

## How Do Happy Leaders Enhance Team Success? The Mediating Roles of Transformational Leadership, Group Affective Tone, and Team Processes<sup>1</sup>

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Extending previous research regarding the relationship between leader positive moods and team performance, the present study examined 2 mediating mechanisms that explain the leader positive moods–team performance linkage: transformational leadership, and positive group affective tone. Data were collected from 85 sales teams (85 team leaders, 365 team members). Structural equation modeling analyses were performed to test the hypotheses. The results showed that leader positive moods not only directly enhanced team performance, but also indirectly led to improved team performance through the explicit mediating process (i.e., transformational leadership) and the implicit mediating process (i.e., positive group affective tone). Theoretical and practical implications are discussed.

In recent years, research interests pertaining to how leader positive moods influence team members' feelings and behaviors have grown rapidly (e.g., Ashkanasy & Tse, 2000; Brief & Weiss, 2002; Damen, van Knippenberg, & van Knippenberg, 2008; Gaddis, Connelly, & Mumford, 2004; Johnson, 2008; Newcombe & Ashkanasy, 2002). The knowledge that leader positive moods have significant effects on team members' affective states, attitudes, and behaviors gives rise to the question of whether leaders' positive moods impact the performance of their teams, which is an important issue for both

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researchers and practitioners (George, 1995; Sy, Cote, & Saavedra, 2005; Van Kleef et al., 2009). In the group affect and leadership literature, several studies have provided preliminary evidence that leader positive moods result in better team performance (Gaddis et al., 2004; George, 1995; George & Bettenhausen, 1990). However, the mechanisms underlying this linkage have not been precisely modeled (Kelly & Barsade, 2001; Kelly & Spoor, 2006; Pescosolido, 2002).

Some researchers have tried to clarify the leader positive moods–team performance linkage on the basis of the emotional contagion perspective (Hatfield, Cacioppo, & Rapson, 1994), suggesting that leader positive moods might influence team processes and team performance through an increase in team members' positive group affective tone (i.e., homogeneous or consistent positive affective reactions among team members; George, 1990). For example, Sy et al. (2005) found that leader positive moods positively predicted group coordination via increasing positive group affective tone in a sample of 56 self-management student teams. Similarly, Van Kleef et al. (2009) also reported that leader positive affect increased members' positive group affective tone, which in turn positively predicted the quality of team performance across 35 student teams. However, as Kelly and Spoor (2006) and Sy et al. (2005) proposed, in addition to nonconscious, automatic, and implicit processes (e.g., emotional contagion), it is possible that leaders in positive moods might influence team processes or performance through conscious, deliberate, and explicit processes, such as transformational leadership behaviors (Ashkanasy & Tse, 2000; Bass, 1998; Grandey, 2008; Kelly & Barsade, 2001).

The present study is designed to contribute to the group affect and leadership literature and to extend previous research in three distinct ways. First, although Sy et al. (2005) and Van Kleef et al. (2009) have highlighted the importance of emotional contagion (i.e., positive group affective tone) in the leader moods–team performance linkage, they did not include actual team performance (e.g., sales or service performance) as the dependent variable. In addition, these studies were conducted in laboratory settings using student teams. Whether these findings can be generalized into real team settings remains unclear. Therefore, the present study takes the additional steps of adding objective–subjective sales performance into the theoretical model and re-examines these associations within field settings using actual teams (i.e., insurance teams).

Second, as Kelly and Spoor (2006) suggested, leader positive moods might influence team processes and performance through dual processes: explicit (e.g., transformational leadership) and implicit (e.g., emotional contagion). However, investigations into explicit processes in the leader moods–team performance linkage are sparse (Kelly & Spoor, 2006). Therefore, in addition

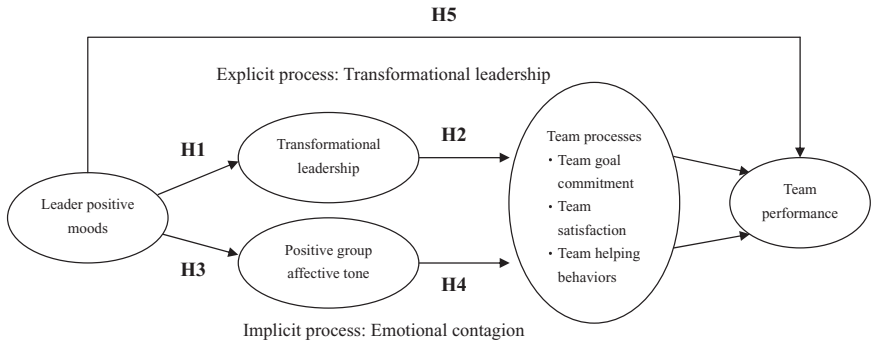


Figure 1. Conceptual model of the current study.

to an implicit-process variable (i.e., positive group affective tone), we also include an explicit-process variable (i.e., transformational leadership) within the proposed model. Incorporating the dual processes in one study is essential because it contributes to each of the theoretical domains of group affect and leadership by answering questions pertaining to how and why leader positive moods enhance team performance (Colquitt & Zapata-Phelan, 2007; Whetten, 1989).

Finally, although leader positive moods might lead to better team performance by triggering the dual processes, the ways that the explicit and implicit processes function in predicting team performance have yet to be examined. To fill this gap, we include three team-process variables in our theoretical model: motivational processes (i.e., team goal commitment), attitudinal processes (i.e., team satisfaction), and behavioral processes (i.e., team helping behaviors). This approach allows us to clarify further how transformational leadership and positive group affective tone influence team performance via the three aspects of team processes. We outline our conceptual model in Figure 1.

### Theory and Hypotheses

Watson, Clark, and Tellegen (1988) defined *positive moods* as “the extent to which a person feels enthusiastic, active, and alert . . . [a high positive mood] is a state of high energy, full concentration, and pleasurable engagement” (p. 1063). Following George (1995), *leader positive moods* are defined as the positive affective states leaders experience at work or in team meetings.

Within the group affect and leadership literature, three studies have indicated that leaders with higher positive moods can lead their teams to better performance. For example, using 33 work groups (i.e., stores) as the research

sample, George and Bettenhausen (1990) found that leader positive moods were positively related to work group sales performance ( $r = .35$ ). In addition, George (1995) documented that leaders with higher positive moods led to better sales team performance ( $r = .41$ ). Finally, from a sample of 87 student teams, Gaddis et al. (2004) reported that teams with leaders in positive affective states performed better in terms of the quality of policy solutions than did teams with leaders in negative affective states.

In general, empirical evidence has supported the proposition that leader positive moods can enhance team performance. In the present study, we argue that leader positive moods influence team performance via dual processes: an explicit process (i.e., transformational leadership) and an implicit process (i.e., positive group affective tone).

