

Transformational Leadership and Job Involvement: The Moderation of Emotional Contagion

Ying-Ni Cheng

Department of Psychology, National Chengchi University, Taipei, Taiwan

Chih-Long Yen

*Department of Psychology and Social Work,
National Defense University, Taipei, Taiwan*

Lung Hung Chen

*Department of Recreation and Leisure Industry Management,
National Taiwan Sport University, Taoyuan County, Taiwan*

This study examined the moderating effects of emotional contagion, including leaders' emotional contagion and subordinates' emotional susceptibility, on the relationship between transformational leadership and subordinates' job involvement. By investigating 210 soldiers from eight companies of the Taiwan Army, a three-way interaction effect was found. For leaders with high emotional contagion, the positive relationship between transformational leadership and subordinates' job involvement was stronger for subordinates' with high (versus low) susceptibility. For leaders with low emotional contagion, no such interaction was found. We discuss the implications of these findings for future research in this area.

“Duty, Honor, Country. Those three hallowed words reverently dictate what you ought to be, what you can be, what you will be,” is a quote from General Douglas MacArthur. It is easy to feel General MacArthur's enthusiasm and expectations for

The views and opinions expressed in this article are solely those of the authors and do not reflect an endorsement by the Republic of China Government.

Correspondence should be addressed to Chih-Long Yen, Department of Psychology and Social Work, National Defense University, No. 70, Sec. 2, Zhongyang N. Rd., Beitou Dist., Taipei City 11258, Taiwan. E-mail: dragon1943@mail2000.com.tw

the soldiers in these words. A great leader can not only convey his or her thoughts to soldiers, but also strong emotions. Because emotions can affect individuals' job attitudes, decision making, and workplace behaviors, an increasing number of studies have been trying to untangle the complex relationship between leadership and emotions in the past two decades, such as leadership and emotional labor, emotional intelligence, and abusive supervision and emotional exhaustion (e.g., Wu & Hu, 2009). Transformational leadership, which is one of the most popular leadership styles, has been found to influence subordinates' performance within various contexts (Cole, Bedeian, & Feild, 2006), including the military (Bass, Avolio, Jung, & Berson, 2003).

One line of transformational leadership research focuses on identifying how emotion may encourage or inhibit individual attitudes, feelings, and behavior at work (Cole et al., 2006). Some of the past studies focused on leaders' ability to affect others by transmitting emotions (i.e., emotional contagion). Individuals with high emotional contagion inherently have better ability to express their emotional states and may thus yield a great influence on others (Hatfield, Cacioppo, & Rapson, 1994). However, the success of emotional contagion depends on not only the abilities of transmitters, but also the susceptibilities of receivers. If soldiers are not susceptible to emotion, could leaders successfully transmit their enthusiasm to soldiers? To gain better understanding of this question, we investigated whether the relationship between leadership and job involvement would be moderated by emotional contagion and emotional susceptibility. Before presenting our main findings, we review relevant research and theory to contextualize the hypotheses under investigation.

Transformational Leadership and Job Involvement

Bass (1985) proposed that leaders can enact two types of behaviors to influence subordinate actions, transformational leadership behaviors and transactional leadership behaviors. Transformational leaders seek to increase the admiration, respect, and trust of the followers by engaging in *idealized influence*, *inspirational motivation*, and *individualized consideration*, as well as through *intellectual stimulation*. Studies have shown that transformational leadership may affect leadership efficiency and subordinates' behavior. Bycio, Hackett, & Allen (1995) found that transformational leadership had a significantly positive impact on subordinates' work performance, job satisfaction, and organizational commitment, and a negative impact on willingness to leave the organization. Similar conclusions can also be found in many other studies (Schaubroeck, Lam, & Peng, 2011). In general, it was demonstrated that transformational leadership has a positive influence on plenty of organization-related variables and consequentially influences job involvement.

