THE ROLE OF LEADER INTERPERSONAL MANAGEMENT IN TEAM PESSIMISM REGULATION

ABSTRACT

In this article, we examined the effect of team pessimism on team performance as well as its underlying mechanisms – collective efficacy and collective stress. We also explored how two different interpersonal emotion management (IEM) strategies by leaders moderate the above effects. Using field data from 80 teams, we found that team pessimism negatively predicted team performance via reduced collective efficacy and increased collective stress. In addition, problem-focused IEM strategies weakened the negative relationship between team pessimism and collective efficacy as well as the positive relationship between team pessimism and collective stress. On the contrary, emotion-focused IEM strategies strengthened these two relationships. The results showed detrimental effect of team pessimism on team functioning and potential double-edged sword effects of different IEM strategies.

Keywords: pessimism, team emotion, interpersonal emotion regulation

Pessimistic, and even desperate. This was exactly what Steven Gerrard and his Liverpool teammates felt during half-time of their match against AC Milan on May 25th 2005 at Istanbul Ataturk Olympic Stadium. They were 0-3 down in the European Champions League final and their opponent was deemed to be stronger in almost every single position. Nobody would believe that they could take the trophy home - except their manager Rafael Benitez. After the break with several tactical changes made by Rafael, the team performed the astonishing "Miracle of Istanbul" - in the second half, Liverpool scored three goals and ended the game with an epic comeback of 3-2 on penalties. The Reds were eventually awarded the trophy permanently.

During that 15-minute break, *pessimism*, or the emotional state involving expectations that undesired things will happen in the future (Carver, Lehman, & Antoni, 2003), infused the whole team. Because of it, people forecasted Liverpool's failure. This widely-shared prediction implies both prevalence of pessimism at team level and its detrimental effect on team functioning. Moreover, Rafael's successful management of pessimism and the subsequent comeback signaled the importance of leader emotion regulation in eliminating pessimism's impairment. Surprisingly, despite these observations, past academic literature regarding both pessimism and team discrete emotions seldom tackles these phenomenon. In pessimism literature, scholars have been focusing on the individual level pessimism (e.g. Carver & Gaines, 1987; Carver, Lehman, & Antoni, 2003) and its harmful effects on individual performance (Carver & Gaines, 1987; Strack, Carver & Blaney, 1987; Carver et al., 2003; Geers, Wellman, & Lassiter, 2009). It remains unexplored whether this effect is analogous at the team level. Meanwhile, a lack of discussion about team discrete emotions has been criticized in the team emotion literature (Menges & Kilduff, 2015). Given that discrete emotions have been found to alter individual behaviors in a distinct manner from valence-based general emotions (i.e.,

positive and negative emotions; Menges & Kilduff, 2015), it is of theoretical importance to investigate team discrete emotions such as team pessimism. Finally, scholars have called for research in regulation of team emotions (Menges & Kilduff, 2015). While a number of studies have demonstrated destructive impacts of certain team emotions on team functioning (e.g. Barsade, 2002; Cole, Walter, & Bruch, 2008), it is both theoretically and practically essential to examine possible strategies to regulate them (Hartel, 2008; Maitlis & Ozcelik, 2004; Menges & Kilduff, 2015).

To address the above theoretical issues, we explore in this study the impact of team pessimism on team performance and its underlying mechanisms of collective efficacy and collective stress. Specifically, we argued that team pessimism may reduce *collective efficacy*, defined as "a group's shared belief in its conjoint capabilities to organize and execute the courses of action required to produce given levels of attainments" (Bandura, 1997: 477), because team pessimism signals that tasks or job require more resources than team members' capacity (Carver & Gaines, 1987; Strack, Carver, & Blaney, 1987), therefore preventing them from establishing self-confidence in accomplishing those tasks or jobs. Meanwhile, team pessimism may increase *collective stress*, defined as perceived imbalance between environmental demand and response capacity of focal teams (Hobfoll, 1989; McGrath, 1970), because expected unfortunate events may cause excess of environmental demands over response capacity and triggers psychological strain and pressures (Motowildlo, Packard, & Manning, 1986). Subsequently, both reduced collective efficacy and increased collective stress lead to diminished team performance due to lack of clear objectives and persistence (Bandura, 1997), as well as hindered communications (Kelly & McGrath, 1985; Ellis, 2006) and information processing (Karau & Kelly, 1992; Kelly & Loving, 2004), respectively (see Figure 1 for the conceptual model).

Insert Figure 1 about here

Despite the detrimental effect of team pessimism on team performance, past research has implied the crucial role of leaders in regulating such unfavorable team emotion (Menges & Kilduff, 2015; Pirola-Merlo, Hartel, Mann, & Hirst, 2002; Toegel, Kilduff, & Anand, 2013). In this study, we made an endeavor to examine the moderating role of two different interpersonal emotion management strategies (IEM strategies) of leaders, which is defined as leaders' attempts to influence what emotions team members have, when they have them, and how they experience and express these emotions (Gross, 1998; Williams, 2007). Specifically, *problem-focused IEM strategies*, defined as attempts to directly manipulate external situations or the perceptions of them (Little, Kluemper, Nelson, & Ward, 2013), are hypothesized to weaken the negative effect of team pessimism on team performance, because they provide employees resources to resolve pessimism-triggering problems or alter employee perceptions about these problems (Little et al., 2016). On the contrary, *emotion-focused IEM strategies*, defined as behaviors intended to eliminate, minimize, or diminish the expressions of negative emotions that result from external situations (Little et al., 2013), exacerbate this negative relationship, because they consume employee resources needed for self-regulation (Carver & Gaines, 1987).

By examining the effect of team pessimism on team performance and its underlying mechanisms, as well as the moderating roles of IEM strategies by leaders, we make three contributions to the existing literature. Firstly, our study extends team emotion consequence literature by examining one specific discrete team emotion – team pessimism, without being confined to a discussion about team general positive or negative emotions. According to Menges and Kilduff (2015), the team emotion consequence literature mostly relies on "a dimensional, valence-based approach" and concentrates on collective "general positive or negative feelings".

While at individual level scholars have found distinct outcomes for different discrete emotions (e.g. Izard, 1993), it shall be theoretically essential to investigate each discrete emotion at team level.

Secondly, our study contributes to team emotion literature by demonstrating who and how to *regulate* team emotions (Menges & Kilduff, 2015). Past literature regarding team emotions has mainly focused on how team emotion emerge (e.g., Arnaud & Schminke, 2012; Cole et al., 2008; Metiu & Rothbard, 2013; Sy, Cote, & Saavedra, 2005; Sy & Choi, 2013;) and how team emotions might facilitate or hinder team functioning (e.g. Cole, Walter, & Bruch, 2008; George, 1990; Mason & Griffin, 2003; Barsade, 2002; Van Knippenberg, Kooij-de Bode, & van Ginkel, 2010). What lacks in team emotion research is a follow-up discussion of "so what". Considering scholars are currently aware of the (dis)functionality of team emotions, it is imperative to investigate who and how to regulate team emotions when they are not favorable (Barsade & Gibson, 2007; Menges & Kilduff, 2015). This article addresses the "so-what" question from both "who" and "how" perspectives. It demonstrates the important role of leaders in regulating team emotions, providing further support for literature in leaders as emotion managers (Kaplan, Cortina, Ruark, LaPort, & Nicolaides, 2014). At the same time, it investigates the effectiveness of two possible IEM strategies, advancing past emotion regulation literature from emotional contagion perspective (e.g. Ashkanasy, 2003; Barsade, 2002; Bono & Illies, 2006; Humphrey,Pollack, & Hawver, 2008; Sy et al., 2005) and ability perspective (e.g. Connelly, Gaddis, & Helton-Fauth, 2002) to an *active* and *deliberate* behavioral perspective.

