Integration and Extension of Leader-Member Exchange and Organizational Justice at Individual- and Group-Levels of Analysis

Rebecca Suk Yin Lau

Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

Doctor of Philosophy
In
Management

Dr. A. T. Cobb (Chairperson)
Dr. T.W. Bonham
Dr. M. L. Connerley
Dr. N. M. Hauenstein

April 30 2008
Blacksburg, VA

Keywords: Leader-member exchange, organizational justice, LMX differentiation, justice climates

Copyright 2008, Rebecca S. Lau

www.manaraa.com

UMI Number: DP19294

All rights reserved

INFORMATION TO ALL USERS
The quality of this reproduction is dependent on the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript
and there are missing pages, these will be noted. Also, if material had to be removed,
a note will indicate the deletion.

UMI DP19294

Copyright 2012 by ProQuest LLC.

All rights reserved. This edition of the work is protected against
unauthorized copying under Title 17, United States Code.

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 - 1346

www.manaraa.com

Integration and Extension of Leader-Member Exchange and Organizational Justice at Individual- and Group-Levels of Analysis

Rebecca S. Lau

ABSTRACT

Both leader-member exchange (LMX) and organizational justice have commanded a great deal of attention in organizational research. Despite this attention, these two research areas are seldom integrated for examination. This dissertation aimed at helping to integrate these two areas and extend them to a higher level of analysis. Two models were developed at the individual- and group-levels of analysis. In the individual-level model, LMX quality was hypothesized to interact with role breadth self-efficacy (RBSE) and two group characteristics – LMX differentiation and intra-group communication – to impact justice perceptions. It was further hypothesized that justice perceptions would mediate the association between LMX quality and various individual outcomes. In the group-level model, it was hypothesized that LMX differentiation would impact justice climate strength in groups which in turn would affect group-level outcomes. Moreover, justice climate strength was hypothesized to impact these group-level outcomes through two group processes – relationship conflict and team-member exchange (TMX).

Data collected from 413 members constituting 87 groups in a corps of cadets revealed that LMX quality interacted with RBSE, LMX differentiation, and intra-group communication to affect procedural and interactional justice perceptions. In addition, distributive, procedural, and interactional justice perceptions partially mediated the impact of LMX quality on group members' commitment to the leader, satisfaction with the leader, job performance, and

www.manaraa.com

citizenship behaviors to different degrees. When extended to the group-level of analysis, LMX differentiation in groups was found to lower the strength of distributive, procedural, and interactional justice climates in the groups. These weak justice climates promoted more relationship conflict and hindered social exchange among group members. They also dampened group members' commitment to the group, satisfaction with the group, group performance, and citizenship behaviors in the group. Contributions, practical implications, and future directions for research on LMX and organizational justice are discussed.

www.manaraa.com

TABLE OF CONTENTS

www.manaraa.com

www.manaraa.com

LIST OF FIGURES

www.manaraa.com

LIST OF TABLES

www.manaraa.com

www.manaraa.com

LIST OF APPENDICES

www.manaraa.com

ACKNOWLEDGEMENT

I have been longing for studying abroad since I was young. However, I have never thought that I would be studying overseas for a doctorate degree. The years I have spent here at Virginia Tech made me realize that I am not as strong and independent as I thought. I went through some time during which I felt lonely and lost. I still remember the time when I encountered culture shock, the time when I did not know what to achieve in this program, and the time when I had no idea about what to do with my summer research project.

Luckily, I have people around me who have given me a lot of social support and academic advice. Dr. Cobb is definitely the one on the top of the list. Dr. Cobb is an excellent advisor. He has given me a lot of guidance yet freedom to pursue what I want in my academic development. Working with him has also let me learn more about conceptual thinking, experimental design, and professional writing. After all, he is a very good thinker and writer! Together with his sharing of personal experiences, all of these have constituted precious lessons that I can never afford forgetting.