### *Explicit Process Linking Leader Positive Moods and Team Performance*

*Relationship between leader positive moods and transformational leadership.* Mood researchers have theorized that positive moods can have a significant impact on individual cognition, judgment, and behaviors (Brief & Weiss, 2002; Forgas, 1995; Fredrickson, 1998). For instance, when individuals experience positive moods, they are more likely to perceive information favorably, they are more prone to remember positive information (Bower, 1981), they are more confident and motivated (George & Brief, 1996), they are more likely to have positive expectations about future success (Brief & Weiss, 2002), and they are more likely to help others (George, 1991; George & Brief, 1992). Therefore, leader positive moods might also influence their cognition, judgment, and behaviors when interacting with followers.

Following in this vein, several researchers have proposed that leader positive moods might influence their leadership behaviors, such as transformational leadership behaviors (Ashkanasy & Tse, 2000; George, 1990, 1995, 2000; Grandey, 2008; Kelly & Spoor, 2006; Sy et al., 2005). Within the leadership literature, several empirical studies have found that leaders with positive affective traits (e.g., extraversion, positive affectivity; Watson & Clark, 1992) tend to perform more transformational leadership behaviors (e.g., Bono & Judge, 2004; Lim & Ployhart, 2004; Rubin, Munz, & Bommer, 2005). This might be because leaders who constantly experience positive moods become more positive, ambitious, inspirational, and influential when interacting with followers, leading to more transformational leadership behaviors (Bono & Judge, 2004).

Transformational leadership is one of the most prominent leadership theories proposed in recent years (Avolio, 1999; Bono & Judge, 2004; Colbert, Kristof-Brown, Bradley, & Barrick, 2008; Rubin et al., 2005).

According to Bass (1985), *transformational leadership* consists of four sets of behaviors: (a) *idealized influence*: leaders engage in behaviors that cause followers to respect and admire them; (b) *inspirational motivation*: leaders provide followers with an appealing and inspiring vision of the future; (c) *intellectual stimulation*: leaders encourage followers to pursue creative thinking and solve problems in new ways; and (d) *individual consideration*: leaders identify and pay attention to follower needs. As various researchers (George, 1995; Grandey, 2008; Kelly & Spoor, 2006; Sy et al., 2005) have suggested, leaders who experience positive moods might shape team processes and team performance by engaging in conscious and deliberate behaviors. Empirically, Colbert et al. (2008), Lim and Ployhart (2004), and Schaubroeck, Lam, and Cha (2007) also used transformational leadership as a mechanism to explain how leaders might influence their team processes and performance. This suggests that transformational leadership might act as a mediator linking the relationships between leader positive moods, team processes, and team performance. As such, it is necessary to explain why happy leaders display more transformational leadership behaviors. The association can be explained by three possible mechanisms.

First, according to the mood congruent memory perspective (Bower, 1981), when leaders experience positive moods during team meetings, they tend to recall more positive memories and to perceive positive team events as more likely to occur. Hence, leaders in positive moods are likely to experience a sense of confidence during team interactions and to have more positive expectations about future performance (George, 1995). As such, leaders in positive moods are more likely to believe that future success is possible and to use an inspiring vision of the future as a way to motivate team members, causing these members to believe that they, too, can succeed in the future (Bono & Judge, 2004; Rubin et al., 2005). Hence, we expect that leaders' positive moods lead them to inspire and motivate their team members actively to pursue a vision of the future (Seo, Jin, & Shapiro, 2008). These behaviors are consistent with the inspirational motivation aspect of transformational leadership.

Second, when leaders experience high levels of positive moods, they are more likely to radiate their confidence and determination, and to display convictions about their thoughts during team interactions (George, 1995). Hence, leaders with highly positive moods can create positive, self-efficacious feelings among team members (George & Bettenhausen, 1990). When working with these types of leaders, members are likely to feel more positive and to offer more positive evaluations of the leaders (Bono & Ilies, 2006), which, in turn, increase their respect and admiration for the leaders (i.e., idealized influence). Therefore, it is plausible that leader positive moods will lead to more idealized influence behaviors.

Finally, mood researchers have found consistently that individual positive moods foster prosocial behaviors because (a) individuals in positive moods tend to perceive stimuli in a more positive light and to look favorably on potential recipients who need help, increasing the intentions and opportunities for helping; and (b) individuals in good moods tend to engage in prosocial behaviors as a means to maintain or prolong their positive moods (George, 1991; George & Brief, 1992; Tsai, Chen, & Liu, 2007). Therefore, leaders who experience positive moods are also more likely to engage in prosocial behaviors, such as helping team members to solve problems, providing necessary support, or assisting members with personal matters (Coleman & Borman, 2000; George, 1995; George & Bettenhausen, 1990). These behaviors tap the characteristics of individual consideration; an important aspect of transformational leadership behaviors (Seo et al., 2008).

In this line of reasoning, leaders who experience positive moods during team meetings are more likely to provide individual considerations toward other team members. Empirically, Seo et al. (2008) examined this association in the field setting. Using 357 full-time managers as the research sample, they found that leader positive moods increased their transformational leadership behaviors over a 27-day period. Based on the aforementioned arguments and on Seo et al.'s findings, we propose the following:

*Hypothesis 1.* Leader positive moods will be positively related to transformational leadership behaviors.

*Transformational leadership* → *team processes* → *team performance*. Although leadership and team researchers have consistently documented a positive association between transformational leadership and team performance (Colbert et al., 2008; Lim & Ployhart, 2004; Schaubroeck et al., 2007), few studies have looked inside the “black box” of this association (Dionne, Yammarino, Atwater, & Spangler, 2004). According to the input–process–output model of teams (Hackman, 1987), transformational leaders should enhance team performance via facilitation of team processes (Dionne et al., 2004). Building on the existing literature (e.g., Colbert et al., 2008; Kozlowski & Bell, 2003; Mason & Griffin, 2005; Sy et al., 2005), we choose three team processes variables—team goal commitment, team satisfaction, and team helping behaviors—to capture fully the mediating roles of team processes in the leadership–performance linkage.

*Team goal commitment* refers to team members' determination to achieve a goal, as well as an unwillingness to abandon that goal (Mulvey & Klein, 1998). According to goal-setting theory (Locke & Latham, 1990), team goal commitment is a motivational construct in that high commitment toward team goals drives team members' motivation to devote their efforts to

achieving the goal (Klein & Mulvey, 1995). *Team satisfaction* is an attitudinal construct that reflects a team's shared attitude toward team tasks and their associated environments (Mason & Griffin, 2005). Finally, *team helping behavior* is a behavioral construct that is defined as voluntarily assisting other team members in work-related areas (Ng & Van Dyne, 2005).

The first possible path is that transformational leadership enhances member motivation to achieve team goals (Shamir, House, & Arthur, 1993). Transformational leaders communicate a vision of the future to team members that can serve as the beginning of the goal-setting process (Bass, 1998). Through idealized influence and inspirational motivation, transformational leaders become influential role models within teams, making decisions and performing behaviors that are consistent with the proposed goals and the vision of the team, and motivating members to pursue these goals (Bass, 1985). Hence, team goals communicated and modeled by transformational leaders should increase team members' commitment to those goals (Dionne et al., 2004). Using 94 top management teams as a sample, Colbert et al. (2008) found that CEO transformational leadership led to higher top management team goal importance congruence, which supports our argument.