Lastly, our study contributes to team pessimism literature by directly testing the mechanisms underlying its effect on team performance – collective efficacy and collective stress. Past literature examining the effect of team negative emotions on team performance often

assumes motivational and behavioral mechanism, arguing that team negative emotions may harm employee motivations (Kunze & Menges, 2017), distract people from tasks (Cole, Walter, & Bruch, 2008), and hinder collaborations (Lin, He, Baruch, & Ashforth, 2017). However, almost none of them directly tested the role of mediators. Our study pioneered this line of research in contending that team pessimism may diminish team performance via employees' collective beliefs and feelings, thus providing two possible mechanisms in the relationship between team negative emotion and team performance.

LITERATURE REVIEW AND HYPOTHESES

Team pessimism

Pessimism has been pervasively studied at individual level in the past literature (e.g. Beck, Weissman, Lester, & Trexler, 1974), with a focus on its consequences (e.g. Carver & Gaines, 1987; Carver et al., 2003). Specifically, often treated as the opposite of individual optimism (Eiser, Pahl, & Prins, 2001; Krizan & Sweeny, 2013), individual pessimism has been found to have notable detrimental impacts on individual behaviors and well-being. For example, studies have shown that pessimism hinders goal pursuit by facilitating withdrawing behaviors (Carver & Gaines, 1987; Strack, Carver & Blaney, 1987; Carver et al., 2003; Geers, Wellman, & Lassiter, 2009) and suppressing self-regulations (Carver & Gaines, 1987; Strack, Carver & Blaney, 1987; Carver et al., 2003; Geers, Wellman, & Lassiter, 2009). In addition, pessimism impairs individual psychological well-being (Carver & Gaines, 1987; Carver, Harris, Robiinson, & Moffat, 1993; Chang, et al., 1997; Robinson-Whelen, Kim, MacCallum, & Kiecolt-Glaser, 1997) and physical health (Raikkonen, Matthews, Flory, Owens, & Gump, 1999).

In our study, we examine pessimism at a higher level of analysis and theorize team pessimism as a collective emotional state that are shared by team members. Based upon the

group emotion model proposed by Menges and Kilduff (2015), we argue that team pessimism may emerge via two mechanisms – *interaction* and *inclination*. Interaction mechanism is regarded as one fundamental process for the emergence and contains two separate processes: emotion contagion and sense-making. Emotion contagion is defined as "the transfer of emotion from one person to another" (Menges & Kilduff, 2015) and sense-making stands for "the process by which group members arrive at a collective interpretation of events that happen to and within their group" (Menges & Kilduff, 2015). Within relatively small-sized teams (around 3-8 members) in workplace, team members are likely to have intense communications with each other. During these communications, team members may easily engage in mimicry processes following each other's vocal, facial, and gestural expression of pessimism, which makes them experience pessimism as well via afferent feedback mechanism (Dimberg, Thunberg, & Elmehed, 2000; Hatfield, Carpenter, & Rapson, 2014; Hatfield, Cacioppo, & Rapson, 1994). Team members might also demonstrate empathy at workplace, imagining being in the same situation as others do (Maitlis, 2005). As a result, both the mimicry processes and empathy help to transmit emotions of one team member to others, contributing to the emotional contagion within teams.

Other than emotion contagion, the emergence of collective pessimism may result from shared sense-making as well. Members in the same workplace teams usually share the same external environment and therefore face highly similar events (Weiss & Cropanzano, 1996). In addition, with frequent exchange of information regarding external events, team members' knowledge about the events is of homogeneity (Menges & Kilduff, 2015). While team members often possess communal benefits and threats, their interpretations of external events are akin to each other based on appraisal theories of emotions (Scherer, Schorr, & Johnstone, 2001). In the

case of pessimism, when the demands of external environment exceed the supplies of focal

teams, members are likely to share the specific emotion of pessimism, collectively expecting that

unfavorable things will happen in future.

Other than social interaction, inclination may be another important reason for pessimism

convergence within workplace teams. Teams in organizations have been found to attract and

select people with similar dispositions (Schneider, 1987; Schneider, Smith, Taylor, & Fleenor,

1998). As a result of such selection process, team members are likely to possess similar affective

dispositions including pessimism (Watson & Tellegen, 2002), leading to emotional convergence

of pessimism within teams. The theorization of pessimism at team level is supported by a study

about pessimism of top management teams (Peterson, Smith, Martorana, & Owens, 2003). In this

study, the authors found that pessimism of top management teams is one mechanism via which

CEO personality alters organizational performance.

In the following sections, we hypothesize that team pessimism may negatively predict

team performance via two processes – collective efficacy and collective stress.

Collective Efficacy as the Mediator

Research in teamwork has long identified collective efficacy as one significant task-

related team process enhancing team effectiveness (Ilgen, Hollenbeck, Johnson, & Jundt, 2005).

Specifically, collective efficacy has been proposed as an important mediator between team inputs

and team outcomes (Bandura, 1993; Earley, 1993; Gibson, 2001; Prussia & Kinicki, 1996).

Following this line of research, we hypothesize that collective efficacy is one important mediator

linking team pessimism and team performance.

When team members share the emotional state believing that unfavorable things will

happen in future (i.e., when team pessimism is high), they tend to possess the expectancy that

upcoming events are unavoidable and unresolvable, making their goal beyond attainability

(Carver & Scheier, 2001). In addition, pessimism may encourage team members to withdraw

from goal pursuit (Carver & Gaines, 1987; Strack, Carver & Blaney, 1987; Carver et al., 2003;

Geers, Wellman, & Lassiter, 2009) as well as to quit self-regulation (Carver & Gaines, 1987). On

the one hand, these behaviors leading to abortion of goal-achievement make team members

actually feel and admit their incompetency confronting external events. On the other hand, the

lack of regulation prevents team employees from establishing the belief that they are able to

accomplish collective goals. As a result, both perceived insolubility of external events and

difficulty of re-establishing self-confidence contribute to a collective belief that the team is not

able to accomplish certain tasks. In another word, team pessimism reduces collective efficacy.

There is some indirect supporting evidence in the individual pessimism research. For example,

both Schunk and Hanson (1985) and Zimmerman and Ringle (1981) found that pessimism

negatively predicts self-efficacy for children.

We further hypothesize that reduced collective efficacy leads to diminished team

performance. According to Bandura (1997, 2001), collective efficacy helps team members to

develop clear collective objectives and clear pathways towards them. In addition, it has been

found to predict team persistence in these pathways (Bandura, 1997; Maddux, 1995). As a result,

teams with low collective efficacy due to team pessimism are less likely to manage their

resources efficiently and often achieve inferior performance. This conclusion has been supported

by a large stream of research including two meta-analyses (Gully, Incalcaterra, Joshi, &

Beaubien, 2002; Srivastava, Bartol, & Locke, 2006; Stajkovic, Lee, & Nyberg, 2009).

Integrating the above arguments, we propose:

H1. Collective efficacy mediates the negative relationship between team pessimism and team performance.

Collective Stress as the Mediator

We hypothesize collective stress to be the second mediator between team pessimism and team performance. Stress may be shared within teams for two main reasons. Firstly, in most cases, external environments faced by team members are almost identical (Drach-Zahavy & Freund, 2007). The existing collective stress literature suggests that stress stimuli triggers homogeneous reactions among team members (e.g. Driskell & Salas, 1991; Edmondson, 2002; Kerr & Tindale, 2004; West, 2002). Secondly, team members tend to have similar interpretations of external environments (Drach-Zahavy & Freund, 2007). Because team members generally maintain the same collective goal and work in the same context, they hold similar criteria when evaluating external environments (Hobfoll, 2011). As a result, people from the same team are likely to hold homogeneous stress appraisals.