I would also like to thank my family, my fiancé, and my best friends in Hong Kong. In these four years, they have given me unconditional love and support. Without them, I would not have finished my dissertation. Also, without these four years, I might not have known how much they love me and care about me. Their phone calls, their emails, their small gifts – all have supported me a lot throughout the whole program. It is interesting to realize that the physical distance between us has actually brought us closer! They are the ones who can never be replaced in my deep heart.

www.manaraa.com

My fellow classmates here also deserve my acknowledgement. I know that in some schools or some departments, PhD students compete with one another and they may have poor relationships. As a people-oriented person, I am glad that I am not in one of those schools. Instead, I have been in a program with caring classmates. We have been to class together. We have studied together. We have partied together. Apart from the doctorate degree, friendship is definitely another precious thing I have earned in these four years.

Besides, I want to thank Dr. Carlson, Dr. Gnyawali, and Dr. Murrmann for their advice. Every time when I dropped by their office and if they were there, they were willing to talk with me. Our conversations covered a variety of topics – from academic to cultural differences, from Blacksburg to Japan. They may think these conversations worth little but to me, these conversations have relieved me from a lot of pressure and helped me develop a sense of belonging to this department, this school, and this country.

Last but not least, I would like to express my sincere gratitude to my committee members – Dr. Bonham, Dr. Hauenstein, and Dr. Connerley – for their opinions and suggestions on my dissertation. Their advice has definitely enriched my knowledge and strengthened my skills in research.

www.manaraa.com

CHAPTER I

INTRODUCTION

Both leader-member exchange (LMX; Dansereau, Graen, & Haga, 1975; Graen & Cashman, 1975) and organizational justice (Adams, 1965; Thibaut & Walker, 1975; Leventhal, 1980; Bies & Moag, 1986) have been examined at the individual-level of analysis for several decades. Recently, researchers are devoting more attention to these two research areas at some higher levels of analysis. However, there is little research that integrates these two streams of research at both individual- and group-levels of analysis, despite the fact that both LMX researchers and organizational justice researchers have been calling for the integration of the two (e.g. Colquitt & Greenberg, 2003; Scandura, 1999). Such integration and extension are critical because these two areas are inter-related: subordinates' justice perceptions are critical to effective leadership and leadership plays an important role in subordinates' judgments of organizational justice.

This dissertation aims to integrate and extend the research on LMX and organizational justice at the individual- and group-levels of analysis. At the individual-level of analysis, I hypothesize that organizational justice perceptions will mediate the relationship between LMX quality and individual outcomes. I also hypothesize that certain individual and contextual characteristics will moderate the LMX quality-organizational justice association. At the group-level of analysis, I focus on how variation of the quality of LMX relationships within a group (i.e. LMX differentiation) may affect justice climates and group dynamics, which in turn may influence various group-level outcomes. I present the individual and group components of this study in turn below.

www.manaraa.com

1.1 Individual –Level Model

In the LMX literature, an appreciable number of critical organizational outcomes have been examined as the consequences of LMX quality, such as satisfaction with supervision (e.g. Vecchio & Gobdel, 1984), organizational commitment (e.g. Major, Kozlowski, Chao, & Gardner, 1995), turnover (e.g. Vecchio, 1985), and job performance (e.g. Duarte, Goodson, & Klich, 1994). Although a meta-analytical review has shown strong relationships between the quality of LMX relationships and these outcomes (Gerstner & Day, 1997), in fact, mixed findings have been reported in individual empirical studies, such as those examining how LMX quality would affect employee productivity (Duarte et al., 1994; Vecchio & Gobdel, 1984) and employee turnover (Vecchio, 1985; Vecchio, Griffeth, & Hom, 1986). Researchers have suggested the possibility of mediators and moderators in the LMX quality-turnover relationship (Vecchio et al., 1986). It is therefore likely that some mechanisms and boundary conditions are operating between LMX quality and outcomes, which can account for these mixed results.

