xue, Bradley, & Liang, 2010). Yang (2007, 2010) attempted to examine the links between leader roles and KS and found that facilitator, mentor, and innovator roles were facilitative, whereas the monitor role was confirmed as being obstructive.

As previously reviewed, determining that scholars paid increasing attention to the effect of leadership on KS and the effect of leader feedback on employee motivation and behavior is not difficult. Although these lines of research tell us the 'what' question, such as 'what type of leadership style facilitates individual KS better?' they could not provide adequate guidance on the 'how' question, such as 'how does a leader effectively promote KS in daily routines?' Therefore, because feedback is a common and specific behavior of leaders, the effect of leader feedback on KS needs to be examined. The theoretical discussion begins with introducing regulatory focus theory, a powerful tool used to explain individual motivation and behavior.

Regulatory focus theory

People are motivated to approach pleasure and avoid pain. For many centuries, the hedonic principle continues to be the dominant motivation theory used to depict the psychological motivation of individuals. Higgins (1997) developed regulatory focus theory by proposing two basic self-regulation

systems – promotion and prevention focuses – that refer to ‘ideal self’ and ‘ought self,’ respectively, and argued that the theory was not simply a unitary way to explain human behavior. People with promotion focus concentrate on hopes, wishes, and aspirations, whereas people with prevention focus concentrate on duties, obligations, and responsibilities.

As each regulatory focus had a specific effect on human perception, feeling, and eventually behavior, Higgins (1997, 1998) clarified that regulatory focus is determined by both situational and chronic factors. Chronic regulatory focus (CRF) is a kind of individual personality tendency that evolves during the growth process, and that is stable and does not change once formed. However, situational regulatory focus (SRF) is temporal and a situational variable of individuals induced by information about task and environment. In Crowe and Higgins (1997), individual regulatory focus is easily induced by controlling the real-time situation, such as in the process of information transfer between leader and employee. Furthermore, leaders are able to affect employees’ regulatory focus using languages and symbols (Brockner & Higgins, 2001).

Leader feedback

In the workplace or on a team, leaders often provide feedback to keep employees’ behavior directed toward achieving the desired goals. Scholars identified various motivational effects of feedback, such as employee task interest (Harackiewicz & Larson, 1986), attitude and task performance (Gaddis, Connelly, & Mumford, 2004), individual performance (Idson & Higgins, 2000), and emotions and extra-role behavior (Belschak & Den Hartog, 2009). This paper synthesizes previous studies (Harackiewicz & Larson, 1986; Higgins, 1997; Idson & Higgins, 2000; Gaddis, Connelly, & Mumford, 2004) to define leader feedback using two facets: leader feedback valence (LFV) and leader feedback style (LFS).

LFV

LFV is defined as the specific information about task performance, either positive or negative (Förster et al., 2001). Positive LFV refers to conveyance of information about success, whereas negative LFV refers to conveyance of information about failure. Over the years, researchers differentiated between positive and negative feedback valence because they appeared to have different effects on subsequent individual behavior (Kluger & DeNisi, 1996). Förster et al., 2001 used a meta-analysis to show that no different effect was found between success information and failure information, and subsequent studies found that positive feedback valence is often associated with approach behaviors, such as greater creativity (Zhou, 1998) and better task performance (Idson & Higgins, 2000). In contrast, negative feedback valence usually signals avoidance behavior to avoid potential losses (Idson, Liberman, & Higgins, 2000).

LFS

LFS refers to the manner in which the feedback is delivered from leader to employee. According to regulatory focus theory (Higgins, 1997), LFS may be of two types: promotion LFS and prevention LFS. When a leader provides feedback to an employee on his or her performance on a task or work, promotion LFS uses encouraging words (e.g., praise) and stresses potentially positive outcomes (e.g., employee ideals, values, and self-development), generating concern over advancement, growth, and accomplishment. Relative information is expressed in a ‘gain–nongain’ pattern. Conversely, prevention LFS uses conservative words (e.g., criticism) and emphasizes possible negative outcomes (e.g., an employee’s responsibilities, obligations, and self-protection), priming a concern with protection, safety, and responsibility. Relative information is expressed in a ‘nonloss–loss’ pattern.