In this study, collective stress is hypothesized to be positively predicted by team pessimism. When team pessimism is high, team members in general predict the occurrence of events that are unfavorable and resource-consuming (Carver et al., 2003). Such an increased demand will then create imbalance between external demands and team response capacity and lead team members to experience psychological strain and pressures (Motowidlo, Packard, & Manning, 1986), resulting in subsequent collective stress. On the contrary, when team pessimism is low, team members do not expect to encounter events that are important and require immense inputs. As a consequence, the lack of demands leaves collective stress unaffected.

We further hypothesize that collective stress may negatively predict team performance for two reasons. Firstly, collective stress has been found to hinder team cooperation and

communications. For example, Kelly and McGrath (1985) directly showed that teams with more stress engaged in fewer communications and performed worse than teams with less stress. In addition, research by Driskell, Salas, and Johnston (1999) demonstrated that team members under stress tend to cognitively shift from team perspective to a narrower individual self-focus, leading to hampered exchanges among team members. Ellis (2006) took an information perspective and argued that stress may harm people's shared representation and awareness of knowledge within teams, such as mental models and transactive memory, thus impeding subsequent team performance. Secondly, stress might also be detrimental for team effectiveness due to its negative impact on information processing and decision making. For instance, a large number of studies have reported that stress may restrict people's attention on a limited amount of task-related information, leading to inadequate information input as well as information processing (e.g., Gladstein & Reilly, 1985; Karau & Kelly, 1992; Kelly, Jackson, & Hutson-Comeaux, 1997; Kelly & Karau, 1999; Kelly & Loving, 2004; Parks & Cowlin, 1995). Such lack of information would then result in reduced task performance. Similarly, Tucker and Edmondson (2002) found that nurses under stress address only immediate symptoms without considering underlying causes. Stress therefore reduces nurse performance. Based on the previous two arguments, we hypothesize that collective stress is negatively related to team performance. A number of previous studies also supported this hypothesis (e.g. Driskell & Johnston, 1998; Driskell et al., 1999; Karau & Kelly, 1992; Kelly et al., 1997). Therefore, we propose:

H2. Collective stress mediates the negative relationship between team pessimism and team performance.

Despite team pessimism's detrimental effect on team performance, we argue that leaders may use IEM strategies to cope with it. Specifically, we hypothesize that different IEM strategies

may have distinct effects in dealing with team pessimism: problem-focused IEM strategies might be favored but emotion-focused IEM strategies may be counterproductive in coping with team pessimism.

Emotion Management and Interpersonal Emotion Management

Certain emotions (such as pessimism) may be undesirable. Emotion management is therefore needed to regulate them (Carver, Lawrence, & Scheier, 1996; Gross, 1998). One dominant theory proposed in the field of emotion management is the Emotion Regulation Process Model by Gross (1998). Specifically, this theory introduces four main strategies to manipulate individual emotional responses based upon different stages of process in response to affective events. In the recent decade, Williams (2007) extended this line of research to an interpersonal context and proposed the construct of interpersonal emotion management (IEM). Specifically, the four IEM strategies include situation modification, attentional deployment, cognitive change, and emotional response modulation (Gross, 1998; Williams, 2007). Situation modification is defined as "active efforts to directly alter the problem with the aim of changing its emotional impact" (Gross, 1998, p.283). Individuals may change the situation that causes others' emotions in order to alter their emotional responses. The second strategy – attentional deployment – refers to the selection of dimensions of the problem that other people focus on (Gross, 1998). In another word, people might emphasize certain aspects of the problem so that others' emotional responses are manipulated. Cognitive change is defined as the selection of meanings attached to the previous dimension chosen in attentional deployment stage (Gross, 1998). In this case, people alter others' cognitive thoughts about the attached meanings to the chosen dimension of the problem, with an aim of manipulating their emotional responses.

Finally, emotional response modulation depicts a direct attempt to alter others' physiological, experiential, or behavioral responding (Gross, 1998).

Following Williams' (2007) work, scholars have explored the role of different IEM strategies in workplace (Little, Kluemper, Nelson, & Gooty, 2012). Little et al. (2012) developed the measures for four IEM strategies. Further, they found that leaders' situation modification, attentional deployment, and cognitive change strategies are all positively related to subordinates' trust in leaders. Later, Little, Kluemper, Nelson, and Ward (2013) examined the effectiveness of IEM strategies in customer context. They found that problem-focused IEM strategy (i.e., situation modification and cognitive change) is negatively related to customer negative emotions but emotion-focused IEM strategy (i.e., attentional deployment and modulating emotional response) is positively related to customer negative emotions. Finally, Little, Gooty, and Williams (2016) examined how leaders' IEM strategies influence employee organizational citizenship behaviors and job satisfaction via LMX. They found that problem-focused emotion management strategies positively pertain to LMX but emotion-focused strategies negatively influence LMX. These effects also expand to employee OCBI and job satisfaction.

Consistent with the most recent research by Little and her colleagues (Little, Kluemper, Nelson, & Ward, 2013; Little, Gooty, & Williams, 2016), in this paper we differentiated problem-focused and emotion-focused interpersonal emotion management strategies. We further argue that these two groups of IEM strategies have distinct effects when dealing with team pessimism.

The Moderating Effects of Problem-focused Strategies

We contend that leader problem-focused strategies positively moderate the effect of team pessimism on collective efficacy, such that when leader problem-focused strategies are

frequently used, there is a weaker negative relationship between team pessimism and collective efficacy. When leaders utilize problem-focused strategy, they either modify the current situation or they adapt team members' thoughts about the current situation (Little et al., 2016). For example, they may provide necessary help for team members in order to accomplish the tasks or even take over the duties. Or they may alter teams' negative perceptions about the situation by referring to their similar past experiences. On the one hand, such strategies provide resources that are necessary to obtain goals, suppress withdrawal behaviors, and facilitate self-regulations (Little et al., 2016). Employees then feel confident in their collective capability of accomplishing tasks. On the other hand, these strategies alter team members' perceptions that the goals are beyond attainability, persuading employees into regarding goals as reachable. As a result, even when team pessimism is high, team members receiving problem-focused strategies still believe that they are able to accomplish work tasks and their collective efficacy remains unhurt.

In comparison, if leaders do not utilize problem-focused strategies, team members possess much fewer resources that are needed to pursuit goals, suppress withdrawal behaviors, and engage in self-regulations (Little et al., 2016). In addition, with their perceptions being unchanged, they are more likely to perceive that external problems are difficult to resolve. Therefore, when team pessimism is high, team members tend to lose confidence in their ability of accomplishing work tasks, leading to a low collective efficacy. Therefore, we hypothesize:

H3. Problem-focused IEM strategies by leaders weaken the negative relationship between team pessimism and collective efficacy.

H4. Problem-focused IEM strategies by leaders moderate the indirect effects of team pessimism on team performance via collective efficacy.

We further hypothesize that leader problem-focused strategies negatively moderate the effect of team pessimism on collective stress, such that when leader problem-focused strategy is frequently used, there is a weaker positive relationship. When leaders adopt problem-focused strategies, teams receive more task-related assistance from leaders and they are less likely to perceive external situations as demanding and challenging (Little et al., 2013; Little et al., 2016). As a result of such supply increase and demand decrease, even when team pessimism is high, team members are likely to experience less strain and pressures (Motowidlo, Packard, & Manning, 1986). In another word, collective stress is not likely to increase due to increased team pessimism when leader problem-focused strategies are used. On the contrary, when leader problem-focused strategies are not used, employees lack necessary resources to deal with external problems. In addition, they tend to regard external these events as demanding and challenging. Under this circumstance, when team pessimism is high, employees are more likely to feel strained and pressured, contributing to higher collective stress. Therefore:

H5. Problem-focused IEM strategies by leaders weaken the positive relationship between team pessimism and collective stress.