The first purpose of this dissertation was to investigate the connection between LMX quality and individual outcomes by examining an individual-level model which looks into this connection from an organizational justice perspective. This model specifies that the linkage between LMX quality and subordinate outcomes (commitment to and satisfaction with the leader, job performance and organizational citizenship behavior; OCB) is mediated by perceptions of organizational justice (distributive, procedural, and interactional justice). The inclusion of organizational justice is explored for two reasons. First, as a leader establishes relationships of different levels of LMX quality with subordinates, he/she is likely to offer different levels of outcome distribution, procedural concerns, and interpersonal interactions across subordinates as well. Issues of organizational justice, then, are likely to emerge (e.g. Adams, 1965; Leventhal,

www.manaraa.com

1980). Second, people's justice perceptions are socially constructed (e.g. Folger & Cropanzano, 2001; Lind & Tyler, 1988). A leader's differential treatments provide the subordinates an opportunity to compare what they receive with what others receive when making their justice judgments. It is therefore likely that one's LMX quality can have significant impact on his/her justice perceptions. The model goes on to suggest that the LMX quality – justice perceptions linkage is moderated by two group characteristics (LMX differentiation within a group and intra-group communication) as well as an individual difference (subordinates' role breadth self-efficacy; RBSE) because these characteristics may enhance or suppress subordinates' social comparison processes in forming their justice judgments. The consideration of moderators thus enriches our understanding of how LMX quality interacts with various characteristics to affect justice perceptions.

1.2 Group-Level Model

Beyond the effects of LMX quality and justice perceptions on individuals, the effects of LMX differentiation on groups is a critical but neglected area of study. LMX differentiation is the variation of the quality of LMX relationships between a leader and his/her subordinates within a group (Boies & Howell, 2006). Individuals do not work in isolation; they work in the social context of a group with other employees. The variation in the quality of the relationships group members have with their leader creates a source of diversity, and perhaps even division, within the group. Past diversity literature has shown that diversity within groups can affect various group processes and outcomes (Williams & O'Reilly, 1998). Hence, the impact of LMX differentiation is worth investigation. When LMX differentiation exists, group members may develop different fairness perceptions about the group. In addition, negative attitudes such as

www.manaraa.com

workplace jealousy (Miner, 1990) may emerge as well as difficulties in communications and other work relevant interactions (Sias & Jablin, 1995). Although some researchers have raised the importance of examining the potential impact of in-group LMX differentiation (e.g. Forret & Turban, 1994; Grane & Uhl-Bien, 1995), to date, very little research has been conducted to explore this issue.

The second purpose of this dissertation was therefore to explore LMX effects at the group-level of analysis by investigating how LMX differentiation within a group would affect group dynamics and outcomes using a group-level model. The model first specifies that LMX differentiation will lead to group members' low agreement in their justice climate perceptions within a group. This low agreement would result from variations in the leader's distribution of outcomes, implementation of procedures, and interpersonal treatments such that some members benefit more than others. Then the model specifies how this low justice climate agreement may impact group-level outcomes (group members' commitment to and satisfaction with the group, group performance, and group OCB). Moreover, these differentiated benefits from the leader may affect group processes as well. Therefore, the model further specifies how two group processes (relationship conflict and team-member exchange; TMX) may mediate the link between group members' justice climate perceptions and group-level outcomes.

1.3 Contributions

This dissertation makes several contributions to both the LMX and justice literatures. To the LMX literature, the individual-level model contributes by advancing our understanding about the mechanisms and conditions under which LMX quality affects outcomes. Using organizational justice perceptions as the mediator, a fuller picture can be depicted about how

www.manaraa.com

LMX quality is related to various individual outcomes. In addition, the inclusion of moderators may yield new insights about how LMX quality interacts with individual and group characteristics to affect justice perceptions. As suggested by Bacharach (1989), a theory is to answer the questions of "when", "why", and "how". The consideration of organizational justice and moderators throws light on the "why" and "when" questions in the LMX literature: "Why are there mixed findings about the impact of LMX at the individual-level of analysis?" and "When does LMX quality have stronger or weaker impact on organizational justice?" The group-level model contributes by examining LMX theory at a higher level of analysis (Graen & Uhl-Bien, 1995), which is critical because leader-member relationships are inter-dependent and they operate within the larger system of a group (Lee, 1997).