A number of studies have shown that subordinates' job involvement is closely related to their work performance (e.g., Keller, 1997; Lodahl & Kejner, 1965). Lodahl and Kejner (1965) defined job involvement as the degree that one values or commits to his or her job. In other words, job involvement is a belief about the importance of a job in one's life, or the extent of one's willingness to devote oneself to the job (Robbins & Judge, 2011). Transformational leaders affect subordinates by emphasizing the meaning of the job, and conveying an alluring prosperous future to get subordinates to focus on their jobs (i.e., inspirational motivation). Thus, transformational leadership is expected to have a positive influence on job involvement. In keeping with this research we proposed the following hypothesis:

Hypothesis 1: Leaders' transformational leadership has a significant positive relationship with subordinates' job involvement.

The Moderating Effect of Leaders' Emotional Contagion and Subordinates' Susceptibility

One reason why transformational leadership may contribute to work outcomes is because it has an intense emotional component (Bass, 1985). A transformational leader can affect his subordinates by way of emotional contagion. Emotional contagion means that people are inclined to imitate another person's facial expression, voices, gestures, and movements automatically, which leads to a process of mutual emotional conversion (Hatfield et al., 1994). Emotional contagion is an automatic process and can be used to explain how emotions are transferred between people. Individuals inherently have the ability to express their emotional states and to perceive the states of others. When people pay attention to others, they tend to imitate other people's emotional expressions continuously and subconsciously synchronize their expressions in terms of faces, voices, and gestures. Dimberg, Thunberg, and Elmehed (2000) found that people imitated the ongoing emotional stimulus, even when they did not pay attention to the stimulus. Therefore, due to the automatic process of emotional contagion, one can understand and experience the emotions of others (Hatfield et al., 1994). Previous empirical research has found that people's emotional states are affected by others. For example, Mullen and his colleagues (1986) studied the effects of the facial and vocal expressions of three TV broadcasters on their audience. They found that when the broadcasters appeared happier, their audience also tended to be happier. For these reasons, we infer a similar contagious process to a leadership context, indicating that subordinates can identify with and perceive their leader's emotional expressions, and that leaders can utilize their emotional behavior and expressions to affect their subordinates. The main issue of the present research is whether leaders' emotional contagion ability (termed "leaders' emotional contagion") and subordinates' ability to perceive other people's emotions

(termed “subordinates’ susceptibility”) can regulate the relationship between transformational leadership and job involvement.

According to Dasborough and Ashkanasy, transformational leaders should be capable of detecting subordinates’ emotions, understanding their feelings, and, most importantly, inspiring and arousing subordinates’ emotions. Conger and Kanungo (1998) asserted that leaders who can arouse subordinates’ emotional reactions are most likely to guide subordinates to achieve the expected outcome. Therefore, transmitting emotions is one important way for transformational leaders to affect subordinates. If leaders are skilled in emotional contagion, their transformational leadership may have a strong impact on subordinates. Transformational leaders with high emotion-transmitting ability may be more efficient in making their subordinates generate a sense of the work’s meaning (i.e., job involvement) than leaders with low emotion-transmitting ability. So leaders’ emotional contagion ability may enhance or reduce the effect of transformational leadership.

However, a leader’s success in transmitting his emotions to subordinates depends on not only the leader’s emotional-transmitting ability, but also subordinates’ emotional susceptibility to be affected by the process. Bakker and Schaufeli (2000) showed that subjects who had a stronger susceptibility appeared to have more emotional exhaustion when their partners transmitted emotional exhaustion. Totterdell (2000) found that higher degrees of susceptibility were related to stronger emotional contagion effects. Also, Johnson (2008) found an interaction effect of leaders’ affect and follower susceptibility on followers’ affect at work. When the follower susceptibility increased, the relationship between the leaders’ positive affect and followers’ positive affect was strengthened.

Accordingly, the effects of transformational leadership may be influenced by both leaders’ emotional contagion ability and subordinates’ emotional susceptibility. We thus propose our main hypothesis:

Hypothesis 2: There is an interaction effect of transformational leadership, leaders’ emotional contagion, and subordinates’ susceptibility on subordinates’ job involvement. The interaction effect between transformational leadership and subordinates’ susceptibility on subordinates’ job involvement is lower when the leader’s emotional contagion is lower.

METHOD

Participants and Procedures

Two-hundred and ten participants were recruited from eight companies of Taiwanese army, of which three to nine members in each squad were randomly sampled. The participants were required to evaluate their squad leaders and their

own states. Participants were all male with a mean age of 22.23 ($SD = 1.86$). Nine percent of those surveyed had an elementary or a junior-high school diploma, 21 percent a high school diploma, 63.8 percent an undergraduate diploma, and 5.7 percent were postgraduates.