Team members with a high level of goal commitment devote more effort to achieving their goals and are more persistent in trying to solve problems when facing obstacles, which result in high levels of team performance (Mulvey & Klein, 1998). Furthermore, several studies have documented that team members with a high degree of goal commitment dedicated more effort to achieving team goals, which resulted in higher levels of team performance (Klein & Mulvey, 1995; Mulvey & Klein, 1998). Therefore, we expect transformational leaders to raise team members' commitment to achieving team goals, which in turn will enhance team performance.

*Hypothesis 2a.* Team goal commitment will mediate the relationship between transformational leadership and team performance.

In addition, it is plausible that transformational leaders boost team performance by shaping members' positive attitudes toward the team (Shamir et al., 1993). Transformational leaders are capable of using rapport building and empathetic language to increase team members' affective attachment to their teams (Dionne et al., 2004). Through their verbal and symbolic behaviors (e.g., idealized influence, inspirational motivation), transformational leaders help team members to see their tasks as more meaningful (Bono & Judge, 2003; Liao & Chuang, 2007). Therefore, we expect that leaders who perform more transformational behaviors will lead members to achieve higher levels of team satisfaction.



Furthermore, when members are highly satisfied with their teams, they are more likely to become involved in team activities and take action to support team functioning, thus leading to better team performance (Eagly & Chaiken, 1993; Mason & Griffin, 2005). Mason and Griffin's field study revealed that team satisfaction was positively related to team performance ( $r = .28, p < .01$ ). As such, we expect that transformational leaders will shape team satisfaction, which, in turn, will raise team performance. Thus, we propose the following:

*Hypothesis 2b.* Team satisfaction will mediate the relationship between transformational leadership and team performance.

Finally, transformational leaders can also stimulate members to help each other to improve team performance. Namely, when leaders show idealized influence and individual consideration for their members, then team members' higher order needs can be satisfied, which, in turn, increases the intention to take on extra responsibilities beyond what is required (Bass, 1985). Supporting this argument, researchers (e.g., Johnson, 2008; MacKenzie, Podsakoff, & Rich, 2001) have found that transformational leadership increased followers' organizational citizenship behaviors (e.g., helping behaviors). In a similar vein, team leaders' transformational leadership might activate more team helping behaviors as well.

Furthermore, when team members consistently perform helping behaviors, their teams enjoy benefits, such as greater exchange of resources and information among team members. Thus, less experienced members are more likely to receive necessary assistance from other members when completing team works (Ng & Van Dyne, 2005), resulting in better overall team performance. Consistent with our argument, several empirical studies have found that team-level helping behaviors increase team performance (e.g., Chen, Lam, Naumann, & Schaubroeck, 2005; Koys, 2001; Walz & Niehoff, 2000). Therefore, we argue that transformational leaders will enhance team performance through increasing team members' helping behaviors. Thus, we propose the following:

*Hypothesis 2c.* Team helping behaviors will mediate the relationship between transformational leadership and team performance.

### *Implicit Process Linking Leader Positive Moods and Team Performance*

*Relationship between leader positive moods and positive group affective tone.* Positive group affective tone is defined by George (1995) as "the homogeneous positive affective states within the group" (p. 781). It pertains to the



mood states team members experience or feel while on the job or in team meetings (George & King, 2007). As such, positive group affective tone focuses on team members' transient moods, rather than on their enduring affective traits. When there is within-group agreement in terms of positive moods that are experienced by all team members, positive group affective tone is a meaningful construct at the team level of analysis (George, 1996). Consistent with the nature and definition of group affective tone, past studies have assessed group affective tone by measuring team members' mood states while at work or in team meetings (e.g., Chi & Tsai, 2008; George, 1990, 1995; Mason & Griffin, 2005; Sy et al., 2005). In the present study, we also follow this approach when measuring positive group affective tone.

Furthermore, in this study, we argue that leader positive moods can enhance team performance through the implicit process of emotional contagion. *Emotional contagion* refers to the processes involved in transferring the moods and emotions of one individual to other individuals (Kelly & Barsade, 2001). Building on the emotional contagion perspective (Hatfield et al., 1994), team leaders can transmit their positive moods to team members through the emotional contagion process during team interactions. Leader positive moods are especially contagious because of leaders' positions in the power hierarchy, and team members are more likely to pay attention to a leader's positive mood than vice versa (Sy et al., 2005). In an experimental setting, Sy et al. found that student teams that included leaders in positive moods had high levels of positive group affective tone. Similarly, Bono and Ilies (2006) reported that leader positive affective states influenced followers' positive moods. Based on these arguments, we propose the following:

*Hypothesis 3.* Leader positive mood will be positively related to positive group affective tone.

*Positive group affective tone* → *team processes* → *team performance*. Within the group affect literature, several studies have documented the positive association between positive group affective tone and team performance. For example, George (1995) found that positive group affective tone was positively related to sales team performance ( $r = .35, p < .01$ ). Mason and Griffin (2005) also indicated that teams with positive group affective tone tended to exhibit better team performance ( $r = .41, p < .01$ ). However, the mechanisms linking positive group affective tone and team performance are still ambiguous (Kelly & Spoor, 2006; Rhee, 2007). Mood researchers have suggested that mood effects can persist for a prolonged period of time, which may have widespread ramifications for individual motivational/attitude processes and behaviors (George & King, 2007; Isen & Reeve, 2005; Tsai et al., 2007; Wright & Staw, 1999).

Kelly and Spoor (2007) concluded that the effects of individual moods can be extended to the team level. In this line of reasoning, at the team level, members' shared positive moods might also influence their team's motivational (e.g., team goal commitment), attitudinal (e.g., team satisfaction), and behavioral (e.g., team helping behaviors) processes over a specific period of time (George, 1995; George & King, 2007; Kelly & Spoor, 2007). Based on the prediction of the broaden-and-build theory (Fredrickson, 1998), we expect positive group affective tone to boost team performance via the three team-process variables (i.e., team goal commitment, team satisfaction, team helping behaviors).

The broaden-and-build theory suggests that individuals' positive affective states can broaden their scope of attention, cognition, and action; as well as build enduring physical, psychological, intellectual, and social resources (Fredrickson, 1998). On the basis of the broaden-and-build theory, Rhee (2007) proposed that positive group affective tone can collectively broaden team members' scope of attention, cognition, and actions through members' idea sharing and exchanging. In addition, positive group affective tone also helps members to build enduring social resources (e.g., helping, cooperation), psychological resources (e.g., resilience, optimism), and physical resources (e.g., high levels of energy) by increasing morale-building communication and offering encouragement during team interactions (e.g., communicating positive and encouraging comments, supporting other members' ideas). These will, in turn, influence team processes and outcomes.

