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Emotional intelligence and leadership emergence

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EMOTIONAL INTELLIGENCE AND LEADERSHIP EMERGENCE

A Thesis

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ABSTRACT

This study looks at how emotional intelligence helps leaders meet the needs of their team. In order to be successful, teams need to exist in an environment that is burn-out preventative and fosters creativity. It was hypothesized that leaders would help meet these needs by creating an unthreatening work environment. Data was gathered from 391 individuals working in existing self managed work teams in private and public sectors. The hypothesized model was tested using a multilevel analysis approach of structural equation modeling. Results indicated that a leader's emotional intelligence predicts an unthreatening work environment for both between and within teams, thus allowing for self managing work teams to be more creative and burnout preventative.

ACKNOWLEDGEMENTS

"For lack of guidance a nation falls, but many advisors make a victory sue" Proverbs 11:14. Without the advice and tremendous dedication of several individuals this thesis would not be possible. I would like to express my gratitude to Dr. Kaufman for his valuable input. Secondly, despite such a challenging year Dr. Ullman was an extraordinary guide. Contrary to me initial fear of statistics, I found structural equation modeling quite intriguing. Thirdly, I am indebted to Janelle Gilbert for her encouragement, belief and guidance. Words cannot express how grateful I am to my *husby*, Nick Anderson. His patience, support and devotion were key in making this victory sure.

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CHAPTER ONE

INTRODUCTION

The use of self managing work teams (SMWTs) continues to become more common in the workplace. Many organizations are using SMWTs since a body of literature claims that the use of SMWTs leads to greater productivity, innovation and employee satisfaction (Cook & Goff, 2002). These teams are mainly characterized by their high degree of decision making autonomy and control at the group level. Consequently, much greater emphasis is placed on control within rather than from outside the group (Manz & Sims, 1987). In efforts to understand the control from within, researchers have looked at leader emergence and in doing so, studies have looked at how emotional intelligence helps emergent leaders successfully guide their teams. This study adds to findings in the literature by looking at how emotional intelligence helps emergent leaders meet the needs of his/ her team.. According to Gilson and Shalley (2004) and Elloy, Terpening, and Kohls (2001) in order to be successful, SMWTs need an environment that fosters creativity and is burn-out preventative. It was proposed that emergent leaders who are high on emotional

intelligence would be able to create an environment that fosters and supports individual creativity and reduces the likelihood of team member burnout (Gilson & Shalley, 2004 and Zhou & George, 2003).

Self Managing Work Teams

As organizations have faced numerous problems such as worker dissatisfaction, decreasing quality of production, high levels of turn over and absenteeism, they have sought out new ways of dealing with their complexities (Manz, Sims & Henry, 1987). One approach that organizations have used to deal with these challenges is the use of self managing work teams (SMWTs). SMWTs are defined as groups of interdependent individuals able to self regulate their behaviors on relatively whole tasks. The key characteristics of SMWT's include a). the employees' power to make decisions about work assignments, work methods and scheduling activities as well as b). the responsibility for making a product or providing a service (Cohen, Ledford & Spreitzer, 1996). SMWTs are also known as autonomous work groups, semi- autonomous work groups and self regulating work groups (Cohen, Chang & Ledford, 1997).

Individuals in SMWTs work interdependently to solve problems or accomplish a task. Interdependence can be defined as the degree to which individuals are dependent on, and support others in the task accomplishment (Rafferty & Tapsell, 2001). The use of SMWTs moves the focus from individual work methods to group work methods. The rational for using teams instead of individuals, stems from the idea that a group can more effectively allocate its resources required to accomplish an entire project than an aggregate of individuals, each assigned a part of a project. When employees become members of a self managing work team, they define their work roles in terms of the group's primary task rather than in relation to one specific job (Manz et. al, 1987).

The term work group and work team have often been used interchangeably although some argue that they are not the same. This difference is primarily attributed to the greater interdependence of a team. While groups focus on individual performance and goals, a team comes together to share perspectives and insight, make decisions that help members of their team to work better and reinforce each other's performance (Cook & Golf, 2002). By definition,

teams are committed to a common purpose and an approach for which they hold each other accountable (Cook & Golf, 2002).

Many organizations are now using SMWTs since studies have shown that their use often results in improved production quality, less absenteeism, productivity increase, higher employee satisfaction and better decision making (Cook & Goff, 2002 and Ford & Sullivan, 2004). Although most empirical studies report positive outcomes as a result of using SMWTs, inconsistencies are often found. Managers often see slow progress and sometimes nonexistent progress in team member's efforts to take responsibility for decisions normally taken by managers (Tata & Prasad, 2004). In addition, studies have also found that SMWTs do not always improve effectiveness (Tata & Prasad, 2004). According to Tata and Prasad (2004) one factor that contributes to SMWT's ineffectiveness is organizational structure. In their study Tata and Prasad (2004) looked at how two aspects of organizational structure, micro level centralization and formalization, moderated the influence of self management on team effectiveness. They found that teams with high levels of self management were more effective in organizations where the power to make decisions about task performance is distributed (an

organization with low centralization) and in organizations where few explicit rules, policies and procedures exists (an organization with low formalization) (Tata & Prasad, 2004). Thus, SMWTs are more likely to engage in decision making, generate alternatives and be creative when they exist in an environment that supports this behavior. Since creativity (the consideration of multiple alternatives) was of interest for this proposal, only SMWTs that indeed have the power to make decisions were looked at.

The Needs of Self Managing Work Teams

In order to be successful, SMWTs not only need to exist in a supportive work environment, but also need to be creative in order to increase their performance (Gilson & Shalley, 2004). Creativity has become critical for organizations facing domestic and global competition, as well as for those needing to adapt to organizational changes (Zhou & George, 2003). These organizations need to come up with new ways of performing tasks. As conceptualized by Gilson and Shaley (2004) team creativity is defined as members working together in a way that they link ideas from multiple sources, dive into unknown areas to find unique approaches, or seek out novel ways of

performing a task. Creativity can vary from minor changes in work procedures to breakthroughs in technology.

Research on creativity rapidly began to expand after J. P. Guilford claimed in his 1950 presidential address that this topic deserved more attention than it had received (Simonton, 2000 and Sternberg, 2005). One of Guildford's most important contributions to the study of creativity was the breakdown of the vague notion of creativity into distinct constructs. These constructs include: fluency, the ability to generate many ideas, flexibility which is the ability to generate a wide range of ideas and originality, the ability to generate novel ideas and elaboration is the ability to develop ideas (Kylen & Shani, 2002). Since Guilford's time research on creativity has addressed three general areas: the creative thinkers cognitive process, the creative personality and behavioral elements of the creative thinker, and, more recently, the environmental context that interacts with and supports creative work (Kurtzberg & Amabile, 2001). The original research on creativity adopted an individualistic perspective. It was not until the late 70's that more researchers began to recognize that creativity takes place in a social context (Simonton, 2001). Nevertheless, little

attention has been paid to team-level creativity in which creative ideas are generated by groups instead of being generated by an individual (Kurtzberg & Amabile, 2001).

Although there is very little research on creativity at the team-level, work in the areas of group problem solving and decision making has shed some light. Groups can combine experiences and expertise of multiple individuals persuing one goal (Kurtzberg & Amabile, 2001). With the right combination of personalities, diversity, resources, cooperative process behaviors groups can be very effective in problem solving (Kurtzberg & Amabile, 2001). Research on organizational decision making shows that when decision makers are creative (and thus consider multiple alternatives), they make higher-quality choices (Nutt, 1999). Novel contributions by team members expand the range of ideas and number of proposals a team considers. The more plans a team creates, the more options it will have. A consideration of several perspectives will make it more likely that a team will adopt a proposal capable of meeting or exceeding a project's task requirements (Okhuysen, 2001). The generation of multiple alternatives does not only increase a team's chances of making better decisions but, it also increases team member learning (Ford &

Sullivan, 2004). Novel contributions from team members allows for the exploration of many ideas and facilitates information exchange and mutual learning among team members. Teams that are able to produce and evaluate novel proposals are likely to provide members a rich and exciting learning environment (Scharge, 2000).

In trying to understand creativity, researchers have asked, "What is the relationship between individual and overall team creativity?" More specifically, it has been questioned whether or not team creativity can be seen as an aggregate of team member creativity (Pirola-Merlo & Mann, 2004). In their study Pirola- Merlo and Mann (2004) found evidence for their model depicting team creativity as an aggregate across people and time. According to Pirola-Merlo and Mann (2004), team creativity at a particular point and time could be explained as an average or weighted average of team member creativity. The authors claim that some researchers like Taggar, who have not found evidence supporting team creativity as an aggregate of individual creativity, have used a time general rating of creativity at the group level but a time specific rating of individual creativity (Pirola-Merlo & Mann, 2004).

