



## The role of collective efficacy in the relations between transformational leadership and work outcomes

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Using a sample of 402 employees from the banking and finance sectors in China and India, we found that transformational leadership is positively related to organizational commitment and job satisfaction, and negatively related to job and work withdrawal. We also found that collective efficacy mediated the contribution of transformational leadership to job and work withdrawal and partially mediated the contribution of transformational leadership to organizational commitment and job satisfaction. Implications and directions for future research are discussed.

Research studies have consistently revealed that transformational leadership is positively related to work outcomes (Dum Dum, Lowe, & Avolio, 2002; Fuller, Patterson, Hester, & Stringer, 1996; Lowe, Kroeck, & Sivasubramaniam, 1996). However, the question of what are the underlying processes and mechanisms by which transformational leaders exert their influence on followers and ultimately on performance has not fully been explored (Kark & Shamir, 2002; Kark, Shamir, & Chen, 2003). Bass (1999) notes, 'much more explanation is needed about the inner workings of transformational leadership' (p. 24). Therefore, research on these processes is needed in order to gain better understanding of transformational leadership and why followers of transformational leaders demonstrate high level of commitment, job satisfaction and less withdrawal behaviours (Kark & Shamir, 2002). In this study, we explored the role of collective efficacy in mediating the relations between transformational leadership and followers' work-related outcomes using data collected from Chinese and Indian financial firms.

Collective efficacy refers to each individual's assessment of his or her group's collective capability to perform job-related behaviours (Riggs, Warka, Babasa, Betancourt, &

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Hooker, 1994). Although Bandura (1986) originally defined efficacy beliefs as occurring at the individual level, recent conceptualization suggests that efficacy beliefs can also occur at the collective level (Bandura, 1997, 2000; Maddux, 2002). Specifically, Bandura (1997) argues that efficacy beliefs play an important role in both individual and group motivation because people have to rely, at least to some extent, on others to accomplish their tasks.

Because collective efficacy appears to account for important organizational outcomes, better understanding of how organizations could boost collective efficacy is important (Chen & Bliese, 2002). Unfortunately, research on collective efficacy has mainly focused on its outcomes, whereas relatively little is known about the situational antecedents of collective efficacy. We believe that to understand the role of collective efficacy in organizations better, it is important to examine not only how collective efficacy affects organizational outcomes, but also how it is affected by other variables. Given the dominant role of leadership in the workplace, one key situational factor that may have substantial impact on collective efficacy is leadership. The goal of this study is to address this important yet relatively unstudied issue.

## **Transformational leadership, collective efficacy and work outcomes**

### ***Transformational leadership and work outcomes***

As already noted, the link between transformational leadership and work outcomes, such as organizational commitment and job satisfaction, is well established (Bass, 1998). According to Bass (1985), transformational leaders motivate their followers to transcend their own self-interests for the sake of the group. As a consequence, such leaders are able to bring a deeper understanding and appreciation of input from each member. Bass (1985) further argued that such leaders encourage followers to think critically and to seek new ways to approach their jobs. This charge to seek new ways to approach problems and challenges motivates followers to become more involved in their duties, resulting in an increase in the levels of satisfaction with their work and commitment to the organization. This position has received support empirically. For instance, work by Dvir, Eden, Avolio, and Shamir (2002) demonstrated that transformational leaders had direct effects on followers' motivation, morality and empowerment. Barling, Weber, and Kelloway (1996) in another experimental study reported a significant effect of transformational leadership on followers' organizational commitment and unit-level financial performance. Other studies (e.g., Bycio, Hackett, & Allen, 1995; Koh, Steers, & Terborg, 1995), including three meta-analytic reviews (e.g., Dum Dum *et al.*, 2002; Fuller *et al.*, 1996; Lowe *et al.*, 1996) have also shown transformational leadership positively related to work-related outcomes such as satisfaction, commitment, and performance. It is possible that by encouraging followers to go beyond their immediate needs to address the long-term interests of their organizations, transformational leaders are able to mobilize higher levels of commitment from their followers for a common good of the organization (Avolio & Bass, 1988).