For team goal commitment, high levels of physical and psychological resources built through positive group affective tone might enhance members' resilience, optimism, and energy when engaging in team tasks and pursuing team goals. In addition, positive group affective tone is likely to cause team members to focus on positive information regarding past experiences, resulting in a greater degree of certainty and confidence regarding the achievement of future team goals (George, 1995; Gibson & Earley, 2007). This also increases members' commitment to team goals (Mulvey & Klein, 1998). Moreover, when members collectively experience positive moods during team meetings, pleasant feelings lead members to consider pursuing team goals that are important and valuable, making team members feel more committed to those goals (Seo, Barrett, & Bartunek, 2004). Hence, positive group affective tone should increase team goal commitment.

As mentioned in Hypothesis 2a, team members with high goal commitment are more likely to devote greater effort to achieving team goals and overcoming obstacles, leading to a higher level of team performance (Mulvey & Klein, 1998). Empirical studies have documented that team goal commitment is positively associated with team performance (Klein & Mulvey, 1995; Mulvey & Klein, 1998). Taken together, we expect that positive group

affective tone will increase team goal commitment, which, in turn, will lead to a high level of team performance. Thus, we propose the following:

*Hypothesis 4a.* Team goal commitment will mediate the relationship between positive group affective tone and team performance.

Team satisfaction reflects members' shared attitudes about the team tasks and environment (Mason & Griffin, 2005). As indicated earlier, positive group affective tone can result in enduring resources by facilitating members' morale-building communication and encouragement, which can create a favorable team environment and member interactions (Rhee, 2007). Empirically, Rhee (2006) also found that members of teams that were associated with positive affect (i.e., joy) were more satisfied with their teams. Therefore, positive group affective tone should enhance member satisfaction with their team.

Furthermore, when team members are more satisfied with their teams, they tend to engage in actions that foster or support it (Eagly & Chaiken, 1993), resulting in a high level of team performance (Mason & Griffin, 2005). Using a sample consisting of service teams, Jehn, Northcraft, and Neale (1999) showed that team satisfaction was positively associated with perceived and actual team performance ( $r_s = .26$  and  $.46$ ,  $ps < .05$ ). Amalgamating these findings, we argue that positive group affective tone will enhance team performance by increasing team satisfaction. Thus, we propose the following:

*Hypothesis 4b.* Team satisfaction will mediate the relationship between positive group affective tone and team performance.

Finally, positive group affective tone promotes morale-building communication and encouragement during team interactions, which helps to build members' social resources within the team (e.g., helping, cooperation; Rhee, 2007). In fact, these favorable and supporting team interactions can cause members to engage in team-beneficial behaviors that are not formally required or rewarded (Garcia-Prieto, Mackie, Tran, & Smith, 2007). Similarly, team members who share positive moods often strive to maintain their positive feelings. Engaging in helping behaviors is seen as one way to maintain these positive moods (George & Brief, 1992). As such, members in teams with positive group affective tone are more likely to display helping behaviors toward others. In support of our contention, Mason and Griffin's (2005) empirical study revealed that positive group affective tone was positively correlated to team helping behaviors ( $r = .28$ ,  $p < .05$ ).

Furthermore, when members consistently engage in helping behaviors in teams, they will actively provide suggestions or take actions to solve

other members' problems (Chen et al., 2005). These make less experienced members more effective and productive when performing team tasks, thereby improving the whole team's performance. Supporting this argument, Podsakoff, Ahearne, and MacKenzie (1997) reported that team helping behaviors significantly improved machine crews' performance quantity ( $r = .36$ ,  $p < .05$ ). Similarly, Walz and Niehoff's (2000) study found a positive relationship between team helping behaviors and performance. Hence, we expect that team helping behaviors will mediate the relationship between positive group affective tone and team performance.

*Hypothesis 4c.* Team helping behaviors will mediate the relationship between positive group affective tone and team performance.

#### *Direct Effect of Leader Positive Moods on Team Performance*

Although we theorized that explicit transformational leadership and implicit emotional contagion processes might explain the mechanisms that link leader positive moods, team processes, and team performance, it is still plausible that leaders who exhibit positive moods impact team interactions and team performance via other unexamined processes (e.g., team shared mental model; George, 1996). In other words, the implicit and explicit processes might only partially mediate the leader positive moods–team performance association. Hence, we expect that leader positive moods will have a direct, positive effect on team performance, even controlling for the implicit and explicit processes. Thus, we propose the following:

*Hypothesis 5.* Leader positive moods will be positively related to team performance, after controlling for the effects of positive group affective tone, transformational leadership, and team processes.

## Method

### *Sample and Procedure*

The study sample was comprised of 85 sales teams from five insurance firms in Taiwan (leader  $N = 85$ ; member  $N = 365$ ). There was substantial variation within these firms in terms of size ( $M = 4335$ ,  $SD = 5790$ ), total assets ( $M = \$14204$ ,  $SD = \$16481$  [in \$US millions]), and market share ( $M = 4.7\%$ ,  $SD = 3.8$ ). This suggests that our sample consisted of firms with

superior (inferior) resources and high (low) performers. Among the five insurance firms, one firm provided 13 valid teams, two firms returned 14 valid teams, and two firms provided 22 valid teams.<sup>3</sup>

As for the data-collection procedure, we first obtained the permission and support of each firm's top management for data collection. Questionnaires were then distributed and collected by researchers during the insurance agents' weekly meeting. Each questionnaire included a cover letter explaining the purpose of the study and emphasized that all responses would be anonymous and kept confidential (i.e., to avoid problems related to social desirability; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Only when greater than half of each team's members and their leader returned the questionnaires were that team's data regarded as valid (Simons, Pelled, & Smith, 1999). As a result, we had a final usable sample of 365 sales team members (223 females, 142 males) and 85 leaders, yielding a valid response rate of 69%. In total, data from 85 valid teams were used in the subsequent analyses.

In order to reduce the potential for common method variance (Podsakoff & Organ, 1986), we measured the study variables from different sources. Team leaders were asked to evaluate their positive moods and team performance. Then, we randomly separated the team members of each team into two parts (Part A and Part B).<sup>4</sup> As such, we obtained measures of transformational leadership and positive group affective tone from half of the members (i.e., Part A) in each team, and obtained measures of the three team-process variables from the other half of the members (i.e., Part B) to avoid the same-source problem. Table 1 shows the details for the measurement design of the present study.

The mean team size was 7.34 persons ( $SD = 2.80$ ), and the mean team tenure was 2.67 years ( $SD = 2.10$ ). Approximately 50% of participants were 21 to 30 years old ( $M = 31.5$  years,  $SD = 7.5$ ). In terms of education, most of the participants (71%) possessed an undergraduate degree or less. In addition, 83% of respondents had less than 5 years of organizational tenure ( $M = 2.8$  years).

