2007

Transformational leadership and group outcomes: The mediating effects of social identification and empowerment

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TRANSFORMATIONAL LEADERSHIP AND GROUP OUTCOMES:
THE MEDIATING EFFECTS OF SOCIAL IDENTIFICATION
AND EMPOWERMENT

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
in
Psychology:
Industrial/Organizational

by
Kevin Michael Karlak
December 2007
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ABSTRACT

Collective efficacy, group helping behaviors, and group cohesion are group outcomes that have demonstrated pervasive effects on group performance. These group outcomes are important because of the strong relationships that have been established among these variables. Transformational leadership has shown to greatly foster these outcomes. The purpose of this thesis was to investigate how transformational leadership can foster these group outcomes and to explore social identification and empowerment as potential mediators on this process. Data were collected by administering questionnaires to teams in several organizations. Team members rated their perceptions of transformational leadership, collective efficacy, group helping behaviors, group cohesion, social identification, and empowerment. A structural equation modeling approach using EQS was adopted to test the proposed model that transformational leadership would be positively correlated with the group outcomes (collective efficacy, group helping behaviors, and group cohesion) and the relationships between transformational leadership and group outcomes were mediated via social identification and empowerment. The EQS model was not a good fit to the data; therefore, the proposed model was rejected. However,
correlational analyses supported the positive relationships between transformational leadership and the outcomes.
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CHAPTER ONE

INTRODUCTION

The work environment is growing faster and changing more than ever. Contemporary organizations are facing continued globalization of markets and rapid technological advances, consequently changing the way in which organizations need to do business. In order to maintain competition, organizations need to be more flexible and responsive than ever. One specific way organizations can maintain competition is by composing teams. A team is composed of people who interact independently in order to achieve common organizational goals (Caproni, 2005). Understanding team dynamics is necessary in order for us to have a better understanding of what constitutes effective teams and how teams affect the organization. Such insight may, in turn, lead to better ways in managing and selecting for teams.

Many organizations are switching to team based strategies because they realize the value that teams can bring to the organization (Wellins, Byham, & Wilson, 1991; Katzenbach & Smith, 1993a). People working in teams bring a variety of perspectives, knowledge, skills, and abilities to job tasks. Therefore, teams have the ability
to solve complex problems and implement solutions that cannot be accomplished by individuals working alone (Caproni, 2005). Teams have shown to be beneficial in increasing production, creativity, innovation, and morale within organizations (Dess & Miller, 1993; Modrick, 1986). Teams also provide flexibility in rapidly changing environments and relieve organizations from expending resources on individual manager selection, development, and compensation (Caproni, 2005). Research shows that teams are better able at generating knowledge and enhancing task quality and task performance (Tannenbaum, Salas, & Cannon-Bowers, 1996; Moravec, et al., 1998). However, in order for teams to provide organizations with these resources, team members must believe in their team’s ability to succeed (collective efficacy), be motivated to help each other with their tasks (group helping behaviors), and be motivated to remain in the team (group cohesion). Collective efficacy, group helping behaviors, and group cohesion are group outcomes that have demonstrated pervasive effects on group performance. These group outcomes are important because of the strong relationships that have been established. Furthermore, transformational leadership has shown to foster these outcomes. Therefore, the purpose of this study is to see
how transformational leadership can foster these group outcomes and to explore social identification and empowerment as mediators on this process.

Collective Efficacy

Meta analyses have shown that collective efficacy has accounted for much of the variance in predicting work-related outcomes (Gully, Incalcaterra, Joshi, & Beaubien, 2002; Stajkovic & Lee, 2001). Collective efficacy was developed based on Bandura’s (1986) concept of self-efficacy (Kark, Shamir, & Chen, 2003). Bandura (1997) defined self-efficacy as “the belief in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p. 3). Organizational members who have a high sense of self-efficacy are more likely to see difficulties as opportunities, rather than barriers, and are therefore more motivated to succeed in difficult situations (Bandura, 1997). Collective efficacy involves the group members’ perception that they can function effectively and perform its tasks successfully by working together (Kark, Shamir, & Chen, 2003). Organizational members with high collective efficacy are more likely to exert more effort toward a task and persevere in difficult times (Bandura
1986). When collective efficacy is high, people are more willing to cooperate with group members and sustain their efforts until their goals are met (Kark, Shamir, & Chen, 2003). Both self-efficacy and collective efficacy refer to individuals’ perceptions of their capacity for achieving an intended effect. However, at the group level, the shared willingness of followers to intervene for the common good of the group depends on conditions of group level effects.

Teams with high levels of collective efficacy are expected to outperform and persist longer in difficult tasks (Bandura, 1986, 1997; Lindsley, Brass, & Thomas, 1995). Specifically, collective efficacy has been suggested to influence the goals that a team sets, the degree of effort team members put into their work, and the team’s perseverance during difficult times (Gibson, 1999; Seijts, Latham, & Whyte, 2000). Several studies have shown a strong, positive relationship between collective efficacy and group performance in various work group settings (Campion, Medsker, & Higgs, 1993; Guzzo, Yost, Campbell, & Shea, 1993; Hodges & Carron, 1992; Jung & Sosik, 1999; Lichacz & Partington, 1996; Silver & Bufanio, 1996; Spink, 1990b; Prussia & Kinicki, 1996). For instance, Campion, Medsker, and Higgs (1993) found
collective efficacy to be the strongest predictor out of six group effectiveness criteria tested. Lent, Schmidt, and Schmidt (2006) found collective efficacy to be positively related to indicators of team performance at the individual and group levels of analysis. Experimental studies have found collective efficacy as a predictor of group effectiveness (Sosik, Avolio, & Kahai, 1997). Laboratory experiments have demonstrated a positive relationship between group perceptions of collective efficacy and group performance (Prussia & Kinicki, 1996; Whitney, 1994). Meta-analyses have shown moderate correlations between collective efficacy and performance (Gully, Incalcataella, Joshi, & Beaubien, 2002; Stajkovic & Lee, 2001).

Group Helping Behaviors

Organizational citizenship behavior (OCB) has also been found to positively influence organizational performance. OCB involves those "extra-role" behaviors that are discretionary and not directly recognized by an organization's formal reward system (Piccolo & Colquitt, 2006). One example of OCB includes coordinating activities between team members. For instance, voluntarily attending and actively participating in work group meetings and
being in close contact with the marketplace information regarding changes in the environment. Such OCBs enhance organizational performance by giving individuals the ability to suggest ways for improving efficiency and effectiveness (Podsakoff, Ahearne, & MacKenzie, 1997). The dimensions of OCB include altruism, courtesy, cheerleading, peacekeeping, sportsmanship, civic virtue, and conscientiousness (Organ, 1988, 1990). Empirical evidence suggests that cheerleading (i.e., enhancing coworker's efficacy beliefs about their achievements when they are down), peacekeeping (i.e., tolerating less than ideal circumstances without complaining), altruism, and courtesy involve aspects of group helping behaviors (MacKenzie, Podsakoff, & Fetter, 1991, 1993; Podsakoff & MacKenzie, 1994). In general, group helping behavior involves helping others with or preventing the occurrence of work-related problems.

There is plenty of research proposing that helping behavior has positive effects on organizational performance (Borman & Motowidlo, 1993; Brief & Motowidlo, 1986; George & Bettenhausen, 1990; Schnake, 1991; Smith, Organ, & Near, 1983; Karambayya, 1989). There is also empirical research that supports a positive relationship between group helping behaviors and organizational

There is also theoretical literature proposing that group helping behavior leads to group performance. For instance, Devine, Clayton, Philips, Dunford, and Melner (1999) suggest that group helping behavior increases group performance by reducing the conflict within the group. Podsakoff, Ahearne, and MacKenzie (1997) state that group helping behaviors are likely to enhance the quantity and the quality of group performance for group members who are in need of work-related help (Podsakoff, Ahearne, & MacKenzie, 1997). Some group helping behaviors that are likely to contribute to group performance include: (1) helping team members if they fall behind in their work; (2) sharing one’s expertise with other team members; (3) acting civil when other team members have disagreements;
(4) taking steps to prevent problems with other team members; and (5) taking time to help team members who have work-related problems (Podsakoff, Ahearne, & MacKenzie, 1997). Another example of group helping behavior that is likely to contribute to group performance involves making the workplace a more appealing place to work. Team members may accomplish this by enhancing morale, fostering cohesiveness, and refraining from complaining about trivial matters (George & Bettenhausen, 1990). These group helping behaviors enhance productivity by increasing the organization’s ability to attract and retain good performing workers (George & Bettenhausen, 1990; Organ, 1988; Podsakoff, Ahearne, & MacKenzie, 1997).