Although there is a theoretical basis to expect transformational leadership behaviour will influence perceptions of withdrawal behaviours, this area of research has received less research attention. According to Bass (1998), transformational leaders show respect and confidence, and they motivate their followers to work hard to improve organizational effectiveness (Bass & Avolio, 1994). By showing respect and confidence in their followers, transformational leaders are able to bring a high degree of trust and loyalty on the part of followers to the extent that followers are willing to identify with

the leader and the organization. As a result, followers trust in and emotionally identify with the leader, such that they are willing to stay with the organization—even under very difficult circumstances. Others (e.g., Avolio, 1999; Bass, 1998) have argued that transformational leaders cause followers to become attached to their organization and work toward group goals leading to undesired behaviours. For instance, by encouraging followers to think more deeply about the obstacles confronting them in their jobs, transformational leaders are able to help followers develop a better understanding of what needs to be done to be successful, resulting in reduced withdrawal behaviours. Indeed, research findings have shown that transformational leadership is negatively related to withdrawal behaviours (Sosik & Godshalk, 2000; Walumbwa & Lawler, 2003).

### ***Transformational leadership and collective efficacy***

There is reason to believe that transformational leaders can influence collective efficacy. Shamir (1990) argued that one of the most important characteristics of transformational leadership is its ability to heighten followers' collective motivation. To explain how this process might occur, we draw on two interrelated theories. First, we turn to social identification theory—defined as a process whereby an individual's belief about a group or organization becomes self-referential or self-defining (Pratt, 1998). Transformational leaders are able to influence their followers by connecting followers' self-concept to the mission of the group, 'such that followers' behavior for the sake of group becomes self-expressive' (Kark & Shamir, 2002, p. 7). Indeed, empirical findings suggest that leaders who raise followers' identification with the group increase followers' willingness to contribute to group objectives (Shamir, Zakay, Breinin, & Popper, 1998, 2000).

Transformational leaders also can enhance collective efficacy by providing emotional and ideological explanations that link followers' individual identities to the collective identity of their organization (Kark & Shamir, 2002). For example, through individualized consideration, transformational leaders are able to help their followers recognize their (followers') capabilities, which then provides a basis for elevating each follower's needs and performance to higher than expected levels (Shamir, House, & Arthur, 1993). Avolio, Kahai, Dum Dum, and Sivasubramaniam (2001) argued that transformational leaders influence perceptions of team members' ability, benevolence, integrity and information exchange (and by extension group effectiveness) by highlighting the importance of cooperation in performing collective tasks. Further, by emphasizing the group mission, stressing shared values and ideology, connecting followers' individual and group interests, transformational leaders provide followers with more opportunities to appreciate group accomplishments and other group members' contributions, resulting in collective identities (Kark & Shamir, 2002). Work by Jung and Sosik (2002), using 47 groups drawn from four Korean firms, demonstrated that transformational leadership was positively related to group cohesiveness and group effectiveness. It is possible that by encouraging followers to take greater responsibility for their own development as well as the development of others, transformational leaders are able to build greater collective identification in what's important for the group to consider and accomplish successfully (Kark & Shamir, 2002; Kark *et al.*, 2003). Such leaders are able to build followers' collective efficacy by raising their awareness of other group members' contribution and by emphasizing the value of self-sacrifice for the good of the group (Avolio, 1999; Bass, 1998).

Another important theoretical framework that can help explain how transformational leadership influences collective efficacy, is the self-concept theory (Brewer & Gardner, 1996). According to this theory, group norm is the yardstick for measuring individual self-worth in relation to other out-group members (Brewer & Gardner, 1996). This theory suggests increasing followers' self-efficacy and facilitating followers' self-identification with the group as mechanisms through which transformational leaders motivate followers. We argue that by emphasizing similarities among group members, transformational leaders can increase activation of collective efficacy by shaping the context of work and linking followers' values and ideologies to the mission of the group (Kark & Shamir, 2002; Shamir *et al.*, 1998). Such leaders work to raise their followers' confidence and expand their needs in line with what they have come to identify with in terms of groups' collective mission (Sosik, Avolio, & Kahai, 1997). By building followers' confidence, such leaders are expected to have a strong, positive influence over time on followers' level of collective identification and motivation (Shamir *et al.*, 1993).