In order to be effective self managing teams not only need to be creative, but also need to fight against common burnout. The term burnout was first used by Herbert Freudenburger, a clinical psychologist in 1974 (Jackson, Schwab & Schuler, 1986). Burnout can be defined as a syndrome of emotional exhaustion, depersonalization and a reduced sense of personal accomplishment (Elloy et. al, 2001). Because self managing work-teams are given the responsibility to complete whole tasks, make decisions on how to complete the task, have to manage multiple relationships and schedule activities, employees can easily feel worn out (Elloy et. al., 2001).

According to Elloy et. al (2001) the social environment of self managing teams is a contributing factor of burnout. Lower burnout levels are related to supportive peer relationships while higher burnout levels are associated with unsupportive peer relationships (Elloy et. al., 2001). Thus the self managing teams that build supportive working relationships are likely to experience less burnout than those that don't. In addition to low co-worker support Elloy et. al (2001) found that role conflict, role ambiguity and inadequacy of time to accomplish tasks also contributed to burnout. Never the

less, findings suggest that negative contact with people can be one of the largest sources of distress and frustration (Leiter &Maslach, 1987). Negative interpersonal relationships contrast with the many positive and rewarding aspects of contact with co-workers (Leiter & Maslach, 1987). Thus, it is evident that challenging interpersonal relationships is one of the biggest factors leading to emotional exhaustion.

Most research on burnout has been focused in the human sector services which include social workers, nurses, teachers, lawyers, police officers and other occupations involving a lot of human contact (Jackson et. al, 1986). Virtually all discussions of burnout have proposed it as a result of both personal and environmental factors. Although, the bulk of research suggests that environmental factors, particularly characteristics of the work setting, are more related to burnout than personal factors, such as personality and demographic variables. Many of the work characteristics that have been linked to burnout include contact with other people. For example, difficult client problems, low degree of peer support, supervisory practices and negative interactions with coworkers (Leiter & Maslach, 1987). The reported consequences of burnout have been very

diverse. They have included lowered job performance, poor care of clients, disruption of family life, poor health, absenteeism and turnover. Once again it is evident that people weigh heavily the interpersonal component of work. In some cases, interactions with coworkers have been cited as the most important sources of job stress and burnout (Leiter & Maslach, 1987).

Research on burnout has primarily focused on the individual rather than on teams (Garman, Corrigan & Morris, 2002). Team burnout refers to the shared level of burnout that employees working together in the same team have in common (Garman et. al., 2002). Garman et. al (2002) tested to see if a group-level burnout construct could be identified. They tested their theory by examining burnout in psychological rehabilitation teams. Participants in their study completed the Maslach Burnout Inventory, a self reported burnout measure. After conducting a group level analysis Garmen et. al (2002) confirmed the existence of a meaningful team-level burnout construct. Their multi level analysis of burnout suggested that each of its three components (emotional exhaustion, depersonalization, and personal accomplishment) was significantly affected by team level factors. In addition, in support of team-level

burnout, other research indicated a burnout contagion phenomenon. In their study on employees working in one of 47 teams, at a large banking and insurance company, Garman et. al (2002) found that team burnout is directly related to individual team member burnout primarily, exhaustion, cynicism and reduced professional efficacy. While other variables such as job demands, job control, and perceived social support are indirectly related.

In studying SMWTs, Pescosolido (2001) found that emergent leaders have a very strong effect on group goals and performance (primarily by influencing group efficacy). According to researchers, emergent leaders, as opposed to external leaders, are beneficial for SMWTs since too much external leader involvement can damage their performance (Cohen, Ledford & Spreitzer, 1996, Beekun, 1989, and Pescosolido, 2001). Furthermore, Yammarino (1996) claims that if leaders emerge and are not appointed, their groups show increased productivity. Relying on external leaders to govern self-managing teams may be problematic because of their tendency to over control the group (Pescosolido, 2002). Research indicates that external leaders are important for self managing teams but that their role should be to help the group lead itself and to communicate

with the group's informal leader (Manz & Sims, 1987). The most important external leader behaviors are those that help the team manage itself through self observation, self evaluations and self reinforcement.

Leader Emergence in Self Managing Work Teams and Emotional Intelligence

In trying to understand personality traits that predict the emergence of informal leaders, researchers have looked at emotional intelligence and have primarily focused on emotion management, both of self and others (Pescosolido, 2002, Taggar , Hackett & Saha, 1999, and Eby, Cader & Noble, 2003). However, because emotional intelligence is a hierarchical construct, in describing how emergent leaders manage emotions, authors have also alluded to use of the other emotional intelligence components (perceiving emotion, understanding emotions and assimilating emotions). For example, in describing how emergent leaders manage the emotions of a group Pescosolido (2002) claims that emergent leaders first empathize and identify with the emotional state of the group. They then understand what factors are causing the emotional state of the group and respond and act as they see fit. In this

manner the leader sets the tone for the group and influences their response. In the previous phrase Pescosolido indirectly says that an emergent leader uses all components of emotional intelligence to influence the group's response. First the leader perceives and understands the emotions of the group then assimilates a response and finally manages the emotions of the group.

Like Pescosolido (2002), Taggar et. al, (1999) also support the idea that emergent leaders use emotional intelligence to manage their group's emotions. The emergent leaders perceived the team's requirements then selected an appropriate behavior to the perceived emotions. In other words the emergent leaders perceive and understand the emotions of the group then assimilate the correct emotional response.

In addition, Yammarino (1996) claims that emergent leaders are responsive to follower's needs, which indicate that they perceive the groups needs and respond accordingly (using emotional intelligence). Finally, Wolf, Pescosolido and Druskat (2002) proposed and found evidence for their model which predicted leader emergence. Their model claimed that emotional intelligence (primarily empathy) is the foundation for KSAs that predict leader emergence. A

further indication, that emotional intelligence is crucial in predicting leader emergence.

Emotional Intelligence

Emotional intelligence is related to social intelligence, which was first identified by Thorndike (Wong & Law, 2002). After Thorndike, Gardner concluded that social intelligence is comprised of knowledge of self and others. Emotional intelligence focuses on the recognition and use of own and others' emotional states to solve problems and regulate behavior (Salovey & Mayer, 1990). As stated by Salovey and Mayer (1990) emotional intelligence is the ability to monitor ones own and other's feelings and emotions, to discriminate among them and to use this information to guide one's own thinking and actions.

Emotional intelligence is divided into four sub-components which are arranged from lower to higher level skills. The first level of skill is the perception and appraisal of emotions (Mayer et. al, 2000). This is defined as the ability to perceive emotions in one self and others and includes empathy (Day & Carroll, 2004 and Zhou & George, 2003). The second level is the assimilation of emotions (Mayer et. al, 2000). This is explained as the

ability to generate emotions in order to use them in other processes (Day & Carroll, 2004). According to Zhou and George (2003), the assimilation of emotion helps people to effectively process information. For example, emotions are used to focus on important concerns, make choices between competing options and increase the flexibility of information processing. The third level of skill involves the understanding and reasoning about emotions (Mayer et. al, 2000). This is the ability to understand and reason about emotional information and how emotions combine and progress through relationship transitions (Day & Carroll, 2004). The fourth highest level involves the management and regulation of emotions (Mayer et. al, 2000). It is defined as the ability to monitor one's and other's emotions, to discriminate among them, and to use this information to guide thinking and actions (Trinidad & Johnson, 2002).

Emotional intelligence describes a set of abilities not preferred courses of action (Mayer, Caruso & Salovey, 2000). Clinicians have long recognized that people differ in their capacity to understand and express emotion. These differences may be rooted in underlying skills (Salovey & Mayer, 1990). According to Wolff, Pescosolido, and Druskat (2002) individuals vary in their ability to take in and

understand affective information - emotional intelligence. Since emotional intelligence is an ability, individuals who are high in emotional intelligence will utilize it in response to situations, while those that are low in emotional intelligence, cannot use it because they lack the ability.

In this proposal emotional intelligence is considered an ability although there is considerable debate over its conceptualization and measurement. Mayer and Salovey have defined emotional intelligence as an ability, emphasizing individual differences in the cognitive processing of information. Others suggest emotional intelligence includes a variety of emotional skills, including aspects of personality, motivation and affective dispositions (Lyons & Schneider, 2005 and Bastian, Burns & Nettelbeck, 2005). The former use ability based models while the later use trait or mixed models (Lyons, Schneider, 2005). The ability of emotional intelligence has typically been measured by maximal performance measures. Mixed models have been assessed by self- report (performance) measures (Lyons, Schneider, 2005). The fact that emotional has been measured with performance measures has caused some concern. As reported by Mathews, Roberts and Zeidner (2003) there may

be individual differences in emotional intelligence that are not captured by self report or performance based measures. Unfortunately, there is no measure that is not performance based and it may be to soon to determine whether or not this difficulty may be overcome (Mathews, Roberts & Zeidner, 2003). As a result a performance based measure was used to capture the construct.

