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Team Emotional Intelligence and Performance: Interactive Dynamics between Leaders and Members

Jin Wook Chang[1], Thomas Sy[2], and Jin Nam Choi[3]

Abstract

Despite increasing attention to emotional intelligence (EI) in the workplace, few studies have investigated EI at the group level. In this study, we propose that average member EI indirectly affects team performance by shaping emergent team dynamics. The results based on 91 teams show that both average member EI and leader EI are positively associated with intrateam trust, which in turn positively relates to team performance. Average member EI and leader EI have a compensatory relationship in predicting team performance. Either high average member EI or high leader EI (not necessarily both) is sufficient to explain a high level of team performance. This pattern is particularly strong with the emotion appraisal and social skills dimensions of EI. Our study highlights the need for increased attention to EI at the group level, which shapes emergent states and outcomes of work teams.

Keywords

emotional intelligence, intrateam trust, team performance, leadership

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Scholars have increasingly attended to the role of emotion as a critical determinant of work behavior, interpersonal exchange, and performance in organizations (Brief & Weiss, 2002). Specifically, emotional intelligence (EI) has been identified as a key determinant of performance for employees and managers. EI can be broadly defined as a set of competencies for identifying, processing, and managing emotions (Zeidner, Roberts, & Matthews, 2008). The popularity of EI stems from its purported benefits. Over the past two decades, empirical studies have demonstrated the link between EI and various individual outcomes, such as job satisfaction and performance (Joseph & Newman, 2010; O'Boyle, Humphrey, Pollack, Hawver, & Story, 2011), conflict resolution (Foo, Elfenbein, Tan, & Aik, 2004; Jordan & Troth, 2004), and interpersonal and social relationships (Saklofske, Austin, & Minski, 2003) as well as in professional (Bar-On, 2000) and academic success (Schutte et al., 1998).

With a few exceptions, most studies have treated EI as an individual-level variable and have focused on its *intraindividual* functions. Although emphasis has been placed on the benefit of EI in the promotion of effective interpersonal interactions in organizational settings (Antonakis, Ashkanasy, & Basborough, 2009), how EI at the team level relates to team processes and outcomes has been rarely examined. Given that the benefits of EI may be accrued through social interactions among emotionally intelligent individuals (Mayer, Roberts, & Barsade, 2008), and because team performance often relies on interpersonal skills and harmony among members (Driskell, 1992), EI may be a key element in high-performing teams. Therefore, understanding the conditions under which EI at the team level shapes team dynamics and collective performance is important.

As such, in the present study, we examine the relationship between average member EI and team performance. We consider the average of the team members' EI scores as a measure of EI at the team level, which has been recommended as an optimal way to capture the collective level of EI in groups (Côté, 2007; Elfenbein, 2006). Given that the small work teams in our sample are predominantly operating teams that produce and offer goods and services in various industries, team performance is driven by the collective efforts and contributions of each member (cf. additive task; Steiner, 1972). Within this team context, the average of members' EI offers a relatively unbiased and representative index of the overall collective potential in terms of EI in the team. We expect that average member EI operates as an input factor that shapes particular emergent states within the team, which in turn predicts team outcomes (Barrick, Stewart, Neubert, & Mount, 1998). Specifically, we propose that interactions between emotionally intelligent members generate

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greater levels of intrateam trust (emergent state), which enhances team performance (team outcome; Marks, Mathieu, & Zaccaro, 2001).

Considering the critical role of leaders in shaping team processes (Zaccaro & Klimoski, 2002) and emotional climate (Druskat & Wolff, 2001), we also propose that EI of team leaders not only directly influences trust among members and team performance but also moderates the effect of average member EI on team emergent states and outcomes. Our examination of the direct effect of team leader EI and potential interaction between member EI and leader EI in explaining team dynamics and performance offers meaningful contributions to both EI and leadership literature. Each relation is empirically tested using a field sample composed of 91 work teams.

Average Member Emotional Intelligence and Team Performance

Multiple Perspectives of Emotional Intelligence

EI research remains in its inceptive stage, and controversies continue over its conceptual definition and measurement. Mayer, Salovey, and Caruso (2000) emphasized the distinction between ability models (EI as a standard intelligence) and mixed models (EI as a mixture of personal qualities that encompasses abilities and personality traits). Paralleling Mayer et al.'s distinction, Petrides and Furnham (2000, 2003) classified EI into ability and trait models, which were found to be empirically distinct. Rather than viewing these models as incompatible, a consensus has been reached that EI is a multifaceted construct that needs to be studied from multiple perspectives, considering the inherent advantages, as well as disadvantages, in both models (Zeidner et al., 2008). The multifaceted nature of EI involves four dimensions: mood regulation, emotion appraisal, social skills, and emotion utilization (Petrides & Furnham, 2000; Saklofske et al., 2003; Schutte et al., 1998).

Recent studies in organizational settings have utilized perceptions by individuals of their own affect-related capabilities and trait-like attributes (e.g., Giardini & Frese, 2008). This is because such an operationalization encapsulates the possibility of EI as a constellation of dispositions and self-perceived abilities (Petrides & Furnham, 2003). In addition, the perception of abilities and traits bears significance in predicting team performance (Barrick et al., 1998). Often, perceptions have more direct influences on behavior than actual abilities (Eisenberger, Huntington, Hutchison, & Sowa, 1986). Furthermore, a perceptual measure of EI may be more robust in capturing the affective experiences of employees in the workplace (O'Boyle

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et al., 2011) and in determining the extent to which individuals draw on their emotional resources and capabilities (Antonakis et al., 2009).