### **Collective efficacy and followers' work-related outcomes**

Collective efficacy can influence followers' work-related outcomes in a number of ways. Bandura (2000) argued that when faced with obstacles, groups with higher levels of collective efficacy are more likely to persist in trying to solve such problems. Bandura (1986, 1997) further argued that efficacy beliefs influence what people choose to do as a group, how much effort they put into it and their staying power when collective efforts fail to produce results. Thus, it is possible that employees with lower efficacy are likely to call in sick rather than face another day of frustration on a job they feel unable to perform. On the other hand, employees higher on efficacy may exhibit fewer withdrawal behaviours, as they are likely to expend more effort and persistence in task performance (Bandura, 1986). These views have received support empirically. For instance, Hochwarter, Kiewitz, Castro, Perrewe, and Ferris (2003) reported that individuals with low perceived collective efficacy were less satisfied with their jobs when levels of 'go-along-to-get-along' politics increased. Jex and colleagues (e.g., Jex & Bliese, 1999; Jex & Thomas, 2003), using military personnel samples, found collective efficacy related to job-related stressors and strains (i.e., job satisfaction, commitment). Specifically, Jex and Bliese (1999) found collective efficacy significantly related to average levels of job satisfaction and organizational commitment. Mulvey and Klein (1998), in testing the impact of perceived loafing and collective efficacy on group goal process and performance, found collective efficacy positively related to group goal commitment. Zellars, Hochwarter, Perrewe, Miles, and Kiewitz (2001), using a sample of 188 nurses, found that collective efficacy was associated with lower levels of turnover intentions and higher levels of job satisfaction, even after controlling for age, gender and self-efficacy. Two recent meta-analytic reviews also reached similar conclusions regarding the validity of collective efficacy in predicting work-related outcomes (Gully, Incalcaterra, Joshi, & Beaubien, 2002; Stajkovic & Lee, 2001). Taken together, we advance the following hypothesis:

*Hypothesis 1:* Transformational leadership will be positively associated with collective efficacy.

*Hypothesis 2a:* Collective efficacy will mediate the relations between transformational leadership and organizational commitment.

*Hypothesis 2b:* Collective efficacy will mediate the relations between transformational leadership and job satisfaction (i.e., satisfaction with supervisor and with work in general).

*Hypothesis 3:* Collective efficacy will mediate the relations between transformational leadership and withdrawal behaviours (i.e., job and work withdrawal).

### **The research context**

Because the constructs investigated in this study are primarily developed in the West, we need to discuss explicitly the applicability and transferability of these constructs to Asian cultures, particularly transformational leadership (Walumbwa, 1999). On the surface, it might seem that the notion of transformational leadership may not be compatible with Chinese and Indian cultures. Both societies score high on collectivism and power distance (Hofstede, 1980). Collectivistic or hierarchical societies tend to generate very top-down and relatively autocratic leadership practices, which seemingly would not be compatible with transformational leadership.

There is a strong tradition of paternalistic management in Chinese organizations (Chen, 1995), much of which was institutionalized in Chinese state-owned enterprises after the 1949 revolution, mainly in the form of the 'iron rice bowl' employment system (which guaranteed workers cradle-to-grave benefits and security). And although Confucianism as a philosophy was suppressed in much of the post-revolutionary era, Confucian values have continued to exert a fundamental influence in Chinese society, including a penchant to respect and defer to those in superior positions (Hwang, 2001).

Despite these characteristics of Chinese culture, there are reasons to believe that transformational leadership could have similar effects in the workplace in China as in the United States. First, the nature of paternalistic leadership is complex and multifaceted. Farh and Cheng (2000) note that paternalism in Chinese culture not only incorporates authoritarian leadership techniques, but also those rooted in both benevolence and moral example, which are very much aspects of Confucianism. Moral leaders motivate subordinates through exemplary and virtuous behaviour, while benevolent leadership involves care and consideration for the welfare of subordinates. In practice, paternalistic leaders in Chinese society would apply all three styles in varying combinations depending upon their personal characteristics and perhaps the situation (Farh & Cheng, 2000). Those exercising moral and benevolent leadership techniques would seem very much to be employing transformational leadership methods (i.e., providing inspiration and individual consideration, being charismatic). Indeed, the ideal Confucian leader is not the autocrat but the benevolent sage—the 'Confucian gentleman'—who maintains harmony and inspires devotion.