### *Measures*

The original version of the questionnaire was translated into Chinese by the authors, and then was back-translated from Chinese to English

<sup>3</sup>We conducted a series of ANOVAs to determine whether teams from different firms had significant differences in terms of study variables. The results show that there were no significant differences between teams from different firms in terms of all study variables.

<sup>4</sup>If team members' agreement in terms of the study variables is high (i.e.,  $r_{wg}$  values), then it is appropriate to separate the teams randomly into two parts and to obtain measures from the two parts (Podsakoff & Organ, 1986).

Table 1

*Measurement Design for Avoiding Common Method Variance*

Variable	Leader-rated	Part A: Members-rated	Part B: Members-rated
Leader positive moods	X		
Transformational leadership		X	
Positive group affective tone		X	
Team goal commitment			X
Team task satisfaction			X
Team helping behaviors			X
Team subjective performance	X	X	
Team objective performance	X		

*Note.* Team performance is composed of three performance indicators: leader-rated subjective performance, member-rated subjective performance (part A members), and leader-rated objective performance.

by two bilingual foreign language experts. The translation was then reviewed for appropriateness by five organizational behavior experts to ensure the content validity and face validity of the measures (Brislin, 1980).

*Leader positive moods.* We used 10 positive mood descriptors from the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988) to measure leader positive moods. As an individual's mood states can last for a few days or even several weeks (George & Jones, 1996; Larsen, 2000; Watson, 2000), leaders were asked to respond to each item (e.g., *interested, enthusiastic, excited, proud, active*) with regard to how they had felt *at team meetings during the past 2 weeks*. Responses were rated on a 5-point Likert-type scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). Cronbach's alpha for this scale was .92.

While conducting this study, we were concerned about any potential memory bias when asking team leaders or members to rate their positive moods at team meetings retrospectively. We addressed this issue in three ways. First, according to Robinson and Clore (2002), when measuring episodic affective knowledge (i.e., moods at specific events and times), the time frame of *the last 2 weeks* is acceptable. For time frames that extend longer than 2 weeks, individuals must rely on more generalized beliefs about their affect to be able to make affective judgments. As we wanted to capture team leader and member mood states associated with specific events and times (e.g., at team meetings during the past 2 weeks), we determined that the use of a 2-week time frame was acceptable.

Second, Parkinson, Briner, Reynolds, and Totterdell (1995, p. 335) and Robinson and Clore (2002) found that weekly retrospective measures of mood were fairly close to average daily mood ratings over the past 2-week period, providing evidence for the validity of the 2-week retrospective measure. Third, in our sample, team leaders and members only met one or two times per week ( $M = 1.9$  times per week,  $SD = 1.7$ ). Therefore, the low number of meetings during the designated time frame made it less difficult for respondents to report on mood states at team meetings during the past 2-week period, as they only had to consider moods associated with one or two occasions.

*Positive group affective tone.* In order to assess positive group affective tone, we measured individual team members' ratings of their positive moods at team meetings. We then tested within-group agreement on team members' positive moods to determine the suitability of aggregation to the group level (George, 1990, 1995). Team members' positive moods were measured with the 10 positive mood items (e.g., *interested, enthusiastic, excited, proud, active*) from the PANAS (Watson et al., 1988).

As mentioned previously, team members were asked to indicate the extent to which the adjectives described their affective states *at team meetings during the past 2 weeks*. Responses were rated on a 5-point scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). Cronbach's alpha for this scale was .89.

*Transformational leadership.* We measured transformational leadership with the Multifactor Leadership Questionnaire (MLQ Form 5X; Bass & Avolio, 1995), which captures the four components of transformational leadership: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Team members were asked to indicate the frequency with each item described their leaders during *the past 2 weeks* on a 5-point scale ranging from 1 (*not at all*) to 5 (*frequently*). Since the intercorrelations between the four components were relatively high ( $r = .77-.84$ ,  $p < .01$ ), we followed Bono and Judge (2003) and Colbert et al.'s (2008)



approach to combine the four components into an overall measure of transformational leadership. Cronbach's alpha for this scale was .97.

*Team goal commitment.* We assessed team goal commitment with Klein and Mulvey's (1995) seven-item scale (e.g., "I am strongly committed to pursuing the team goals"; "I think the team goals are good goals to shoot for"; "It would not take much to make me abandon the team goals," reverse-scored). Team members were asked to rate their commitment toward team goals *during the past 2 weeks*. Responses were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's alpha for this scale was .87.

*Team satisfaction.* We used Barsade, Ward, Turner, and Sonnenfeld's (2000) three-item scale to measure members' satisfaction with their team *during the past 2 weeks* (e.g., "I am satisfied with the interpersonal relations between team members"). Responses were rated on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach's alpha for this scale was .88.

*Team helping behaviors.* We used Coleman and Borman's (2000) three-item scale to measure team helping behaviors. Team members were asked to rate members' helping behaviors *during the past 2 weeks* (e.g., "Team members helped each other"; "Team members assisted other members with personal matters"). Responses were rated on a 4-point scale ranging from 1 (*never*) to 4 (*always*). Cronbach's alpha for this scale was .82.

*Team performance.* In this study, we used multiple indicators (i.e., subjective and objective indicators) to measure team performance, for several reasons. First, in order to tap the performance domains fully, job-performance researchers have suggested the use of both subjective and objective performance indicators to capture the different aspects of overall performance (Sulsky & Keown, 1998; Viswesvaran, 2002). Second, there are two popular ways to measure team performance in the team literature: outcome-based and process-based measures (Brannick & Prince, 1997). Using both subjective and objective indicators in our study not only captures the outcome-based measure (measured by objective indicator), but also taps the process-based measure (measured by subjective indicator) of team performance. Third, since leader positive moods might influence teams' objective outputs as well as the goal progress, the use of both objective and subjective performance indicators provides a complete examination of the effects of positive moods on performance (Lucas & Diener, 2003; Tsai et al., 2007; Wright & Staw, 1999).

In the present study, we used three indicators to form the team performance score: leader-rated subjective performance, team-member-rated subjective performance, and leader-rated objective performance. Subjective performance was measured with Edmonson's (1999) four-item scale (e.g.,

“This team meets or exceeds the firm’s requirements”; “This team does superb work”; “This team keeps getting better and better”). Team leaders and members were asked to rate team performance *over the past 2 weeks* on a 7-point scale ranging from 1 (*very inaccurate*) to 7 (*very accurate*). Cronbach’s alphas for the leader-rated and member-rated subjective performance were .83 and .88, respectively.

As for objective performance, we developed three indicators to capture the objective performance of insurance sales teams: first-year commission (FYC), first-year premium (FYP), and total commissions earned by the team. Moreover, we added another item to measure level of team goal achievement. Team leaders were asked to evaluate the team performance over the past 2 weeks, compared to the team performance in the previous month on a 6-point scale (1 = *higher than -200 percent*; 2 = *between -101 and -200 percent*; 3 = *between 0 and -100 percent*; 4 = *between 1 and 100 percent*; 5 = *between 101 and 200 percent*; 6 = *higher than 200 percent*). Cronbach’s alpha for these indicators was .91.