Leader feedback and KS

As success information is often associated with positive performance and failure information signals negative performance (Zhou, 1998), positive LFV represents approval and confirmation of an employee's performance and ability, accompanied by positive feelings such as happiness and confidence. Consequently, an employee is motivated to take more approaching actions. In contrast, negative LFV is a denial and gainsay of an employee's performance and ability, along with negative feelings such as vigilance and fear. As a result, the employee becomes nervous and tends to choose an avoidance strategy (Idson & Higgins, 2000).

Likewise, promotion LFS obviously and very likely causes an employee to begin to consider his or her hopes, wishes, and aspirations and, thus, advance the accomplishment of growth (Higgins, 1997, 1998). Employees are sensitive about the 'gain–nongain' situation and care about the presence of positive outcomes. In this case, they are more likely to adopt approaching strategies. Otherwise, prevention LFS probably leads to employee recognition of safety, duties, and protection and, thus, to the recognition of careful behavior to prevent committing mistakes. In this situation, employees are sensitive about the 'nonloss–loss' outcome and choose to take avoidance strategies.

For both positive LFV and promotion LFS, approach strategy is about pursuing the presence of positive outcomes even when behavior beyond which reflecting minimum role expectations is required (Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008). Instead, in avoidance strategy for both negative LFV and prevention LFS the target is to avoid the presence of negative outcomes. Employees prefer to fulfill tasks with vigilance and concern themselves with accuracy (Förster, Higgins, & Bianco, 2003). Given that personal knowledge is perceived as a source of priority, advantage, and even power, Individuals who face the risk of losing personal privilege over others are usually unwilling to share knowledge without strong personal motivation (Ipe, 2003; Boer, Berends, & Baalen, 2011). Thus, employees with an approaching strategy are likely to take more initiative at work and when cooperating with others, leading to a higher level of KS. Employees following an avoidance strategy may attempt to stay away from such risky behavior and maintain the *status quo*, resulting in a lower level of KS. Thence, the following hypothesis is developed based on all of these stated reasons.

Hypothesis 1a Positive LFV and promotion LFS are positively related to employee KS.

Hypothesis 1b Negative LFV and prevention LFS are negatively related to employee KS.

Leader feedback, motivation, and KS

To understand factors that affect KS, numerous theories are used as the theoretical foundation, such as the theory of reasoned action, social exchange theory, social capital and network theory, and so on (Wang & Noe, 2010). Some scholars attempted to draw support from motivation theories to gain insight into KS (Chiu, Hsu, & Wang, 2006; Quigley, Tesluk, Locke, & Bartol, 2007). As leadership is one of the most important factors with a significant influence on employees' motivation, uncovering the hidden process for how a leader affects employee KS behavior is reasonable from a motivational perspective.

Consider the situation in which a leader provides feedback to employees. Words reflecting promotion LFS that focus on hopes, wishes, and aspirations are used to shape a gain–nongain situation, which encourages employees to accomplish growth using strong ideals. Thus, employees are motivated to achieve their 'ideal self,' implying the priming of promotion situational regulatory focus (promotion SRF). Consequently, employees behave more openly and prefer to take positive actions to implement their values and to grow (Higgins, 1997). In this case, employees are more likely to share their knowledge and skills to obtain the presence of positive outcomes. For these reasons, promotion LFS is inferred as likely priming employee promotion SRF (Brockner & Higgins, 2001).