Similar processes would appear to be at work in India. Sinha (1997) notes there are multiple and sometimes conflicting forces at work shaping Indian management systems: bureaucracy rooted in the legacy of British colonial rule, traditional Indian values rooted in Hinduism, and conventional Western business values (promoted by multinationals and Indian managers educated in the West). Concepts of leadership in India rooted in traditional values parallel aspects of Western transformational leadership (as in China). The distance between leaders and subordinates is very deferential to superiors; but the superior's authority is rooted not just in position, but moral integrity. Thus, leaders should provide care and affection to subordinates, as well as provide guidance and inspiration (Sinha, 1997). The impact of Western values, especially among the more educated, would further promote openness to transformational leadership techniques.

In sum, the point here is not that transformational leadership is necessarily commonplace in Chinese and Indian organizations—clearly it is not. Rather, there are aspects of

idealized notions of leadership in these two societies that are indeed quite compatible with transformational leadership. These similar notions may cause workers to be receptive to such an approach. Indeed, there is both theory and empirical findings to suggest that transformational leadership works both in collectivistic and individualistic cultures (Walumbwa & Lawler, 2003). This being so, we believe transformational leadership would seem applicable to China and India.

## Method

### *Sample and procedure*

Our data was collected in Chinese and Indian financial firms. In each country, we contacted top managers (e.g., CEOs, HR managers) to seek permission to participate in the study. After permission was granted, all employees were assured that all of the survey information that we collected would be kept confidential.

The survey, which included all scales, was administered on-site and one of our researchers collected the completed survey. For the non-English speaking China, the questionnaire, which was developed in English, was translated into Chinese following the conventional method of back-translation described by Brislin (1980). A bilingual speaker (Chinese and English) performed the initial translation. After this, the questionnaire was given to another bilingual translator, who then back-translated it into English. Finally, the original and the re-translated questionnaire were piloted with several native Chinese students in a large research institution in the United States, and any concerns that were raised were resolved.

A total of 402 (China = 208; India = 194) employees participated in this study. Women comprised 41% of the total sample (China = 74%; India = 26%). Respondents ranged in age from 20 to 51 years, with a mean age of 32 years ( $SD = 6.36$ ) for China and 34 years ( $SD = 9.37$ ) for India; and over 90% were married or living with a partner. Respondents were well educated, with more than 97% having completed some college or university degree.

## Measures

### *Transformational leadership*

Bass and Avolio's (1994) conceptualization of transformational leadership includes charisma, inspirational motivation, intellectual stimulation and individualized consideration. Although these four subscales are theoretically distinct, in the present study, we make no distinction among the component factors of transformational leadership. This is consistent with recent empirical developments on transformational leadership, which have consistently shown that these dimensions are highly correlated and reflect the high-order construct of transformational leadership (e.g., Antonakis, Avolio, & Sivasubramaniam, 2003; Avolio, Bass, & Jung, 1999; Bass, 1998). Bass (1998) has argued that this combination satisfies the needs for parsimony in research. The rating of transformational leadership (coefficient alpha = .92) was obtained using 20 items adopted from the Multifactor Leadership Questionnaire (Bass & Avolio, 1995). Ratings were completed on a 0 to 4 scale, with 0 representing 'Not at all' and 4 representing 'Frequently, if not always'. Sample item: 'Goes beyond self-interest for the good of the group.'

### *Collective efficacy*

We used a 7-item scale from Riggs *et al.* (1994) to measure collective efficacy (coefficient alpha = .74). Sample item: 'The members of this department have excellent



job skills'. Responses were made on a 6-point response scale ranging from 'Very inaccurate' (1) to 'Very accurate' (6).