Although there has been a plethora of theoretical literature proposing that group helping behavior leads to group effectiveness, most empirical research focuses on the relationship between group helping behavior and unit performance. Therefore more empirical evidence on the relationship between group helping behavior and group effectiveness should be conducted.

Cohesion

Meta-analyses show evidence for group cohesion as a major motivating factor that influences team performance
Group cohesion can be defined as the degree to which group members are attracted and motivated to stay with the group (Zaccaro, Blair, Peterson, & Zazanis, 1995). Group cohesion reflects the quality of work-related interactions within the group (Hackman & Oldham, 1974).

Highly cohesive teams are expected to show less absenteeism, be more involved in team activities, and have higher levels of member coordination during team tasks (Morgan and Lassiter, 1992). Group cohesion has shown to be a discriminator between effective and ineffective teams (Swezey & Salas, 1992). Past research has demonstrated that group cohesion improves team performance and functioning (Bass, 1998; Bettenhausen, 1991; Evans & Dion, 1991; Gal, 1985; Sundstrom, DeMeuse, & Futrell, 1990). Meta-analyses show support for a positive relationship between group cohesion and group effectiveness (Evans & Dion, 1991; Mullen & Copper, 1994).

Leadership

In order for teams to be able to gain high perceptions of collective efficacy, be motivated to engage in group helping behaviors, and have group cohesiveness, their team leaders must demonstrate behaviors that promote
the development of such outcomes. Research has shown leadership behaviors to have particular effects on organizational effectiveness (e.g., Avolio & Bass, 1988). Tannenbaum, Weschler, and Massarik (1961, p. 24, as cited in Yukl, 1994) defined leadership as "interpersonal influence, exercised in a situation and directed through the communication process, toward the attainment of a specified goal(s)". Historical and current correlational analyses have shown that leadership greatly influences the success of organizations (Chandler, 1962). Research has shown leaders to make a contribution to organizational members' satisfaction and performance (Bass, 1990). Observational studies have shown leadership to be crucial if they are to maintain competitiveness in the ever-changing work environment (Maccoby, 1979). Studying leadership helps us in having a better understanding of what constitutes leadership effectiveness and what its effects are on organizational members and the organization. Such insight should, in turn, lead to possible ways in training leaders to become more effective. Harris and Lambert (1998) suggested that the transformational and transactional leadership styles offer a set of effective leadership behaviors that assist in the success of teams. But transformational leadership is
suggested to be a better predictor of the outcomes investigated in this thesis (i.e., collective efficacy, group helping behaviors, & group cohesion).

**Transformational Leadership**

Transformational leaders motivate followers to perform beyond their expectations in order to achieve challenging goals (Keller, 1995). Such leaders accomplish this by inspiring followers to trust and identify with the collective in order to be more willing to contribute to the goals of the collective (Pillai, Schreisheim, & Williams, 1999). Specifically, they turn ideal goals into a concrete vision and change followers' values and beliefs in order to change followers' behavior towards the goals and the mission of the organization (Bass & Avolio, 1994). Empirical data has indicated that transformational leadership is related to higher levels of followers' actual and perceived performance, extra effort, and satisfaction compared to transactional leadership style (Sosik, 1997). The results of Bass and Avolio's (1989) study indicated profound effects of transformational leadership compared to transactional leadership. Specifically, several employees rated over 1,500 leaders on the Multifactor Leadership Questionnaire (MLQ), Form 5.
Leaders that were described as being transformational, as opposed to transactional were described as having better relationships with their superiors and making more of a contribution to the organization.

Bass and Avolio (1994) identified four important, interrelated behavioral dimensions of transformational leadership. These include idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Several studies indicate that leaders who portray these behavioral dimensions are seen as more effective than transactional leaders in creating successful teams (e.g., Howell & Avolio, 1993; House & Shamir, 1993 & Jung & Avolio, 1999; Lowe, Kroeck, & Sivasubramaniam, 1996).

Individualized consideration has consistently shown to be highly correlated with subjective and objective measures of leader effectiveness (Bass, 1985; Hater & Bass, 1988; Yammarino & Bass, 1989b). Idealized influence refers to leaders who provide a sense of mission, pride, and strong emotions in followers by proposing an appealing, visionary change (Bass, 1985). Transformational leaders go against the general conformity and present followers with something they need and have yet to be previously given. Such leaders have high standards of
ethical and moral conducts, are held in high personal regard, and bring about great loyalty from their followers (Bass, 1985). Further, transformational leaders gain follower's respect and trust by modeling desirable behaviors that portray personal integrity, diligence, confidence, and commitment (Bass, 1985). Inspirational motivation has shown to consistently correlate with objective measures of leader effectiveness. Inspirational motivation refers to leaders who articulate an attractive, unconventional vision for the future that is based on values and ideals. Such leaders motivate followers by promoting optimism and confidence in the achievement of the vision (Bass & Avolio, 1994). Avolio and Bass (1988) found correlations of .54 and .73 between intellectual stimulation and effectiveness. Intellectual stimulation refers to leaders who empower followers by promoting their intellectual development, as well as the development of the team, and by encouraging them to independently perform challenging tasks (Jung & Sosik, 2002). Such leaders also challenge organizational norms by encouraging different ways of thinking and by encouraging followers to seek new ways to approach problems and challenges (Graham, 1987). Individualized consideration refers to leaders who recognize followers' unique growth and developmental needs
(Jung & Sosik, 2002). By creating strong one-on-one relationships with followers, such leaders are able to appropriately coach and mentor each follower with consideration to their unique growth and developmental needs (Zaleznik, 1977).

Such evidence leads to the proposition that:

- Transformational leadership will have a positive relationship with empowerment.

Theoretical evidence suggests that transformational leaders greatly influence follower’s collective efficacy and social identification. Transformational leaders have a strong, positive influence on follower’s collective efficacy by developing followers’ self-confidence, self-efficacy, and self-esteem (Bass, 1990; Shamir, House, & Arthur, 1993; Yukl, 2002). Avolio, Kahai, Dumdum, and Sivasubramaniam (2001) suggest that transformational leaders enhance collective efficacy by emphasizing a common mission and shared values. By emphasizing such commonalities, transformational leaders are able to inspire followers to see their self-interests as collective interests. Consequently, followers have an enhanced sense of social identification and a raised awareness of other group members’ contribution (Kark & Shamir, 2002; Kark, Shamir, & Chen, 2003). Empirical
evidence suggests that leaders who raise followers’ social identification increase followers’ willingness to contribute to group objectives, which, in turn, enhances followers’ collective efficacy (Shamir, Zakay, Breinin, & Popper, 1998, 2000).

Such evidence leads to the proposition that:

- Transformational leadership will have a positive relationship with collective efficacy
- Transformational leadership will have a positive relationship with social identification

The effects of transformational leadership on organizational citizenship behavior (OCB) are well documented. Transformational leaders communicate a salient vision, motivate followers to see collective interests as personal interests, and set high performance expectations. Such behavior presents more opportunities for followers to participate in group goal setting, which in turn causes followers to identify more with the group and become more willing to engage in group helping behaviors in order to positively contribute to the work environment (Podsakoff, Mackenzie, Moorman, & Fetter, 1990; Yukl, 1998). Many studies show that transformational leadership influences OCBs through trust (Pillai, Schriesheim, & Williams, 1999). One study found transformational leadership to have
a stronger relationship with OCB than that of transactional leadership (MacKenzie, Podsakoff, & Rich, 2001). Meta-analyses show strong and consistent correlations between the transformational leadership dimensions and OCB across organizations (Fuller, Patterson, Hester, & Stringer, 1996; Judge & Piccolo, 2004; Lowe, Kroeck, & Sivasubramaniam, 1996).

Theoretical research suggests that transformational leadership has a positive relationship with group cohesion. For instance, Avolio, Bass, and Jung (1999) suggest that the charismatic component of transformational leadership (i.e. idealized influence) impacts group cohesion through the development of a shared vision within the team. Korsgaard, Schweiger, and Sapienza (1995) suggest that transformational leaders enhance group cohesion through individualized consideration (Korsgaard, Schweiger, & Sapienza, 1995). Further, by enhancing followers' personal and social identification towards the group's mission and goals, transformational leaders cause followers to feel more involved which, in turn, enhances group cohesion (Bass, Avolio, Jung, & Berson, 2003).