A major premise in our study is that leaders and followers draw on and deploy EI resources to influence team interactions and outcomes. Accordingly, a self-reported measure of EI is more appropriate because individuals' perceptions of their emotional abilities and usual behaviors may determine whether they draw on and deploy their EI resources (Antonakis et al., 2009). Therefore, in this study, the EI construct represents self-perceptions of respondents of their emotional capabilities and typical behaviors, which is consistent with similar constructs, such as perceived EI (Chan, 2004) and emotional competence (Giardini & Frese, 2008).

Team Characteristics of Emotional Intelligence

Similar to the differing models of EI at the individual level, scholars have conceived of team-level EI in two different ways (Druskat & Wolff, 2001; Elfenbein, 2006). Team-level EI can be regarded as the norm or climate that shapes members' interpretations of and responses to emotional issues (Druskat & Wolff, 2001). Team-level EI can also be viewed as a pool of resources individual members bring to their teams that can be leveraged in carrying out their work (Elfenbein, 2006). Whereas the former notion represents team-level EI as an *emergent state* of the team that facilitates harmonious intrateam processes, the latter conceptualizes team-level EI as an *input factor* that has implications for team processes and outcomes. Different composition models are appropriate for the respective conceptualizations of team-level EI. The referent-shift consensus model is appropriate for the former perspective because it conceptualizes team-level EI as a type of norm or climate that resides in teams. In contrast, the additive model is more appropriate for the latter because it focuses on the compositional effect of member EI (member characteristics) in determining the team processes and overall performance (Chan, 1998; Elfenbein, 2006). In this study, we adopt the latter perspective to examine the role of member EI as a compositional input for team functioning, which accounts for the subsequent team emergent states and performance.

Average Member EI and Team Performance

Several reasons support the possibility that average member EI predicts smoother team interaction processes, enhancing overall performance. First, average member EI may enhance team performance because individuals

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with high EI may be more adept at regulating the affective environment; therefore, teams can direct their attention to more important issues (Druskat & Wolff, 2001). Teams with high-EI members may utilize their emotions in functional ways to achieve better cognitive and decision-making processes (Mayer et al., 2000). Moreover, when team members exert effort to build high-quality relationships, which is more likely to occur in teams with high average EI, other members are likely to reciprocate with higher performance (Graen & Uhl-Bien, 1995).

In addition, average member EI may also relate to team performance through effective coordination. Individuals with high EI are more likely to be perceived as dependable and reliable because they can successfully cope with various emotionally taxing organizational events (Huy, 1999). If a team is composed of members with high EI, teammates regard one another as dependable and trustworthy, which reduces the need to closely monitor them (Langfred, 2004). This decrease in monitoring (freeing up cognitive resources) and associated increase in reliability results in less need for extensive control and, subsequently, in improved performance (Lewis, 2003; Mohammed & Dumville, 2001).

Furthermore, average member EI may also increase team performance through effective communication. Both social functionalist accounts of emotion and the role of emotion as social information emphasize the communication function of emotions, proposing that emotions evolve as an adaptive mechanism for individuals to coordinate their interactions and relationships with one another (Keltner & Haidt, 1999; van Kleef, 2010; van Kleef, De Dreu, & Manstead, 2010). Accordingly, individuals send emotion signals (via facial, vocal, and postural cues) regarding their internal states that, when perceived by others, allow them to adjust their behaviors to enhance interactions (van Kleef, 2010). Members with high EI are more adept at deciphering the emotions and behaviors of teammates (Elfenbein, Polzer, & Ambady, 2007). Therefore, they are more capable of making the necessary adjustments to harmonize interpersonal processes. When teams are composed of members who can effectively interpret nonverbal and verbal messages without misunderstanding the intentions of their counterparts, the level of communication effectiveness of these teams becomes higher than those consisting of low-EI members. This way, higher quality communication minimizes process loss, facilitating team performance. Thus, we hypothesize the following relationship:

Hypothesis 1: Average member EI is positively related to team performance.

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Several empirical studies have provided preliminary evidence for the relationship between member EI and team performance (Feyerherm & Rice, 2002; Jordan & Troth, 2004). However, these studies have utilized less validated or proxy measures of EI, which may affect the robustness and validity of the findings (Zeidner et al., 2008). Moreover, some of these studies have examined team-level EI with student samples, thereby limiting the generalizability of the findings (Jordan, Ashkanasy, Härtel, & Hooper, 2002). In addition to collecting data from organizational teams, we employ a widely used EI scale that has been validated at the individual level as a distinct construct from other personality and ability measures (van Rooy & Viswesvaran, 2004). This study also explains the pathways by which EI at the team level affects team performance by investigating the intervening dynamics.

Direct and Moderating Effects of Leader EI

Team leaders have long been acknowledged as having a significant influence on team processes, characteristics (e.g., affective tone), and effectiveness (Zaccaro & Klimoski, 2002). Accordingly, we expect leader EI to have a positive and direct impact on intrateam trust and team performance. In this study, we define intrateam trust as the shared belief of team members regarding the dependability of other members and the extent to which others care about the team interests (Dirks, 1999; Langfred, 2004).

Leaders with high EI are likely to recognize the emotional expressions of followers and to acknowledge and respect those emotions (George, 2000; Wong & Law, 2002). As such, leaders with high EI are more adept at appropriately responding to the emotions of their followers. Moreover, leaders with high EI are likely to be better at buffering followers from the ill effects of negative emotions, while simultaneously fostering the salutary effects of positive emotions (Bono, Foldes, Vinson, & Muros, 2007). The positive affective tone shared among team members should enhance their commitment and trust toward one another. Studies have shown that when individuals experience positive emotions during social exchange, they tend to perceive others as attractive and trustworthy (Jones & George, 1998). Leaders with high EI may enhance intrateam trust by helping members regulate their emotions and avoid overly emotional reactions. The stability and reliability of individuals in the midst of emotion-inducing events lead others to regard these individuals as more dependable and trustworthy (Johnson-George & Swap, 1982). Likewise, leaders with high EI are adept at nurturing more positive interactions between followers, fostering greater cooperation and coordination (Barsade, 2002; Sy, Côté, & Saavedra, 2005), which tends to promote interpersonal trust among members.