#### *Organizational commitment*

Organizational commitment is viewed as a multidimensional construct. However, in this study, the focus is on *affective* organizational commitment to remain consistent with prior studies in international management literature (Walumbwa & Lawler, 2003). A 9-item scale adopted from Mowday, Steers, and Porter (1979) was used to measure affective organizational commitment (coefficient alpha = .85). Sample item: 'This organization has a great deal of personal meaning for me'. Responses were made on a 5-point scale, with 1 representing 'Strongly disagree' and 5 representing 'Strongly agree.'

#### *Job satisfaction*

Job satisfaction is also viewed as a multidimensional construct. However, only satisfaction with supervisor (coefficient alpha = .82) and satisfaction with work in general (coefficient alpha = .87) were investigated in the present study because leader behaviour is expected to have a strong effect on these dimensions (Schriesheim, 1979). Eighteen items adopted from Smith, Kendall, and Hulin's (1969) Job Descriptive Index (JDI) were used to measure job satisfaction. Sample items: 'My supervisor praises good work' (satisfaction with supervisor) and 'My work is fascinating' (satisfaction with work in general). Respondents were asked to circle 'yes' (2) if the item described their supervisor or their work, 'no' (0) if the item did not, and '?' (1) if they could not decide.

#### *Withdrawal behaviours*

We measured perceptions of withdrawal behaviours using measures developed by Hanisch and Hulin (1991). Six items addressed job withdrawal (coefficient alpha = .72). Sample item: 'How often do you think about quitting your job?' Responses were made on a 5-point scale, with 1 representing 'Never' and 5 representing 'Constantly'. Eight items addressed work withdrawal (coefficient alpha = .84). Respondents were asked to review a list of behaviours and then record the number of times they have observed each behaviour in the past year on an 8-point Likert-type scale rating ranging from 'Never' (1) to 'More than once a week' (8). This scale was transformed into a 4-point scale in our analyses, with 1 representing 'Never' and 4 representing 'More than once per week' following Hanisch and Hulin (1991). Sample item: 'How often do you think about being late for work?'

#### *Control variables*

Because previous research (e.g., Walumbwa & Lawler, 2003) suggests that age, gender, organization tenure, education and job level may confound the relationship between leadership and outcome variables, we measured and used these factors as controls in all our analyses. Country, gender, education and job level were all dummy-coded.

#### **Measurement equivalence**

Before conducting our analyses, we employed mean substitution to replace missing values using their respective scale means. We used mean substitution because we had

less than 3% missing data, consistent with Donner's (1982) recommendation that mean substitution be used when less than 10% of the data is missing. To establish the validity and reliability of the scales used in this study and the equivalency of the scales across samples, we used a combination of mean and covariance structures and simultaneous factor analysis in several populations. Both techniques were performed using the AMOS maximum likelihood estimation method because its estimators are asymptotically unbiased, consistent and efficient (Arbuckle & Wothke, 1999; Raju, Laffitte, & Byrne, 2002). Results indicated that the factor structure specifying the unidimensionality of all constructs was consistent with the data for the two samples. The fit indices (goodness-of-fit, adjusted goodness-of-fit, comparative fit index, and normed fit index) for each construct ranged from .97 to .99 for both unrestricted and restricted models. The Root Mean Square Error of Approximation (RMSEA) for each construct ranged from .02 to .03.

### **Common method/source**

Because our data was collected from the same source using the same method, we determined the extent of method variance in the present study. We used Harman's (1967) single-factor statistical procedure to address the potential common-method/source bias. The basic assumption of this technique is that if a substantial amount of common-method variance exists, either a) a single factor will emerge from the factor analysis, or b) one 'general' factor will account for the majority of the covariance in the independent and criterion variables (Podsakoff & Organ, 1986). Using an eigenvalue greater than 1 cut-off criterion, all the seven factors were factor analysed using the principal axis method with varimax rotation. Results indicated the presence of seven factors, suggesting that common-method/source variance was not a serious problem in this study, although this procedure does not completely rule out the possibility of same-source bias. Note, however, that Crampton and Wagner (1994) argued that method-driven inflation is not as severe as generally claimed.