H6. Problem-focused IEM strategies by leaders moderate the indirect effects of team pessimism on team performance via collective stress.

The Moderating Effects of Emotion-focused Strategies

Despite the benefits of problem-focused strategies in dealing with team pessimism, we argue that leader emotion-focused strategies may be counterproductive when coping with it. When leaders adopt emotion-focused strategies, they either distract employees' attention to other unrelated cases or directly tell employees to suppress their emotions (Little et al., 2016). Both of them require massive attentional and emotional input and lead to lack of resources needed for

self-regulation (Carver & Gaines, 1987; Muraven & Baumeister, 2000). Under this situation, when team pessimism is high, actual problems causing team pessimism remain unchanged (Gross, 1998; Little et al., 2016; Carver & Scheier, 2001). In addition, employees are in short of the resources needed for task accomplishment and engage in more withdrawing behaviors. Moreover, they may lack self-regulations needed to establish their task-related self-confidence. As a result, employees may suffer from a lower collective efficacy. In comparison, when emotion-focused strategies are not adopted, team members do not suffer from extra resource consumption. The negative relationship between team pessimism and collective efficacy is weaker, compared to when emotion-focused strategies are adopted. Therefore:

H7. Emotion-focused IEM strategies by leaders strengthen the negative relationship between team pessimism and collective efficacy.

H8. Emotion-focused IEM strategies by leaders moderate the indirect effects of team pessimism on team performance via collective efficacy.

Finally, we hypothesize that leader emotion-focused strategies strengthen the positive effect of team pessimism on collective stress. When emotion-focused strategies are adopted, team members may need to consume attentional and emotional resources in response to leaders' behaviors (Carver & Gaines, 1987; Muraven & Baumeister, 2000). Therefore, when team pessimism is high, external problems remain unchanged but employees have fewer resources left to deal with them (Carver & Scheier, 2001). As a result, an augmenting gap between demand and supply at work may be perceived by employees, leading to higher collective stress (Motowidlo, Packard, & Manning, 1986). In comparison, when emotion-focused strategies are not used, employee possess a larger number of resources to deal with external problems, making collective stress relatively low. Therefore:

H9. Emotion-focused IEM strategies by leaders strengthen the positive relationship between team pessimism and collective stress.

H10. Emotion-focused IEM strategies by leaders moderate the indirect effects of team pessimism on team performance via collective stress.

METHOD

Sample and Procedure

Data were collected from teams in the construction industry located in northwestern China. Functions of these teams included architecture designing and construction management. These teams are appropriate for our research for several reasons. Frist, in order to manage complexities and uncertainties arising from their tasks and environment, team members in our sample interacted with each other on a daily basis, laying foundations for shared perception emergence within teams. Moreover, according to our interviews with team leaders and members before data collection, pessimism was prevalent in the construction industry because of economic downturn during the past years and the government strict policies. In addition, in order to avoid loss of talent and effectiveness, team leaders frequently engaged in various forms of interpersonal emotion management strategies. Therefore, this sample provided an ideal context for testing our hypothesized model.

Data was obtained through a three-wave data collection plan. We administered questionnaires to team leaders and members over a three-month span with one-month intervals. In order to avoid common method bias, we asked team leaders and members to report different variables at different time points. Both team leaders and members completed the questionnaires in an on-site meeting room with the presence of researchers. Specifically, at Time 1, we invited 465 team members to report their perception of team pessimism and we received 411 valid

responses, resulting in a response rate of 88.4%. At Time 2, we asked the 411 team members who completed the Time-1 survey to report their collective efficacy and collective stress and 377 useable responses were returned, yielding a response rate of 91.7%. Additionally, we requested 104 team leaders of these 411 team members to assess their IEM strategies towards team members and 93 complete questionnaires were returned, resulting in a response rate of 89.4%. At Time 3, we collected evaluation of team performance from the 93 team leaders who completed the Time-2 survey and we received 89 valid responses, yielding a response rate of 95.6%. We matched the data collected from team members and leaders in the three waves.

In addition, we only kept teams in which team leaders and more than 60% of team members in that team responded to the questionnaires (Timmerman, 2005). In this way, we further excluded three teams that we cannot match the responses of team leaders and team members and six teams in which less than 60% of team members responded the questionnaires. Thus, the final sample consisted of 322 members in 80 teams. The average team size of the final sample was 4.36 employees ($SD = 1.03$), ranging from 2 to 9 members. The average age of team members was 33.93 years ($SD = 8.39$), 79% of whom were male, and their average team tenure was 2.62 years ($SD = 2.96$). We checked potential non-response bias and found no statistically significant differences between those who were included in our final sample and those who were not [1].

Measures

Given that all scales we used were developed in English while adopted in Chinese, we followed translation–back-translation procedure to set up the survey (Brislin, 1980). A 7-point

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[1] For team leaders, the differences between responded participates and missed participates were non-significant in terms of education ($t = .03$, *n.s.*) and tenure ($t = .63$, *n.s.*). And for team members, the differences between responded participates and missed participates were either non-significant in terms of education ($t = 1.34$, *n.s.*) and tenure ($t = -.85$, *n.s.*).

Likert scale ranging from 1 (strongly disagree/never) to 7 (strongly agree/always) was used for all variables in our study.

Team pessimism (Time 1). We measured team pessimism by reversing de Hoogh and den Hartog's (2008) 3-item scale for employees' optimism. We asked team members to rate the extent to which all team members as a whole were pessimistic about their organizations. Sample items were "We are pessimistic about our future with this organization" and "We do not expect this organization to have an excellent future". The Cronbach's alpha for this scale was .85.

Leaders' IEM strategies (Time 2). To measure leaders' IEM strategies, we adopted the 20-item scale that was originally developed by Little et al. (2012) and later validated by Litter et al. (2016). We requested team leaders to report the extent to which they engaged in the two types of IEM behaviors. Sample items for problem-focused strategies included "I modify the elements of the situation that are having undesired impact on my team members" and "When I want my team members to feel more positive emotions (such as joy or amusement), I put their problems into perspective". And sample items for emotion-focused strategies included "When a situation is disturbing my team members, I focus their attention away from the troubling aspect of the problem" and "When my team members are experiencing undesirable emotions, I tell them not to express them". The Cronbach's alpha for the two sub-scales were .93 and .86, respectively.

Collective efficacy (Time 2). We measured collective efficacy with Salanova et al.'s (2003) 4-item scale. We asked team members to assess the extent to which all team members as a whole believe they have the conjoint capabilities to organize and execute actions as required and produce given levels of attainment. Sample items were "I feel confident about the capability of my group to perform the tasks very well" and "My group is able to solve difficult tasks if we invest the necessary effort". The Cronbach's alpha for this scale was .85.

Collective stress (Time 2). We measured collective stress with Motowidlo et al.'s (1986) scale for occupational stress. We requested team members to assess the extent to which all team members as a whole feel stressful when working in the team. Sample items were "Many stressful things happen to us at work" and "We frequently feel stressed at work". The Cronbach's alpha for this scale was .92.

Team performance (Time 3). Following previous research (e.g., Zhang, Hempel, Han, & Tjosvold, 2007), we adopted three items from Ancona and Galdwell (1992) to measure team performance. Team leaders were required to evaluate efficiency, quality and overall achievement of their team work. The Cronbach's alpha for this scale was .89.