The researchers served as the survey administrators. A gift was offered to each participant to increase their participating motivation. The questionnaires were administered in the following order: transformational leadership scale, subordinates' susceptibility scale, social desirability scale, job involvement questionnaire, and a demographic profile. Throughout the administration, the privacy and confidentiality of participants were ensured.

MEASURES

Transformational Leadership

Subjects were asked to evaluate their leaders' transformational leadership using a multifactor leadership questionnaire (MLQ-5X) that contained 20 items (Avolio, Bass, & Jung, 1995). Four dimensions comprise this questionnaire: *idealized influence* (e.g., "In my mind the person I am rating is a symbol of success and accomplishment"), *inspirational motivation* (e.g., "The person I am rating emphasizes the importance of having a collective sense of mission"), *individual consideration* (e.g., "The person I am rating treats me as an individual rather than just a member of the group"), and *intellectual stimulation* (e.g., "The person I am rating shows how to look at problems from new angles"). Avolio and his colleagues (1995) demonstrated that the MLQ-5X possesses satisfactory convergent and discriminant validity. Most researchers reduced the four dimensions into a single factor, and the result was supported by several studies (Cota, Longman, Holden, Fekken, & Xinairis, 1993). Thus, the total score was used in the current study, with higher scores indicating greater levels of transformational leadership. A six-point Likert scale (1, "strongly disagree"; 6, "strongly agree") was adopted and its Cronbach's α was .95 in our study.

Leaders' Emotional Contagion

An Affective Communication Test (ACT; Friedman, Prince, Riggio, & DiMatteo, 1980) was used to assess leaders' emotional contagion. According to Friedman et al. (1980), the ACT has satisfactory criterion-related validity, convergent validity, and discriminant validity. Higher scores represent a better ability in terms of moving, encouraging, and attracting others, and more liveliness in terms of emotional expressions. Because some items in the original questionnaire were not suitable for a military situation, four original items were dropped and three new items were constructed into the scale. Sample items include "It is easy for

everyone to perceive the emotional fluctuations of my squad leader,” “My squad leader expresses emotional states on the phone,” and “My squad leader is able to give a seductive glance.” As a result, a total of 12 items was used to measure leaders’ emotional contagion. A four-point Likert scale (1, “never or rarely”; 4, “often or always”) was adopted and Cronbach’s α was .68 in this study.

Subordinates’ Susceptibility

Subordinates’ susceptibility was measured by an Emotional Contagion (EC) scale (Doherty, 1997), representing the degrees to which one is easily affected by others’ emotions. Doherty demonstrated that the EC possesses satisfactory construct validity. However, three of the original items were eliminated, because these items were used to measure susceptibility to love, which is not relevant to our research purpose. As a result, a total of 12 items was used to measure subordinates’ susceptibility. Sample items include “I get teary eyes if someone I’m talking with begins to cry,” “Being with a happy person picks me up when I’m feeling down,” and “I clench my jaws and my shoulders get tight when I see the angry faces on the news.” A four-point Likert scale (1, “never or rarely”; 4, “often or always”) was adopted and Cronbach’s α was .83 in this study.

Job Involvement

Job involvement was measured with 10 items from Kanungo (1982), who used a multitrait-multimethod matrix, which showed good convergent and discriminant validity. Sample items were “I live, eat, and breathe my job,” and “Most of my interests are centered around my job.” A seven-point Likert scale (1, “strongly disagree”; 7, “strongly agree”) was adopted, and its Cronbach’s α was .87 in this study.

Social Desirability

Originally, we tried to adopt social desirability as a control variable to prevent common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) by using a 10-item scale developed by Strahan and Gerbasi (1972). However, the latter analysis showed that social desirability did not correlate significantly with any constructs and also did not influence the results; therefore, social desirability was omitted from the analysis.