Meeting the Needs of Self Managing Work Teams

According to Mumford (2003) in team settings creativity is encouraged by supportive charismatic leadership and an open approach to emerging issues. More specifically, according to Zhou and George (2003) one contextual factor that influences creativity is the emotional intelligence of leaders. Emotional intelligence allows them to vary their behaviors depending on the emotions felt by the subordinates. The emotional intelligence of the leader can help awaken creativity. For example, an employee who is experiencing negative emotions (such as boredom) on the job can either neglect his / her duties and withdraw from the workplace or use this as an opportunity to be creative. It is at this point a leader with emotional intelligence is likely to be aware of the employee's emotions, be likely to

respond well to different emotions. According to Riggio, Salinas and Cole (2003) leaders with emotional intelligence have better leader follower relationships. Because their relationships are stronger, followers are more likely to express new ideas and their desire for change.

Building on the discussion above, Jackson and Dutton (1998) conducted an experiment with managers and found that they were more sensitive to threat consistent information than to opportunity consistent information. Managers were quick to acknowledge the presence of threats and found it hard to disregard them. These findings are relevant to creativity in that while engaging in creative decision making individuals rely on their ability to consider several options (Barron, 1998 & Guilford, 1987). Thus the findings that people are more sensitive to threat consistent information rather than opportunity consistent information, indicate a restriction in cognitive flexibility. When people perceive a threatening work environment they limit the set of options that they offer and consider (Dewett, 2004). For this reason it is a logical conclusion that leaders who are high on emotional intelligence and create a less threatening work environment, will allow more opportunity for creativity.

People in their teams will feel free to generate and consider more alternative ideas and thus be more creative.

Leaders who are high on emotional intelligence can not only create a less threatening work environment, but can also help prevent team burnout. As it has been mentioned previously, lower burnout levels are associated with supportive peer relationships. Conversely, having to deal with multiple relationships in a team and taking on new responsibilities, can lead to emotional exhaustion (Elloy et. al, 2001). Emergent leaders who are high on emotional intelligence can develop and maintain better working relationships than those low on emotional intelligence. More specifically leaders who are high on emotional intelligence demonstrate approval, respect, esteem, and affection which lead to better relationships (Wong & Law, 2002). Since interactions with coworkers have been cited as one of the most important sources of stress and burnout, it is expected that leaders who are high on emotional intelligence will reduce the chances of burnout in SMWT's. This is because of their ability to strengthen and develop positive working relationships.

Hypothesis

Please see figure 1 for the hypothesized model. Measurement Model. There were four hypothesized latent variables, emotional intelligence, unthreatening work environment, creativity and burnout. The emotional intelligence factor was hypothesized to have 4 indicators, appraisal of emotions, assimilation of emotions, understanding emotions and emotion management. An individual's perceptions of their leader's emotional intelligence was hypothesized to predict greater numbers on the emotional intelligence subscales. Unthreatening work environment had 3 indicators: team support, team inclusion, tolerance and admitting errors. Individual's perceptions of an unthreatening work environment was hypothesized to predict the individual's perceptions of team support, team inclusion tolerance and admitting errors. Team burnout also had three indicators: personal accomplishment, emotional exhaustion and depersonalization. Higher individual burnout levels were hypothesized to predict higher scores on depersonalization, emotional exhaustion and lower scores on personal accomplishment. Creativity had 7 indicators, questions that were used to assess team creativity. Higher scores on individual's perceptions of team creativity were

hypothesized to predict higher scores on questions 1-7.

Direct Effects. It was hypothesized that emotional intelligence would predict an unthreatening work environment; the higher the leader's score on emotional intelligence, the more the team was predicted to perceive an unthreatening work environment. A more unthreatening work environment was hypothesized to predict greater creativity and less burnout.

Indirect Effects. It was hypothesized that an unthreatening work environment would mediate the relationship between emotional intelligence and creativity and burnout.

CHAPTER TWO

METHOD

Participants

For this proposal, organizations using self managed work teams were asked to participate. To ensure the identification of SMWTs and not traditional teams, all teams were screened by asking the contact person the following questions based on Cohen's et. al, (1997) definition of SMWT's:

1. Are the teams responsible for making a product or providing a service?
2. Do the teams have the power to make decisions about work assignments, work methods, and the power to make scheduling decisions?
3. Are the teams responsible for setting goals, making evaluations, and developing necessary corrections?

The teams were considered SMWTs if the contact person answered yes to the three questions. Volunteers from these organizations were asked to complete a set of questionnaires. Data was gathered from 391 participants.

Procedure

Because I was interested in the emotional support that a leader provides and this support can come from either an emergent or an appointed leader, participants were asked to identify who their leader is and whether or not he/she is an emergent or appointed leader. Participants were given the following definition of emergent leaders "a team member who exerts significant influence over the members of the team although no formal authority has been given to him or her" (Taggar et. al, 1999). Participants were then asked, "Is your leaders an emergent leader or an appointed leader." They were then asked to identify who the leader of his or her team is. They were asked to rate his or her leader's emotional intelligence by completing the measure created by Evelyn and Gilbert. The participants were then asked to fill out the Maslach Burnout Inventory, which was used to measure team burnout (Maslach & Jackson, 1986). They were then asked to rate the teams creative accomplishments and to complete the questionnaires that were used to measure a non threatening work environment.

Measures

Non-threatening Work Environment

A non-threatening team environment was defined as an environment in which work relationships are supportive and inclusive. It is an environment in which employees feel the freedom to voice disagreement with the team, admit errors and present new ideas without fear of severing team relationships or being negatively judged. A non threatening work environment was measured by assessing team support, team inclusion, tolerance and by assessing how comfortable employees feel in admitting errors. Scores on each of these sub scales were used to measure employee's perceptions of an unthreatening work environment.

Team Support

Perceived team support was defined as a person's belief concerning the extent to which the *team* values their contributions and cares about their well being (Chen, Aryee & Lee, 2005). In their study, Eisenberg & Huntington (1986) and Chen et.al (2005) used a 9 item short version of the Survey of Perceived Organizational Support to measure organizational support. Because there is no measure of perceived *team* support, the short version of the Survey of Perceived Organizational Support was modeled to capture

team support. I changed the Survey of Perceived Organizational Support to read "my team" as opposed to "my organization". Response options ranged from (1) strongly disagree to (5) strongly agree. Sample items included "help is available from my team when I have a problem" and "the team cares about my opinions". The scale's alpha reliability as reported by Wayne, Shore & Linden (2002) is .92. The scale's alpha reliability in the present study is .92. Please see appendix A for a copy of the measure.

Team Inclusion

Team inclusion was defined as the degree to which individuals feel part of a critical team process. It includes their belief about having access to information, connectedness to co-workers, work group engagement and ability to participate in and influence the decision making process (Mor Barak, Findler & Wind, 2001). Team inclusion was measured using the Inclusion- exclusion scale, a 9 item questionnaire, one of the items was reversed scored. Response options ranged from (1) strongly disagree to (5) strongly agree. The scale was modified to read "my team" as opposed to "my organization". Sample questions included "I am able to influence decisions that affect my team" and "I have usually been involved in choosing my team

assignments". Higher scores on the scale reflect a higher sense of team inclusion. The scale's alpha reliability as reported by Mor-Barak et. al (2001) is .90. The scale's alpha reliability in the present study is .87. Please see appendix A for a copy of the measure.

Admitting Errors

Employee's perceptions of their ability to admit errors to the team was measured by asking them to rate the following statements (which I developed) on a scale of 1 (meaning strongly disagree) through 5 (meaning strongly agree). Items 1, 2, and 5 were reverse coded. The items were pilot tested by volunteer CSUSB graduate students before they were used on my thesis. The scale's alpha reliability in the present study is .76.

*1. If I were to admit a mistake, my team-mates would look down on me or view me as being incompetent.

*2. Once you make a mistake, people in this team don't trust you as much.

3. It is safe to bring up concerning situations in this team.

4. My team accepts that mistakes are normal and a part of life.

*5. If I were unsure of a decision that I've made in

this team, I would not feel comfortable admitting to the team.