Consider another situation in which a leader provides feedback to employees. Words that reflect prevention LFS and that focus on duties, obligations, and responsibilities are used to shape a nonloss–loss situation, which encourages employees to care about their safety and not to commit mistakes with strong ought. Thus, employees are motivated to strive to ‘ought self,’ implying that prevention situational regulatory focus (prevention SRF) is primed; therefore, employees behave more carefully and prefer to select protective actions to avoid failure and making mistakes (Higgins, 1997). In this case, employees are more likely to be conservative and reluctant to engage in extra KS behavior to ensure no negative outcomes. Based on this, the discussion that prevention LFS likely primes employees’ prevention SRF is reasonable (Brockner & Higgins, 2001).

Generally, in tasks or in the workplace, positive/negative LFV is often transmitted to employees through one type of LFS. Based on the discussion in the previous section, positive LFV is helpful in strengthening employees’ confidence and generating demand for growth, whereas negative LFV is likely to evoke a decrease in confidence and demand for safety and protection. Thus, the following hypothesis is developed.

Hypothesis 2a Positive LFV and promotion LFS are positively related to employee promotion SRF.

Hypothesis 2b Negative LFV and prevention LFS are positively related to employee prevention SRF.

When positive LFV is transmitted to employees through promotion LFS, employees are motivated to concentrate on hopes, wishes, and aspirations; promotion SRF is then primed to achieve the growth requirement (Higgins, 1997; Brockner & Higgins, 2001). In this situation, employees are sensitive about the presence of positive outcomes and behave more actively, such as taking the initiative to communicate with colleagues regarding work experience, skills, and knowledge. In other words, promotion SRF is positively related to a high level of KS. In contrast, when negative LFV is transmitted to employees through prevention LFS, employees are motivated to focus on safety, obligations, and responsibility. Thus, prevention SRF is primed to avoid mistakes (Higgins, 1997; Brockner & Higgins, 2001). Consequently, employees care about the absence of negative outcomes and perform conservatively, such as being unwilling to share work experience, skills, and knowledge. On the basis of this logic, the following hypotheses are suggested.

Hypothesis 3a Employee promotion SRF is positively related to KS.

Hypothesis 3b Employee prevention SRF is negatively related to KS.

Hypothesis 4a Employees’ promotion SRF mediates the positive relationships of promotion LFS and positive LFV with KS.

Hypothesis 4b Employees’ prevention SRF mediates the negative relationships of prevention LFS and negative LFV with KS.

METHOD

Participants

A total of 129 college students from a large university in China participated in the experiment for course credit. In all, 84 (65.12%) were male. All participants were randomly separated into 28 groups and each group was arranged to participate in a group task to design a theme park. Each of the four experimental contexts (see the ‘Measure’ section for details) had seven groups of participants (~32 participants for each scenario). From the beginning to the end of the group task, the trained

leader gave predesigned feedback to the participants three times. At the end of the experiment, all participants were required to fulfill a questionnaire on KS and SRF.

Procedure

The CRF of each participant was first examined. A week later, the experiment was implemented. After entering the lab, the organizer gave a brief introduction and background information on the experiment to the group, and then introduced the four leaders to the group members. Each leader was associated with a certain type for the four feedback designs. The leaders were actually PhD students and were specially trained before the experiment to perform certain feedback patterns. In addition, the leaders were unaware of the research purpose of the experiment.

Subsequently, the leaders provided certain feedback for the first time regarding the result of the supposed task portrayed in the background information. In the following 15 min, the leader fulfilled the first step of the group task of designing the theme park with the group members. When the first step was completed, the leader left the lab to discuss the blueprint with an inexistent expert for 5 min and went back to the lab, giving the same feedback for the second time. The second step was to design a marketing plan. Similarly, at the end of 15 min of work, the leader gave the same feedback for the third time after having a discussion with the inexistent expert. Finally, an integrated design plan was asked to be submitted and a questionnaire on KS and SRF was required to be fulfilled, together with two 7-point scales serving as the manipulation check of the received feedback. The two scales were 'do you think our project will probably fail (1) or succeed (7) in the bidding?' and 'during the experiment, did you focus more on avoiding negative behaviors and outcomes (1), or did you focus more on approaching positive behaviors and outcomes (7)?' (Zhang, Higgins, & Chen, 2011).