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Hypothesis 2: Leader EI is positively related to intrateam trust.

Research has shown that leaders with high EI produce desirable work outcomes (Sy, Tram, & O'Hara, 2006; Wong & Law, 2002; Zhou & George, 2003). These leaders facilitate team performance by channeling emotions of members in a way that fosters more creativity, resilience, confidence in action, and collaboration among members (Sy et al., 2005; Zhou & George, 2003). Moreover, leaders with high EI are likely to engage in both instrumentally and emotionally supportive behaviors toward followers, which then lead these followers to reciprocate with increased effort and contribution toward the achievement of collective goals (Shamir, House, & Arthur, 1993; Wayne, Shore, & Liden, 1997). Therefore, we expect leader EI to be directly related to team performance.

Hypothesis 3: Leader EI is positively related to team performance.

Along with its direct effects, we consider leader EI as one of key factors that allows the team members to fully utilize their emotional resources frequently and effectively (Côté, 2007). When present, these key factors activate the effects of member EI on team emergent states and outcomes; when absent, the effects of member EI on emergent state and performance may not be fully activated and are often muted (Jordan et al., 2002). Leadership theorists argue that effective leaders are keenly aware of and astutely manage the emotions of their subordinates (George, 2000). Leaders promote the emergence of positive team characteristics by effectively resolving complicated emotion-laden issues and by encouraging positive emotions among their followers (Zaccaro, Rittman, & Marks, 2001). We therefore propose that leader EI renders an enabling condition for member EI to exert a positive effect on team performance.

In this vein, leader EI may strengthen the positive link between member EI and team performance. Leaders with high EI may be able to foster an emotionally intelligent team environment that minimizes process loss. By creating a positive context, leaders with high EI may establish the necessary foundation for team members to develop trusting relationships (Williams, 2001). In addition, leaders with high EI may be more effective at developing and communicating a compelling vision (George, 2000). Thus, emotionally intelligent leaders are adept at creating more supportive team environments where members may fully utilize their EI resources frequently and effectively. In contrast, leaders with low EI may not be able to form this type of constructive team context that fully utilizes EI resources of team members for

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increased team performance. Even worse, emotional resources of team members may need to be diverted to combat the toxic environment that leaders with low EI may manifest (Padilla, Hogan, & Kaiser, 2007; Wu & Hu, 2009).

Hypothesis 4: Leader EI moderates the relationship between average member EI and team performance, such that the relationship is stronger when leader EI is high.

Intrateam Trust as a Mediating Mechanism among Average Member EI, Leader EI, and Team Performance

Researchers have posited that the link between member EI and team performance is most likely a function of various intervening processes (Druskat & Wolff, 2001; Rode et al., 2007) and that intrateam trust is a potential key intervening mechanism (Elfenbein, 2006). As a key emergent state of teams (Ilgen, Hollenbeck, Johnson, & Jundt, 2005), intrateam trust is posited to be positively related to team performance because it promotes positive interpersonal dynamics, such as coordination, communication, cooperation, and mutual social and task support (Ferrin, Bligh, & Kohles, 2007; Jones & George, 1998; Peters & Karren, 2009). In this study, we propose a positive relationship between average member EI and trust, and further expect that intrateam trust mediates the relationship between member EI and team performance.

People with high EI are adept in regulating their emotions (Mayer et al., 2008). As such, members with high EI can effectively deal with emotion-laden situations (Schutte et al., 1998) and cope with stressful work events (Mikolajczak, Menil, & Luminet, 2007). Members with high EI may exhibit stability and calmness under various pressing and interpersonally stressful affective events, which would then invoke images of professionalism and reliability, leading to evaluations of trustworthiness (Johnson-George & Swap, 1982; McAllister, 1995). This mechanism is separate from the influence of the leader, such that team members with high EI demonstrate their trustworthiness and dependability by regulating their own emotions, whereas leaders lead their followers to be perceived as trustworthy by helping them regulate their emotions. Therefore, teams composed of members with high EI develop trusting relationships.

People with high EI can communicate their ideas and thoughts more effectively and are sensitive and responsive to the emotions of others (Mayer et al., 2008). These characteristics result in increased intrateam trust among members because trust arises from a mutual understanding of the needs and

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interests of one another (Mayer, Davis, & Schoorman, 1995). At the same time, individuals with high EI are more adept in reading and interpreting the emotions, cognitions, and behaviors of others (Elfenbein et al., 2007); therefore, they are likely better able to identify the needs of others, which subsequently affords them the awareness to make appropriate accommodations. Even when they disagree, members with high EI can understand or at least recognize the thoughts and feelings of others and respond accordingly, making them more trustworthy.

Finally, teams with high-EI members may further invigorate trust among members because of the self-reinforcing nature of trust (Kramer, Brewer, & Hanna, 1996). Once trust is formed, it tends to act as an additional basis for the further development of trust, reinforcing extant trust relationships. This positive spiral wherein trust begets more trust continues *unless* destructive trust-breaking events occur (McAllister, 1995). Considering that trust is often broken by misunderstandings or poor communication among members, teams whose members possess high EI may be able to prevent these trust-breaking events. Teams with high-EI members are likely to sustain the reinforcing cycle of trust development.

Hypothesis 5: Average member EI is positively related to intrateam trust.