Tolerance

I defined tolerance as the extent to which the team allows for deviation from the standard (what is considered normal) and accepts differences. Tolerance was measured by asking participants to rate the following statements, which I created, on a scale of 1(meaning strongly disagree) through 5 (strongly agree). Items 3 and 4 were reverse coded. Before these items were used on my thesis they were pilot tested by volunteer CSUSB graduate students. The scale's alpha reliability in the present study is .70.

1. I feel comfortable letting my team-mates know that I disagree with a decision or idea.
*2. People in my team criticize those that have different views.
*3. I sometimes do not share my honest opinion with my team-mates because they are likely to disregard it.
4. People in this team feel free to play devil's advocate.
5. Constructive criticism is welcomed by the team.

Emotional Intelligence

The individual's perception of their leader's emotional intelligence was measured using the Emotional Intelligence Survey. The survey consists of twenty seven items which assess four emotional intelligence sub scales; the appraisal, assimilation and understanding of emotions and emotion management. The survey has been validated in two settings by Jan Kottke and Janelle Gilbert. However, they are in the process of writing their article. In the present study, the alpha reliability of appraisal of emotions is .91, assimilation of emotions is .95, understanding emotions is .90, and emotion management is .91. Please see appendix A for a copy of the measure.

Leader Emergence

Participants were given the definition of an emergent leader, "a group member who exerts significant influence over other members of the group although no formal authority has been given to them" (Taggar et. al, 1999). In order to measure leader emergence each individual was asked "Identify who the emergent leader is on your team" Pescosolido, 2001).

Burnout

Burnout was measured using the Maslach Burnout Inventory (Maslach & Jackson, 1986). This scale is a 22-item measure which produces three scores: emotional exhaustion, depersonalization and personal accomplishment. It takes approximately 15 minutes to complete. The frequency that the respondent experiences feelings related to each subscale is measured using a six point, anchored response format. A high degree of burnout is reflected in high scores on the emotional exhaustion and depersonalization subscales and on low scores in personal accomplishment subscale. An average level of burnout is demonstrated by average scores on all three subscales. Finally a low degree of burnout is depicted by low scores on the emotional exhaustion and depersonalization subscales and a high score on the personal accomplishment subscale (Lane & Curbow, 1994).

The scores are considered high if they are in the upper third of the normative distribution, average if in the middle and low if in the bottom third (numerical cutoffs will be seen in the appendix). The three scores are not combined into a single total score, they are considered separately (Lane & Curbow, 1994). Maslach and Jackson

(1986) reported a reliability coefficient of .71 for the personal accomplishment scale, .79 for the depersonalization scale and .90 for the emotional exhaustion scale. In the present study the alpha reliability for personal accomplishment is .82, for depersonalization is .78, and for emotional exhaustion is .89.

The items on the Maslach Burnout Inventory were modified in order for them to apply to a team setting. For example the statement, "I feel frustrated by my job" was modified to read "I feel frustrated by my team" and the statement "In my work, I deal with emotional problems very calmly" was modified to read "In my team, I deal with emotional problems very calmly". Please see appendix A for a copy of the measure.

Creativity

Team creativity was measured in two ways. First, each participant was asked to rate their team's creativity in the last 3 months by rating the following statements which I created on a scale of 1 (meaning strongly disagree) to 5 (meaning strongly agree). The items with the astrics were reverse coded. The scale's alpha reliability in the present study is .83.

1. My team has generated original ideas.
*2. My team has not considered a large number of ideas.
3. My team has considered a wide range of ideas.
*4. My team has a difficult time figuring out how to make our ideas come true.
5. My team has come up with unique, successful solutions.
*6. My team has been too busy to explore or come up with new alternatives.
7. My team has turned a broad and general idea into a good, specific solution.

Because self report measures are often criticized mainly by the argument that some people are unable to report accurately because of poor introspection, team creativity was also measured by having the team's manager rate the team's creativity (Kratzer, Leenders and Van Engelen, 2004). The managers were asked to rate the team's creativity by using the same questionnaire, except the items were modified to read, "the team" as opposed to "my team".

CHAPTER THREE

RESULTS

The Hypothesized Model

The hypothesized model is illustrated in figure 1 in appendix C where Circles represent latent variables while rectangles represent measured variables. Absence of a line connecting the variables represents a lack of hypothesized direct effects. Hypothesized relationships between variables are indicated by a line with an arrow. Emotional intelligence is a latent variable with four indicators (appraisal of emotions, assimilation of emotions, understanding emotions and emotion management). Unthreatening work environment is also a latent variable with four indicators (team support, team inclusion, tolerance and admitting errors. Creativity and burnout are also both latent variables. Creativity has seven items that serve as indicators while burnout has three indicators (personal accomplishment, emotional exhaustion and depersonalization).

Assumptions

Before evaluating assumptions individual scores were computed for unthreatening work environment (team support, team inclusion, tolerance and admitting errors), burnout (depersonalization, emotional exhaustion and personal accomplishment) and emotional intelligence (emotion management, understanding emotions, assimilation of emotions and appraisal of emotions). Creativity scores were not computed since the seven items are being tested at the individual item level. A missing value analysis was done using SPSS on a sample of 401 team members. All the missing data was less than 5 %. Little MCAR's test was examined, it was found to be not significant χ^2 (51) = 68.84 $p > .05$, indicating data is missing at random. As a result, the missing data was imputed using EM algorithim.

The data was then examined for normality and outliers using SPSS.Using Mahalonobis distance with a critical distance of 42.31 and 18 degrees of freedom at $p < .001$, 10 multivariate outliers were found. Since they all had unique patterns which were not representative of the sample, they were deleted. Please see table #1 in appendix B for the variance, statistical evidence, and descriptives of the multivariate outliers.

After deleting the 10 multivariate outliers the data was examined for univariate outliers and normality using a sample size of 391. Because of the large sample size a criteria z score of 3.5 was used to examine all univariate outliers. No univariate outliers were identified. According to Ullman (2001) a sample size of 391 is adequate since 10 subjects per parameter are recommended.

Creativity items 1, 2, 3, 4, 5 and 7 were found to be significantly negatively skewed and not kurtotic. Most people rated their team high on creativity. Creativity item number 6 was found to be kurtotic. All the emotional intelligence sub-scales were found to be significantly negatively skewed and kurtotic. Most people rated their leader high on emotional intelligence. Team support and team inclusion were found to be negatively skewed. Most people felt very supported by their team and included in decisions. Emotional exhaustion and depersonalization were found to be positively skewed and kurtotic. Most people reported low levels of emotional exhaustion and depersonalization. Although 14 out of the 18 variables were found to be skewed, none will be transformed since they were expected to be skewed. We also concluded that since no univariate outliers were found, the variables were

naturally skewed. Since the variables are not normal Satorra- Bentler chi square and fit indices were interpreted. Please look at table 2 in appendix B for the skewness and kurtosis of the variables.

Most people rated their leader high on emotional intelligence. In addition the means for team support, tolerance, inclusion, and admitting errors were relatively high. In addition the means for emotional exhaustion and depersonalization were low. As we hypothesized when people felt that they leader was high in emotional intelligence they reported low levels of burnout (emotional exhaustion and depersonalization). Please see table 3 in appendix B for the means and standard deviations of the variables.

Linearity was assessed by examining pair-wise scatter plots between appraisal of emotions and all the other variables. Since the scatter plots were oval shaped or looked like a blob, linearity was assumed. The assumptions of multivariate normality, muticollinearity, singularity and homoscedasticity were examined using EQS. Mutivariate normality was violated since the normalized estimate is 13.86 which is greater than ±3.3. This is not problematic since our variables were expected to be skewed and since robust statistics will be reported. The determinant is

.19933D-05, this is greater than 0, indicating that we do not have multicollinearity or singularity. The distribution of the residuals was largely centered around 0, indicating that we have normality of residuals.

Model Estimation

A multilevel analysis approach using EQS was taken. However, since the data violates normality and multilevel analysis do not allow us to test Satorra-Bentler statistics (which are interpreted when normality is violated) the model fit and assumptions were tested at the individual level. The comparative fit index (CFI) and root mean-square error of approximation (RMSEA) indicated that the model did not fit the data, χ^2 (132, N = 391) = 514.88, $p < .05$, CFI = .91 < .95, RMSEA = .86 > .06. The Multivariate Lagrange Multiplier test indicated that covariances between the unexplained variances of creativity's reverse coded items (E4, E2 & E6, E4 & E6, E2) needed to be added in order for the model to fit the data. Thus indicating that a measurement factor (more specifically, a reverse coded factor) existed in the unexplained variance of the creativity variable. As a result these covariances were added in a post hoc analysis.