RESULTS

Structural equation modeling was used to examine the construct validity of the studied variables. Hierarchical multiple regression analyses were then used for

testing Hypothesis 1 and Hypothesis 2. To prevent the problem of colinearity, transformational leadership, leaders' emotional contagion, and subordinates' susceptibility were centered for all regression analyses (Cohen, Cohen, West, & Aiken, 2003). The approach suggested by Cohen et al. (2003) was used to plot moderation figures.

Confirmatory Factor Analysis

Following Anderson and Gerbing's (1988) approach, we tested confirmatory factor analysis of the studied constructs. The four-factor model (transformational leadership, leaders' emotional contagion, subordinates' susceptibility, and job involvement) had acceptable model fit, $\chi^2(1371, N = 210) = 2737.08, p = .00$; NNFI = .92; CFI = .92; RMSEA = .07; SRMR = .08. (Hu & Bentler, 1999). Convergent validity was supported, as all factor loadings were significant at the .05 level. We used one of the most common methods to test discriminant validity: the confidence interval around the correlation between any two latent constructs that does not include one, and the result met this standard, which indicates that discriminant validity is achieved.

Table 1 shows the means, standard deviations, internal consistency estimates (Cronbach's α) and correlations among all variables. The correlation matrix corroborated previous findings, suggesting that greater transformational leadership is positively related to subordinates' job involvement. Transformational leadership ($r = .25, p < .001$), leaders' emotional contagion ($r = .20, p < .01$), and subordinates' susceptibility ($r = .21, p < .01$) positively related to subordinates' job involvement.

Hierarchical Regression Analysis

Based on Baron and Kenny's (1986) suggestion, hierarchical regression analysis was conducted for each hypothesis. To counter problems of multicollinearity, all independent and moderating variables were centered before being entered in the regression analysis. Also, the interaction terms were created before centering

TABLE 1
Means, Standard Deviations, Reliabilities, and Correlations (n = 210)

Variables	<i>M</i>	<i>SD</i>	α	1	2	3
1. Transformational leadership	4.18	.92	.95			
2. Leaders' emotional contagion	2.81	.42	.68	.41***		
3. Subordinates' susceptibility	2.61	.51	.83	.17*	.38***	
4. Job involvement	4.64	.85	.87	.25***	.20**	.21**

* $p < .05$. ** $p < .01$. *** $p < .001$.

TABLE 2
Hierarchical Regression Analysis of the Interaction

	<i>Job Involvement</i>		
	<i>M1</i>	<i>M2</i>	<i>M3</i>
Transformational leadership	.20**	.17*	.09
Leaders' emotional contagion	.06	.09	.09
Subordinates' susceptibility	.15*	.14	.07
(ΔR^2)	(.10)**		
Transformational* Contagion		-.00	.00
Transformational* Susceptibility		.09	.12
Contagion* Susceptibility		-.13	-.14
(ΔR^2)		(.01)	
Transformational*Contagion * Susceptibility			.21*
(ΔR^2)			(.03*)
Total R^2	.10	.11	.13
Adjusted R^2	.08	.08	.10
<i>F</i>	7.21***	4.00***	4.45***
Degrees of freedom (<i>df1,df2</i>)	(3,206)	(6,203)	(7,202)

Note. Standardized β coefficients are reported.

* $p < .05$. ** $p < .01$. *** $p < .001$.

independent and moderating variables. As shown in Table 2, transformational leadership accounted for significant variance in terms of job involvement ($\beta = .20, p < .01$), indicating that subordinates were more involved in their jobs when their leader's transformational leadership was higher. Thus, Hypothesis 1 was supported.

Testing the Interaction Effects

For moderation effects, each of the two-way interaction effects was nonsignificant. However, the three-way interaction effect among transformational leadership, leaders' emotional contagion, and subordinates' susceptibility on subordinates' job involvement was significant ($\beta = .21, p < .05$). The pattern of this three-way interaction effect is shown in Figures 1 and 2. Figure 1 shows that when leaders' emotional contagion was low, the relationship between transformational leadership and job involvement was not moderated by subordinates' susceptibility. Figure 2 shows that when leaders' emotional contagion was high, there was a higher positive relationship between transformational leadership and subordinates' job involvement for those subordinates with high susceptibility, as