To the organizational justice literature, the individual-level model contributes by offering some insights about the social comparison process through which individuals form their justice perceptions. The examination of one's LMX quality as an antecedent to his/her perceptions of organizational justice allows us to have a better notion about how leaders may indirectly foster an environment that encourages social comparison. The inclusion of individual as well as contextual variables further enriches our understanding by suggesting how subjective individual and objective environmental characteristics may heighten or dampen the social comparison process. Last but not least, the group-level model examines both the antecedents and consequences of justice climates. It generates some insights about the development of justice climates in groups from a leadership perspective and explores how justice climates may impact group processes and group-level outcomes. Such consideration answers the call for more attention to multi-level justice research (Konovsky, 2000).

www.manaraa.com

This dissertation also has practical significance. It offers practitioners implications about how leaders' relationships with their subordinates may affect the latter's justice perceptions as well as how individual and contextual characteristics may heighten the influence of leadership on subordinates' perceptions and behaviors. Therefore, this highlights the importance of considering leaders, subordinates, and situations together when practitioners seek to improve employees' justice perceptions and attitudinal and behavioral outcomes through leadership. This study also sheds light on how differential leader-member relationships may affect the development of a perceived just environment, group members' interactions, and various group-level outcomes. Practical recommendations can be developed for practitioners regarding how to better manage LMX differentiation and how to handle the potential negative impact caused by LMX differentiation in the workplace.

1.4 Dissertation Preview

In Chapter II, I present the basic premises of both LMX and organizational justice theories and research. This lays the theoretical and empirical foundation upon which I build my integrated study. In Chapter III, I develop two independent conceptual models. The first model is an individual-level model that links LMX quality to individual outcomes integrating the organizational justice perspective. In addition, individual and contextual factors will be introduced as moderators in the LMX quality – organizational justice relationship. The second model is a group-level model that focuses on how LMX differentiation affects group justice climates and group dynamics. Chapter IV describes the research methodology used to test these two models. A survey design was employed with primary data collected from both the leaders and followers in a corps of cadets. To test the two models, individual as well as group data were

www.manaraa.com

collected. The measures of each construct and the analysis techniques are also described in this Chapter. The results pertaining to the hypotheses of the two models are presented in Chapter V. Finally, the contributions, practical implications, and limitations of this dissertation are covered in Chapter VI. In addition, recommendations for future studies are provided in this Chapter.

www.manaraa.com

CHAPTER II

LITERATURE REVIEW

In this Chapter, a literature review of both LMX theory and organizational justice is provided. First, I cover the basic premises of LMX theory and summarize important empirical findings relevant to this study. Second, I address the dimensionality of organizational justice and discuss important empirical findings in this literature. Finally, I review a new trend of research on organization justice – the study of justice climates. This literature review provides the theoretical and empirical foundation to integrate LMX and organizational justice research in the individual- and group-level models presented in Chapter III.

2.1 Leader-Member Exchange

Beginning with the studies by Graen and his colleagues over three decades ago (Dansereau et al., 1975; Graen & Cashman, 1975), the relationship-based approach to leadership has established an important portion in leadership research. Unlike traditional leadership theories that focus on leader traits or behaviors (e.g. Bass, 1990; Lord, Foti, & DeVader, 1984; Stogdill, 1948), LMX theory examines leadership as a mutual influence process and focuses on the vertical dyadic relationship between a leader and his/her subordinate.