At the end, small gifts were given to each group member. All participants were told that the experimental information was confidential.

Measures

KS was measured using a 7-item scale adapted from Lin (2007). Three items assessed knowledge donating, whereas four items measured knowledge collecting (Van den Hooff & Van Weenen, 2004). The scale taken from a study by Neubert et al. (2008) was adapted for SRF, which constitutes 18 items, of which nine items measured promotion SRF and the other nine items measured prevention SRF. Employee CRF was measured using the scale developed by Lockwood, Jordan, and Kunda (2002) that included 18 items. Promotion and prevention focus were measured using nine items each. All items were evaluated using 7-point Likert-type scales that ranged from 1 (strongly disagree) to 7 (strongly agree). As the experiment was conducted in China, the translation-back translation procedure from Brislin (1980) was first run to create a Chinese version of the scale. Second, the original context of 'at work' was replaced with the context of 'at group task' when necessary. In addition, CRF was controlled because previous studies showed that it potentially influences the proposed model (Shah, Higgins, & Friedman, 1998; Idson & Higgins, 2000), together with gender.

LFV and style

By drawing on previous experimental studies, control over different leader feedback contexts was achieved by training four doctoral students to provide different feedback (Gaddis, Connelly, & Mumford, 2004). In line with the literature review and hypotheses, four different leader feedback contexts were designed (as depicted in Figure 1). The appendix presents the manipulations of LFV and style.

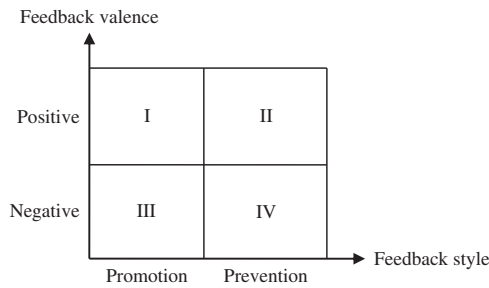


FIGURE 1. FOUR DIFFERENT EXPERIMENTAL CONTEXTS

RESULTS

Measurement validation

First, the reliability of the scales was assessed and the results show adequate reliability scores of the coefficient alphas (α): 0.92 for KS, 0.82 for the promotion SRF scale, 0.79 for the prevention SRF scale, 0.87 for the promotion CRF scale, and 0.77 for the prevention CRF scale.

Also checked was whether the manipulation of the different LFV and style was successful by comparing participants' perceptions of the possible outcomes of their plan (positive/negative) and leadership attitude (promotion/prevention). The results show that the manipulation succeeded. Participants in the negative valence condition indicated that they felt a lower possibility of success ($M = 2.31$, $SD = 1.10$) than respondents in positive valence condition ($M = 5.75$, $SD = 1.03$), $F(1, 129) = 335.69$, $p < .001$. Similarly, respondents in the prevention style condition indicated that they focused more on avoiding negative behavior and outcomes ($M = 2.40$, $SD = 1.05$) than respondents in the promotion style condition ($M = 5.60$, $SD = 1.10$), $F(1, 129) = 281.96$, $p < .001$.

As SRF, CRF, and KS are all measured using single-source self-report data, common method variance may act as a potential bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The Harmon's one factor test was employed to evaluate whether CMV is a serious concern. All of the measurement items were entered into a factor analysis using varimax rotation (Xue, Bradley, & Liang, 2011). No single dominant factor was found, indicating that common method variance is unlikely to be serious. In addition, confirmatory factor analysis involving the previously noted three variables showed an acceptable fit with the data ($\chi^2 = 1305.29$; $df = 850$; $RMSEA = 0.055$; $CFI = 0.89$; $SRMR = 0.088$).

Hypotheses testing

Table 1 shows the descriptive statistics and correlations among the variables in this study. Except for prevention SRF, all independent variables are strongly correlated with KS. CRF does not have a significant relationship with KS. On the whole, the correlations between variables support our hypotheses. Tables 2 and 3 display the hypotheses testing results.