Control variables. Given that team pessimism, collective efficacy and collective stress were all shared perception emerging from team members' daily interactions, we controlled for two factors that may influence such interactions and shared perception emergence. First, we controlled for team size since smaller teams usually have more frequent and intense interactions among team members (Carter et al., 2018). We measured team size as the number of members in the roster. Second, we controlled for familiarity among team members given that teams with higher levels of familiarity tend to have frequent and intense interactions in daily work (Sieweke & Zhao, 2015). We first asked team members to rate the extent to which they were familiar with other team members on a 7-Likert point scale and then aggregated the individual responses to team level.

Analytic Strategy

We tested our hypothetical model with a three-step procedure. First, we conducted confirmatory factor analyses (CFAs) to confirm the discriminant validity of our measures. Second, we calculated within-group inter-rater reliability (R_{wg}; James, Demaree, & Wolf, 1984),

intra-class correlations (ICC [1]), and reliability of means (ICC [2]; Bliese, 2000) to justify

aggregation of data from individual level to team level. Third, to better account for the

covariance among multiple mediators and moderators (Edwards & Lambert, 2007), we ran

overall path analysis to test the hypotheses. Moreover, we examined mediation and moderated

mediation hypotheses by estimating the indirect effect with 20,000 parameter-based

bootstrapping (Preacher & Selig, 2012). We performed path analyses with Mplus 7.4 (Muthén &

Muthén, 2015) and parameter-based bootstrapping with R-project (R Development Core Team,

2018).

RESULTS

Results of Confirmatory Factor Analyses (CFAs)

We assessed discriminant validity of three constructs rated by team members (i.e., team

pessimism, collective efficacy and collective stress) in two steps. First, we ran a three-factor

model in which indicators of each construct were specified on their respective latent variables.

Results showed that the proposed model fitted the data well ($\chi^2/df = 1.48$, $p < .05$, $RMSEA = .04$,

$CFI = .99$, $TLI = .98$, $SRMR = .03$). Second, we ran an alternative one-factor model which treated

three variables as one construct. Results showed that the alternative model did not fit the model

well ($\chi^2/df = 16.15$, $p < .01$, $RMSEA = .22$, $CFI = .52$, $TLI = .40$, $SRMR = .22$).

The discrimination validity of three constructs rated by team leaders (i.e., problem-

focused strategies, emotion-focused strategies and team performance) were evaluated in the same

manner. We first specified a three-factor model in which the items of each construct are allowed

to load onto their respective factors. Results demonstrated that hypothesized three-factor model

achieved an acceptable model fit ($\chi^2/df = 1.55$, $p < .01$, $RMSEA = .08$, $CFI = .89$, $TLI = .87$,

$SRMR = .08$). Additionally, it was better than alternative one-factor model ($\chi^2/df = 2.95$, $p < .01$,

RMSEA = .16, *CFI* = .58, *TLI* = .54, *SRMR* = .14). Compared to the traditional thresholds (> .90),

the values of CFI and TLI in the hypothetical model were slightly low. We think this is largely

because of the small ratio of sample size (N) to number of free parameters (q) in the model.

According to Bentler and Chou (1987), the least N: q to get a robust model fit is 5:1. However, in

the hypothetical model the ratio was 1.05 (80:76), which was not sufficient to get a robust model

fit. As such, we conducted the CFA with item parceling, by which we can reduce the number of

free parameters in the hypothetical model to an acceptable level. More specifically, we adopted

the single-factor approach to parcel items (Mathieu & Farr, 1991), which is one of most

frequently used methods in previous studies (Landis, Beal, & Tesluk, 2000). The results of CFA

with parceling indicated that the hypothetical model fitted the data well (χ^2/df = 1.25, *p* < .05,

RMSEA = .06, *CFI* = .97, *TLI* = .96, *SRMR* = .06). Moreover, it was better than that of one-factor

model with item parceling (χ^2/df = 3.71, *p* < .01, *RMSEA* = .18, *CFI* = .65, *TLI* = .58, *SRMR*

= .14). In sum, the above results provided legitimacy for our primary measurements and laid

foundations for our following analyses.

Justification for Data Aggregation

As we mentioned above, we calculated within-group inter-rater reliability (R_{wg}; James,

Demaree, & Wolf, 1984), intra-class correlations (ICC [1]), and reliability of means (ICC [2];

Bliese, 2000) see whether we can use group means of variables reported by team members in the

following analyses. According to prior studies, team members share substantial consensus on

rating a variable when it has values of R_{wg} with both means and medians larger than .70 (James

et al., 1984), value of ICC (1) larger than .12 and value of ICC (2) larger than .40 (James, 1982).

The results revealed a substantive degree agreement among members from the same teams for

ratings of team pessimism ($R_{wg\ mean}$ = .75, $R_{wg\ median}$ = .85, ICC [1] = .20, ICC [2] = .51),

collective efficacy (Rwg $_{mean}$ = .91, Rwg $_{median}$ = .95, ICC [1] = .15, ICC [2] = .41) and collective stress (Rwg $_{mean}$ = .81, Rwg $_{median}$ = .88, ICC [1] = .19, ICC [2] = .49). In sum, these results provided sufficient support for aggregation of team pessimism, collective efficacy and collective stress.

Descriptive Statistics

We presented the means, standard deviations and correlations among variables at team level in Table 1. As can be seen in Table 1, team pessimism was negatively related to collective efficacy and positively related to collective stress, while collective efficacy was positively while collective stress was negatively related to team performance. These results provided some preliminary support for our mediating hypotheses. We further test all the hypotheses in our model as follows.

Insert Table 1 about here

Mediating Effects of Collective Efficacy

Hypothesis 1 predicted that collective efficacy mediates the relationship between team pessimism and team performance. As shown in Table 2 and Figure 2, the effect of team pessimism on collective efficacy was negative and significant (b = -.20, $p < .01$), while the effect of collective efficacy on team performance was positive and significant (b = .45, $p < .05$). To further test mediating effect, we calculated the indirect effect of team pessimism on team performance through collective efficacy and estimated its 95% confidential interval with 20,000 parameter-based bootstrapping (Preacher & Selig, 2012). Results in Table 3 indicated that the indirect effect was negative and had a 95% CI excluding zero (indirect effect = -.088; 95% CI: [-.200, -.008]). Thus, Hypothesis 1 was supported.

Insert Table 2, Table 3 and Figure 2 about here

Mediating Effects of Collective Stress

Hypothesis 2 predicted that collective stress mediates the relationship between team pessimism and team performance. As shown in Table 2 and Figure 2, the effect of team pessimism on collective stress was positive and significant ($b = .22$, $p < .01$), while the effect of collective stress on team performance was negative but non-significant ($b = -.03$, *n.s.*). Moreover, the results of 20,000 parameter-based bootstrapping in Table 3 indicated that the indirect effect of team pessimism on team performance through collective stress was negative but had a 95% CI including zero (indirect effect = -.007; 95% CI: [-.073, .053]). Thus, Hypothesis 2 was not supported.

Moderating Effects of Problem-Focused Strategies

Hypothesis 3 predicted that leaders' problem-focused IEM strategies weaken the negative relationship between team pessimism and collective efficacy. As shown in Table 2 and Figure 2, the interactive effect of team pessimism and leaders' problem-focused IEM strategies on collective efficacy was positive and significant ($b = .19$, $p < .05$). Following Cohen et al. (2003), in Figure 3a, we displayed the interactive effect graphically at two levels of leaders' problem-focused IEM strategies (i.e., +1 SD and -1 SD). The simple slope tests indicated that team pessimism was negatively related to collective efficacy at lower levels of leaders' problem-focused IEM strategies ($\beta = -.38$, $p < .01$), but was not significantly related to it at higher levels of leaders' problem-focused IEM strategies ($\beta = -.01$, *n.s.*). Therefore, Hypothesis 3 was supported.