The CFI and RMSEA indicated a good model fit, χ^2 (129, N= 391) = 353.49, $p < .05$, CFI = .95 = .95, RMSEA = .067 > .06. All the paths in the model were significant. Moreover, a chi square difference test was computed. It indicated that adding the covariances significantly improved the model fit χ^2 (21, N = 391) = 56.42, $p < .05$. All the covariances were found to be significant and positively correlated. The unexplained variances of creativity items 4 and 2 had 20.7% of the variance in common. The unexplained variance of the creativity items 6 and 4 had 15.21% of the variance in common. The unexplained variance of the creativity items 6 and 2 had 17.13% of the variance in common. Please see table 4 in appendix B for the unstandardized and standardized coefficients and correlations of the covariances. As it was mentioned previously, the covariances which were added dealt with a minor measurement factor (more specifically, a reverse coded factor). After the measurement factor was accounted for, our hypothesized model was supported.

Interclass correlations were computed using EQS in order to see if any variance in the variables could be accounted for by being part of the same team and if indeed a multilevel analysis would be appropriate. The variance

accounted for by being part of the same team ranged from .127 and .395. Thirteen percent of the variance in creativity item 6 was accounted for by being part of the same team. Forty nine percent of the variance in emotion management was accounted for by being part of the same team. Please see table 5 in appendix B for a description of all the interclass correlations.

The CFI and RMSEA indicated that the multilevel model fit the data χ^2 (258, N = 391) = 404.08, $p < .05$, CFI = .994 > .95. RMSEA = .024 < .06. There were a total of 104 teams. The average team size was 3, with teams of 2 being the smallest and teams of 11 being the largest. Individual differences in the creativity items could be significantly predicted by the creativity construct after removing the variance due to being part of the same team. The path between item 1 and creativity was fixed to one. Individual differences in the emotional intelligence sub components (understanding emotions, emotion management, appraisal of emotions, and assimilation of emotions) could be significantly predicted by the emotional intelligence construct after removing the variance due to being part of the same team. Individual differences in team support, tolerance and admitting errors could be significantly

predicted by unthreatening work environment after removing the variance due to being part of the same team. The path between team inclusion and unthreatening work environment was fixed to one. Individual differences in emotional exhaustion and depersonalization could be significantly predicted by burnout after removing the variance due to being part of the same team. Individual differences in personal accomplishment could not be significantly predicted after removing the variance due to being part of the same team. Individual's perceptions of an unthreatening work environment could be significantly predicted by their perceptions of their leader's emotional intelligence after removing the variance due to being part of the same team. For every one unit increase in their perceptions of their leader's emotional intelligence we can predict a .23 unit increase in their perceptions of an unthreatening work environment. Individual's perceptions of their team's creativity could be significantly predicted by people's perceptions of an unthreatening work environment after removing the variance due to being part of the same team. For every one unit increase in perceptions of an unthreatening work environment, we can predict a .87 unit increase in creativity. We can significantly predict

burnout from an individual's perception of an unthreatening work environment after removing the variance due to being part of the same team. For every one unit increase in people's perception of an unthreatening work environment we can predict a 1.07 unit decrease in burnout. Please see figure 2 in appendix C for the path coefficients for the within teams analysis. Differences between teams in the creativity items could be significantly predicted by the creativity construct after removing the variance due to individual differences. Differences between teams in understanding emotions, emotion management, appraisal of emotions and assimilation of emotions could be significantly predicted by emotional intelligence after removing the variance due to individual differences. Differences between teams in team support, tolerance and admitting errors could be predicted by unthreatening work environment after removing the variance due to individual differences. Differences between teams in personal accomplishment and depersonalization could be predicted by burnout after removing the variance due to individual differences. We could significantly predict differences between teams in their perceptions of an unthreatening work environment from their perceptions of their leader's

emotional intelligence after removing the variance due to individual differences. For every one unit increase in their in their perceptions of their leader's emotional intelligence we can predict a .24 unit increase their perceptions of an unthreatening work environment. We could significantly predict differences in teams in creativity from unthreatening work environment after removing the variance due to individual differences. For every one unit increase in unthreatening work environment we can predict a 1.28 unit increase in creativity. We can significant predict differences in teams in burnout from unthreatening work environment after removing the variance due to individual differences. For every one unit increase in unthreatening work environment we can predict a 1.13 unit decrease burnout. Please see figure 3 in appendix C for the path coefficients for the between teams analysis.

As a secondary analysis, we wanted to see if the team members and the team supervisors agreed on the team's creativity scores. Scores were obtained from a total of 75 team supervisors. Only these 75 teams which had supervisor creativity ratings were included in this analysis. There was no significant correlation between team member's creativity and the team supervisor's creativity scores, r =

.21, $p > .05$. The alpha reliability for the team leader's creativity scale is .85. Please see table 6 in appendix B for the bi-variate correlations between all the variables. As a secondary analysis we also examined if the team supervisor's perception of the team's creativity could be predicted by the emotional intelligence of the team's leader and unthreatening work environment. A regression analysis was run using SPSS with unthreatening work environment as the IV and the team leader's perception of the team's creativity as the DV. It was found that we could not significantly predict the team supervisor's perception of the team's creativity by the unthreatening work environment, Multiple R = .241, R square = .058, Adj. R square = .004, $F(4, 70) = 1.084$ $p > .05$. A regression analysis was also run with emotional intelligence as the IV and the team leader's perception of the team's creativity as the DV. It was found that we could not significantly predict the team supervisor's perception of the team's creativity by the team leader's emotional intelligence, Multiple R = .297, R square = .088, Adj. R square = .036, $F(4, 70) = 1.695$ $p > .05$.

CHAPTER FOUR

DISCUSSION

The present study examined how emotional intelligence helps leaders meet the needs of his or her team. According to Gilson and Shalley (2004) and Elloy, Terpening and Kohls (2001) in order to be successful, SMWTs need to exist in an environment that fosters creativity and is burnout preventative. It was hypothesized that the emotional intelligence of a leader would help teams be burnout preventative and help foster team creativity. All of the hypotheses were simultaneously tested using a multilevel analysis approach of structural equation modeling. Thus all of the hypotheses were tested between and within groups. As it was hypothesized it was found that a leader's emotional intelligence predicts an unthreatening work environment for both within and between teams. The higher the individual's perceptions of their leader's emotional intelligence the more they perceive an unthreatening work environment. It was also found that people's perception of an unthreatening work environment predicts people's perception of the team's creativity for both within and between teams. The more people feel the environment they work in is unthreatening

the higher creativity scores they report. The hypothesis indicating that burnout can be predicted by an unthreatening work environment was also supported for both within and between teams. The more people perceive an unthreatening work environment the lower burnout scores they report. It was found that perceptions of an unthreatening work environment mediate the relationship between emotional intelligence and creativity and burnout.

All the constructs that were measured were predicted by their indicators for both within and between teams except one. Individual differences in personal accomplishment could not be significantly predicted after removing the variance due to being part of the same team. In order to measure personal accomplishment individuals were asked to rate statements such as "I feel I'm positively influencing other people's lives through my work with the team" and "I have accomplished many worthwhile things with this team." These statements are written in such a way as to focus the participants on their accomplishments within the team and not outside of their team participation. Thus it makes sense that after removing the variance in personal accomplishment due to being part of the same team there is no significant variance left.

This may indicate there are no other contributing factors to their team personal accomplishment.

As a secondary analysis we examined if team members and team supervisors agreed on the team's creativity scores. As it was mentioned in the results section, no significant correlation was found. This indicates that the team member's perception of the team's creativity is not the same as an outsider's (the team's supervisors) perception of the team's creativity. Although people may have intended to report accurate scores, their perceptions may often be biased. Perhaps the team member's perception of the team's creativity is not the same as team's actual creativity. In addition, creativity is a complex construct with several dimensions. It is likely that our measure of creativity does not capture all of its dimensions.

The present study's findings are consistent with Zhou and George's (2003) and Gilson and Shalley's (2004) findings which indicate that contextual factors, particularly the emotional intelligence of a leader, play a critical role in enabling and supporting team creativity. The emotional intelligence of the leader may help team members build better interpersonal relationships and thus help team members feel free to discuss and consider new

ideas. Having great interpersonal relationships helps individuals perceive their environment as being interpersonally non-threatening (Gilson and Shalley, 2004), allowing them to feel free to explore new ideas even when they might fail. Thus individuals feel free to consider multiple alternatives and take risks. The emotional intelligence of the leader also enables him or her to respond appropriately to the emotions (for example discouragement or excitement) that a team member experiences while engaging in creativity (Zhou and George, 2003). For example, the leader is able to suggest caution if the team member is overly excited and support when he or she is feeling discouraged. This is also consistent with Mumford's (2003) idea that creativity is encouraged by leaders.