Because insurance firms in Taiwan ask sales team members to report and update their sales performance on the company website and allow team leaders to access weekly team performance information, the objective data recorded in this database made it easier for leaders to rate their team performance (as they could access the objective performance data over the past 2 weeks and month). Finally, the intercorrelations between the three performance indicators ranged from .52 to .67 ( $ps < .01$ ), which indicates good convergent validity between the three performance indicators.

### *Control Variables*

Because larger teams are more likely to achieve high team performance (Stewart, 2006), we treated team size as a control variable in this study (team size varied between 4 and 11 members;  $M = 7.34$ ). Moreover, team tenure can also influence team effectiveness and member interactions (Stewart, 2006), so team tenure ( $M = 2.67$ ,  $SD = 2.10$ ) was also included as a control variable.

### *Validity of Measures*

Because the study variables were rated by team leaders and team members separately, we conducted two confirmatory factor analyses (CFAs) to evaluate the convergent validity of the measures (Bagozzi, Yi, & Phillips, 1991). We conducted a series of CFAs using LISREL 8.54 with maximum likelihood estimations, and compared the fit indexes of the two models (i.e., one

composed of leader-rated variables, and the other composed of member-rated variables). The results of the CFAs show that the leader-rated model (i.e., leader positive moods, subjective team performance, objective team performance) provided an adequate fit to the data (comparative fit index [CFI] = .93, normed fit index [NFI] = .91, non-normed fit index [NNFI] = .91, standardized root mean square residual [SRMR] = .07). Moreover, the member-rated model (i.e., transformational leadership, positive group affective tone, team goal commitment, team satisfaction, team helping behavior, subjective team performance) also showed a good fit to the data (CFI = .95, NFI = .94, NNFI = .94, SRMR = .05). Finally, the factor loadings of all items in the two models were statistically significant ( $p < .01$ ), suggesting that the convergent validity of all measures was acceptable (Bagozzi et al., 1991).

### *Data Aggregation*

To investigate the team-level properties of measures and the appropriateness of the data aggregation, we examined interrater agreement by calculating  $r_{wg}$  values (James, Demaree, & Wolf, 1984) of transformational leadership, positive group affective tone, the three team-process variables, and subjective team performance. The results show that the  $r_{wg}$  values for transformational leadership ranged from .92 to .99 ( $M r_{wg} = .97$ ;  $Mdn r_{wg} = .99$ ), and the  $r_{wg}$  values for positive group affective tone ranged from .72 to .98 ( $M r_{wg} = .91$ ;  $Mdn r_{wg} = .93$ ), which indicate that team members displayed high agreement in terms of their perceptions of leader transformational behaviors and positive affective experiences (George, 1990; Klein & Kozłowski, 2000). In addition, three team-process variables also showed high agreement:  $r_{wg}$  values for team goal commitment ranged from .85 to .99 ( $M r_{wg} = .93$ ;  $Mdn r_{wg} = .96$ ), team satisfaction ranged from .83 to .99 ( $M r_{wg} = .95$ ;  $Mdn r_{wg} = .97$ ), and team helping behaviors ranged from .73 to .98 ( $M r_{wg} = .92$ ;  $Mdn r_{wg} = .94$ ). Finally, the  $r_{wg}$  values for subjective team performance were also acceptable ( $r_{wg}$  values ranged from .87 to .98;  $M r_{wg} = .92$ ;  $Mdn r_{wg} = .97$ ).

We also calculated the intraclass coefficient (ICC[1]) values for all variables. ICC(1) values were calculated on the basis of Bliese's (2000) formula.<sup>5</sup> ICC(1) values showed a significant between-groups variance than within-group variance in terms of transformational leadership (ICC[1] = .13), positive group affective tone (ICC[1] = .23), team goal commitment

<sup>5</sup>It should be noted that Bliese's (2000) formula makes two assumptions: (a) equal group size when calculating ICC(1) values; and (b) ICC(1) values are not influenced by group size or by number of groups (Castro, 2002).

(ICC[1] = .22), team satisfaction (ICC[1] = .15), team helping behavior (ICC[1] = .14), and subjective performance (ICC[1] = .47; Bliese, 2000). To summarize, the empirical evidence suggests that the data aggregation is appropriate.

### *Data Analysis*

According to James, Mulaik, and Brett (2006), the recommended way to test a mediation model is to use structural equation modeling (SEM) techniques. Therefore, we conducted SEM using LISREL 8.54 with maximum likelihood estimation to test our hypotheses. Following the suggestion of Anderson and Gerbing (1988), we adopted a two-stage approach to test the SEM. First, we examined the convergent validity of the measurement model with a series of CFAs (see Validity of Measures section). Second, we compared the fit index between the full mediation model and the partial mediation model to decide the form of mediation and test our hypotheses (James et al., 2006). We used CFI, NFI, NNFI, and SRMR to assess the model fit (Jöreskog & Sörbom, 1999).

Because we had a relatively small sample size at the team level ( $N = 85$ ), we used the single-indicator approach by using scale scores to form a single manifest indicator (see Chen & Klimoski, 2003) for each of leader positive moods, transformational leadership, positive group affective tone, and the three team-process variables. In terms of team performance, we used three indicators (i.e., leader-rated objective performance, leader-rated subjective performance, member-rated subjective performance) to capture fully the construct domain of team performance. Finally, as all SEM analyses were based on the correlation matrix, we followed Netemeyer, Johnston, and Burton's (1990) approach to set the random measurement error of each indicator equal to the quantity of 1 minus the reliability in order to account for random measurement error of all indicators. Moreover, the paths from the latent variables to indicators were set equal to the square root of the reliability.

## Results

Table 2 presents the means, standard deviations, reliabilities, and correlations of the study variables. As can be seen in Table 2, leader positive moods were positively and significantly related to transformational leadership, positive group affective tone, and the three performance indicators ( $r_s = .24-.38$ ,  $p_s < .05$ ). Moreover, transformational leadership and positive

Table 2  
Means, Reliabilities, and Correlations Among Study Variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Team size	7.34	2.78	—										
2. Team tenure <sup>a</sup>	2.67	2.06	.23*	—									
3. Leader positive moods	3.69	0.56	.08	-.29*	(.92)								
4. Transformational leadership	4.92	0.55	.18	-.14	.33**	(.97)							
5. Positive group affective tone	3.30	0.43	.17	.08	.24*	.43**	(.89)						
6. Team helping behavior	3.15	0.33	.06	.09	.11	.33**	.32**	(.82)					
7. Team goal commitment	5.02	0.76	.03	.04	.15	.36**	.38**	.36**	(.87)				
8. Team satisfaction	5.51	0.74	.20	.10	.11	.41**	.38**	.27*	.49**	(.88)			
9. Leader-rated subjective team performance	4.38	0.83	.22*	-.11	.38**	.52**	.30**	.31**	.25*	.27*	(.83)		
10. Leader-rated objective team performance	3.87	0.66	.12	-.07	.32**	.39**	.36**	.31**	.33**	.29**	.54**	(.91)	
11. Member-rated subjective performance	5.13	0.72	.27*	.01	.31**	.35**	.35**	.38**	.47**	.46**	.55**	.67**	(.88)

Note. N = 85. Cronbach's alpha coefficients appear on the diagonal.