Hypothesis 1a proposes two positive relationships of positive LFV and promotion LFS with KS. Model 2 in Table 2 shows that both positive LFV ($\beta = 0.38$, $p < .01$) and promotion LFS ($\beta = 0.50$, $p < .01$) are positively related to KS, supporting Hypothesis 1a. Likewise, the result of model 2 in Table 3 (for negative LFV, $\beta = -0.38$, $p < .01$; for prevention LFS, $\beta = -0.52$, $p < .01$) supports Hypothesis 1b, which predicts the negative relationships of negative LFV and prevention LFS with KS. Thus, Hypotheses 1a and 1b are supported.

TABLE 1. CORRELATIONS, MEANS, AND STANDARD DEVIATIONS

Variable	M	SD	1	2	3	4	5	6	7	8
1. Gender	0.64	0.48								
2. CRF	0.83	0.88	-0.07							
3. Positive LFV	0.51	0.50	0.07	0.03						
4. Negative LFV	0.49	0.50	-0.07	-0.03	-1.00**					
5. Promotion LFS	0.54	0.50	0.19*	0.12	0.12	-0.12				
6. Prevention LFS	0.46	0.50	-0.19*	-0.12	-0.12	0.12	-1.00**			
7. Promotion SRF	5.01	0.76	0.20*	0.08	0.22*	-0.22*	0.49**	-0.49**		
8. Prevention SRF	5.11	0.83	-0.09	-0.07	-0.03	0.03	-0.32**	0.32**	0.05	
9. KS	5.62	0.93	0.05	-0.01	0.40**	-0.40**	0.55**	-0.55**	0.54**	-0.08

Note: N = 129.

CRF = chronic regulatory focus; KS = knowledge sharing; LFS = leader feedback style; LFV = leader feedback valence; SRF = situational regulatory focus.

* $p < .05$; ** $p < .01$.

TABLE 2. REGRESSION ANALYSIS RESULTS FOR MEDIATION (PROMOTION SITUATIONAL REGULATORY FOCUS)

Variable	Model 1	Model 2	Model 3
	Promotion SRF	KS	KS
Gender	0.02	-0.09	-0.09
CRF	0.06	0.15*	0.13*
Positive LFV	0.19*	0.38**	0.34**
Promotion LFS	0.51**	0.50**	0.42**
Promotion SRF	-	-	0.21*
R ²	0.33	0.46	0.49
Adjusted R ²	0.31	0.44	0.47
F	15.14	26.13	23.25

Note: N = 129.

CRF = chronic regulatory focus; KS = knowledge sharing; LFS = leader feedback style; LFV = leader feedback valence; SRF = situational regulatory focus.

* $p < .05$; ** $p < .01$.

Hypothesis 2a suggests the positive effects of positive LFV and promotion LFS on promotion SRF. As is expected, significant and positive effects of the two leader behaviors on promotion SRF were found in model 1 of Table 2 (for positive LFV, $\beta = 0.19$, $p < .05$; for promotion LFS, $\beta = 0.51$, $p < .01$). Thus, Hypothesis 2a is supported. In testing Hypothesis 2b, although the positive relationship between prevention LFS and prevention SRF is significant ($\beta = 0.45$, $p < .05$), model 1 of Table 3 shows no significant effect of negative LFV on prevention SRF ($\beta = 0.07$, $p > .05$).

To test the mediating role of promotion and prevention SRF, the three-step regression approach of Baron and Kenny (1986) was used. In step 1, the independent variable should be significantly related to the mediator (Model 1). In step 2, the independent variable should be significantly related to the dependent variable (Model 2). In step 3, the mediating variable should be significantly related to the dependent variable, with the independent variable included in the equation (Model 3). If the significant relationships in step 1 are reduced or eliminated, partial mediation or complete mediation is supported, respectively.