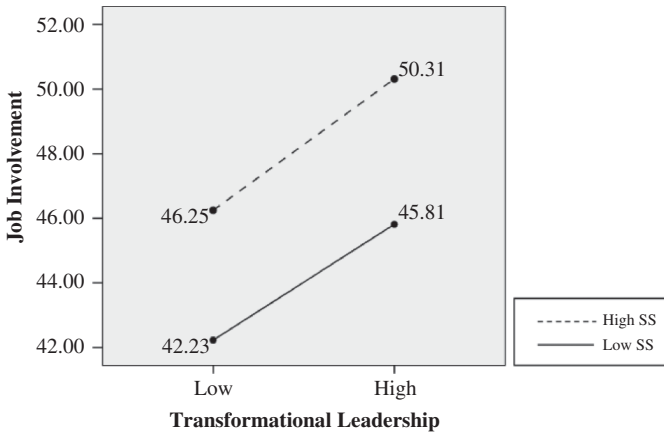


FIGURE 1 The interaction effect of transformational leadership and subordinates' susceptibility within lower leaders' emotional contagion group. *Note.* SS = Subordinates' Susceptibility.

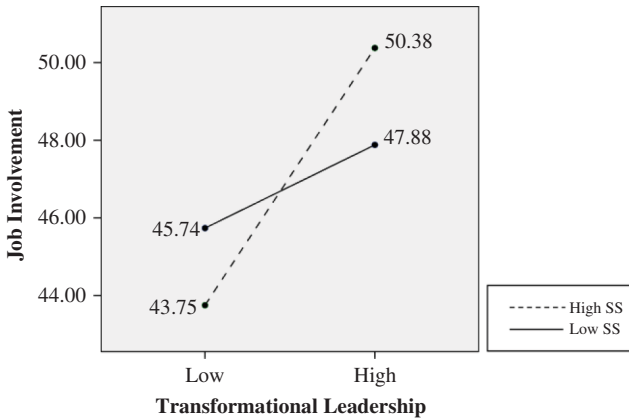


FIGURE 2 The interaction effect of transformational leadership and subordinates' susceptibility within higher leaders' emotional contagion group. *Note.* SS = Subordinates' Susceptibility.

compared to those with low susceptibility. Thus, Hypothesis 2 was fully supported. In summary, only when leaders have a good ability to transmit emotions and subordinates have a good ability to receive emotions can transformational leaders have a better influence on subordinates' job involvement.

DISCUSSION

In sum, our main findings indicate that (1) transformational leadership had a positive influence on subordinates' job involvement; and that (2) the influence of transformational leadership on subordinates' job involvement was moderated by leaders' emotional contagion and subordinates' susceptibility.

The current results correspond to previous results stating that transformational leadership has a positive influence on subordinates' efficiency (Bass et al., 2003), such as job involvement. Transformational leaders may increase the job's meaning for their subordinates through methods such as idealized influence, inspirational motivation, individualized consideration, and intellectual stimulation (Bass, 1985). Therefore, it is not surprising to find a positive influence of transformational leadership on job involvement.

Results show that all the two-way interactions were not significant, which means that neither leaders' emotional contagion nor subordinates' susceptibility moderate transformational leadership independently. One plausible explanation for this insignificant result is that the leaders' ability to transmit emotions and subordinates' ability to perceive emotions should be considered at the same time (i.e., the three-way interaction effect found in our study). Only when leaders have high emotional contagion ability and subordinates have high susceptibility to emotions can transformational leadership show a great influence on subordinates' job involvement.

Transformational leaders rely on arousing emotions to motivate their subordinates. They arouse a strong sense of self-identification and exciting emotions in subordinates, and communicate with them through emotions in order to bring out the subordinates' responses (Ashkanasy & Tse, 2000). Thus, the leaders can induce positive thinking of subordinates, and this enhances their identification with the job. Subordinates can perform better than expectations and have positive emotions (Ashkanasy & Tse, 2000) when they are supported by their leaders (Bass, 1985). In short, research has shown that transformational leaders can influence positive emotions, attitudes, and behavior of subordinates and then improve their work performance. This is consistent with our findings.