Empirical evidence also demonstrates a positive relationship between transformational leadership and group cohesion (Bass, Avolio, Jung, & Berson, 2003; Careless,
Mann, & Wearing, 1995; Jung & Sosik, 2002; Sosik, Avolio, & Kahai, 1997). For instance, many studies have demonstrated that group cohesion mediates the relationship between transformational leadership and performance (Bass, Avolio, Jung, & Berson, 2003; Careless, Mann, & Wearing, 1995; Sosik, Avolio, & Kahai, 1997). The study conducted by Sparks and Schenk (2001) indicated that transformational leaders enhance group cohesion by encouraging them to see the higher purposes in their work. Such evidence leads to the proposition that:

- Transformational leadership will have a positive relationship with group cohesion

Social Identification

Mediators need to be further explored in order to explain why transformational leadership has such profound effects on collective efficacy, group helping behaviors, and group cohesion. Social identification is hypothesized to mediate the positive relationship between transformational leadership and the group outcomes. Social identification can be defined as a process where one’s belief about a group or organization becomes self-defining or self-referential (Pratt, 1998). Social identification occurs when people take pride in being part of a social
group and regard membership as one of their most important social identities (Ashforth & Mael, 1989). Individuals will classify themselves into social groups (e.g., organizational membership, gender, & age cohort) in order to see where they fit in relation to others. They identify themselves with social groups to the extent that they feel they are part of another group that shares similar qualities, goals, or problems (Ashforth & Mael, 1989).

Past research has demonstrated that social identification is positively related to group effectiveness. By enhancing social identification, individuals become more committed to, and are more likely to identify with, the group (Allen, 1996). Hennessy and West (1999) suggest that the more individuals identify with their group, the more motivated they will be to work harder. Identifying with one’s group is said to contribute to the satisfaction of the work and the overall effectiveness of the group (Neilson, 1972).

Empirical research demonstrates that transformational leaders are able to enhance followers’ social identification by changing followers’ values and beliefs (Shamir, Zakay, Breinin, & Popper, 1998, 2000; Yukl, 2006). Specifically, transformational leaders articulate a vision that connects a follower’s self-concept to shared
values, beliefs, behavior norms, and role identities associated with the mission and the group (Conger, Kanungo, & Menon, 2000; Kark & Shamir, 2002; Shamir, House, & Arthur, 1993). Such behavior encourages followers to move toward a larger vision and see their efforts as meaningful to the mission and goals of the group (Avolio, Waldman, & Einstein, 1988; Hall & Schneider, 1972).

Transformational leaders then encourage followers to be actively involved in the goals of the group so followers can have more opportunities to appreciate group accomplishments (Hall & Schneider, 1972; Kark & Shamir, 2002). The more followers appreciate the accomplishments of the group, the more likely followers are to identify with the group.

By emphasizing the rational importance of the mission and the groups' unique abilities to accomplish it, followers are more aware of similarities between group members. Such awareness causes followers to become more willing to contribute to group objectives and, in turn, place the groups' interests above their own (Ashforth & Mael, 1989; Avolio, 1999; Bass, 1998; Organ 1988; O'Reilly & Chatman 1986; Podsakoff, Mackenzie, Moorman, & Fetter 1990; Shamir, Zakay, Breinin, & Popper, 1998, 2000). The more that followers are willing to identify with the
group, the more likely they will trust and respect the group (Walumbwa, Wang, Lawler, & Shi, 2004). Consequently, they will be motivated to work harder for the success of the group and, in turn, engage in group helping behaviors (Hennessy & West, 1999; Podsakoff, Mackenzie, Moorman, & Fetter, 1990; Yukl, 1998). As a result of their trust and respect for the group, followers are also more willing to stay with the group, even in times of tyranny (Bass & Avolio, 1994). Furthermore, research suggests that followers are so motivated to contribute to group objectives because they want to maintain their feelings of self-esteem and self-worth (Shamir, Zakay, Breinin, & Popper, 1998; Shamir, Zakay, Breinin, & Popper, 2000). Individuals base their self-worth and self-esteem partly on their identification with their social group, seeing group successes as personal successes (Mael & Ashforth, 1992). Therefore, group successes should increase collective efficacy and group cohesion (Abrams & Hogg, 1988; Alderfer, 1987; Hogg & Abrams, 1990) to the extent that they identify with their social group (Katz & Kahn, 1978).

Such evidence leads to the proposition that:

- Social identification will have a positive relationship with group helping behaviors
Social identification will have a positive relationship with collective efficacy
- Social identification will have a positive relationship with group cohesion

Empowerment

Empowerment is also hypothesized to mediate the positive relationship between transformational leadership and the group outcomes. Bass (1985) suggested that transformational leaders enhance empowerment by encouraging followers to participate in group work by highlighting the importance of cooperation in group tasks, providing opportunities to learn from the group, and by delegating authority. Consequently, transformational leaders create a work context where followers are empowered to seek new approaches to perform their job without fear of being punished. Previous research has shown team empowerment to be positively related with team performance (Burpitt & Bigoness, 1997; Hyatt & Ruddy, 1997; Kirkman & Rosen, 1999; Wellins, Byham, & Wilson, 1991). Empowerment involves motivating followers by enhancing their efficacy beliefs and intrinsic task motivation (Conger & Kanungo, 1987). Empowered people execute extra-role efforts, are intrinsically motivated to
initiate and complete tasks without direct supervision, and are more committed to the group (Conger & Kanungo, 1987; Eisenberger, Fasolo, & Davis-LaMastro, 1990; Kraimer, Seibert, & Liden, 1999; Spreitzer, 1995).

Empirical evidence suggests that transformational leaders empower followers to be self-motivated and confident in their ability to significantly contribute to their job (Avolio, Zhu, Koh, & Bhatia, 2004; Dvir, Eden, Avolio, & Shamir, 2002). They empower followers by encouraging them to take responsibility for their development and the development of their team members, and in turn, helping them understand what’s important for the success of the group (Kark & Shamir, 2002; Kark, Shamir, & Chen, 2003). Individuals who are more involved in their work are also more likely to have higher levels of group cohesion (Allen & Meyer, 1990, 1996; Jermier & Berkes, 1979; Rhodes & Steers, 1981; Walumbwa & Lawler, 2003). Research suggests that transformational leaders also empower followers by enhancing their self-efficacy, self-esteem, and self-worth and by realigning their values with an unconventional vision (Kark, Shamir, & Chen, 2003; Kirkpatrick & Locke, 1996; Shamir, House, & Arthur, 1993; Shamir, Zakay, Breinin, & Popper, 1998; Yukl, 1998). Followers are then motivated to internalize the beliefs
and values of the leader and become empowered to cooperate among other group members (Jung & Avolio, 2000; Shamir, House, & Arthur, 1993). In doing so, followers become intrinsically motivated to carry out tasks, have common expectations, a shared identity, and, in turn, enhanced group cohesion and perceptions of collective efficacy (Jung & Avolio, 1999). Therefore, followers will have higher perceptions of group cohesion and collective efficacy to the extent that they are empowered to adopt the leader’s vision.

Such evidence leads to the proposition that:

- Empowerment will have a positive relationship with group cohesion
- Empowerment will have a positive relationship with collective efficacy

Meta-analyses have shown strong and consistent correlations between the transformational leadership dimension and OCB (Fuller, Patterson, Hester, & Stringer, 1996; Judge & Piccolo, 2004; Lowe, Kroeck, & Sivasubramaniam, 1996). Research has shown transformational leadership to influence OCBs by promoting trust in the leader (Podsakoff, Mackenzie, Moorman, & Fetter, 1990) and by getting followers to perform beyond their expectations (Bass, 1985). Specifically, social
identification causes individuals to become more intrinsically motivated to place the groups interests above their own (Ashforth & Mael, 1989; Avolio, 1999; Bass, 1998; Shamir, Zakay, Breinin, & Popper, 1998, 2000; O’Reilly & Chatman 1986; Organ 1988; Podsakoff, Mackenzie, Moorman, & Fetter, 1990) and, in turn, engage in group helping behavior (Podsakoff, Mackenzie, Moorman, & Fetter, 1990). Wang, Law, Hackett, Wang, and Chen (2005) suggest that intrinsically motivated individuals are more likely to contribute to group goals via group helping behaviors because they have a desire to maintain their self-worth and self-concepts. Therefore, social identification is hypothesized to positively influence group helping behavior.