TABLE 3. REGRESSION ANALYSIS RESULTS FOR MEDIATION (PREVENTION SITUATIONAL REGULATORY FOCUS)

Variable	Model 1	Model 2	Model 3
	Prevention SRF	KS	KS
Gender	-0.02	-0.09	-0.09
CRF	-0.12	0.15*	0.16*
Negative LFV	0.07	-0.38**	-0.38**
Prevention LFS	0.45**	-0.52**	-0.56**
Prevention SRF	-	-	0.09
R ²	0.22	0.46	0.46
Adjusted R ²	0.20	0.44	0.44
F	8.90	26.13	21.22

Note: $N = 129$.

CRF = chronic regulatory focus; KS = knowledge sharing; LFS = leader feedback style; LFV = leader feedback valence; SRF = situational regulatory focus.

* $p < .05$; ** $p < .01$.

As Table 2 shows, the two independent variables are significantly related to promotion SRF (mediator, model 1) and KS (dependent variable, model 2). In model 3, the two independent variables remain significant when a mediator is included in the equation; however, the β value declines from 0.38 and 0.50 to 0.34 and 0.42, respectively. Thus, Hypothesis 3a, which demonstrates a positive relationship between promotion SRF and KS ($\beta = 0.21, p < .05$), and Hypothesis 4a, which represents partial mediation, are supported.

In Table 3, the two independent variables are significantly related to KS in model 2; however, the relationship between negative LFV and prevention SRF (mediator, $\beta = 0.07, p > .05$) in model 1 and the relationship between prevention SRF (mediator) and KS (dependent variable) in model 3 ($\beta = 0.09, p > .05$) are not significant. Therefore, Hypotheses 3b and 4b are not supported.

To further gauge the mediation mechanisms, the Sobel test (Preacher & Hayes, 2008) was conducted on the previously described four mediated relationships. The results for three of the relationships (positive LFV-promotion SRF-KS, Sobel statistic = 4.27, $p < .001$; promotion LFS-promotion SRF-KS, Sobel statistic = 4.91, $p < .001$; negative LFV-prevention SRF-KS, Sobel statistic = -0.86, $p = .39$) remained the same as what was found in the previous mediation analyses. For the 'prevention LFS-prevention SRF-KS' relationship, the indirect effect was found to be significant (Sobel statistic = -2.26, $p = .02$), suggesting that prevention SRF mediated the negative relationship between prevention LFS and KS.

DISCUSSION

Conclusion

This study examined the relationship between leader feedback and employee KS behavior through a new perspective: regulatory focus theory. This study showed that leader feedback directly and indirectly affects individual KS behavior. Positive feedback valence and promotion feedback style facilitate KS both directly and indirectly through the mediating role of a promotion SRF. Prevention feedback style could form a prevention SRF that, in turn, negatively affects KS. Negative feedback valence has a direct negative effect on KS. Figure 2 shows the results of the hypotheses testing, which generate interesting theoretical and managerial implications.

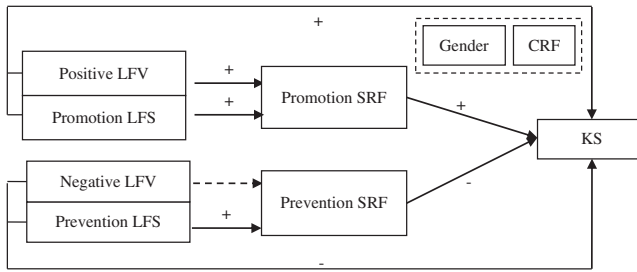


FIGURE 2. THE RESULTS OF REGRESSION ANALYSIS. CRF = CHRONIC REGULATORY FOCUS; KS = KNOWLEDGE SHARING; LFS = LEADER FEEDBACK STYLE; LFV = LEADER FEEDBACK VALENCE; SRF = SITUATIONAL REGULATORY FOCUS