Insert Figure 3a about here

Hypothesis 4 further proposed that leaders' problem-focused IEM strategies moderate the indirect effects of team pessimism on team performance through collective efficacy. We summarized the results in Table 4. The results indicated that there was a significant conditional indirect effect of team pessimism on team performance through collective efficacy, such that the indirect relationship is significant when leaders' problem-focused IEM strategies were lower (indirect effect = -.171; 95% CI: [-.387, -.019]) but not when they were higher (indirect effect = -.006; 95% CI: [-.123, .107]). These results together supported Hypothesis 4.

Insert Table 4 about here

Hypothesis 5 stated that leaders' problem-focused IEM strategies weaken the positive relationship between team pessimism and collective stress. As shown in Table 2 and Figure 2, the interactive effect of team pessimism and leaders' problem-focused IEM strategies on collective stress was negative and significant (b = -.32, $p < .01$). Figure 3b showed the interactive effect graphically at two levels of leaders' problem-focused IEM strategies (i.e., +1 SD and -1 SD). Simple slope tests indicated that team pessimism was positively related to collective stress at lower levels of leaders' problem-focused IEM strategies (β = .53, $p < .01$), but was not significantly related to it at higher levels of leaders' problem-focused IEM strategies (β = -.09, *n.s.*). Therefore, Hypothesis 5 was supported.

Insert Figure 3b about here

Hypothesis 6 further proposed that leaders' problem-focused IEM strategies moderate the indirect effect of team pessimism on team performance through collective stress. The results in Table 4 did not reveal a significant moderated mediation effect. This was not surprising since the

earlier test revealed a non-significant mediating effect of collective stress between team pessimism and team performance. Therefore, Hypothesis 6 was not supported.

Moderating Effects of Emotion-Focused Strategies

Hypothesis 7 predicted that leaders' emotion-focused IEM strategies strengthen the negative relationship between team pessimism and collective efficacy. As shown in Table 2 and Figure 2, the interactive effect of team pessimism and leaders' emotion-focused IEM strategies on collective efficacy was negative and significant ($b = -.20$, $p < .05$). In Figure 4a, we displayed the interaction effect graphically at two levels of leaders' emotion-focused IEM strategies (i.e., +1 SD and -1 SD). The simple slope tests indicated that team pessimism was negatively related to collective efficacy at higher levels of leaders' emotion-focused IEM strategies ($\beta = -.37$, $p < .01$), but was not significantly related to it at lower levels of leaders' emotion-focused IEM strategies ($\beta = -.03$, *n.s.*). Therefore, Hypothesis 7 was supported.

Insert Figure 4a about here

Hypothesis 8 further proposed that leaders' emotion-focused IEM strategies moderate the indirect effect of team pessimism on team performance through collective efficacy. As shown in Table 4, results of moderated mediation tests revealed a significant conditional indirect effect of team pessimism on team performance through collective efficacy such that the indirect effect was significant when leaders' emotion-focused IEM strategies were higher (indirect effect = -.164; 95% CI: [-.368, -.019]) but not when they were lower (indirect effect = -.012; 95% CI: [-.128, .094]). These results together supported Hypothesis 8.

Hypothesis 9 stated that leaders' emotion-focused IEM strategies strengthen the positive relationship between team pessimism and collective stress. As shown in Table 2 and Figure 2, the interactive effect of team pessimism and leaders' emotion-focused IEM strategies on

collective stress was positive and significant ($b = .36, p < .01$). Figure 4b showed the interactive effect graphically at two levels of leaders' emotion-focused IEM strategies (i.e., +1 SD and -1 SD). The simple slope tests indicated that team pessimism was positively related to collective stress at higher levels of leaders' emotion-focused IEM strategies ($\beta = .52, p < .01$), but was not significantly related to it at lower levels of leaders' emotion-focused IEM strategies ($\beta = -.09$, *n.s.*). Therefore, Hypothesis 9 was supported.

Insert Figure 4b about here

Hypothesis 10 proposed that leaders' emotion-focused IEM strategies moderate the indirect effect of team pessimism on team performance through collective stress. The results were summarized in Table 4. There was a non-significant moderated mediation effect because the mediating effect of team pessimism on team performance via collective stress was not significant according to earlier test. Therefore, Hypothesis 10 was not supported.

DISCUSSIONS

This article examined the effect of team pessimism on team performance, as well as its underlying mechanisms of collective efficacy and collective stress. In addition, the role of two different leader IEM strategies in coping with team pessimism was explored. Our results showed that team pessimism hindered team performance via both decreased collective efficacy and increased collective stress. However, the detrimental effects of team pessimism may be compensated by leader problem-focused IEM strategies, while leader emotion-focused IEM strategies only exacerbate the circumstance.

Theoretical Implications

We aim to make three contributions in this paper. Firstly, this study extended team emotion literature by concentrating on one discrete negative emotion – team pessimism. Past

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team emotion literature mostly adopted "a dimensional and valence-based approach" (Menges & Kilduff, 2015) and restricted discussions on the consequences of team general positive and negative affect. While affect literature at individual level has found distinct consequences for various discrete emotions, especially various negative emotions, it is theoretically necessary to examine the effects of team discrete emotions on team functioning (Menges & Kilduff, 2015). Moreover, our paper found a negative relationship between team pessimism and team performance. While previous literature tend to regard the relationship between team negative emotion and team performance as context-specific (e.g. Knight & Eisenkraft, 2015), this article provides one direction to this line of research – focusing on team discrete emotion rather than team general emotion.

Secondly, this article contributed to current team emotion literature by focusing on how team emotions may be regulated. Scholars in emotions have made an impressive achievement in arguing for team emotion emergence (Arnaud & Schminke, 2012; Barsade et al., 2000; Cole et al., 2008; Metiu & Rothbard, 2013; Sy et al., 2005; Sy et al., 2013; Totterdell, 2000; Totterdell et al., 2004). Based upon this premise, they further explored the consequences of team positive affect and negative affect, showing that team positive affect is generally beneficial for team functioning while team negative affect may be harmful (Cole, Walter, & Bruch, 2008; George, 1990; Mason & Griffin, 2003; Barsade, 2002; Van Knippenberg, Kooij-de Bode, & van Ginkel, 2010). This article extended this line of research by answering a "so-what" question – what leaders shall do in case of undesired team emotions. Specifically, it discussed the role of leader IEM strategies and found that leaders may actively utilize appropriate IEM strategies (i.e., problem-focused strategy) in order to compensate for the detrimental effects of team pessimism.

In addition, the use of inappropriate IEM strategies (i.e., emotion-focused strategy) may be counterproductive and exacerbate team pessimism's noxious effects.

Moreover, this regulation perspective emphasizes the role of leaders as *active* emotion managers. Leaders have been argued to be significant in employee emotion management (Kaplan, Cortina, Ruark, LaPort, & Nicolaides, 2014) and they may manage employee emotions via emotional contagion process by either engaging in emotional labor behaviors or displaying desired emotions (Ashkanasy, 2003; Barsade, 2002; Bono & Illies, 2006; Humphrey, Pollack, & Hawver, 2008; Sy et al., 2005). Other studies showed that leader emotional intelligence may determine employee emotions based on an ability perspective (Connelly, Gaddis, & Helton-Fauth, 2002). Despite these findings, this line of research fails to answer what exactly leaders could do in order to directly regulate team member emotions. Our study filled out this gap by proposing and comparing two groups of direct strategies (i.e., problem-focused and emotion-focused strategy) that leaders may adopt for team emotion management.

Finally, our study pioneered team discrete emotion research in identifying and directly testing the underlying mechanisms of the effect of team pessimism on team performance. While the majority of past studies assumed several possible routes via which team negative emotions can alter team performance (e.g. Cole et al., 2008; Kunze & Menges, 2017; Lin et al., 2017), they seldom tested these assumptions. Our study tested two of the mediators and may shed light on future studies testing other possible mechanisms.