### **Aggregation tests**

The level of theory should always dictate the level at which a construct is measured (Morgeson & Hofmann, 1999). Because collective efficacy is conceptualized as a group construct (e.g., Bandura, 1997; Riggs *et al.*, 1994), measures of collective efficacy were aggregated to the unit (department) level. This is consistent with past research (Chen & Bliese, 2002; Jex & Bliese, 1999). To test the suitability of such aggregation, both between-group differences and within-group agreement was examined. To do this, we calculated intra-class correlations ICC(1) and ICC(2) following the formula provided by Bliese (2000). The ICC(1) was .15 and the ICC(2) was .68 ( $F = 2.89, p < .0001$ ). Despite the moderate ICC(2) values, we continued with the analyses because we theoretically defined collective efficacy as group-level construct. Values greater than .70 for ICC(2) are typically used to justify aggregation (Bliese, 2000). Transformational leadership has also been conceptualized as a group-level construct (Jung & Sosik, 2002; Shamir *et al.*, 1998). In this study, however, we treated transformational leadership as an individual level because we recognize that leaders may behave differently across situations and followers. This conclusion was supported by the ICCs, which did not exhibit high levels of within-group agreement and reliability to justify aggregation (ICC[1] = .02; ICC[2] = .47).



**Table 1.** Means, standard deviations, coefficient alphas and correlations of study variables

Variables	M	SD	$\alpha$	1	2	3	4	5	6
1. Transformational leadership	3.04	.72	<b>.92</b>	—					
2. Collective efficacy	4.31	.88	<b>.74</b>	.28**	—				
3. Organizational commitment	3.43	.69	<b>.85</b>	.42**	.39**	—			
4. Supervisor satisfaction	2.50	.49	<b>.82</b>	.58**	.37**	.36**	—		
5. Work satisfaction general	2.23	.60	<b>.87</b>	.47**	.27**	.52**	.27**	—	
6. Job withdrawal	2.55	.67	<b>.72</b>	-.09	-.22**	-.40**	-.28**	-.20**	—
7. Work withdrawal	1.46	.34	<b>.84</b>	.00	-.12**	-.17**	-.17**	-.01	.28**

\*\*Correlation is significant at the .01 level (two-tailed).

Note. Collective efficacy variable is group mean from 33 groups assigned back to individuals;  $\alpha$  = coefficient alpha.

## Results

Table 1 summarizes the means, standard deviations, coefficient alphas and correlations for all measures.

### Tests of hypotheses

To test the direct and indirect effect of transformational leadership, we followed the procedure described by Kenny, Kashy, and Bolger (1998) using hierarchical multiple regression. However, before conducting our analyses, we examined the residual plots and confirmed that regression assumptions were not violated. Results are shown in Table 2.

As shown in step 1 of Table 2, transformational leadership made a significant contribution to collective efficacy ( $\beta = .36, p < .001$ ). Results in step 2 of Table 2 indicate that transformational leadership made significant contributions to all outcomes (organizational commitment,  $\beta = .36, p < .001$ ; satisfaction with supervisor,  $\beta = .67, p < .001$ ; satisfaction with work in general,  $\beta = .40, p < .001$ ; job withdrawal,  $\beta = -.14, p < .01$ ; and work withdrawal,  $\beta = -.11, p < .05$ ). As indicated in step 3 of Table 2, collective efficacy significantly predicted work-related outcomes (organizational commitment,  $\beta = .34, p < .001$ ; satisfaction with supervisor,  $\beta = .36, p < .001$ ; satisfaction with work in general,  $\beta = .29, p < .001$ ; job withdrawal,  $\beta = -.23, p < .001$ ; and work withdrawal,  $\beta = -.16, p < .01$ ). The decreased, but still significant, coefficient for transformational leadership at step 4 (column 13 and 14) of Table 2 indicates that collective efficacy *partially* mediates the contribution of transformational leadership to organizational commitment, satisfaction with supervisor, and with work in general. However, the insignificant coefficient for transformational leadership in columns 15 and 16 of Table 2 (step 4) indicates that collective efficacy completely mediates the relationship between the transformational leadership and withdrawal behaviours. Thus, these results fully support Hypotheses 1 and 3, and partially Hypothesis 2.