The present study has several strengths and weaknesses. One of its strengths is the fact that data was collected from existing work-teams in actual work-settings. Thus the participants had worked together over a significant period of time. In addition the SMWTs were very diverse and consisted of individuals from both private and public sectors This allows for generalizeable findings. Also no other study had attempted to explain *how* emotional

intelligence helps leaders meet the needs of his or her team. This study provides evidence supporting that emotional intelligence helps leaders meet the needs (the need for creativity and burnout prevention) of their team by creating an unthreatening work environment. Finally, this is one of few empirical studies on emotional intelligence.

Limitations

This study has several limitations which should be taken in account before considering the findings. As it was mentioned previously, the measure of emotional intelligence that was used is not an ability based measure (Roberts and Zeidner, 2003). Thus there may be variance in the leader's emotional intelligence that we failed to capture. However, the measure used does capture the leader's typical response. Also, perceptions of the team's creativity were measured as opposed to the team's actual creative performance. Because the teams sampled came from various organizations, performed different types of projects, and exist in different environments, giving them all the same type of project to measure their creative performance and controlling for confounding variables would be very

difficult. Future studies should consider capturing actual creative outcomes as opposed to perceptions. Finally, sampling different types of teams can be a strength as it was mentioned earlier but, it can also limit the findings. Depending on the nature of the team, individuals may be more likely to experience burnout. For example a team of nurses working together to provide services to a very ill patient may be more likely to experience burnout as opposed to a team of teachers working together to put on a reading workshop. It may be naturally more stressful to feel responsible for an individual's health than for a workshop. Thus in this situation a team of nurses may report higher burnout levels than a team of teachers regardless if leader high on emotional intelligence.

Implications and Future Research

Future possible researchers should consider controlling the nature of the teams sampled. For example, they should consider the differences between a team of nurses and a team of teachers. These two different teams exist in very different environments which can affect the degree of burnout experienced and the amount of creativity they engage in. For example, the team of teachers may

engage in more creative processes simply because the outcome (whether their new approach fails or not) may not cause someone to loose their life. A team of nurses may engage in trying new alternatives less often because the uncertainty of the results may be too risky and dangerous.

In their study on empathy and forgiveness Toussaint and Webb (2005) found that women were more empathetic than men. Empathy has been identified as an important part of emotional intelligence, primarily emotion management (Pescosolido, 2002). According to Pescosolido (2002), leaders mange the emotions of a group by first empathizing with the emotional state of a group. Thus a leader may be higher on emotional intelligence than another simply because of their gender. It would be interesting to investigate if the gender of a leader affects the creativity and burnout levels of teams.

The findings from this study propose several implications. The emotional intelligence of managers may strengthen work outcomes such as creativity. Perhaps organizations whose success heavily depends on innovation such as Sony should consider hiring managers who are high on emotional intelligence. Managers who are high on emotional intelligence can help create a great work

environment that will affect the creativity of the team. Perhaps organizations that are wondering why their employees are not creative, should investigate the type of environment they are creating for their employees. Also organizations that focus on humanitarian services (where burnout levels are generally high) should choose leaders who are high on emotional intelligence. Their strong people skills (listening, perception of emotions and emotion management) will help them create an interpersonal environment that will help prevent burnout. Finally, the findings from this study suggest that emotional intelligence is a valuable ability for leaders to have.

APPENDIX A

QUESTIONNAIRES

Survey of Perceived Team Support

Please rate your team on the following statements. Indicate the extent to which you strongly disagree or strongly agree with the following statements by circling a number from 1 to 5.

1. The team strongly considers my goals and values.
2. Help is available from the team when I have a problem.
3. The team really cares about my well-being.
4. The team is willing to extend itself in order to help me perform my job to the best of my ability.
5. * Even if I did the best job possible, the team would fail to notice.
6. The team cares about my general satisfaction within the team.
7. * The team shows very little concern for me.
8. The team cares about my opinions.
9. The team takes pride in my accomplishments within the team.

* indicates that the item will be reverse scored.

Inclusion- Exclusion Scale

Please indicate the extent to which you strongly disagree or strongly agree with the following statements by circling a number from 1 to 5.

1. I have usually been involved in choosing my job assignments.
2. I am able to influence decisions that affect my team.
3. I have a significant say in the way important work is performed by my work team.
4. I have input into the process of how my work team gets routine work done.
5. I am usually consulted before being asked to be part of a task team.
6. I feel that I have the cooperation of the people in my work team.
7. I can ask anyone in my team to assist me with my tasks.
8. * I feel isolated from my work team.
9. My coworkers openly share work related information with me.

* indicates that the item will be reverse scored.

Emotional Intelligence Survey

1. Understands his/her own strengths and weaknesses.
2. Handles stressful situations in a constructive manner.
3. Able to recognize different emotions in self and others.
4. Seeks mutual understanding and welcomes sharing of information.
5. Promotes a friendly and cooperative climate.
6. Able to regulate temper outbursts.
7. Communicates effectively with employees when a problem arises.
8. Handles stressful situations effectively.
9. Ability to energize and direct a project.
10. Willing to take initiative and set goals.
11. Is patient and persistent in the face of setbacks.
12. Makes everyone around him/her enthusiastic about assignments.
13. Guides the performance of others while holding them accountable.
14. Articulates and arouses enthusiasm for a shared vision and mission.
15. Is attentive to emotional cues and listens well.
16. Shows sensitivity and understands others' perspectives.
17. Fosters open communication and is receptive to bad news as well as good.
18. Cultivates relationships with employees.
19. Shows concerns for employees' needs.
20. Encourages understanding points of view of others employees.
21. Develops interpersonal relationships with employees.

22. Respects and relates well to people from varied backgrounds.

23. Understands diverse worldviews and is sensitive to group differences.

24. Able to detect social networks within the organization.

25. Cultivates and maintains extensive informal networks.

26. Seeks out relationships that are mutually beneficial.

27. Makes and maintains personal friendships among work associations.

Maslach Burnout Inventory

On the following pages there are 22 statements of job related feelings. Please read each statement and decide if you feel this way about your job. If you never had this feeling, write "0" in both how often and how strong columns before the statement. If you have had this feeling, indicate how often you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way. Then decide how strong the feeling is when you experience it by writing the number (1 to 7) that best describes how strongly you feel it. An example is shown below.

Example:

How Often					
0	1	2	3	4	6
never	a few times a year or less	once a month or less	a few times a month	once a a week	every day

How Strong						
0	1	2	3	4	6	7
never	very mild barely noticeable			moderate		major very strong

How Often	How Strong	Statement:
0-6	0-7	
_____	_____	I feel depressed in my team.

If you never feel depressed in your team, you would write the number "0" on both lines. If you rarely feel depressed in your team you would write the number 1 on the line under the heading "How Often." If your feelings of depression are fairly strong, but not as strong as you can imagine, you would write a "6" under the heading "How Strong."

How Often	How Strong	Statements:
0-6	0-7	
_____	_____	I feel emotionally drained from the work in my team.
_____	_____	I feel used up at the end of my team work day.
_____	_____	I feel fatigued when I get up in the morning and have to face another day with my team.
_____	_____	I can easily understand how my team-mates feel about things.
_____	_____	I feel that I treat some team-mates as if they were impersonal objects.
_____	_____	Working with my team-mates is really a strain on me.
_____	_____	I deal very effectively with the problems of my team-mates.
_____	_____	I feel burned out from the work in my team.
_____	_____	I feel I'm positively influencing other peoples lives through my work with the team.
_____	_____	I've become more callous toward people since I began working with this team.
_____	_____	I worry that working with this team is hardening me emotionally.