Practical Implications

Other than the theoretical contributions, our research is of practical significance. Firstly, this study proposed two groups of direct strategies that leaders may utilize in order to regulate team emotions. In addition, it stated each strategy's effectiveness in regulating team pessimism.

This demonstrated that it is practical for leaders in real workplace to regulate team members' pessimism, but only when they adopt problem-focused strategies – that is, when leaders help to resolve the problem faced by their teams or lead their subordinates to reappraise coming challenges, they are likely to cope well with team pessimism and eliminate its negative effects on team functioning. However, when they choose emotion-focused IEM strategies, they are more likely to make the matter worse.

Secondly, our research manifested the potential destructive impacts of team pessimism. While current workplace is becoming more and more competitive, pessimism becomes more and more popular (Bjornstad, 2006; Jensen & Slack, 2003; Strathdee & Hughes, 2001; Thiel, Connelly, & Griffith, 2012). While a number of leaders might overlook this emotion among their subordinates, our study showed that it is of significance for leaders to take care of it in case of reduced team effectiveness.

Limitations and Future Research

There are several limitations in our study. Firstly, our choice of mediators only represent one part of possible mechanisms between team pessimism and team performance. While literature in team negative emotion proposed other possible routes including team member motivations, task-related behaviors, and interpersonal behaviors (e.g. Cole et al., 2008), it shall be more comprehensive to include and compare all these major possible mechanisms.

Secondly, although we tested the hypothetical relationships with three-wave survey data, our conclusions were ultimately correlational. Future research could utilize experimental methods to eliminate alternative explanations and draw definitive causal relationships between team pessimism, collective efficacy, collective stress, and team performance.

Finally, our study limited our discussion on team task-related functioning such as team performance. It remains unclear how team pessimism might influence other team outcomes such as relationship-related outcomes (e.g. interpersonal conflicts) and even individual outcomes like individual behaviors and attitudes. In addition, we are not aware of the impacts of leader IEM strategies in these processes. Therefore, future research might explore the effects of team pessimism on other team outcomes. In addition, cross-level effects of team pessimism on individuals shall be investigated. Finally, the underlying mechanisms and boundary conditions of these relationships may be clearly depicted.

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Table 1. Means, Standard Deviation and Correlates among Variables

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	ICC (1)	ICC (2)	Mean Rwg	Median Rwg
1. Team size	4.36	1.03	–											
2. Team familiarity	5.87	.58	-.26*	–										
3. Team pessimism	2.67	.81	-.03	-.04	(.85)						.20	.51	.75	.85
4. Problem-focused strategies	4.40	.96	.05	-.18	.07	(.93)								
5. Emotion-focused strategies	3.38	.85	-.09	-.11	.08	.60**	(.86)							
6. Collective efficacy	5.34	.53	.08	.22†	-.30**	.09	-.06	(.85)			.15	.41	.91	.95
7. Collective stress	4.34	.80	.01	-.03	.19†	-.28*	-.20†	-.07	(.92)		.19	.49	.81	.88
8. Team performance	5.69	.87	.05	-.01	.04	.24*	.14	.25*	-.08	(.89)				

Note. N = 80. † $p < 0.10$; * $p < 0.05$; ** $p < 0.01$.
The figures on the diagonal in parentheses are the alpha coefficients.

Table 2. Unstandardized Coefficients of the Hypothetical Model

Predictors	Collective efficacy		Collective stress		Team performance	
	Coff.	*SE*	*Coff.*	*SE*	*Coff.*	*SE*
Team size	.07	.05	-.02	.08	.04	.09
Team familiarity	.26**	.09	-.15	.15	-.05	.17
Team pessimism	-.20**	.06	.22**	.10	.12	.12
Problem-focused strategies	.18*	.07	-.31**	.11	.10	.14
Emotion-focused strategies	-.11	.08	-.03	.12	.07	.14
Team pessimism × Problem-focused strategies	.19*	.09	-.32**	.14	-.13	.17
Team pessimism × Emotion-focused strategies	-.20*	.10	.36**	.15	-.10	.18
Collective efficacy					.45*	.20
Collective stress					-.03	.13

Note. N = 80. * $p < 0.05$; ** $p < 0.01$.

Table 3. Unconditional Indirect Effects of Team Pessimism on Team Performance

	Indirect Effects	Effect Size	95% CIs
H1	Team pessimism → Collective efficacy → Team performance	-.088	[-.200, -.008]
H2	Team pessimism → Collective stress → Team performance	-.007	[-.073, .053]

Note. N = 80. The confidential intervals (CIs) were based on 20,000 bootstrapping resamples.

Table 4. Conditional Indirect Effects of Team Pessimism on Team Performance

	Indirect Effects	Moderators (IEM strategies)	Levels of Moderators	Effect Size	95% CIs
H4	Team pessimism → Collective efficacy → Team performance	Problem-focused	Low	-.171	[-.387, -.019]
			High	-.006	[-.123, .107]
H8		Emotion-focused	Low	-.012	[-.128, .094]
			High	-.164	[-.368, -.019]
H6	Team pessimism → Collective stress → Team performance	Problem-focused	Low	-.018	[-.167, .121]
			High	.003	[-.047, .065]
H10		Emotion-focused	Low	.003	[-.047, .058]
			High	-.018	[-.165, .119]