## Discussion

Research on transformational leadership has been criticized for providing little information about the possible mechanisms through which transformational leadership

**Table 2.** Results of hierarchical regression analysis for mediation

	Step 1		Step 3					Step 4									
	Collective efficacy	Organizational commitment	Supervisor satisfaction	Work satisfaction general	Job withdrawal	Work withdrawal	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	
Age	.01	.20***	-.01	.19***	-.15*	-.14*											
Education level																	
Some college or diploma		.13*	.08	.17**	-.01	-.20**	-.01										
University degree		-.05	.01	.02	.05	-.04	-.01										
Post-graduate		.02	-.06	-.12*	-.04	.14*	.01										
Gender		-.05	.01	-.08	.07	-.07	-.01										
Job level																	
Administrative		-.07	-.03	-.06	.09	.12*	-.01										
Clerical		-.03	.02	.06	.00	-.02	.02										
Management		-.11	-.02	-.06	.07	.22***	.09										
Professional		-.174*	-.12*	-.10*	.12*	.08	.18***										
Technical		-.03	-.02	-.03	.03	-.03	-.03										
Organizational tenure		.04	.02	.02	-.02	-.20***	-.11										
Transformational leadership		.36***	.36***	.67***	.40***	-.14**	-.11*										
Collective efficacy																	
ΔR2		.36	.26	.41	.31	.20	.24	.34***	.36***	.29***	-.23***	-.16**	.31***	.24***	.22***	-.19***	-.15**
R2 for total equation		9.21	13.79	21.25	13.40	7.33	9.52	12.09	5.12	9.88	8.79	10.56	15.78	26.15	16.11	9.89	11.92
F for total equation																	

\*p < .05; \*\*p < .01; \*\*\*p < .001.  
 Note. Standardized coefficients reported.

behaviour influences work-related outcomes (Podsakoff, MaKenzie, Paine, & Bachrach, 2000; Yukl, 1999). Thus, the present study was intended to enhance our understanding on leadership processes by explaining how transformational leaders motivate their followers (Kark & Shamir, 2002).

The finding that collective efficacy fully or partially mediated the relations between transformational leadership and work outcomes is a step forward in uncovering the process through which transformational leadership influences work-related outcomes, and more importantly, why followers of transformational leaders demonstrate high levels of job satisfaction and commitment, and less withdrawal intentions. Specifically, we found that collective efficacy completely mediated the effect of transformational leadership on followers' withdrawal behaviours, but only partially on work attitudes. The finding that collective efficacy partially mediated the relationship between transformational leadership and work-related attitudes suggests that transformational leadership may influence work-related attitudes through multiple mechanisms. Ajzen and Fishbein (1980) suggested that two constructs must correspond in terms of their levels of specificity in order to have strong relationship. Job satisfaction and organizational commitment are relatively general attitudes while collective efficacy is a task-specific belief in this study. Thus, it is reasonable to expect factors other than collective efficacy may mediate the relationship between transformational leadership and work attitudes. Moreover, because transformational leaders are able to encourage followers to think critically and to seek new ways to approach their job, this may directly strengthen followers' job involvement and intrinsic motivation, resulting in more desirable work-related attitudes. This is an important area for future research.

The results of this study are also in line with results of Chen and Bliese (2002) which suggested that leadership may be a good predictor of collective efficacy. Specifically, the pattern of results support prior research which highlights the importance of transformational leadership in raising followers' confidence and their groups' collective mission (Sosik *et al.*, 1997). Many leadership researchers have argued the importance of collective efficacy in the transformational leadership process. For example, Shamir and colleagues (e.g., Shamir *et al.*, 1993; Shamir *et al.*, 1998) argued that transformational leadership can increase the salience of collective identity of followers by highlighting their membership in the unit and simultaneously emphasize the identity of the unit, by stressing its uniqueness from other units. Bass and Avolio (1994) take a similar position, suggesting that transformational leaders increase group members' motivation, confidence and performance by elevating the salience of the group and its capabilities while also supporting followers in achieving the collective goals. Finally, our findings also suggest that by developing collective efficacy through transformational leadership, withdrawal behaviours can be greatly minimized. That is, high collective efficacy may lower the rates of undesired behaviours (i.e., reporting late to work or calling in sick when they are actually not), e.g., by providing group members with emotional support (Cohen & Wills, 1985).