Such evidence leads to the proposition that:

- Social identification will have a positive relationship with group helping behaviors

Literature on the job characteristics theory provides support that followers are more likely to be intrinsically motivated if they view their job as challenging, important, and autonomous (e.g., Fried & Ferris, 1987). Transformational leaders evoke such perceptions by creating an empowered environment (Bass, 1985). This can be accomplished by expressing meaningfulness, competence,
and impact with followers (Spreitzer, 1995). Transformational leaders enhance follower's perceptions of autonomy through intellectual stimulation (Piccolo & Colquitt, 2006). Specifically, they encourage followers to seek new perspectives and generate many new ways to approach problems and challenges by being creative, open minded, and critical to the way things are currently done (Graham, 1987). They also encourage followers to be rational by thinking of consequences before taking action (Hater & Bass, 1988). Transformational leaders also enhance follower's perceptions of autonomy through individualized consideration (Piccolo & Colquitt, 2006). They coach and train followers with respect to their individual needs. Specifically, they create strong one-on-one relationships with followers, allowing leaders to fulfill the different needs of each follower depending on his or her need for autonomy, encouragement, support, responsibility, structure, and instructions. Such leaders listen well, prompt for feedback, and encourage suggestions within the team (Dyer, 1995; Oser, McCallum, Salas, & Morgan, 1989; Stevens & Camion, 1994; Swezey & Salas, 1992; Zander, 1994). Transformational leaders enhance follower's perceptions of job significance through idealized influence and inspirational motivation (Piccolo
& Colquitt, 2006). Specifically, they emphasize moral and ethical consequences and communicate an inspirational vision of the future and the group's unique abilities to accomplish it.

Such evidence leads to the proposition that:

- Empowerment will have a positive relationship with group helping behavior

The purpose of this thesis is to investigate the effects of transformational leadership on the group outcomes discussed in this thesis, to see how transformational leadership can foster these group outcomes, and to explore potential mediators (social identification and empowerment) on this process. Collective efficacy, group helping behaviors, and group cohesion are the group outcomes that have demonstrated pervasive effects on group performance. These group outcomes are important because of the strong relationships that have been established. Several studies have shown a strong, positive relationship between collective efficacy and group performance in various work group settings (e.g., Jung & Sosik, 1999; Prussia & Kinicki, 1996). There is also a plethora of research proposing that group helping behavior has positive effects on performance quantity and quality (e.g., Devine et al., 1999; Podsakoff
et al., 1997). Additionally, research has demonstrated that cohesion improves team performance and functioning (e.g., Bass, 1998; Weaver et al., 1997).

Transformational leadership has shown to greatly foster these group outcomes. Empirical data has indicated that transformational leadership is related to higher levels of followers’ actual and perceived performance, extra effort, and satisfaction (e.g., Sosik, 1997). Research shows that transformational leadership enhances collective efficacy by emphasizing a common mission and shared values, as well as by developing followers’ self-confidence, self-efficacy, and self-esteem (e.g., Avolio et al., 2001; Yukl, 2002). Empirical evidence shows that transformational leadership increases the likelihood that followers will engage in group helping behaviors by raising followers’ social identification, thus increasing followers’ willingness to contribute to group objectives (e.g., Shamir et al., 1998, 2000). Research also shows that transformational leaders enhance group cohesion by emphasizing group commonalities and inspiring followers to see their self-interests as collective interests (e.g., Kark & Shamir, 2002; Kark et al., 2003).

Mediators need to be further explored in order to explain why transformational leadership has such profound
effects on collective efficacy, group helping behaviors, and group cohesion. Social identification is hypothesized to mediate the positive relationship between transformational leadership and the group processes collective efficacy, group helping behaviors, and group cohesion. Past research has demonstrated that social identification is positively related to group effectiveness (e.g., Hennessy & West, 1999). Empirical research suggests that transformational leadership enhances social identification by changing followers' values and beliefs (e.g., Conger et al., 2000; Kark & Shamir, 2002). Research also shows that transformational leaders enhance collective efficacy and group cohesion by emphasizing the rational importance of the mission and the groups' unique abilities to accomplish it, thus causing followers to be more likely to place the groups interests above their own (e.g., Avolio, 1999; Shamir et al., 1998, 2000). Additionally, research shows that transformational leaders increases the likelihood that followers engage in group helping behaviors by inspiring followers to identify with the group, thus trusting and respecting the group (e.g., Bass & Avolio, 1994; Walumbwa, et al., 2004). Therefore, transformational leaders should enhance these
group outcomes to the extent that they identify with their social group.

Empowerment is also hypothesized to mediate the positive relationship between transformational leadership and the group processes collective efficacy, group helping behaviors, and group cohesion. Previous research has shown team empowerment to be positively related with team performance (e.g., Burpitt & Bigoness, 1997; Kirkman & Rosen, 1999). Empirical evidence has shown that transformational leaders empower followers by inspiring them to be self-motivated and confident in their ability to significantly contribute to their job (e.g., Avolio et al., 2004; Dvir et al., 2002). Research also suggests that transformational leaders enhance collective efficacy and group cohesion by empowering them to be involved in their work and cooperate among other group members (Jung & Avolio, 2000; Walumbwa & Lawler, 2003). Additionally, research suggests that transformational leaders increase the likelihood that followers engage in group helping behaviors by giving followers autonomous, challenging, and important job tasks and by empowering followers to perform beyond their expectations (Podsakoff et al., 1990). Therefore, transformational leaders should enhance these group outcomes to the extent that they are empowered.
Hypotheses

- Social identification will mediate the positive relationship between transformational leadership and group cohesion

- Social identification will mediate the positive relationship between transformational leadership and collective efficacy

- Social identification will mediate the positive relationship between transformational leadership and group helping behaviors

- Empowerment will mediate the relationship between transformational leadership and group cohesion

- Empowerment will mediate the positive relationship between transformational leadership and collective efficacy

- Empowerment will mediate the positive relationship between transformational leadership and group helping behavior

Please see Appendix C, figure 1 for the hypothesized model for transformational leadership and the group outcomes.
CHAPTER TWO

METHOD

Participants

Approximately 90% of the data were collected from a large school district with the remainder of the data coming from a large manufacturing industry. The targeted sample was organizational group members. Prerequisites for the targeted group include that group members have at least three individuals total in their group, are aware that they are in a group, report to an immediate team manager or supervisor, and are in a group that has stable membership. There were no restrictions in age, ethnic background, or sex. The sample contained 90 individuals, including 22 males and 68 females. Respondent’s age ranged from 22 to 62, with the average age being 39. The ethnicities of this sample included 48 whites, 15 African Americans, 4 Filipinos, 2 Koreans, 1 Vietnamese, 14 Hispanics, and 6 unspecified. The sample included 80 full-time and 10 part-time employees. The number of members in the respondent’s workgroup ranged from 3 to 50, with the average number of team members being 9. The number of managers that respondent’s report to ranged from
1 to 7, with the average number of managers being 2, and the median being 1.

Procedure

The participants were asked to complete a demographic sheet and scales for the six measures mentioned in the measures section on www.surveymonkey.com. These six scales were arranged in six counterbalanced orders with the demographic questions at the beginning. No order effect was detected. The scores across the variables were similar for the scales presented in different counterbalanced orders; therefore no order effect was detected. Each of the six counterbalanced scales had their own link, which was equally distributed among all 90 participants. Before responding to the surveys, participants were informed about the purpose of the study and told that their responses would be kept confidential. Participants had the opportunity to receive feedback on the results, upon their request.

Measures

Collective Efficacy

A 7-item scale from Riggs et al. (1994) was used to measure collective efficacy. The overall Cronbach’s alpha for this scale is .88. The overall reliability would not
significantly decrease if an item were deleted, so no items were deleted. Responses were made on a 6-point Likert-type scale from 1 (*strongly disagree*) to 6 (*strongly agree*).

The mean was used as the index to indicate collective efficacy. The items that were worded in negative directions (items 2, 3, 5, 6) were reverse coded so that a higher score would indicate a higher degree of confidence that participants have in their group's work-related ability. The participants' responses to the seven items were then averaged yielding a mean score that could range from 1 (low collective efficacy) to 6 (high collective efficacy).

**Group Helping Behaviors**

Williams and Anderson’s (1991) 7-item scale was used to measure the extent to which each employee engages in group helping behaviors directed toward the organization and coworkers in their workgroup. The overall Cronbach's alpha for this scale is .90. The overall reliability would not significantly decrease if an item were deleted, so no items were deleted. The measure was based on the conceptual work of Organ (1988, 1990) and the empirical research of MacKenzie, Podsakoff and Fetter (1991, 1993), Podsakoff and MacKenzie (1994), and Podsakoff, Mackenzie,
Moorman, and Fetter (1990). Ratings were obtained on a 7-point Likert-type scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). The mean was used as the index to indicate group helping behaviors. Participants responded to the seven items were averaged yielding a mean score that could range from 1 (low group helping behaviors) to 7 (high group helping behaviors). High scores indicate that the participant engages in group helping behaviors directed toward the organization and coworkers in their workgroup more frequently.