Note. N = 80. The confidential intervals (CIs) were based on 20,000 bootstrapping resamples.
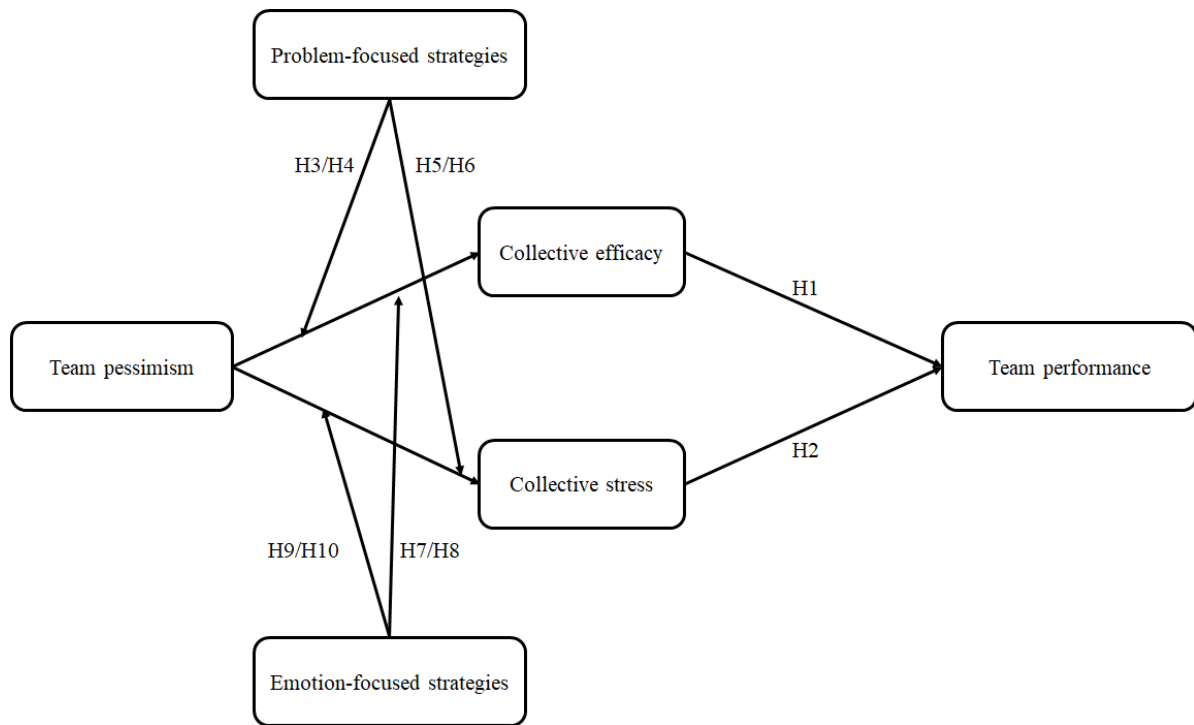
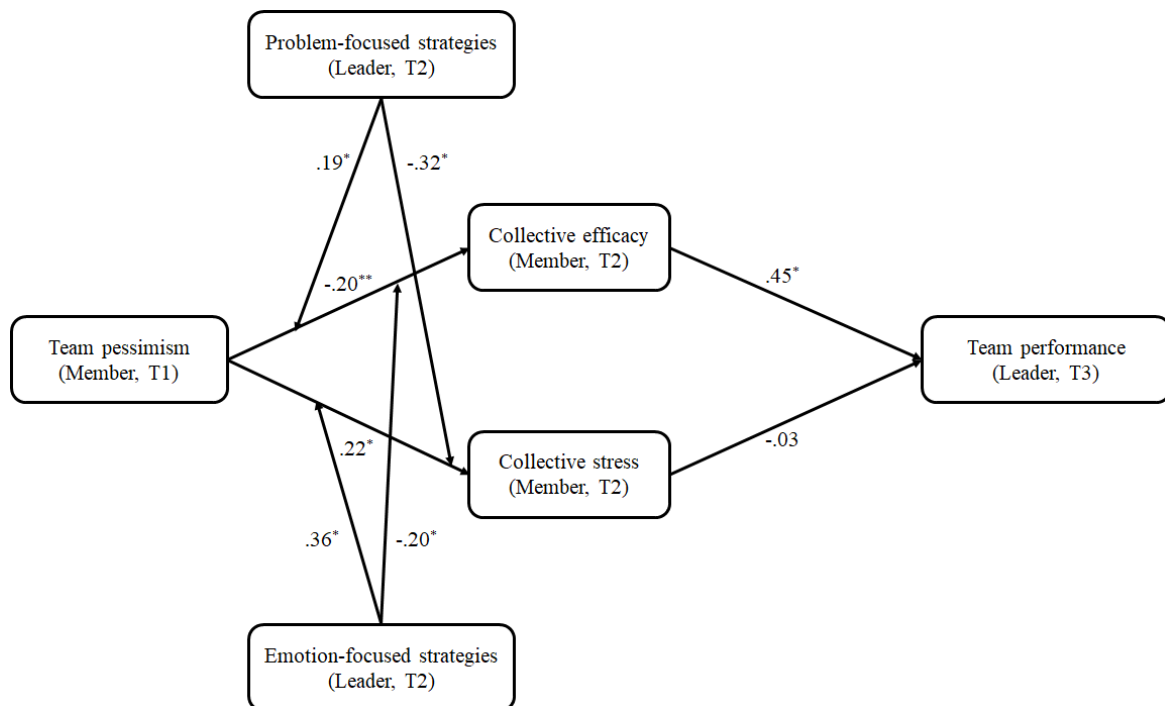*Figure 1. The Conceptual Model*

Figure 2. Path Coefficients of the Hypothetical Model
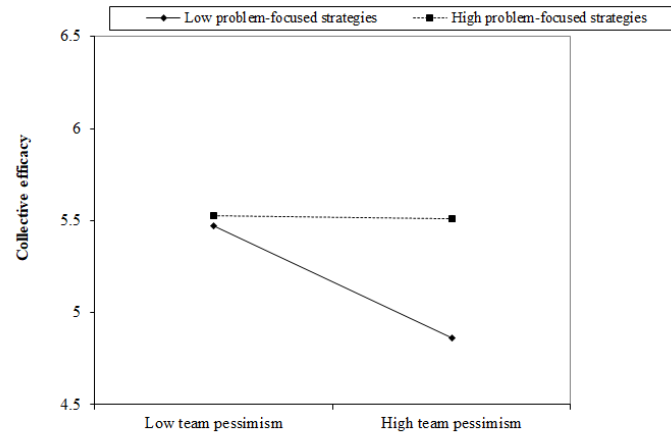
Figure 3a. Interaction Effect between Team Pessimism and Problem-Focused Strategies on Collective Efficacy
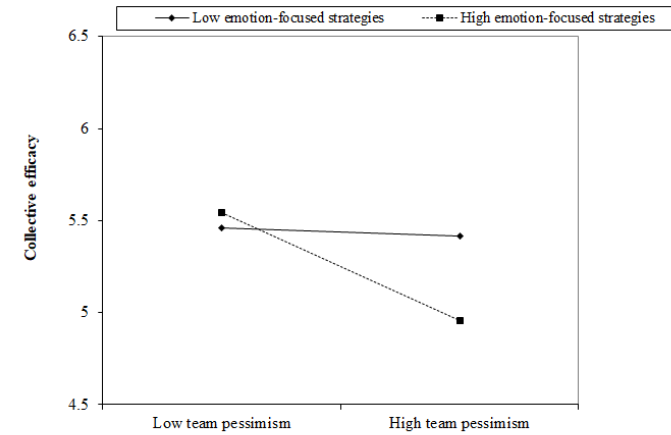

Figure 4a. Interaction Effect between Team Pessimism and Emotion-Focused Strategies on Collective Efficacy
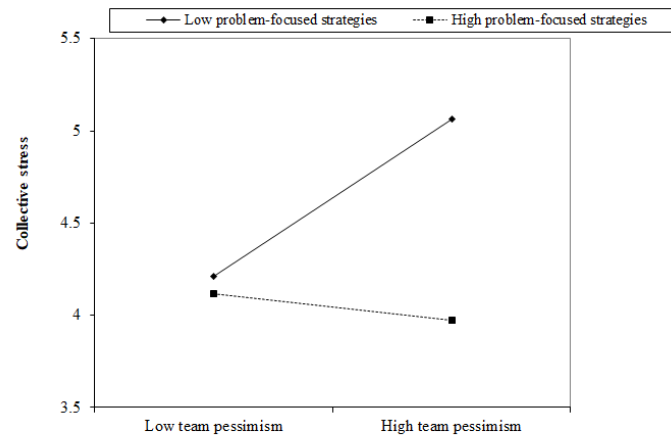

Figure 3b. Interaction Effect between Team Pessimism and Problem-Focused Strategies on Collective Stress
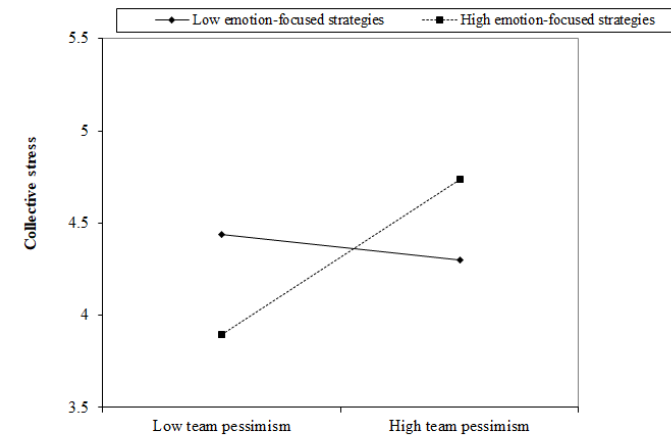

Figure 4b. Interaction Effect between Team Pessimism and Emotion-Focused Strategies on Collective Stress