<sup>a</sup>In years.

\*p < .05. \*\*p < .01 (two-tailed).

group affective tone were also positively correlated to the three team-process variables ( $r_s = .32-.41$ ,  $p_s < .05$ ), and the three performance indicators ( $r_s = .30-.52$ ,  $p_s < .05$ ).

### *Testing of Alternative Models*

As noted in Hypothesis 5, we expected that the implicit and explicit processes would partially mediate the leader positive moods–team performance association, and leader positive moods would influence team performance directly. However, it is also plausible that the implicit and explicit processes fully mediated this relationship. Therefore, we tested and compared the model fit of both models (i.e., the partially and fully mediated model) with SEM. The partially mediated model differs from the fully mediated model in that three direct paths from leader positive moods, transformational leadership, and positive group affective tone to team performance exist. The results show that the partially mediated model,  $\chi^2(26, N = 85) = 40.52$ ,  $p < .01$ ;  $\chi^2/df = 1.56$  (CFI = .96; NFI = .91; NNFI = .93; SRMR = .07) provided a better fit to the data than did the fully mediated model,  $\chi^2(29, N = 85) = 49.18$ ,  $p < .01$ ;  $\chi^2/df = 1.70$  (CFI = .95; NFI = .89; NNFI = .91; SRMR = .08).

The chi-square difference test also shows that the chi-square decrement between the partial mediation and full mediation model was statistically significant ( $\Delta\chi^2 = 8.67$ ,  $\Delta df = 3$ ;  $p < .05$ ). However, the direct paths from transformational leadership and positive group affective tone to team performance were not statistically significant ( $\beta_s = .10$  and  $.04$ ,  $p_s > .05$ ). Thus, we deleted the two direct paths and examined the fit indexes of the modified partial mediation again.

The SEM results show that the modified partial mediation model also provided an adequate fit to the data,  $\chi^2(28, N = 85) = 41.66$ ,  $p < .01$ ;  $\chi^2/df = 1.49$  (CFI = .97; NFI = .91; NNFI = .94; SRMR = .06). Moreover, the chi-square difference test also shows that the chi-square decrement between the partial mediation and modified partial mediation model was not statistically significant ( $\Delta\chi^2 = 1.14$ ,  $\Delta df = 2$ ;  $p > .10$ ). Based on a consideration for model parsimony and the results of the chi-square difference test, we used the modified partial mediation model to test the proposed hypotheses (see Figure 2).

### *Hypothesis Testing*

As can be seen in Figure 2, leader positive moods were positively and significantly correlated to both transformational leadership ( $\beta = .37$ ,  $p < .01$ )

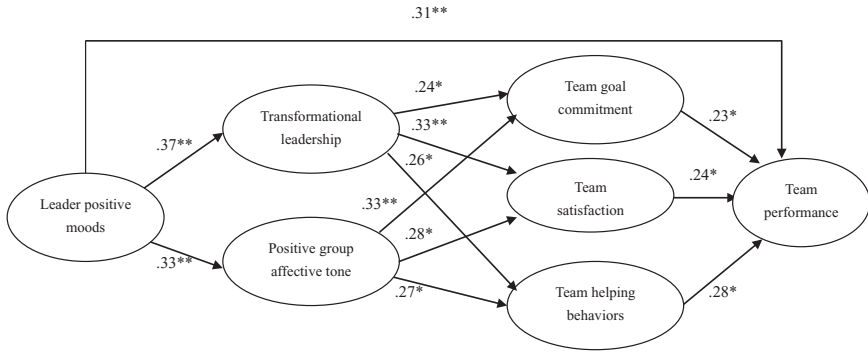


Figure 2. Structural equation model with maximum likelihood estimates (standardized). Indicators and correlations among the exogenous and control variables are not included.  $\chi^2(28, N = 85) = 41.66, p < .01; \chi^2/df = 1.49$  (CFI = .97; NFI = .91; NNFI = .94; SRMR = .06). \* $p < .05$ . \*\* $p < .01$  (two-tailed).

and positive group affective tone ( $\beta = .33, p < .01$ ). Therefore, Hypotheses 1 and 3 were supported.

For Hypotheses 2a, 2b, 2c, 4a, 4b, and 4c, we proposed that the three team-process variables would mediate the relationships between transformational leadership, positive group affective tone, and team performance. As shown in Figure 2, both transformational leadership ( $\beta = .24-.33, ps < .05$ ) and positive group affective tone ( $\beta = .27-.33, ps < .05$ ) showed positive associations with the three team-process variables. Moreover, all three team-process variables were positively related to team performance ( $\beta = .23-.28, all ps < .05$ ).

In order to test whether the indirect effects of transformational leadership and positive group affective tone on team performance via the three team-process variables existed, we performed Sobel tests to examine the statistical significance of these mediated relationships (see O’Driscoll, Pierce, & Coghlan, 2006; Sobel, 1982). The results of the Sobel tests reveal the significant mediating effects of transformational leadership on team performance via team goal commitment, team satisfaction, and team helping behaviors ( $Zs = 1.98-2.17, ps < .05$ ). In addition, SEM results reveal that transformational leadership had a significant indirect effect on team performance through team processes (indirect effects = .21,  $p < .01$ ). Thus, Hypotheses 2a, 2b, and 2c were supported.

Similarly, the results of the Sobel test also show the significant mediating effects of positive group affective tone on team performance via team goal commitment, team satisfaction, and team helping behaviors ( $Zs = 1.96-2.07, ps < .05$ ). Furthermore, we also calculated the indirect effects of transforma-



tional leadership and positive group affective tone on team performance. The SEM results indicate that positive group affective tone had a significant indirect effect on team performance (indirect effects = .22,  $p < .01$ ). Therefore, Hypotheses 4a, 4b, and 4c were supported.

Finally, as can be seen in Figure 2, after controlling for the effects of transformational leadership, positive group affective tone, and team processes, leader positive moods were still positively related to team performance ( $\beta = .31$ ,  $p < .01$ ). Thus, Hypothesis 5 was supported.

## Discussion

### *Theoretical Implications*

Leader positive moods serve an important function in terms of boosting team performance. However, past studies have not extensively examined the mechanisms that underlie this association. In this study, we found that the proposed explicit processes (i.e., transformational leadership) and implicit processes (i.e., emotional contagion) partially mediated the leader positive moods–team performance relationship: Team leaders who experience positive moods are more likely to engage in transformational leadership explicitly and to influence the positive affective tone of their teams implicitly, which, in turn, enhance team performance through motivational, attitudinal, and behavioral team processes. These findings have several theoretical implications for the group affect and leadership literature.