_____ _____ I feel very energetic.

_____ _____ I feel frustrated by my team.

_____ _____ I feel I'm working too hard on this team.

_____ _____ I don't really care what happens to some team-mates.

_____ _____ Working with my team-mates directly, puts too much stress on me.

_____ _____ I can easily create a relaxed atmosphere with my team-mates.

_____ _____ I feel exhilarated after working closely with my team-mates.

_____ _____ I have accomplished many worthwhile things with this team.

_____ _____ I feel like I'm at the end of my rope.

_____ _____ In my team, I deal with emotional problems very calmly.

_____ _____ I feel team-mates blame me for some of their problems.

APPENDIX B

TABLES

Table 1

Variance, Statistical Evidence, and Descriptives for the Multivariate Outliers

Multivariate Outlier	R^2	F ratio	Variable	Score	Average Score
1	0.11	2.52*	creativity 1	1	3.84
			creativity 7	4	3.73
			team support	1.22	3.88
			admitting errors	3	3.83
2	0.11	2.62*	creativity 5	5	3.8
			creativity 7	1	3.73
			personal accomplishment	0.75	3.72
3	0.11	2.63*	emotion management	2.6	4.79
			appraisal of emotions	2	4.78
			assimilation of emotions	4.33	4.84
4	0.12	2.77*	creativity 5	5	3.8
			creativity 7	1	3.73
			personal accomplishment	0	3.72
5	0.12	2.77*	creativity 7	1	3.73
			personal accomplishment	0.38	3.72
6	0.12	2.81*	creativity 1	1	3.84
			creativity 3	5	3.79
7	0.12	2.97*	creativity 3	5	3.79
			emotion management	2.2	4.79
			assimilation of emotions	4.25	4.84
8	0.13	3.25*	creativity 4	5	3.51
			creativity 5	1	3.8
			creativity 6	1	3.37
			creativity 7	5	3.73
9	0.13	3.29*	creativity 7	2	3.73
			appraisal of emotions	2.5	4.78
			personal accomplishment	5.88	3.72
			depersonalization	6.8	1
10	0.16	4.07*	creativity 1	1	3.84
			creativity 3	2	3.79
			understanding emotions	5.5	4.83
			emotion management	3.8	4.79
			team support	5	3.88
			personal accomplishment	1.63	3.72

d f = 13, 382 * $p < .05$

Table 2

Z Scores for Kurtosis and Skewness

Variable	Skewness	Kurtosis
creativity 1	-5.36*	-0.73
creativity 2	-4.17*	-2.52
creativity 3	-4.98*	-0.55
creativity 4	-3.77*	-2.89
creativity 5	-4.88*	-0.87
creativity 6	-2.65	-3.76*
creativity 7	-4.91*	0.01
understanding emotions	-10.73*	8.64*
emotion management	-9.71*	5.32*
appraisal of emotions	-9.65*	5.43*
assimilation of emotions	-10.86*	7.93*
team support	-5.33*	0.49
tolerance	-0.69	-1.14
admitting errors	-3.15	-2.58
team inclusion	-3.79*	-0.76
emotional exhaustion	9.44*	4.59*
personal accomplishment	-3.21	-0.36
depersonalization	12.63*	9.02*

* $z > 3.3$

Table 3

Means and Standard Deviations

Variable	Mean	Standard Deviation
creativity 1	3.84	1.02
creativity 2	3.52	1.20
creativity 3	3.79	1.02
creativity 4	3.52	1.22
creativity 5	3.80	1.03
creativity 6	3.37	1.27
creativity 7	3.73	1.00
understanding emotions	4.83	0.98
emotion management	4.79	1.06
appraisal of emotions	4.78	1.06
assimilation of emotions	4.84	0.98
team support	3.88	0.80
tolerance	3.62	0.74
admitting errors	3.83	0.81
team inclusion	3.68	0.77
emotional exhaustion	1.56	1.37
personal accomplishment	3.72	1.35
depersonalization	1.00	1.25

Table 4

Unstandardized & Standardized Coefficients, and Correlations Between Covariances at the Individual Team Member Level

Covariances	Unstandardized Coefficient	Standardized Coefficient	R
E4, E2	0.565*	0.091	0.455
E6, E4	0.542*	0.091	0.39
E6, E2	0.535*	0.09	0.414

* $p < .05$

Table 5

Interclass Correlations

Variable	R
creativity item 1	0.327
creativity item 2	0.182
creativity item 3	0.256
creativity item 4	0.225
creativity item 5	0.252
creativity item 6	0.127
creativity item 7	0.217
understanding emotions	0.349
emotion management	0.395
appraisal of emotions	0.357
assimilation of emotions	0.389
team support	0.278
tolerance	0.278
admitting errors	0.211
team inclusion	0.256
emotional exhaustion	0.189
personal accomplishment	0.233
depersonalization	0.213

Table 6

Bi-variate Correlations Between Variables

	undrstdng. e	e. mgt.	app. of e.	ass. of e.	team supp.	to
Understan-ding Emotions	1.00					
Emotion Management	0.89**	1.00				
Appraisal of Emotions	0.92**	0.87**	1.00			
Assimilation of Emotions	0.95**	0.88**	0.92**	1.00		
Team Support	0.44**	0.36**	0.41**	0.41**	1.00	
Tolerance	0.45**	0.37**	0.38**	0.38**	0.74**	
Admitting Errors	0.45**	0.32**	0.38**	0.37**	0.77**	
Inclusion	0.44**	0.36**	0.40**	0.39**	0.78**	
Emotional Exhaustion	-0.34**	-0.31**	-0.27*	-0.35**	-0.54**	
Personal Accomplish-ment	0.38**	0.37**	0.42**	0.39**	0.67**	
Depersona-lization	-0.23	-0.18	-0.17	-0.25*	-0.54**	
Team Member Creativity	0.42**	0.33**	0.41**	0.42**	0.75**	
Leader Creativity	0.06	0.07	0.14	0.02	0.19	

l.	admtng. errors	Incl.	Emtnl. exh.	person -al acc.	deperson -alization	t. m. creativity	l. criteativy
1.00							
0.72**	1.00						
0.75**	0.64**	1.00					
-0.45**	-0.50**	-0.39**	1.00				
0.59**	0.46**	0.65**	-0.28*	1.00			
-0.38**	-0.44**	-0.28*	0.81**	-0.31**	1.00		
0.64**	0.62**	0.68**	-0.52**	0.56**	-0.46**	1.00	
0.12	0.17	0.05	0.00	0.15	-0.04	0.21	1.00