The positive association between average member EI and trust among members is likely to emerge more readily when the leader is also emotionally intelligent and able to instill positive moods and reduce unnecessary tension among members (George, 2000). Leader EI may boost the positive association between member EI and intrateam trust because leaders with high EI tend to foster emotionally intelligent team environments (Druskat & Wolff, 2001) that enhance communication and inoculate against emotional distress among members and from work tasks (Bono et al., 2007).

We further expect that intrateam trust, affected by the direct and interactive effects of average member EI and leader EI, subsequently influences team performance. Intrateam trust can lead to superior levels of team performance (Golembiewski & McConkie, 1975) because it promotes higher levels of cooperation (Dirks & Ferrin, 2001). Furthermore, intrateam trust facilitates members of a team to commit to the team endeavor (Jones & George, 1998). As team members become certain that their teammates are trustworthy, they are more likely to engage in open communication (Klimoski & Karol, 1976; Zand, 1972), which potentially reduces the process loss and enhances team performance. As such, we propose that trust among members

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is the reason the interaction between average member EI and leader EI affects team performance.

Hypothesis 6: Intrateam trust mediates the main effects and moderating effects of average member EI and leader EI on team performance.

Method

Sample and Data Collection Procedure

Working adults were recruited by a team of trained undergraduate research assistants. The assistants received approximately 1 hr of training on study protocols and ethical guidelines and requirements. Each research assistant was asked to brainstorm and map out his or her existing network of industry contacts (e.g., family, friends, and colleagues working in various organizations) and to prioritize his or her contact network based on the likelihood of response to the study survey. Based on this prioritized network contact list, the team of research assistants approached work teams to collect data.

The initial sample consisted of 1,103 individuals in 292 work teams, with a response rate of 94.4%. Our response rate is consistent with past research employing similar methods of recruiting participants from existing contact networks (e.g., De Dreu & van Vianen, 2001). Among this initial sample, we focused on teams with no more than 5 members because the dynamics of EI are more relevant in small teams where members have frequent daily contact and more intimate interpersonal interactions (Feyerherm & Rice, 2002). Our analysis sample included 347 individuals comprising 91 work teams. On average, there were 4 respondents in each team (3 team members and their leader). Based on the reports of the team leaders, the actual size of the teams ranged from 3 to 5 members (4.6 on average).

Data were collected from various companies located in metropolitan areas in the western region of the United States, including a wide range of industries, for example, professional services (19%), retail (17%), food services (11%), and finance and banking (8%). Participants worked an average of 33.1 hr per week (SD = 9.7) and had an average company tenure of 2.9 years (SD = 3.7). Among the participants, 43% were male, with ages ranging from 18 to 68, yielding an average of 28 years (SD = 8.6). Education level and ethnicity of the participants were also diverse: high school (39%), vocational school (18%), bachelor's degree (34%), graduate degree (8%), and Asian (33%), Hispanic (31%), White (16%), African American (7%), and others (13%).

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Measures

Team members reported their EI and intrateam trust. Team leaders rated their own EI, intrateam trust, and the overall performance of their teams. Given the small size of teams and the centrality of leaders within the teams, team leaders were likely to have daily contact with members and intimate knowledge regarding team operations. Thus, leaders were likely well-informed judges for trust among team members. Participants responded to all scale items using a 7-point Likert-type scale (1 = *strongly disagree*, 7 = *strongly agree*).

Emotional intelligence of the leader and members. We examined EI with the abbreviated version (Saklofske et al., 2003) of the Emotional Intelligence Scale (EIS) of Schutte et al. (1998). We selected EIS because it is one of the most widely researched and validated measures of EI (van Rooy & Viswesvaran, 2004). Utilizing a widely used measure affords comparison across studies, which is critical for the advancement and accumulation of knowledge on EI. Although initial research has suggested that EIS is best represented as a unidimensional measure of EI (Schutte et al., 1998), subsequent research has demonstrated that its four dimensions (i.e., mood regulation, emotion appraisal, social skills, and emotion utilization) have shown consistent stability across several studies (Petrides & Furnham, 2000; Saklofske et al., 2003). In this study, we examine the proposed relationships within the context of the four dimensions of EI as well as the overall (average) level of EI representing all these dimensions.

The four-dimensional structure of EI adopted in this study is consistent with the dimensions suggested in both ability (Mayer & Salovey, 1997) and trait (Bar-On, 2000) models of EI. For each of the four dimensions, we adopted four items showing the highest factor loadings to the corresponding factor, along with low cross-factor loadings (Saklofske et al., 2003). Confirmatory factor analysis (CFA) of the present data exhibited an acceptable fit of the four-factor structure with the data, $\chi^2(df = 98) = 689.88$, $p < .001$; CFI = .88; GFI = .93; RMSEA = .07, and all items exhibited significant loadings on their corresponding factors (all $p < .001$). The four dimensions of EI also revealed acceptable reliability coefficients (.77, .75, .66, and .70 for leaders; .71, .73, .65, and .70 for members) for mood regulation, emotion appraisal, emotion utilization, and social skills, respectively. Based on previous theoretical development of team-level aggregation of EI (Côté, 2007; Elfenbein, 2006), we employed the additive composition model of team-level EI (Chan, 1998) and averaged the EI of members to compute the average member EI score of the team.

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Intrateam trust. Adopting the items developed by McAllister (1995), we constructed a three-item scale of intrateam trust, which was rated by both leaders ($\alpha = .85$) and members ($\alpha = .79$): "Members of our team can speak frankly with one another," "Members of our team follow through on their commitments to one another," and "Members of our team are not likely to give one another bad advice." We first aggregated each member's assessment of intrateam trust by averaging their responses, $ICC(1) = .18$, $ICC(2) = .39$, $p < .01$, and $r_{wg} = .92$. We then averaged the leader report of intrateam trust and aggregated (averaged) member ratings. In so doing, we effectively weighed the leader ratings more heavily because we expected that leaders would provide an independent, third-party rating of trust among members. Incorporating both leader and member perspectives is presumably more desirable than using a single rating of intrateam trust because it gives a more complete picture of intrateam dynamics (Sin, Nahrgang, & Moregeson, 2009). These two trust ratings show a moderate correlation ($r = .38$), consistent with the previous findings of emergent states in teams (Gerstner & Day, 1997; Sin et al., 2009).