First, the present findings contribute to the literature by precisely modeling the dual mediating mechanisms (i.e., explicit and implicit processes) through which leader positive moods influence team performance, and by clarifying how and why leader positive moods enhance team performance (Colquitt & Zapata-Phelan, 2007; Whetten, 1989). Although Sy et al. (2005) and Van Kleef et al. (2009) also found that leader positive moods enhance team performance via the implicit process, they did not include either the explicit process or any actual team performance outcomes in their models. The present study extends their findings by simultaneously testing both the explicit and implicit processes, and by linking the dual mediating processes to actual team performance outcomes. Moreover, it should be noted that both transformational leadership and positive group affective tone independently and indirectly influence team performance in a very similar magnitude (indirect effects = .21 and .22, respectively; see Results section). This further demonstrates that the explicit process and the implicit process play equally important roles in explaining the leader positive moods–team performance linkage.

Second, echoing Dionne et al.'s (2004) suggestion, our study looks inside the "black box" of the transformational leadership–team performance association. The present findings extend previous leadership studies (e.g., Colbert et al., 2008; Lim & Ployhart, 2004; Schaubroeck et al., 2007) by highlighting three pathways through which transformational leaders can enhance team performance; specifically, motivating team members to pursue team goals, satisfying members in terms of their team tasks and environments, and leading members to exhibit more helping behaviors. Together, these enhance the functioning of team processes and lead to higher team performance.

Third, although group affect researchers have examined the main effect of positive affective tone on team performance outcomes (e.g., Chi & Tsai, 2008; George, 1995; Mason & Griffin, 2005; Rhee, 2006), we do not yet fully understand the intricacies embedded within the mechanisms. On the basis of the broaden-and-build theory for teams (Rhee, 2007), we have attempted to clarify the mediating processes linking positive group affective tone and team performance. Positive group affective tone helps to facilitate members' morale-building communication and to create a favorable team environment, leading to more psychological, physical, and social resources available to team members. As such, team members become more satisfied with their current teams and have access to additional resources to reach difficult team goals and to assist other team members when necessary.

Fourth, we found that the explicit and implicit processes only partially mediated the association between leader positive moods and team performance. This highlights the possibility that leaders who experience positive moods can influence team performance through other mechanisms. Besides the explicit (i.e., leadership behaviors) and implicit (i.e., emotional contagion) processes, it is also plausible that leader positive moods might influence team members through the cognitive processes (e.g., team shared mental model; George, 1996). That is, leaders in positive moods might shape team members' shared cognitive structures and lead these members to make sense of shared knowledge and information during the team interaction, resulting in better team functioning and performance. This is an interesting issue for future researchers to explore.

Finally, in George's (1995) research, she reported a nonsignificant relationship between leader positive moods and positive group affective tone. Interestingly, this is inconsistent with our findings. George argued that leaders in her study were not actual members of their team, and did not work side by side with their team members. Therefore, leader positive moods were less likely to influence the positive affective tone of teams. However, in the current study, team leaders and members met approximately two times per week ( $M = 1.9$ ) to evaluate their goal achievement. As such, the leaders in our study had more chances to influence their team members via the emotional contagion process.

### *Practical Implications*

Since leader positive moods help to boost team performance, it would be beneficial for organizations to enhance leaders' positive moods by selecting team leaders with appropriate personalities (e.g., positive affectivity; George, 1995) or shaping a favorable context for leaders and members to interact (e.g., providing a comfortable meeting room). Second, organizations can design and implement specific emotional management courses or training (e.g., skills to understand, maintain, and express emotions), whereby leaders can better understand the role of positive moods in the pursuit of success (Sy et al., 2005), and thereby effectively regulate and display their emotions to influence their team members.

Third, as transformational leadership might influence team performance through three team-process variables, it would be beneficial for organizations to facilitate transformational leadership through the selection of team leaders with high levels of conscientiousness and extraversion (Judge, Bono, Ilies, & Gerhardt, 2002). Finally, the presence of positive group affective tone also enhances team performance indirectly. Organizations can shape positive group affective tone by selecting as team members those who possess appropriate personalities in terms of positive affectivity (George, 1990), extraversion, and agreeableness (Tsai & Chi, 2008), or by designing tasks that need higher levels of task/social interdependence to facilitate a positive mood contagion between team members (Bartel & Saavedra, 2000; Tsai & Chi, 2008).

### *Limitations and Directions for Future Research*

There are a few limitations in the present study that should be noted. The first limitation concerns the difficulty of making causal inferences from a cross-sectional design. Given the cross-sectional nature of our study, we cannot unequivocally determine the direction of causality in our data. Only a replication of the present findings using an experimental design can establish the direction of causality. However, some previous studies have confirmed the leader positive moods–team performance and leader positive moods–positive group affective tone linkages using experimental research designs (e.g., Gaddis et al., 2004; Sy et al., 2005). Those findings should help to reduce the possibility of reverse causality in our findings.

Second, since we chose insurance sales teams as the research sample, this may limit the generalizability of our findings. However, as Tsai et al. (2007) stated, positive moods are particularly beneficial for jobs requiring high levels of social interaction with others (e.g., insurance sales agents). As leaders and

members of sales teams are required to interact frequently with other team members and their clients, positive moods are particularly relevant for team performance in the setting of sales teams (George & Bettenhausen, 1990). Therefore, sales teams should be considered a relevant sample for the current study (Sackett & Larson, 1990) in terms of testing our theoretical framework as it relates to positive moods. We encourage future researchers to test our model again on teams with different task requirements to discover whether the team type acts as a moderator on our theoretical framework (e.g., Kelly & Spoor, 2007).

Finally, to clarify further the nomological network (Schwab, 2005) of the leader moods–team performance relationship, we propose some directions for future research. For example, the recent literature has suggested that the effects of positive moods and negative moods are not parallel or symmetrical (George & King, 2007; George & Zhou, 2007). It would be worthwhile to investigate further the relationship between leader negative moods and team performance (Grandey, 2008).

According to the mood-as-information theory (Schwarz & Clore, 2003), leaders with negative moods signal a problematic state of affairs. Further, these leaders will urge team members to address systematically the problems according to a detail-oriented and analytic approach, which, in turn, improves their team performance. Sy et al. (2005) also found that leader negative moods led to higher levels of group effort. We encourage future researchers to clarify further the mechanisms through which leader negative moods influence team performance.

In conclusion, the present study tested the dual mediating mechanisms that underlie the leader positive moods–team performance association and highlighted the important mediating roles of transformational leadership and positive group affective tone in this linkage. In addition, we found that leader positive moods could influence team performance directly. Future research should extend the nomological network by exploring further whether leader positive moods will boost team performance through the cognitive mechanism (e.g., team shared mental model) or by examining the role of leader negative moods to build a more comprehensive theoretical framework of the leader moods–team performance linkage (Schwab, 2005; Whetten, 1989).

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