**Group Cohesion**

Carron et al.'s (1985, 1988) 23 item modified version of the Group Environment Questionnaire was used to measure the degree to which each employee perceives the cohesiveness of their workgroup. The overall Cronbach’s alpha for this scale is .92. This instrument measures group-social cohesion, individual-social cohesion, group-task cohesion, and individual-task cohesion. This instrument was originally designed to measure cohesion in sports groups (Carron, 1982; Carron, Widmeyer & Brawley, 1985, Carron, Widmeyer, & Brawley, 1988). It was modified and expanded to facilitate its application across a variety of different groups.
The mean was used as the index to indicate group cohesion. The items that were worded in negative directions (items 1, 2, 5, 10, 11, 13, 14, 15, 23) were reverse coded so that a high score would indicate that the employee feels he or she works in a cohesive group. Participants' responses to the 23 items were then averaged yielding a mean score on a 7-point Likert-type scale ranging from 1 (strongly agree) to 7 (strongly disagree). The following are sample items: “The close relationships among members are an important aspect of this group” (group social cohesion); “Some of my best friends are in this group” (individual social cohesion); “My group as a whole, emphasizes accomplishing specific group tasks” (group task cohesion); “This group does not give me enough opportunities to improve my personal performance” (individual task cohesion).

Transformational Leadership

Bass and Avolio's (1994) 28-item Multifactor Leadership Questionnaire (MLQ) was used to measure transformational leadership behaviors of team managers and supervisors. The overall Cronbach's alpha for this scale is .94. The overall reliability would not significantly decrease if an item were deleted, so no items were deleted. Construct validity of the MLQ, using Confirmatory
Factor Analysis, has been shown (cf. Avolio, Bass, & Jung, 1999). Ratings were obtained on a 5-point Likert-type scale ranging from 0 (Not at all) to 4 (Frequently, if not always). A N/A option is also included for “do not know” or “not applicable” responses. The N/A responses were not included when the mean score for the 28 items was calculated.

All internal consistencies of the original scale are relatively high. The overall internal consistency of the original scale is .95. The internal consistency for the transformational leadership dimension is .93 (20 items). The internal consistency for the transactional leadership dimension is .79 (8 items). The internal consistencies of the sub-scales are .87 (charisma), .79 (individualized consideration), .86 (intellectual stimulation), .82 (inspirational motivation), .79 (contingent reward), and .84 (management-by-exception).

The mean was used as the index to indicate transformational leadership. Participants responded to the 20 transformational items were averaged yielding a mean score that could range from 1 (low transformational leadership) to 4 (high transformational leadership). High scores indicate that employees perceive their team manager
or supervisor as portraying a higher degree of transformational leadership behaviors.

Social Identification

Kark, Shamir, and Chen’s (2003) 10-item scale was used to measure the degree to which group members identify with their workgroup. The overall Cronbach’s alpha for this scale is .92. The items were adopted from identification measures developed by Mael and Ashforth (1992) and Shamir, Zakay, Breinin, and Popper (1998). Ratings were obtained on a 7-point Likert-type scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). The items focus on the branch or department that each employee works in.

The mean was used as the index to indicate social identification. Participants responded to the 10 items were averaged yielding a mean score that could range from 1 (low social identification) to 7 (high social identification). High scores indicate that the employee has a higher degree of identification with their workgroup.

Empowerment

Spreitzer’s (1995) 12-item scale was used to measure follower’s perception of psychological empowerment. The overall Cronbach’s alpha for this scale is .88. The
overall reliability would not significantly decrease if an item were deleted, so no items were deleted. The scale is based on the dimensions of meaningfulness (items 1-3), competence (items 4-6), self-determination (items 7-9), and impact (items 10-12). Competence items were adapted from Jones’ (1986) self-efficacy scale. Impact items were adapted from Asforth’s (1989) helplessness scale. Meaning items were obtained from Tymon’s (1988) scale. Self-determination items were adapted from Hackman and Oldham’s (1974) autonomy scale. Ratings were obtained on a 7-point Likert-type scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). The mean was used as the index to indicate empowerment. Participants responded to the 12 items were averaged yielding a mean score that could range from 1 (low empowerment) to 7 (high empowerment). High scores indicate that employees feel a higher sense of empowerment in their workplace.
CHAPTER THREE

RESULTS

The data were screened for normality prior to testing the hypotheses. Scatterplots were created and the relationships among the pairs of measured variables in residual plots were inspected. Collective efficacy was found to be the only non-linear variable. Histograms were also computed in order to detect normality for each of the variables within the six scales by comparing the data to the normal curve and looking at the skewness of each variable. Skewness and kurtosis tests were performed on the main variables at the average of items. Empowerment was found to be slightly skewed (skewness coefficient = 3.98). No variables were found to have kurtosis. The minimal skewness that was found would not affect the analyses and there was less than 5% missing data; therefore, no transformations were made.

Descriptives and frequencies were then run. No outliers were present. Frequencies were also run on employment (part vs. full-time), sex, and ethnic background. No variables were deleted because none of the categorical variables violated the 90-10 split. A table was generated reporting a summary of the means and the
standard deviations of all the variables (shown below in Table 1). Participants rated the transformational leadership variable on a 0-4 scale, the collective efficacy variable on a 1-6 scale, the group helping behaviors variable on a 1-7 scale, the group cohesion variable on a 1-7 scale, the social identification variable on a 1-7 scale, and the empowerment variable on a 1-7 scale.

Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
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<td>.941</td>
</tr>
<tr>
<td>Group Cohesion</td>
<td>4.61</td>
<td>.889</td>
</tr>
<tr>
<td>Empowerment</td>
<td>5.48</td>
<td>.801</td>
</tr>
<tr>
<td>Collective Efficacy</td>
<td>3.89</td>
<td>.954</td>
</tr>
<tr>
<td>Social Identification</td>
<td>5.21</td>
<td>1.02</td>
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<tr>
<td>Group helping behaviors</td>
<td>5.43</td>
<td>.971</td>
</tr>
<tr>
<td>Managers or Supervisors</td>
<td>1.72</td>
<td>1.04</td>
</tr>
<tr>
<td>Members in Workgroup</td>
<td>9.42</td>
<td>7.98</td>
</tr>
</tbody>
</table>

Mahalobis distance was also looked at to check for multivariate outliers. The Mahalobis distance value was found to be 22.458. There was only one value outside of this range. This value was taken out to see if it would make a significant change and it did not, therefore this value was not deleted. Multicollinearity was not present.
Correlations

In order to examine the interrelationships among the variables, correlations between the predictor variable (transformational leadership) and each of the mediating variables (empowerment and social identification) and each of the criterion variables (collective efficacy, group helping behaviors, and group cohesion) were calculated. Moreover, correlations between each of the mediator variables and each of the criterion variables were calculated. The resulted correlation matrix is given in Appendix D. Most hypothesized relationships were supported. In regard to the relationships between the predictor variable and the mediating variables and the criterion variables, transformational leadership was significantly correlated with empowerment, social identification, group helping behaviors and group cohesion, but was not significantly correlated with collective efficacy. In regard to the relationships between each of the mediator variables and each of the criterion variables, empowerment was significantly correlated with group helping behaviors and group cohesion, but was not significantly correlated with collective efficacy. Social identification was
significantly correlated with group helping behaviors, group cohesion, and collective efficacy.

EQS Analysis

EQS was used to test the fit of the hypothesized model. The hypothesized model includes the following six factors: transformational leadership, social identification, empowerment, collective efficacy, group helping behaviors, and group cohesion. The group outcomes include collective efficacy, group helping behaviors, and group cohesion. The study was conducted at the individual level of analysis, but looked at group level concepts. The model hypothesized that transformational leadership predicts group cohesion, collective efficacy, and group helping behaviors with social identification and empowerment mediating this process. The hypothesized model is presented in Figure 1 (see Appendix C, Figure 1). In the figure, the rectangles represent measured variables. Even though an EQS was performed, a factor analysis of latent variables was not performed because the sample size did not allow for that type of analysis and because each of the measures was previously established in the literature and factor analyzed.
The dataset contains responses from 90 organizational team members with no missing data. None of the variables were significantly skewed or kurtotic. The DETERMINANT OF INPUT MATRIX is 0.589. Results indicated that singularity is present. There were no univariate or multivariate outliers. There was evidence that both univariate and multivariate normality were violated. Mardia's Normalized coefficient = 5.26, p < .001, so the robust output was used. The models were estimated with maximum likelihood estimation and tested with chi-square. A comparative fit index (CFI) was computed and indicated that the hypothesized model represents a poor fit of the sample data. Poor support was found for the hypothesized model Satorra Bentler $\chi^2(15, N = 90) = 71.0, p < .05$, Robust CFI = .73, $\chi^2(7, 90) = 44.64, p < .001$

On the basis of the Lagrange Multiplier test, and theoretical evidence, the direct effect of transformational leadership on the outcomes was then added (i.e., the pathways between transformational leadership and the outcome variables without the mediators). The fit increased, but was still poor, Satorra-Bentler $\chi^2(15, N = 90) = 73.8, p < .05$, Robust CFI = .75, $\chi^2(5, 90) = 44.643, p < .001$. 