Why is job involvement influenced by transformational leadership simultaneously moderated by leaders' emotional contagion and subordinates' susceptibility? We suppose that this could be explained by the attribution process. Research in social psychology has found that individual attribution is greatly affected by emotions. The classic research of Dutton and Aron (1974) found that when subjects walked across a dangerous bridge, it caused a physiologically aroused state that was good enough to make the subjects feel in love with someone of the opposite sex. This is because people need to attribute their physical arousal to something. Some researchers have found that the emotions transmitted by transformational leaders were usually positive and optimistic (Bono,

Foldes, Vinson, & Muros, 2007). Thus subordinates with higher susceptibility (i.e., those easily aroused by emotions) can receive more positive emotions from transformational leaders. Therefore, subordinates with a higher susceptibility tend to attribute their positive emotions to external effects more often, while a transformational leader with a high emotion-transmitting ability could be the external effect the emotion is attributed to. This process may cause a moderation effect between leaders' emotional contagion and subordinates' susceptibility in terms of the relationship between transformational leadership and subordinates' job involvement.

From the perspective of the self-perception theory (Bem, 1972), one should observe his or her own behavior and context to infer his or her emotional state. Thus, not only personal characteristics (e.g., subordinates' susceptibility), but also other environmental clues (e.g., leaders' emotional contagion) need to be taken into consideration to infer one's own emotional state. Leaders' emotional contagion and subordinates' susceptibility should be taken into account to enhance the predictive effect of transformational leadership on subordinates' job involvement. Also, the rationales behind the self-perception theory may explain why a three-way interaction, rather than two-way interactions, was supported.

Transformational leadership encompasses charismatic behaviors and inspirational communication (Bass, 1985); thus it worthy of concern whether transformational leadership and emotional contagion are distinct constructs. The present study showed that transformational leadership and leaders' emotional contagion correlated significantly ($r = .41$); however, this correlation of $r = .41$ indicated only a 16% overlapping between transformational leadership and leaders' emotional contagion ($R^2 = .16$), which indicated that these two constructs may be distinct. The confirmatory factor analysis also indicated acceptable discriminant validity between transformational leadership and leaders' emotional contagion. The model treating transformational leadership and leaders' emotional contagion as distinct constructs had acceptable model fit, $\chi^2(1371, N = 210) = 2737.08, p = .00; NNFI = .92; CFI = .92; RMSEA = .07; SRMR = .08$. This is in concordance with past research. For example, Connelly and Ruark (2010) found that a leader's high activating emotions did not always result in more perceptions of transformational leadership, and vice versa. Thus, transformational leadership and leaders' emotional contagion may be related but distinct constructs.

Limitations and Future Research Direction

Some limitations of this study should be noted. First, all variables were collected from the subordinates so that there was some concern over common method variance. Nevertheless, the confirmatory factor analysis displayed an acceptable level

of discriminant validity. Moreover, in order to ensure this research result is not affected by common method variance, we adopted two methods to deal with or detect the extent of this possible variance: (1) Social desirability was used as a control variable (Podsakoff et al., 2003) to reduce common method variance, and the analyses showed that all the results remain the same even when controlling the social desirability; and (2) Harman's one-factor test is used to detect the extent of common method variance (Podsakoff et al., 2003). The procedure is that all of the variables in a study are loaded into an exploratory factor analysis, and the unrotated factor solution is examined to assess the extent to which method biases may be a problem. If a single factor will emerge from the factor analysis or one general factor will account for the majority of the covariance among the measures, a substantial amount of common method variance is present. According to the above procedure, the research variables (transformational leadership, leaders' emotional contagion, subordinates' susceptibility, and job involvement) are all loaded into an exploratory factor analysis. The analysis result showed that more than one factor emerges, and the variance of the first factor is 23.41%, which is less than half the total explained variance (68.66%). From the above analyses, the common method variance might not be a serious problem.

Second, the current study used only male subjects, so we cannot overgeneralize the results, nor say much about possible gender difference in our finding. There is contradictory evidence showing that gender difference may account for (e.g., Lundqvist & Dimberg, 1995) or not account for (e.g., Doherty, Orimoto, Singelis, Hatfield, & Hebb, 1995) emotional contagion effects. Further research on this issue may provide interesting insights about how our findings can be generalized to different populations.