Team performance. Leaders reported on the performance of their teams by rating three items ($\alpha = .81$). Two items were adopted from Wayne et al. (1997): "In my estimation, members of my group get their work done very effectively" (1 = *strongly disagree*, 7 = *strongly agree*) and "Rate the overall level of performance of your group members" (1 = *low performance*, 7 = *high performance*). The third item was adopted from Shore, Sy, and Strauss (2006): "A summary evaluation of overall group performance" (1 = *very poor*, 7 = *excellent*).

Results

We conducted CFA to address potential common method variance regarding three variables reported by team leaders. In situations where the method variance is responsible for the covariation among the measures, CFA should indicate that a single factor model fits the data. However, a single-factor model did not fit the data well, $\chi^2(df = 35) = 144.88$, $p < .001$; CFI = .78; RMSEA = .19. In contrast, the hypothesized three-factor model (EI, trust, and performance) exhibited a good fit, $\chi^2(df = 32) = 47.98$, $p < .05$; CFI = .97; RMSEA = .07, presenting a significant improvement from the one-factor model, $\Delta\chi^2(\Delta df = 3) = 96.9$, $p < .001$. We also conducted CFA with regard to two variables rated by team members (EI and intrateam trust), and found that the hypothesized two-factor model, $\chi^2(df = 13) = 33.19$, $p < .01$, CFI = .93, RMSEA = .13, fit the data better than the single-factor model, $\chi^2(df = 14) = 83.45$, $p < .001$, CFI = .76, RMSEA = .24; $\Delta\chi^2(\Delta df = 1) = 50.26$, $p < .001$. The

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Table 1. Means, Standard Deviations, and Correlations Among Study Variables

Variables	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Team size	4.64	1.04	—												
2. Member mood regulation	5.00	0.72	.02	*.68*											
3. Member emotion appraisal	4.89	0.78	.01	.50	*.72*										
4. Member emotion utilization	4.96	0.73	–.02	.59	.52	*.71*									
5. Member social skills	5.10	0.77	.01	.58	.76	.53	*.65*								
6. Member overall EI	4.99	0.62	.01	.80	.85	.79	.87	*.89*							
7. Leader mood regulation	4.90	1.22	.08	.23	.55	.19	.48	.44	*.75*						
8. Leader emotion appraisal	5.02	1.16	–.01	.25	.51	.20	.46	.43	.55	.72					
9. Leader emotion utilization	4.91	1.14	.04	.16	.40	.15	.40	.34	.47	.66	*.66*				
10. Leader social skills	5.15	1.13	.01	.16	.41	.02	.50	.34	.61	.62	.56	*.69*			
11. Leader overall EI	5.00	0.96	.04	.25	.57	.17	.56	.47	.80	.86	.81	.84	*.89*		
12. Intrateam trust	5.11	0.91	.09	.32	.60	.34	.62	.57	.60	.57	.41	.64	.67	—	
13. Team performance	5.77	0.89	.04	.19	.44	.07	.42	.35	.46	.35	.28	.44	.47	.54	*.81*

Note: Team-level, $N = 91$. Italicized figures on the diagonal are reliability coefficients.
$r > .19$, $p < .10$; $r > .22$, $p < .05$; $r > .27$; $p < .01$; $r > .40$, $p < .001$.

means, standard deviations, and intercorrelations among the study variables are presented in Table 1. To test the moderating effects of leader EI, a product term of average member EI and leader EI was calculated. To reduce the collinearity between the main effect terms and the interaction term, both average member EI and leader EI were centered before computing their product term. We conducted hierarchical regression analyses to test our hypothesized relations among the variables.

Regression Equations for the Four EI Dimensions and the Overall Level of EI

In line with the findings and arguments supporting the investigation of EI as a multidimensional construct (Côté, 2007; Petrides & Furnham, 2000), the same regression equations were repeatedly tested using the four dimensions

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of EI, as well as the overall level of EI, thereby resulting in five separate regression models. In the four models developed for the four EI dimensions, four scale items for each dimension (e.g., emotion appraisal) were averaged as scores of average member EI and leader EI. In these models, the same dimensions were applied to both the members and the leader in each model (e.g., team emotion appraisal and leader emotion appraisal), maintaining consistency of the content domain in the analysis. The interaction term was calculated using average member EI and leader EI of the corresponding dimension. In the model for overall EI, the scale averages of the four EI dimensions were used as the EI scores for the members and the leader. The interaction term was computed using the centered average scores of average member EI and leader EI. Tables 2 and 3 present the regression results based on the overall EI score and the four dimensions of EI, respectively. In these equations, we included the standard deviation of member EI as a control variable, following the argument that controlling for dispersion effects of the trait-like measures is important when using mean scores as a predictor (Klein & Kozlowski, 2000).

Hypothesis Testing

Hypothesis 1 posits that average member EI is positively related to team performance. As Model 5 in Table 2 shows, average member EI was significantly related to team performance ($b = .51$, $p < .01$), supporting Hypothesis 1. Among the four dimensions of EI, emotion appraisal and social skills exhibited significant positive effects on team performance ($b = .53$ and $b = .51$ respectively, both $p < .001$; Model 5 in Table 3). The other two dimensions, mood regulation and emotion utilization, were not significant predictors of team performance.