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Based on the Wald test, the mediating effects of empowerment on all of the outcomes were dropped. The model still did not reach a fit at a critical level, Satorra-Bentler $\chi^2(15, N = 90) = 83.7$, $p < .05$, Robust CFI = .87, $\chi^2(7, 90) = 27.80$, $p < .001$. Considering the model did not fit, there are other sources of variance that are not accounted for.

Additional Analyses

An ANOVA was run to test the potential differences between the group outcomes as a result in the differing numbers of supervisors who employees reported to. Results are as follows. There are no significant mean differences in group helping behaviors as a result in employees who reported having one supervisor (mean = 5.47) and employees who reported having two or more supervisors (mean = 5.40). There are no significant mean differences in group cohesion as a result in employees who reported having one supervisor (mean = 4.60) and employees who reported having two or more supervisors (mean = 4.52). There are no significant mean differences in collective efficacy as a result in employees who reported having one supervisor (mean = 3.91) and employees who reported having two or more supervisors (mean = 3.86). These analyses indicate
that there are no significant differences in the group outcomes as a result of the number of supervisor’s employees reported to; therefore, error was not introduced into the results as a result of the differing numbers of supervisors employees reported to.

An ANOVA was also run to test the potential differences between the group outcomes as a result in the differing numbers of individuals who were in employees’ work groups. Results are as follows. There are no significant mean differences in group helping behaviors as a result in employees who reported being apart of a small (mean = 5.62), medium (mean = 5.52) and large group (mean = 5.05). There are no significant mean differences in group cohesion as a result in employees who reported being apart of a small (mean = 4.62), medium (mean = 4.58) and large group (mean = 4.47). There are no significant mean differences in collective efficacy as a result in employees who reported being apart of a small (mean = 4.00), medium (mean = 3.95) and large group (mean = 3.65). These analyses indicate that there are no significant differences in the group outcomes as a result of the number of individuals that were in each group; therefore, error was not introduced into the results as a
result of the differing numbers of individuals who were in employees' work groups.
CHAPTER FOUR
DISCUSSION

This study investigated the effects of transformational leadership on collective efficacy, group cohesion, and group helping behaviors, and explored the potential mediators of social identification and empowerment on this process. The study was conducted at the individual level of analysis, but looked at group level concepts. Among the various elements of organizational context, transformational leadership was chosen to be the focus because theoretical evidence suggests that this leadership style has profound effects on organizational success. Leadership is the variable that organizes employees and allows the organization to stay competitive (Bass, 1997). Leadership is even more important now than ever because many organizations are composing teams to maintain competitiveness (Harris & Lambert, 1998), which is what brought about the primary research question for this study: "What are the key behaviors of managers that allow them to successfully foster profound team outcomes?"

A conceptual model was developed in order to integrate and extend the knowledge we have on managerial
behaviors that exhibit positive team outcomes. This study attempted to present a comprehensive model that can be used to guide future research and practice.

First, correlations were conducted to look at the relationship between transformational leadership, social identification, empowerment, collective efficacy, group cohesion, and group helping behaviors. Second, structural equation modeling provided data with regards to the indirect relationships between the factors of the six variables. The following section discusses the results for the correlations.

The correlations supported the hypotheses that proposed a positive relationship between transformational leadership, the group outcomes, and the mediators on this process. This provides empirical evidence for the connection of the leadership behaviors to organizational team outcomes.

There is not a good fit between the data and the proposed model, so the hypothesized model was rejected. Specifically, even though transformational leadership is related to empowerment and social identification, neither is accounting for the relationship between transformational leadership and the group outcomes. Therefore, there are other variables that are accounting
for this variance. The results showed that empowerment is related to transformational leadership, but it does not predict the outcomes (collective efficacy, group cohesion, and group helping behaviors). The hypothesized model was modified due to the results of the EQS analysis (see Appendix C, Figure 2).

There are a few possible reasons why these findings were not as hypothesized. Consistent with past research, results of this study showed transformational leadership to have an effect on empowerment and social identification. Conversely, empowerment did not have an effect on the group level outcomes. A possible reason for these results may be that empowerment has an individual, rather than a group, effect on the group outcomes; empowerment may not be group directed. For instance, empowerment may be affecting individual outcomes such as self-efficacy and self-motivation. This is logical because empowered people are intrinsically motivated to independently initiate and complete their own tasks (Conger & Kanungo, 1987); therefore, not needing to remain in, feel confidence in, or be compelled to help their group. Consistent with this rationale, social identification was related to the group outcomes because it causes team members to identify with their group and
view group membership as one of their most important social identities (Ashforth & Mael, 1989). Placing such an importance on group membership (i.e., perceiving social identification) further motivates group members to stay in the group (i.e., enhances perceptions of group cohesion). Individuals are also more likely to engage in group helping behaviors to benefit groups they hold in such high regard. Moreover, group members who are in groups that engage in such behavior, in turn, tend to perceive that they can function effectively and perform its tasks successfully by working together (i.e., have higher perceptions of collective efficacy).

The sample could be another reason why the findings were not as hypothesized. The majority of the respondents in this study have more than one manager, ranging from 1 to 7 managers, with the average number of managers being 2. In order to appropriately assess the group outcomes, respondents were asked to rate how frequently their current immediate team manager has displayed a series of behaviors. Considering that the respondents had many managers, it is likely that some reported on managers who they are not directly supervised by or work with. Therefore, employees would be rating on managers that do not have a direct effect on their group outcomes. Such
ratings would introduce error into the results and weaken the relationship between transformational leadership and the group outcomes.

Limitations

There are some limitations that explain for some of the error that was introduced into the results of the EQS and correlational analyses. Approximately ninety percent of the sample was collected from an organization that was undergoing major transitions. Specifically, during the administration of the surveys, team members were being transferred to other teams and team leaders were being assigned to new teams. Such transition introduces error into the study’s results because some team members may not have known their leaders long enough; as a result, their perceptions of their leaders may not be accurate and thus their ratings may not reliably reflect their managers' leadership styles. Additionally, new team leaders might have had different managerial styles than what the team members are use to. Consequently, team members might not have had enough yet to adjust to the new leadership style, which, in turn, could have caused team members to give biased and/or inaccurate ratings for the perceptions of their leaders.
Furthermore, new team members might not have had sufficient time to know their team members. Therefore some team members may not have known their team members long enough; as a result, their perceptions of their team members may not be accurate and thus their ratings may not reliably reflect their groups’ outcomes. For instance, some team members may not have had enough time to accurately assess the efficacy of their team (collective efficacy), have an attachment to their team, build motivation to stay with their team (group cohesion), identify with their team (social identification), or feel a sense of empowerment being in their team. In addition, new team members are less likely to engage in group helping behaviors because they most likely have not become close enough to their team to be sufficiently motivated to go out of their way and help.

Past research suggests that Organizational Citizenship Behaviors (OCBs) should be distinguished and measured according to the target of the behavior (McNeely and Mehlito, 1994; Lee & Allen, 2002; Podsakoff et al., 2000; Organ & Konovsky, 1989; Williams & Anderson, 1991). OCBs can either be individual-targeted or organizational-targeted. According to Podsakoff et al. (2000), individual-targeted OCBs directly benefits
specific individuals (e.g., supervisor or team members) and is more likely to be portrayed when performance is important to the supervisor. This dimension incorporates group helping behaviors. According to Williams and Anderson (1991), organizational-targeted behaviors directly benefit the organization and are more likely to be portrayed when performance is important to the organization. This dimension incorporates such behaviors as creativity and innovativeness. Therefore, the relative importance of group helping behaviors might depend on whether individual-targeted or organizational-targeted citizenship behavior is being considered. The findings regarding group helping behavior may not have been as hypothesized because the current study combined individual-targeted and organizational-targeted citizenship behavior. Future research should have two subtests that distinguish between the targeted behaviors.