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

APPENDIX C

FIGURES

Figure 1 Hypothesized model

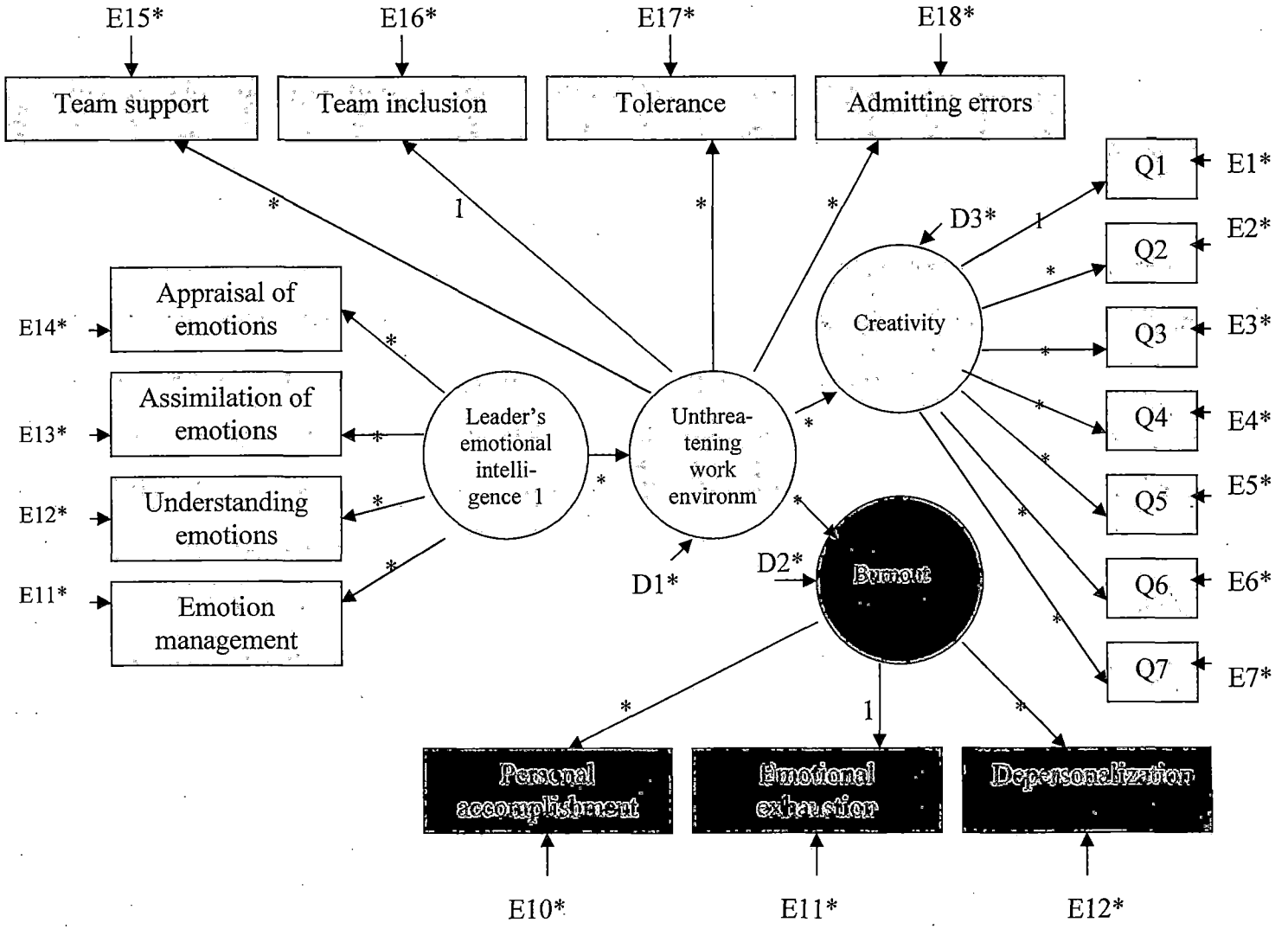
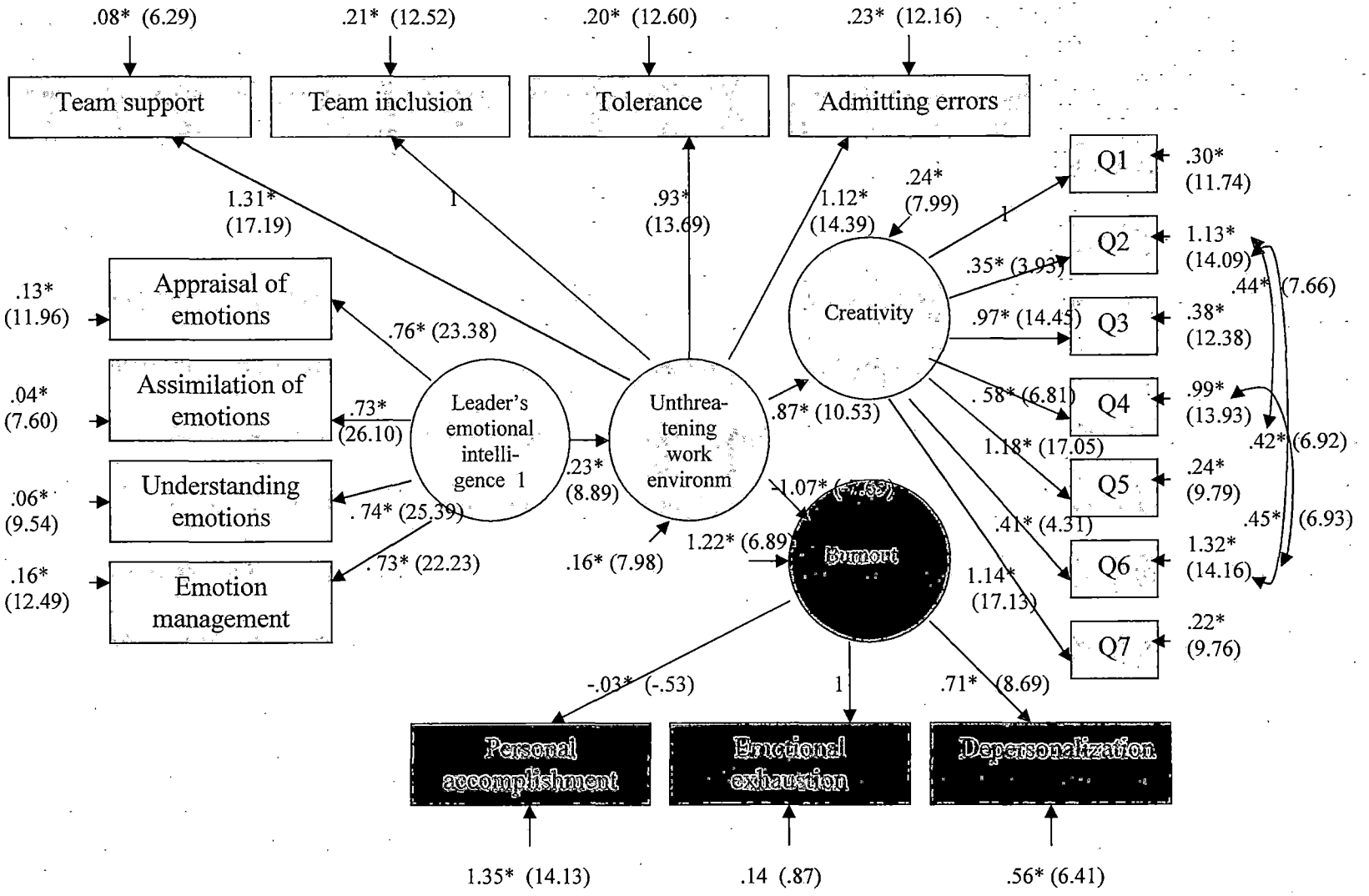
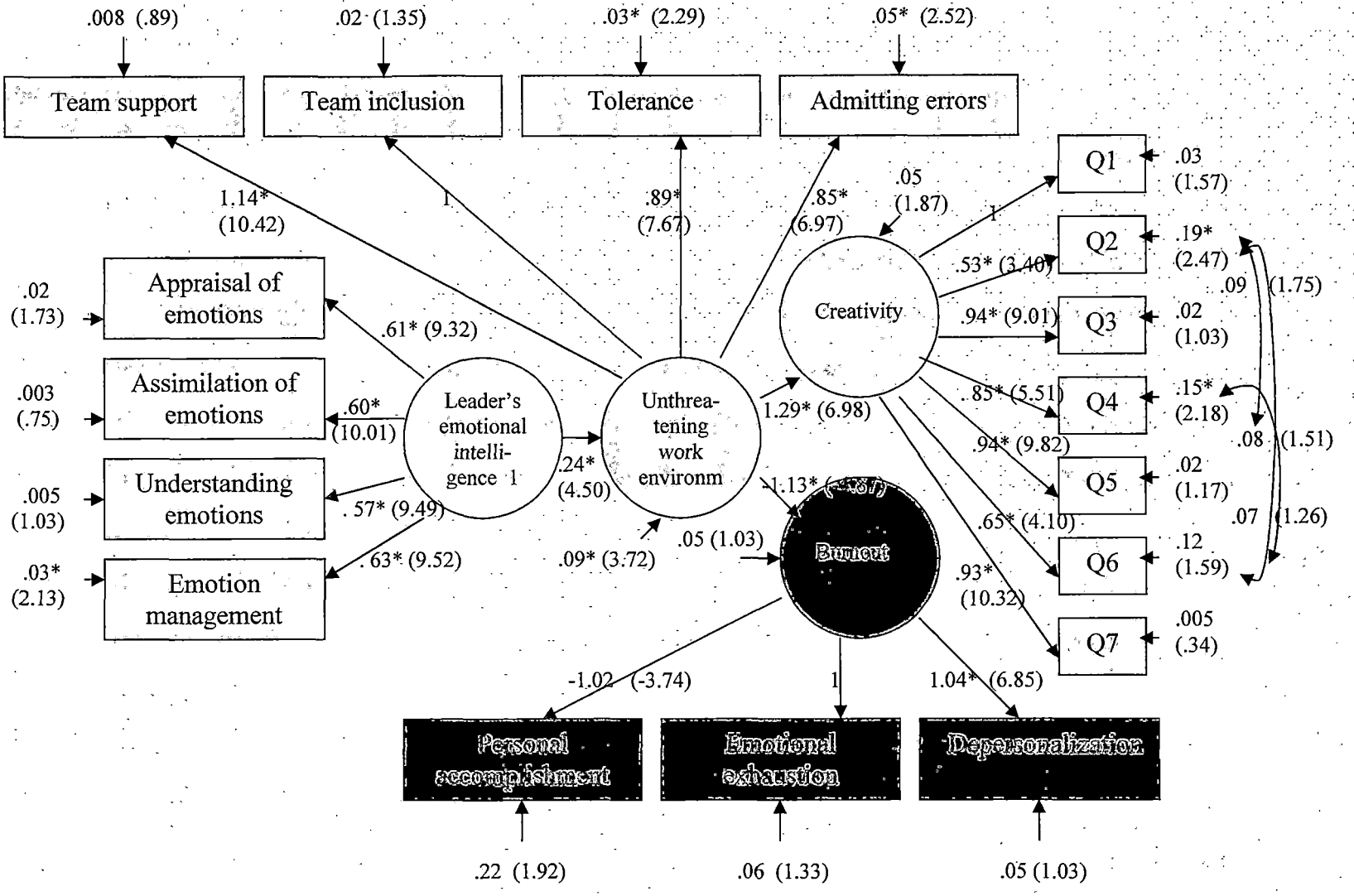


Figure 2 People Within Teams



P <.05 * , standardized coefficients in parenthesis

Figure 3 People Between Teams



P <.05 * , standardized coefficients in parenthesis

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