Hypotheses 2 and 3 are also supported. The overall EI score of the leader was a significant predictor of intrateam trust ($b = .48$, $p < .001$; Model 3 in Table 2). All of the four EI dimensions were significant, with the leader mood regulation dimension exerting particularly strong effects ($b = .41$, $p < .001$; Model 3 in Table 3). With regard to the direct effect of leader EI on team performance, overall leader EI was positively and significantly related to team performance ($b = .33$, $p < .01$; Model 6 in Table 2). All four dimensions of EI exhibited a significant and positive association with team performance (Model 6 in Table 3), with the leader mood regulation dimension having the strongest relation with team performance ($b = .32$, $p < .001$).

Supporting Hypothesis 4, the interaction between leader EI and average member EI was a significant predictor of team performance when the overall

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Table 2. Hierarchical Regression Models for Testing the Mediated Moderation of Team Performance Using the Overall EI Score

	Trust			Performance			
Predictors	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Step 1							
Team size	.08	.08	.07	.03	.03	.04	.01
Member EI *SD*	–.35	–.11	.15	–.03	.12	.32	.26
Step 2							
Member EI		.82***	.46***		.51**	.19	.02
Step 3							
Leader EI			.48***			.33**	.16
MEI × LEI			–.08			–.21*	–.19†
Step 4							
Intrateam trust							.36**
R^2	.02	.33***	.55***	.00	.12**	.28***	.34***
ΔR^2		.31***	.22***		.12**	.16***	.06**

Note: Entries are unstandardized regression coefficients. SD = standard deviation; MEI = average member EI; LEI = leader EI.
† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

EI score was used ($b = –.21$, $p < .05$; (Model 6 in Table 2). The interaction was also significant for the emotion appraisal and social skills dimensions of EI (both $b = –.15$, $p < .05$; Model 6 in Table 3). We further probed the form of this significant interaction by employing the simple slope procedure (Aiken & West, 1991). Figure 1 shows the interaction pattern based on the overall EI. The pattern is nearly identical for the emotion appraisal and social skills dimensions. Contrary to our expectation that average member EI and leader EI reinforce each other to produce desirable outcomes for the team, the results indicate that they have a *compensatory* relationship. Average member EI contributed to team performance only when leader EI was low. In contrast, leader EI made a significant difference in team performance only when member EI was low. Thus, a certain level of EI as a resource within the team, whether supplied by the leader or team members, appeared to be sufficient for team performance.

Hypothesis 5 proposes a positive relationship between average member EI and intrateam trust. This prediction is supported for overall EI, as well as all four dimensions of EI, with particularly strong effects from emotion appraisal

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Table 3. Hierarchical Regression Models for Testing the Mediated Moderation of Team Performance Using the Four Dimensions of EI

	Trust			Performance			
Predictors	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Mood regulation							
Team size	.07	.07	.04	.03	.03	.00	−.02
Member mood regulation *SD*	−.42*	−.30	−.20	−.33†	−.27	−.19	−.12
Member mood regulation		.34**	.15		.19	.05	−.01
Leader mood regulation			.41***			.32***	.17*
Member × Leader interaction			−.09			−.06	−.02
Trust							.38**
R^2	.07*	.14**	.42***	.04	.06	.24***	.33***
Emotion appraisal							
Team size	.09	.08	.08	.02	.01	.01	−.02
Member emotion appraisal *SD*	−.19	−.07	.10	.26	.36*	.41*	.37*
Member emotion appraisal		.69***	.48***		.53***	.28*	.09
Leader emotion appraisal			.29***			.14†	.03
Member × Leader interaction			.00			−.15*	−.16**
Trust							.39**
R^2	.02	.36***	.46***	.02	.23***	.33***	.41***
Emotion utilization							
Team size	.09	.10	.09	.03	.04	.02	−.03
Member emotion utilization *SD*	.27	.23	.25	.06	.05	.08	−.06

(continued)

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Table 3. (continued)

	Trust			Performance			
Predictors	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Member emotion utilization		.42**	.33**		.08	.04	−.14
Leader emotion utilization			.30***			.21*	.05
Member × Leader interaction			−.04			.02	.05
Trust							.55***
R^2	.02	.14**	.27***	.00	.01	.08	.31***
Social skills							
Team size	.08	.08	.08	.03	.03	.04	.01
Member social skills *SD*	−.10	.10	.16	.06	.20	.25	.19
Member social skills		.74***	.46***		.51***	.25†	.09
Leader social skills			.35***			.21*	.09
Member × Leader interaction			−.04			−.15*	−.14*
Trust							.34**
R^2	.01	.39***	.55***	.00	.19***	.30***	.36***

Note: Entries are unstandardized regression coefficients.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

and social skills (see Model 2 in Tables 2 and 3). Finally in Hypothesis 6, we advance that intrateam trust is a mediating mechanism that explains the relationships between EI of the leader, members, and team performance. This hypothesis was tested in Model 7 in Tables 2 and 3. Intrateam trust was a significant predictor of team performance for both the overall EI and all four EI dimensions. In addition, significant main and moderating effects of average member EI and leader EI on team performance became insignificant with the inclusion of trust, confirming its mediating role.