The organizations sampled have a large workload, so there is a pressure for employees to remain productive. Therefore, there was likely pressure placed on employees to finish the surveys in a timely manner. This is a problem because filling surveys out too quickly potentially introduces extraneous error into the results of the EQS and correlational analyses.
Implications

Because the fit never reached a critical level, there are other mediators and outcomes that should be explored. A potential mediator that should be explored is the reward system a leader implements. Specifically, future research should look at whether the leader administers rewards (e.g., promotions, desirable work assignments, and praise) that are contingent on team, rather than individual, performance. According to Howell et al. (1986), leaders have a more powerful impact on their employees when leaders reward employees based on employee performance. Several studies have shown that individuals express more organizational cohesion when given rewards based on their performance (Bryne, 1971; Bryne & Clore, 1970; Yammarino, Spangler, & Dubinsky, 1998). Therefore, rewarding team performance should, in turn, enhance group cohesion. Additionally, if leaders reward for team performance then team members are more likely to engage in group helping behaviors to ensure the success of their team. Team members are also likely to view rewards as team success, which, in turn, should enhance collective efficacy once the rewards are received. In sum, exploring how leaders administer rewards is meaningful because of the positive effects that rewards may have on group outcomes.
Another potential mediator that should be explored is employee’s perceptions of their leader’s expertise. Prior research indicates that leaders with little expertise have a significantly smaller influence on their follower’s behavior (Podsakoff, Todor, & Schuler, 1983). Therefore, leader’s expertise should be explored as a mediator because leaders who are highly experienced should have more of an influence on group outcomes.

One potential outcome that should be explored is social loafing. Social loafing involves individuals having a tendency to put forth less effort when working on a collective task because their team and/or supervisor do not recognize their efforts (Karau & Williams, 1993). Social loafing is likely to occur when a group members’ work is anonymous and when leaders evaluate the group’s contribution instead of each individual contribution. According to Harkins and Szymanski (1989), transformational leaders are able to reduce the likelihood that social loafing will occur. According to Sheppard (1993), transformational leaders are able to decrease the likelihood of social loafing through inspirational motivation and individualized consideration. Specifically, transformational leaders change employee perspectives by helping each employee to realize the importance of his/her...
task and that contribution from all group members is necessary for effective performance. Social loafing is problematic because it causes a decline in employee participation and cooperation, and, in turn, employee performance. Because managers with a transformational leadership style may curb the negative effects of social loafing, social loafing should be explored as a group outcome.

Another potential outcome that should be explored is team creativity. Butler (1999) suggests that a sense of trust among team members provides a climate for creativity. Transformational leaders are able to establish trust among team members by creating a work context where team members are empowered to seek unconventional approaches to perform their job without fear of being punished (Bass, 1985). Scott and Bruce (1994) state that such individuals are comfortable enough to have open communication and emotional sensitivity for others ideas, which are essential for the expression of creative ideas. Because managers with a transformational leadership style may enhance team creativity, team creativity should be explored as a group outcome.

Even though the EQS model was not supported, important correlations were indicated. Transformational
leadership is strongly correlated with empowerment, social identification, collective efficacy, group cohesion, and group helping behaviors. Social identification and empowerment are both strongly correlated with the group outcomes. This knowledge has many practical implications.

There is plenty of theoretical support that indicates a positive relationship between transformational leadership and these group outcomes. But there is insufficient empirical evidence showing this connection. Therefore, these results establish an empirical connection between transformational leadership and these group outcomes.

These results suggest for organizations to select supervisors who portray transformational leadership behaviors to manage organizational teams. Organizations should also develop training programs that are based on specific behaviors and skills of transformational leaders that would enable managers and supervisors to adapt to change and create more productive teams. Such supervisors would be able to foster empowerment, social identification, collective efficacy, group cohesion, and group helping behaviors.

Transformational leaders motivate followers to perform beyond their expectations in order to achieve
challenging goals. Such leaders are able to foster empowerment by encouraging followers to enhance their own intellectual development and to independently seek new approaches to performing challenging tasks. Transformational leaders are able to foster social identification by encouraging followers to be actively involved in the goals of the group, and by articulating a vision that connects a follower’s self-concept to shared values, beliefs, behavior norms, and role identities associated with the mission and the group. Such leaders are able to foster collective efficacy by emphasizing a common mission and shared values, and by developing followers’ self-confidence, self-efficacy, and self-esteem. Transformational leaders are able to foster group cohesion by developing a shared vision within the team and by offering opportunities for team members to work together on common tasks. Such leaders are able to foster group helping behaviors by presenting more opportunities for followers to participate in group goal setting and by motivating followers to see collective interests as personal interests.

All group outcomes are correlated; therefore it is likely that by fostering one of the group outcomes, transformational leaders are likely to be indirectly
enhancing other group outcomes. This is important because of the strong relationships that have been established between these group outcomes and organizational performance. When collective efficacy is high, team members perceive they can effectively perform their tasks by working together and are therefore more willing to cooperate with, and engage in group helping behaviors towards their team members. Such interactions provide team members with the opportunity to relate to, as well as be more involved in, the group and, in turn, feel higher levels of group cohesion. In addition, team members who are attracted and motivated to stay with the group are more likely to engage in group helping behaviors and, in turn, see group successes as personal successes, thus enhancing their collective efficacy beliefs. Results supported these proposed correlations, indicating that collective efficacy, group helping behavior, and group cohesion are correlated.

The work environment is growing faster and changing more than ever, causing the need for organizations to be more flexible and responsive than ever. Therefore, it is necessary to have managers and supervisors to demonstrate transformational leadership styles in order to create more effective team outcomes.
APPENDIX A

INFORMED CONSENT OF THE STUDY
The study in which you are being asked to participate in is designed to investigate the relationship between leadership styles and organizational group outcomes. Kevin Karlak is conducting this study under the supervision of Dr. Gilbert, professor of psychology. This study has been approved by the Institutional Review Board, California State University, San Bernardino.

In this study you will be asked to rate the degree to which you agree with several descriptive statements regarding your organizational group and your immediate team manager or supervisor. This questionnaire should take about 15 to 30 minutes to complete. All of your responses will be held in the strictest of confidence by the researchers. Your name will not be reported with your responses. All data will be reported in group form only. Group results from this study will be available from Dr. Gilbert (909-537-5587) after June 1, 2007.

Your participation in this study is completely voluntary. You are free not to answer any questions and withdraw at any time during this study without penalty. When you have completed the questionnaire, you will receive a debriefing statement describing the study in more detail. In order to ensure the validity of the study, we ask that you not discuss this study with other coworkers or other participants. Participating in this study brings no risks beyond those of daily life and only the benefit of contributing to scientific research.

If you have any questions or concerns about this study, feel free to contact Dr. Gilbert at 909-537-5587.

By placing a check mark in the box below, I acknowledge that I have been informed of, and that I understand, the nature and purpose of this study, and I freely consent to participate. I also acknowledge that I am at least 18 years of age.

Place a mark here: __________

Today's date: __________
APPENDIX B

QUESTIONNAIRES
SECTION I: COLLECTIVE EFFICACY

Please rate the degree to which you agree with the following descriptive statements regarding your work group.

The rating scale is as follows:

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<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Agree Somewhat</th>
<th>Disagree</th>
<th>Disagree Somewhat</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. The department I work with has above average ability.
2. This department is poor compared to other departments doing similar work.
3. This department is not able to perform as well as it should.
4. The members of this department have excellent job skills.
5. Some members of this department should be fired due to lack of ability.
6. This department is not very effective.
7. Some members in this department cannot do their jobs well.
SECTION II: GROUP HELPING BEHAVIORS

Please rate the degree to which you agree with the following descriptive statements regarding your work group.

The rating scale is as follows:

<table>
<thead>
<tr>
<th>Very Strongly Disagree</th>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Very Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

Members of my group...

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Help each other out if someone falls behind in his/her work</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Willingly share their expertise with other members of the crew</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Try to act like peacemakers when other crew members have</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>disagreements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Take steps to try to prevent problems with other crew members</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Are willingly to give their time to help crew members who have</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>work-related problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>“Touch base” with other crew members before initiating actions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>that might affect them</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Encourage each other when someone is down</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>


SECTION III: TRANSFORMATIONAL LEADERSHIP

Please rate the degree to which you agree with the following descriptive statements regarding your current immediate team manager or supervisor. For each statement, please judge how frequently your current immediate team manager or supervisor has displayed the behavior described. Then circle the appropriate rating that corresponds to your judgment. When the item is irrelevant or does not apply, or where you are uncertain or do not know, please check “N/A” section.

The rating scale is as follows:

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Once in a while</th>
<th>Sometimes</th>
<th>Fairly Often</th>
<th>Frequently if not always</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

The person I am rating...