Theoretical implications

This paper makes three specific contributions to the leadership and KS literature. First, the relationship between leader feedback and KS was empirically tested. As far as is known, this study is the first to investigate how leader feedback affects employee KS, although leader feedback was recognized as a key leader behavior in shaping follower motivation and behavior (Harackiewicz & Larson, 1986; Idson & Higgins, 2000; Gaddis, Connelly, & Mumford, 2004). This experimental study found that positive feedback valence and promotion feedback style work better to facilitate KS among employees, whereas negative valence and prevention style have negative influences. In the meantime, SRF acts as a mediator in the effecting process. These findings are meaningful because leader feedback is a specific behavior that directly pertains to the KS process, making both theoretical and practical contributions. At this point, future research is strongly encouraged to investigate how other leader behavior, such as leader affect (Gaddis, Connelly, & Mumford, 2004) and role modeling (Wu, McMullen, Neubert, & Yi, 2008), might play a role in influencing individual KS.

Second, this study extends prior ‘leadership KS’ studies by taking a motivational perspective as its theoretical foundation. Although the role of motivation was recognized and emphasized in the KS literature (Hansen, Mors, & Lovas, 2005), motivation theories are not frequently used in KS research (Wang & Noe, 2010). The theoretical foundation of KS research is enriched using introducing regulatory focus theory, which turns out to be a powerful tool in explaining KS motivation and behavior.

Third, this study measures leader feedback in a more comprehensive manner that includes two aspects: feedback valence and style. Prior studies on feedback often focused on the effect of either style or valence but not on both simultaneously. Zhou (1998) separately measured the two facets in one study and concluded that they are both effective in influencing individual behavior. Building on this concept, the present study considers both style and valence and defines feedback in a more complete manner. Future researchers may use this study for reference.

In addition, inconsistent results were found on the ‘prevention LFS-prevention SRF-KS’ relationship by using multiple regression analysis and the Sobel test. The mediation effect exists when using the Sobel test but not when using multiple regression. One possible explanation is that the prevention SRF mediates the ‘prevention LFS-KS’ relationship. However, compared with the negative effect from prevention LFS, negative LFV has a stronger direct negative effect on KS because employees pay more attention to the results. They are upset about the failure but do not feel a lot worse when the leader gives them prevention LFS.

Managerial implications

The results of the current study answered an important question that most leaders care about: how can employees’ KS behavior be facilitated? As the conclusion indicates, when leaders are to give feedback or evaluate employees’ work, they attempt to choose the promotion style. In other words, words of

praise should be used frequently to arouse their hopes, wishes, and aspirations at work and to stress the 'gain–nongain' situation of their development and growth accomplishment. In contrast, words regarding possible loss, duty, and responsibilities prevent followers from contributing their knowledge. As KS is primarily associated with positive organizational outcomes (e.g., higher performance, Collins & Smith, 2006; Srivastava, Bartol, & Locke, 2006), promotion feedback style and reports on success information are positive stimulators in leveraging KS and improving an organization's performance.

Limitations

The present study has several limitations. First, given the experimental nature of low external validity and the use of a student sample in the current study, the applicability of the results needs to be verified. To improve the external validity, data from enterprises are utilized to test the findings. Second, although the experimental procedure was carefully designed, unconsidered or even uncontrollable factors may still exist that actually influence the embodiment of a moderating role from the data. Future research is expected to address this issue. Third, this study was conducted in the Chinese culture. As all of the participants were Chinese, future work in other cultures is still called for to help validate the application of these results, although consistency across different cultures was identified (e.g., Hackett, Farh, Song, & Kapierre, 2003).

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APPENDIX

MANIPULATION OF LFV AND STYLE

I. Positive feedback valence–promotion feedback style

Feedback of the ‘supposed task’: ‘Our proposal succeeded in the bidding last week and we won a good project for our company. Our reputation had also received a huge response from the industry and I would like to commend all of you for showing your value and ability.’