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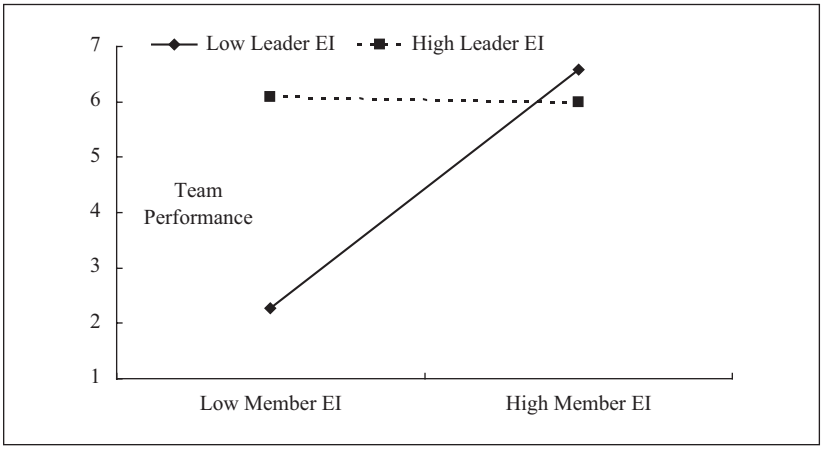

Figure 1. Interaction effect between average member emotional intelligence and leader emotional intelligence on team performance

The overall pattern supports the main effects of average member EI and leader EI on intrateam trust and team performance, as well as the mediating role of trust between EI variables and team performance. Our analysis also revealed the significant interaction between member EI and leader EI in predicting team performance although the form of interaction indicates the presence of a compensatory function, instead of a synergistic relationship involving member EI and leader EI.

Discussion

The present study provides a preliminary understanding of the mechanism through which EI at the team level affects team performance. Given the paucity of empirical studies on team-level EI, particularly in an organizational setting, the present findings provide valuable insights for the EI literature. Member EI, as a compositional input to the team, shapes intrateam trust (an intermediate emergent state), which mediates the effect of member EI on team performance. The results also reveal the importance of leader EI in shaping team emergent states and outcomes by setting a favorable affective climate within the team, whereby the team may capitalize on its EI resources (Côté, 2007). Our study also offers insights into the various dimensions of EI and alternative operationalizations of member EI. Below, we discuss theoretical implications of the findings along with study limitations.

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Average Member EI, Trust, and Performance

Supporting our expectation, average member EI was a significant predictor of intrateam trust, mediating the effect of member EI on team performance. This mediation hypothesis is supported for the emotion appraisal and social skills dimensions of EI, providing additional evidence for the critical role of accurate emotion recognition in team settings (Elfenbein et al., 2007). Our results substantiate previous theoretical arguments that the emotion appraisal dimension of EI is particularly important because it is one of the most inherently social aspects of EI dimensions continually used in accomplishing daily work tasks (Elfenbein, 2006). For example, team members need to be accurate in judging the reactions, intentions, preferences, and future behaviors of others to productively work together. Being more accurate and in tune with the emotions of other members may engender more trust by minimizing miscommunications (Elfenbein et al., 2007). The present findings also substantiate previous theoretical arguments that team-level EI operates to shape interpersonal perceptions, such as trust, which ultimately affects team effectiveness (e.g., Druskat & Wolff, 2001; Jordan et al., 2002).

Although the present results demonstrate the benefits of trust, several studies have presented null or even negative effects of trust on team performance. For example, Langfred (2004) identified self-management as a boundary condition that may engender the negative effects of high levels of trust. Similarly, trust is not a meaningful predictor of performance for virtual teams (Aubert & Kelsey, 2003). In the present setting of face-to-face interacting teams with formal leaders, intrateam trust among team members, conceptualized as dependability and caring about the team, was significantly and positively related to team performance. Further studies are needed to reveal boundary conditions for the effects of member EI and ensuing trust on team performance.

Leader EI and Average Member EI

In the present analysis, leader EI exhibited a significant direct effect on trust among members, suggesting the importance of the role of leaders in managing affect at work (George, 2000; Zaccaro et al., 2001). For the emotion appraisal and social skills dimensions, leader EI significantly interacted with average member EI to predict team performance. The interaction pattern depicted in Figure 1 suggests that leader EI enhances team performance only when member EI is low, whereas member EI enhances team performance

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when leader EI is low. The results suggest that when members lack EI resources to handle internal emotional processes and to cope with external threats and uncertainties, the team is more likely to accrue substantial benefits from leaders with sufficient EI resources. Similarly, when a leader lacks EI resources, the team is more likely to benefit from the EI resources of its members.

This pattern suggests that, when both are high, leader EI and average member EI have a *compensatory relationship*, rather than mutually reinforcing the effect of each other and producing a synergistic effect. The present data indicate that (a) when both leader EI and average member EI are low, team performance is lower than when EI of either party is high (see Figure 1), and (b) when EIs of both parties are high, team performance is not higher than when EI of either party is high. This pattern resonates with the findings of poorer relational outcomes resulting from couples consisting of a high-EI male and a high-EI female (Brackett, Warner, & Bosco, 2005). Offering any definite conclusions may be premature, given the rather weak negative effect of having both high-EI leader and high-EI members. However, we speculate that high EI may be positively correlated with consideration behaviors, such that when both leaders and team members have high EI, they may overly engage in consideration behaviors (e.g., focus on establishing and maintaining positive relationships above all else) at the expense of initiating structure or task-performance behaviors (Larson, Hunt, & Osborn, 1976). Our interpretation is consistent with recent discussion on the "curse" of emotional intelligence (Antonakis et al., 2009). Although the conclusion is highly speculative, having either a leader with high EI or members with high EI is sufficient to fulfill the threshold requirement for emotional resources needed for team performance.

Team EI: Compositional Input or Emergent State?

Previous research on EI at the team level has stated that team EI can be construed in two ways: as an input factor reflecting the emotional capabilities that members bring to the team and as an emergent state shared among members and leaders. We conceptualize team-level EI as an input factor because we regard it as a stable and consistent individual trait (additive composition model, Chan, 1998). However, EI at the team level can also be operationalized using a referent-shift model of composition to tap into the EI of the entire team (e.g., "Overall, our team members have a high level of EI."), as suggested by Yang and Mossholder (2004). The present data suggest that EI at the team level could operate as both individual input and emergent states. For instance, emotion appraisal and social skills of leaders are strongly

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correlated with emotion appraisal and social skills of team members, whereas the correlations regarding mood regulation and emotion utilization are nearly negligible. This pattern implies that some dimensions of EI are more readily shared among members and leaders through vicarious learning and role modeling (Shamir et al., 1993).