<p>|   |                                                                 |   | 0 | 1 | 2 | 3 | 4 |
|---|-----------------------------------------------------------------|---|---|---|---|---|---|---|
| 1 | Provides me with assistance in exchange for my efforts          | N/A|   | 1 | 2 | 3 | 4 |
| 2 | Re-examines critical assumptions to question whether they are appropriate | N/A|   | 1 | 2 | 3 | 4 |
| 3 | Focuses attention or irregularities, mistakes, exceptions, and deviations from standards | N/A|   | 1 | 2 | 3 | 4 |
| 4 | Talks about his/her most important values and beliefs           | N/A|   | 1 | 2 | 3 | 4 |
| 5 | Seeks different perspectives when solving problems              | N/A|   | 1 | 2 | 3 | 4 |
| 6 | Talks optimistically about the future                           | N/A|   | 1 | 2 | 3 | 4 |
| 7 | Instills pride in me for being associated with him/her          | N/A|   | 1 | 2 | 3 | 4 |
| 8 | Discusses in specific terms who is responsible for achieving performance targets | N/A|   | 1 | 2 | 3 | 4 |
| 9 | Talks enthusiastically about what needs to be accomplished      | N/A|   | 1 | 2 | 3 | 4 |
| 10| Specifies the importance of having a strong sense of purpose   | N/A|   | 1 | 2 | 3 | 4 |
| 11| Spends time teaching and coaching                               | N/A|   | 1 | 2 | 3 | 4 |</p>
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Makes clear what one can expect to receive when performance goals are achieved</td>
<td>N/A</td>
</tr>
<tr>
<td>13</td>
<td>Goes beyond self-interest for the good of the group</td>
<td>N/A</td>
</tr>
<tr>
<td>14</td>
<td>Treats me as an individual rather than just as a member of a group</td>
<td>N/A</td>
</tr>
<tr>
<td>15</td>
<td>Acts in ways that build my respect</td>
<td>N/A</td>
</tr>
<tr>
<td>16</td>
<td>Concentrates his/her full attention on dealing with mistakes, complaints, and failures</td>
<td>N/A</td>
</tr>
<tr>
<td>17</td>
<td>Considers the moral and ethical consequences of decisions</td>
<td>N/A</td>
</tr>
<tr>
<td>18</td>
<td>Keeps track of all mistakes</td>
<td>N/A</td>
</tr>
<tr>
<td>19</td>
<td>Displays a sense of power and influence</td>
<td>N/A</td>
</tr>
<tr>
<td>20</td>
<td>Articulates a compelling vision of the future</td>
<td>N/A</td>
</tr>
<tr>
<td>21</td>
<td>Directs my attention toward failures to meet standards</td>
<td>N/A</td>
</tr>
<tr>
<td>22</td>
<td>Considers me as having different needs, abilities, and aspirations from others</td>
<td>N/A</td>
</tr>
<tr>
<td>23</td>
<td>Gets me to look at problems from many different angles</td>
<td>N/A</td>
</tr>
<tr>
<td>24</td>
<td>Helps me to develop my strengths</td>
<td>N/A</td>
</tr>
<tr>
<td>25</td>
<td>Suggests new ways of looking at how to complete assignments</td>
<td>N/A</td>
</tr>
<tr>
<td>26</td>
<td>Emphasizes the importance of having a collective sense of mission</td>
<td>N/A</td>
</tr>
<tr>
<td>27</td>
<td>Expresses satisfaction when I meet expectations</td>
<td>N/A</td>
</tr>
<tr>
<td>28</td>
<td>Expresses confidence that goals will be achieved</td>
<td>N/A</td>
</tr>
</tbody>
</table>
SECTION IV: GROUP COHESION

Please rate the degree to which you agree with the following descriptive statements regarding your work group.

The rating scale is as follows:

<table>
<thead>
<tr>
<th>Very Strongly Disagree</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Very Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

1. Members of our group do not stick together outside of group meetings. 1 2 3 4 5 6 7
2. Members of our group would rather go out on their own than together as a group. 1 2 3 4 5 6 7
3. Members would still like to spend time together if the group did not work together for a long time. 1 2 3 4 5 6 7
4. The close relationships among members are an important aspect of this group. 1 2 3 4 5 6 7
5. Our group members rarely go our socializing together. 1 2 3 4 5 6 7
6. Our group is united in trying to reach its goals for performance. 1 2 3 4 5 6 7
7. We all take responsibility for poor performance by our group. 1 2 3 4 5 6 7
8. If members have problems during group activities, everyone wants to help them so we can work together again. 1 2 3 4 5 6 7
9. Some of my best friends are in this group. 1 2 3 4 5 6 7
10. I would not miss the members of this group if we did not work together for a long time. 1 2 3 4 5 6 7
<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th>Rating</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>I enjoy other social events more than those of my group.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>For me, this group is one of the most important social groups to which I belong.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>13</td>
<td>This group does not give me enough opportunities to improve my personal performance.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>14</td>
<td>I'm not happy with the amount of participation I am allowed in the group's activities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>15</td>
<td>I don't like this group's style of performing its activities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>16</td>
<td>It is important to me that I attend my group's upcoming task related activities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>17</td>
<td>The members of my group as a whole like one another.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>18</td>
<td>My group can do what is necessary to complete a difficult task successfully.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>19</td>
<td>My group as a whole emphasizes accomplishing specific group tasks.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>20</td>
<td>I enjoy belonging to my group because of the other members in it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>21</td>
<td>I feel that the activities of my group are personally rewarding.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>22</td>
<td>I enjoy belonging to my group because of its tasks.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>23</td>
<td>I do not enjoy being a part of the social activities of this group.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
SECTION V: SOCIAL IDENTIFICATION

Please rate the degree to which you agree with the following descriptive statements regarding your work group.

The rating scale is as follows:

<table>
<thead>
<tr>
<th></th>
<th>Very Strongly Disagree</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Very Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>When someone criticizes the group I work in, it feels like a personal insult</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>I am very interested in what others think about the group I work in</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>When I talk about employees in the group I work in I usually say ‘we’ rather than ‘they’</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>I view the success of the group I work in as my own success</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>I feel I am not just an employee in the group I work in, I have a sense of partnership</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>I am proud to tell others I belong to the group I work in</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>I praise the group I work in, when speaking with friends, as a good working place</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>I identify very strongly with the employees of the group I work in</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>It is important for me to see myself as an employee of the group I work in</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>The values of most of the employees in the group I work in are similar to my values</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
SECTION VI: EMPOWERMENT

Please rate the degree to which you agree with the following descriptive statements regarding your work you are involved in at your organization.

The rating scale is as follows:

<table>
<thead>
<tr>
<th></th>
<th>Very Strongly Disagree</th>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Very Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The work I do is very important to me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>My job activities are personally meaningful to me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>The work I do is meaningful to me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>I am confident about my ability to do my job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>I am self-assured about my capabilities to perform my work activities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>I have mastered the skills necessary for my job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>I have significant autonomy in determining how to do my job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>I can decide on my own how to go about doing my work</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>I have considerable opportunity for independence and freedom in how I do my job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>My impact on what happens in my department is large</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11</td>
<td>I have a great deal of control over what happens in my department</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12</td>
<td>I have significant influence over what happens in my department</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX C

EQS MODEL
Figure 1. Hypothesized Model for Transformational Leadership and Group Outcomes

* Indicates a significant path
Figure 2. Model for Transformational Leadership and Group Outcomes (modified based on the EQS Analysis)

* Indicates a significant path
APPENDIX D

TABLE OF INTERCORRELATIONS
Appendix D: Table of Intercorrelations

<table>
<thead>
<tr>
<th>Variables</th>
<th>Transformational Leadership</th>
<th>Group Cohesion</th>
<th>Empowerment</th>
<th>Collective Efficacy</th>
<th>Social Identification</th>
<th>Group Helping Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational Leadership</td>
<td>1</td>
<td>.459**</td>
<td>.338**</td>
<td>.193</td>
<td>.482**</td>
<td>.583**</td>
</tr>
<tr>
<td>Group Cohesion</td>
<td>.459**</td>
<td>1</td>
<td>.220*</td>
<td>.264*</td>
<td>.593**</td>
<td>.587**</td>
</tr>
<tr>
<td>Empowerment</td>
<td>.338**</td>
<td>.220*</td>
<td>1</td>
<td>.063</td>
<td>.493**</td>
<td>.325**</td>
</tr>
<tr>
<td>Collective Efficacy</td>
<td>.193</td>
<td>.264*</td>
<td>.063</td>
<td>1</td>
<td>.227*</td>
<td>.260*</td>
</tr>
<tr>
<td>Social Identification</td>
<td>.482**</td>
<td>.593**</td>
<td>.493**</td>
<td>.227*</td>
<td>1</td>
<td>.612**</td>
</tr>
<tr>
<td>Group Helping Behaviors</td>
<td>.583**</td>
<td>.587**</td>
<td>.325**</td>
<td>.260*</td>
<td>.612**</td>
<td>1</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
REFERENCES