Implications

Several theoretical and practical implications can be drawn from the current findings. Theoretically, this research contributes to the increasing studies on the role of emotional contagion in transformational leadership by examining the moderating effect of leader emotional contagion ability and subordinates' susceptibility to emotions. Besides, the result of this research is in accordance with affective events theory (AET, Weiss & Cropanzano, 1996); the leader behavior is itself an affective event, and personal disposition would interact with the event, which eventually influences subordinates' response, attitudes, and performance.

Practically, this research examines not only the role of leader emotional contagion ability on subordinates' job involvement, but also highlights the role of subordinates' emotional susceptibility in job involvement. This issue is especially important for organizations whose leadership style stresses emotional transmitting, such as the military. Though the conventional training areas in the military

are tight, people nowadays are more willing to understand how to be a good leader as it relates to leader effectiveness. We recommend building up a planned system to train the incumbent and possible leaders in the future about what is effective leadership (i.e., transformational leadership), and how to employ relevant emotions, thoughts, and behavior to influence subordinates in the military.

Further, subordinates who are more susceptible to emotions might be more susceptible to the effects of transformational leaders and their emotional contagion ability. Subordinates' susceptibility can be improved by the training process of experiential methods, which include case studies, business games, simulations, role playing, and behavior modeling. These training methods are commonly used in organizations in order to develop employees' sensitivity, better understand others' feelings, and refine problem-solving skills, as well as improve interpersonal skills (Werner & DeSimone, 2009).

CONCLUSION

Emotional issues have drawn much attention in organizational psychology, especially reflected in the development of leadership theories in recent years. The major contribution of the current study is to identify the roles of leaders' emotional contagion and subordinates' susceptibility on the leadership process. To our best knowledge, this may be the first study to explore this issue. How emotional contagion may affect leadership efficiency is an important and timely issue that requires further investigation.

REFERENCES

- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*, 411–423. doi:10.1037/0033-2909.103.3.411
- Ashkanasy, N. M., & Tse, B. (2000). Transformational leadership as management of emotion: A conceptual review. In N. Ashkanasy, C. Hartel, & W. Zerbe (Eds.), *Emotions in the workplace: Developments in the study of the managed heart* (pp. 221–235). Westport, CT: Quorum Books.
- Avolio, B. J., Bass, B. M., & Jung, D. I. (1995). *Multifactor leadership questionnaire technical report*. Redwood City, CA: Mind Garden.
- Bakker, A. B., & Schaufeli, W. B. (2000). Burnout contagion processes among teachers. *Journal of Applied Social Psychology*, *30*(11), 2289–2308. doi:10.1111/j.1559-1816.2000.tb02437.x
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, *51*(6), 1173–1182. doi:10.1037/0022-3514.51.6.1173
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York, NY: Free Press.
- Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology*, *88*(2), 207–218. doi:10.1037/0021-9010.88.2.207