These two approaches provide complementary insights. It is not clear which approach may provide a more valid measure of team EI and offer more theoretically sound explanations of the phenomenon in question (Elfenbein, 2006). Future studies may compare the validity of the two distinct approaches for operationalizing EI at the team level. In this regard, we suggest that future research incorporate the role of team tenure or developmental stages of teams (e.g., Tuckman, 1965) in the examination of EI at the team level. Possibly, in the earlier stages of team interactions, EI may be better conceptualized as a compositional input factor because the opportunity to develop shared expectations regarding emotion-related behaviors is still lacking. In contrast, in the later stages of team development, members are more likely to develop similar perceptions and norms related to their EI.

Managerial Implications

The present findings offer several practical implications for organizations. First, results imply that teams with high average member EI may achieve high performance. Thus, EI may be an important employee attribute that should be considered when forming work teams or recruiting new members. Member EI can be more critical in teams that belong to industries where team tasks demand more emotional labor and are highly interdependent because emotion-laden events are more prevalent in such context. Second, our analysis also emphasizes the role of the leader in managing emotions in a team setting. Leaders should pay attention to the management of emotions in teams, particularly when followers have low EI. Finally, organizations may also improve the performance of their work teams by providing training interventions designed to enhance employee EI. Along with this employee development, a leader needs to be cautious in actively managing emotions when followers are already adept at handling emotion-laden workplace events among themselves.

Strengths and Weaknesses

This study has several limitations. First, given the cross-sectional nature of the present data, causal inference cannot be made from the results. Although

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our predicted relationships are consistent with prior theories (Côté, 2007; Rode et al., 2007), longitudinal or experimental research designs should be employed for clear causal validation of the proposed relations. Second, one caveat in interpreting our results involves adopting the self-reported measure of EI, which represents the perception by individuals of their capabilities and traits related to emotions. Given that ability measures of EI, such as MSCEIT, may reflect EI capacity of individuals, and that self-reported measures of EI may reflect typical EI behaviors of individuals (Giardini & Frese, 2008), studying the presumably differential impacts of the two measures on team performance would have been ideal (Joseph & Newman, 2010; O'Boyle et al., 2011). At the group level, ability measures of EI may represent stable team-level resources that individual members may draw on, whereas self-report measures of EI capture the emergent state of emotion management among team members.

Finally, the present findings should be interpreted with caution because the performance measure was based on subjective ratings by leaders who offered ratings on leader EI and who were also part of the intrateam trust measure. Nevertheless, CFA results indicate the distinctiveness of the measures, and data were collected from both members and leaders. Unlike the main effects, moderating effects are less subject to the bias due to common method variance. Related to the measurement issue, intrateam trust ratings offered by leaders and members were moderately correlated (r = .38). Although this moderate level of correlation between leader and member observations of behavior and group processes is consistent with previous findings (Harris & Schaubroeck, 1988), future studies should explore the sources and drivers of convergent and divergent perceptions among the leader and members.

Despite these shortcomings, the present study complements existing studies of EI by testing its efficacy as a team characteristic using a large field data set representing diverse industries performing many different functions, which increases the generalizability of the present findings. It further enriches our understanding of the dynamics involving EI of members by identifying a potential intervening mechanism (i.e., trust) through which it affects team performance. Along with affective team processes, such as trust, conflict, or cooperative motivation, future studies should examine the possibility that team EI promotes team performance by improving cognitive team processes, such as problem solving or decision making (e.g., Feyerherm & Rice, 2002). Moreover, examining if the cognitive and affective processes of a team interact to explain team performance above and beyond the simple main effects of

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either aspect would be of great interest. Future research should also examine whether different team dynamics emerge when EI is assessed with ability measures, such as MSCEIT, in comparison with perceptual measures. Although controversies exist regarding the ability- and trait-based conceptualizations of EI, systematic comparisons and further theoretical development are required to push the science of EI forward as a valid domain of inquiry (Zeidner et al., 2008). As previous research on EI at the individual level of analysis has succeeded in establishing the incremental validity of EI independent of other personality measures, such as Big Five personality factors, future research should also examine whether team-level EI has a distinct effect over other personality measures at the team level.

Furthermore, examining various operationalizations of EI at the team level in relation to typology of group task types by Steiner (1972) may prove fruitful in predicting specific circumstances in which each approach may best predict team performance (Côté, 2007). Our findings from post hoc analyses using different methods of team-level aggregation (team-level maximum and team-level minimum) show almost identical patterns of results obtained from the mean aggregation. These results offer support for the argument that team EI is a resource that teams can pool together and draw from to improve team performance (Elfenbein, 2006). However, an elaborate investigation may still be needed. For example, the maximum EI (instead of average) score at the team level can be the most meaningful approach for teams that engage in disjunctive tasks because performance on disjunctive tasks are best predicted by the strongest member of the team, regardless of other members (Côté, 2007).

Conclusion

In this study, we have proposed that average member EI and leader EI directly and interactively affect team performance by shaping intrateam trust. We have tested our hypotheses using 91 organizational teams and have found support for most of our hypotheses. We have also found that average member EI and leader EI have a compensatory relationship, such that either high average member EI or high leader EI, not necessarily both, is sufficient to induce a high level of team performance. This is an interesting venue for future research, wherein the impact of emotional capabilities on team process and outcomes are more than simple linear relationships. The research on EI and emotion management at the team level deserves further conceptual and empirical attention because the purported benefits of EI can be maximally realized at the team level rather than at the individual level.

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