The findings that transformational leadership has both direct and indirect effects on followers' work-related outcomes have practical implications for leadership development programmes. It suggests that organizations can benefit greatly by providing transformational leadership training to their supervisors and managers to enhance followers' collective efficacy, in turn enhancing positive outcomes. Such training may be done through the use of goal-setting interventions (Barling *et al.*, 1996). Indeed, several authors view such training as a highly promising means of enhancing collective efficacy and motivation (Avolio *et al.*, 2001; Bass, 1998; Kark *et al.*, 2003; Sosik *et al.*,

1997). Shamir *et al.* (1993) argued that transformational leaders may raise the salience of the collective identity in followers' self-concepts by emphasizing ideology and shared values, both directly and indirectly, through references to the history of the unit and symbolic actions of founders, former leaders and former members. Our research is supportive of these arguments by showing that transformational leadership may increase followers' collective efficacy and ultimately reduce withdrawal behaviours. Thus, managers who want to improve collective efficacy might consider building transformational leadership skills as a means to reducing withdrawal intentions and enhancing organizational effectiveness. This is particularly important as organizations are increasingly embracing groups or team work as the basic building block of their business operations (Mohrman, Cohen, & Mohrman, 1995).

Finally, the finding that collective efficacy mediated transformational leadership-withdrawal intentions relations, suggest that efforts to enhance employees' collective efficacy, may be beneficial in reducing withdrawal intentions. For instance, in situations where groups are periodically experiencing difficulties that might result into withdrawal behaviours, it may be helpful to foster a strong sense of collective efficacy among group members. This may help because collective efficacy may serve to enhance social support (Jex & Bliese, 1999). This suggestion is consistent with Bandura's (2000) assertion that perceived collective efficacy might influence what people choose to do as a group and the effort they put into their task.

### **Limitations and recommendations for future research**

The results of this study suggest several important areas of future research. First, although our findings showed collective efficacy fully mediated the relationship between transformational leadership and behavioural intentions, this area of research still merits further empirical investigation. For example, we examined behavioural intentions as surrogates of actual behaviours, rather than actual behaviour. Although previous studies (e.g., Hanisch & Hulin, 1991) suggest behavioural intentions can be ideal substitutes for actual behaviour (especially when constraints do not allow for actual behaviours to be measured), this limits the extent to which we can make firm conclusions about our results. Therefore, an obvious direction for future research is to examine actual work behaviours such as turnover and job performance to test whether the results would vary as a function of actual behaviour.

Secondly, because all data was collected by a means of self-report measures, this raises the possibility that the findings may have been confounded by common-method/source variance. Future studies should consider employing multiple sources of data collection (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Moreover, because data for this study was collected from the financial sector, it would be helpful for future studies to replicate these findings in non-financial settings to enhance generalizability in other settings.

Thirdly, the use of cross-sectional data precludes definitive assertions regarding causality. Longitudinal designs are needed in future research to avoid such problems. However, such studies must take into consideration the optimal time lag because without time lag, longitudinal data might provide biased parameter estimates worse than those obtained from cross-sectional data. Finally, although we did not compare across cultures, it would be more informative if future research attempts to include both individualistic and collectivistic cultures in examining the role of collective efficacy. We believe this issue is very important for future cross-cultural leadership

researchers to address in order to determine whether the results would vary as a function of cultural differences.

## Conclusion

This study makes a contribution to our understanding of the processes through which transformational leadership affects followers' work-related outcomes. Specifically, this study suggests that transformational leadership is an antecedent of collective efficacy and that collective efficacy plays an important role in the relationship between transformational leadership and work-related outcomes, especially to followers' behavioural intentions. This finding is important because, despite the commonly held view among organizational researchers that the development of collective efficacy is beneficial for organizations, considerably less is known about the antecedents of collective efficacy (Chen & Bliese, 2002). We hope that the results of the current study will stimulate further investigation into the potential mediating effects of collective efficacy using other leadership theories.

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