Feedback of the design of the theme park: ‘I just had a discussion with the expert and according to his advice, the design is successful and may be recognized by the judges of the whole project. All of you

were hard working and we achieved our goal in this step as the name of the park, as well as character and style, are creatively designed. This will probably help us to win the whole project. Consequently, our skills are improved and experience is accumulated while the success of our team will in turn bring all of you chances to promote and develop. I would like to commend all of you again for your effort.'

Feedback of the marketing plan: 'According to the expert's assessment of the plan, the marketing approach is successful and perfectly going with the design of the park, which will undoubtedly enhance the possibility of winning the project. In a word, we accomplished this work by proposing a successful framework and overall idea. Our efforts promoted the development of this important project and the company forward and again, you showed your value. The success of our team will in turn bring all of you chances to promote and develop.'

II. Positive feedback valence–prevention feedback style

Feedback of the 'supposed task': 'Our proposal succeeded in the bidding last week, thus our company avoided losing such a good project. This was because we fulfilled our responsibilities and obligations. What's more, we protected our reputation and the company's interest.'

Feedback of the design of the theme park: 'I just had a discussion with the expert and according to his advice, the design is successful and may be recognized by the judges of the whole project. All of us accomplished the work of our own and fulfilled the duties and responsibilities as a member of planning department. The success of the first step will effectively avoid the failure of the whole proposal. Consequently we would possibly avoid being criticized by our leader.'

Feedback of the marketing plan: 'According to the expert's assessment of the plan, the marketing approach is successful and perfectly going with the design of the park, which will undoubtedly enhance the possibility of winning the project. In a word, we did a good job today and achieved our goal which we supposed to obtain. All of us fulfilled the responsibilities and obligations as a member of planning department. The success of the second step will effectively avoid the failure of the whole proposal and the development of the company is not hampered. More importantly, we preserve our team reputation and personal interest of our own.'

III. Negative feedback valence–promotion feedback style

Feedback of the 'supposed task': 'Our proposal failed in the bidding last week, thus our company did not win such a good project. We received no response from the peers. I think the result doesn't reflect our value and so I would not commend all of you this time.'

Feedback of the design of the theme park: 'I just had a discussion with the expert and according to his advice, the design is unsuccessful and may not be recognized by the judges of the whole project. That is to say, we didn't achieve our goal and the failure did nothing for the promotion of the whole project. As a result, all of you would not get chances to promote or develop.'

Feedback of the marketing plan: 'According to the expert's assessment of the plan, the marketing approach is also unsuccessful, which may fail again in winning the project. In a word, we didn't do a good job today to achieve our goal which was supposed to obtain. It is really a pity that the failure of both two steps is not helpful in winning the whole proposal and the development of the company is not promoted. You did not show your value and the failure of our team will not bring all of you chances to promote and develop.'

IV. Negative feedback valence–prevention feedback style

Feedback of the 'supposed task': 'Our proposal failed in the bidding last week. As a result, our company lost a good project. We didn't achieve the task assigned by our supervisor and also, we didn't fulfill our responsibilities and obligations as a member of planning department this time. The failure brought damage to our company's reputation so I criticize everyone here for the loss.'

Feedback of the design of the theme park: 'I just had a discussion with the expert and according to his advice, the design is unsuccessful and may not be recognized by the judges of the whole project. It seems that we did not work hard on the design and all of us didn't accomplish the work of our own and we did not fulfill the duties and responsibilities as a member of planning department. The failure of the first step will probably result in failure of the whole proposal. Consequently we would possibly not avoid being criticized by our leader.'

Feedback of the marketing plan: 'According to the expert's assessment of the plan, the marketing approach is also unsuccessful, which may fail again in winning the project. In a word, we didn't do a good job today to achieve our goal which was supposed to obtain. I seriously advise everyone here to think the question that whether you have fulfilled your duties and responsibilities during the designing and marketing work. Our mistakes are likely to lead to the failure of the whole project and more importantly, the reputation and development of our company, even interests of us are suffering huge losses. We did not avoid the loss our team reputation and personal interest.'