- Bem, D. (1972). Self-perception theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 6, pp. 1–62). New York, NY: Academic Press.
- Bono, J. E., Folds, H. J., Vinson, G., & Muros, J. P. (2007). Workplace emotions: The role of supervision and leadership. *Journal of Applied Psychology, 92*(5), 1357–1367. doi:10.1037/0021-9010.92.5.1357
- Bycio, P., Hackett, E. D., & Allen, J. S. (1995). Further assessments of Bass (1985) conceptualization of transactional and transformational leadership. *Journal of Applied Psychology, 80*(4), 468–478. doi:10.1037/0021-9010.80.4.468
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.
- Cole, M. S., Bedeian, A. G., & Feild, H. S. (2006). The measurement equivalence of web-based and paper-and-pencil measures of transformational leadership—A multinational test. *Organizational Research Methods, 9*(3), 339–368. doi:10.1177/1094428106287434
- Conger, J., & Kanungo, R. (1998). *Charismatic leadership in organizations*. Thousand Oaks, CA: Sage.
- Connelly, S., & Ruark, G. (2010). Leadership style and activating potential moderators of the relationships among leader emotional displays and outcomes. *The Leadership Quarterly, 21*, 745–764. doi:10.1016/j.leaqua.2010.07.005
- Cota, A. A., Longman, R. S., Holden, R. R., Fekken, G. C., & Xinairis, S. (1993). Interpolating 95th percentile eigenvalues from random data: An empirical example. *Educational and Psychological Measurement, 53*, 585–596.
- Dasborough, M. T., & Ashkanasy, N. M. (2002). Emotion and attribution of intentionality in leader-member relationships. *The Leadership Quarterly, 13*, 615–634. doi:10.1016/S1048-9843(02)00147-9
- Dimberg, U., Thunberg, M., & Elmehed, K. (2000). Unconscious facial reactions to emotional facial expressions. *Psychological Science, 11*, 86–89.
- Doherty, R. W. (1997). The emotional contagion scale: A measure of individual differences. *Journal of Nonverbal Behavior, 21*, 131–154. doi:10.1023/A:1024956003661
- Doherty, R. W., Orimoto, L., Singelis, T. M., Hatfield, E., & Hebb, J. (1995). Emotional contagion: Gender and occupational differences. *Psychology of Women Quarterly, 19*, 355–371. doi:10.1111/j.1471-6402.1995.tb00080.x
- Dutton, D. G., & Aron, A. P. (1974). Some evidence for heightened sexual attraction under conditions of high anxiety. *Journal of Personality and Social Psychology, 30*, 510–517.
- Friedman, H. S., Prince, L. M., Riggio, R. E., & DiMatteo, M. R. (1980). Understanding and assessing nonverbal expressiveness: The affective communication test. *Journal of Personality and Social Psychology, 39*, 333–351.
- Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1994). *Emotional contagion*. New York, NY: Cambridge University Press.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1–55.
- Johnson, S. K. (2008). I second that emotion: Effects of emotional contagion and affect at work on leader and follower outcomes. *The Leadership Quarterly, 19*(1), 1–19. doi:10.1016/j.leaqua.2007.12.001
- Kanungo, R. N. (1982). Measurement of job and work involvement. *Journal of Applied Psychology, 67*, 341–349.
- Keller, R. T. (1997). Job involvement and organizational commitment as longitudinal predictors of job performance: A study of scientists and engineers. *Journal of Applied Psychology, 82*, 539–545. doi:10.1037/0021-9010.82.4.539
- Lodahl, T. M., & Kejner, M. (1965). The definition and measurement of job involvement. *Journal of Applied Psychology, 49*, 24–33.

- Lundqvist, L. O., & Dimberg, U. (1995). Facial expressions are contagious. *Journal of Psychophysiology*, *9*(3), 203–211.
- Mullen, B., Futrell, D. E., Stairs, D., Tice, D. M., Baumeister, R. F., Dawson, K. E., . . . Rosenfeld, P. (1986). Newscasters' facial expressions and voting behavior of viewers: Can a smile elect a president? *Journal of Personality and Social Psychology*, *51*, 291–295. doi:10.1037/0022-3514.51.2.291
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*, 879–903. doi:10.1037/0021-9010.88.5.879
- Robbins, S. P., & Judge, T. A. (2011). *Organizational behavior* (14th ed.). River, NJ: Pearson Prentice Hall.
- Schaubroeck, J., Lam, S. S. K., & Peng, A. C. Y. (2011). Cognition-based and affect-based trust as mediators of leader behavior influences on team performance. *Journal of Applied Psychology*, *96*(4), 863–871. doi:10.1037/a0022625
- Strahan, R., & Gerbasi, K. C. (1972). Short, homogeneous versions of the Marlow-Crowne social desirability scale. *Journal of Clinical Psychology*, *28*, 191–193.
- Totterdell, P. (2000). Catching moods and hitting runs: Mood linkage and subjective performance in professional sport teams. *Journal of Applied Psychology*, *85*, 848–859. doi:10.1037//0021-9010.85.6.848
- Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior: An annual series of analytical essays and critical reviews* (Vol. 18, pp. 1–74). Greenwich, CT: JAI Press.
- Werner, J. M., & DeSimone, R. L. (2009). *Human resource development*. Mason, OH: South-Western Cengage Learning.
- Wu, T. Y., & Hu, C. (2009). Abusive supervision and employee emotional exhaustion dispositional antecedents and boundaries. *Group & Organization Management*, *34*(2), 143–169. doi:10.1177/1059601108331217