Constrained by limited personal and organizational resources such as time, energy, and power, a leader is unlikely to form close relationships with all subordinates (Dansereau et al., 1975; Graen & Scandura, 1987). Rather, the leader has to distribute such resources selectively, thereby developing leader-member relationships of different levels of quality based on the forms of exchange between the leader and the subordinates. The development of these relationships

www.manaraa.com

can be described with the "life cycle model" (Graen & Uhl-Bien, 1995). In the first stage of this life cycle – the "stranger" stage – the leader and the subordinate are like strangers to one another. They conduct some evaluation with each other's motives, attitudes, as well as potential resources that can be exchanged. Mutual role expectations are formed (Yukl, 2006). Owing to limited knowledge about each other, their exchanges tend to be contractual in nature such that they each choose to provide mainly what they are required to (Graen & Uhl-Bien, 1995). The second stage is the "acquaintance" stage (Graen & Uhl-Bien, 1995) in which the exchange arrangement between the two parties is refined. In this stage, more social exchanges occur between the two parties in addition to contractual exchanges. Information and resources are shared with less negotiation or contractual agreement (Graen & Uhl-Bien, 1995) and mutual trust, loyalty, and respect are developed (Yukl, 2006). The final stage is the "mature" stage in which mutual commitment is established between the leader and the subordinate (Yukl, 2006). A lot of "in kind" social exchanges occur between the exchange partners who can depend on one another not only for behavioral reciprocation but also for emotional reciprocation (Graen & Uhl-Bien, 1995).

Each LMX relationship does not necessarily go through all three stages. Some relationships may stop at the first stage while some may reach the final stage. For those that do not go beyond the first stage, the interactions between the leader and the subordinates tend to be formal and impersonal and are often constrained to those required by the job description. The LMX relationships are of low quality and the subordinates are considered "out-group" members. In contrast, those relationships that have proceeded to the final "mature" stage are regarded as high-quality LMX relationships or "partnership" relationships. These subordinates are seen as "in-group" members by the leader (Graen & Uhl-Bien, 1995). High-quality LMX relationships are characterized by trust, respect, and mutual obligation (Graen & Uhl-Bien, 1995). Not only is

www.manaraa.com

there more mutual loyalty and influence between the leader and the subordinates but the subordinate also receives more support, a wider latitude of discretion, and more challenging assignments from the leader (Boies & Howell, 2006; House & Aditya, 1997). The opposite happens to low-quality LMX relationships[1]. Therefore, within a group of subordinates, a variation in LMX quality is likely.

2.1.1 Empirical Findings of Leader-Member Exchange Studies

A significant amount of research has been conducted confirming differential LMX relationships, in-groups and out-groups, as well as the characteristics of resources exchanged between leaders and subordinates of different levels of LMX quality. For example, subordinates in high-quality LMX relationships (i.e. high-LMX subordinates) receive more support and attention from their supervisors (Liden & Graen, 1980). They also receive higher supervisory sensitivity than those in low-quality LMX relationships (i.e. low-LMX subordinates; Liden & Graen, 1980). Additionally, high-LMX subordinates tend to enjoy more pleasant and positive interactions with their supervisors whereas low-LMX subordinates have more confrontational and negative interactions (Fairhurst, 1993; Fairhurst, Rogers, & Sarr, 1987). In high-quality LMX relationships, for instance, the communications between supervisors and subordinates involve more humor, challenging questions from the subordinates, and more choices offered by the supervisors to the subordinates (Fairhurst, 1993). The allocation and characteristics of tasks also differ. For example, positive associations have been found between LMX quality and subordinates' perceived empowerment (Sparrowe, 1994) and negotiating latitude (Vecchio & Gobdel, 1984). Overall, not only do high-LMX subordinates receive more and better work-

[1] This is not to suggest that the quality of LMX relationship is a dichotomy. Instead, the quality of LMX relationship is treated as a continuous variable in this dissertation. The discussion here only emphasizes the two extremes on the continuum of the quality of LMX relationship.

www.manaraa.com

related benefits than their low-LMX counterparts (Scandura, 1999), but they also have better interactions with their leaders.

The LMX literature also suggests that the quality of the exchange relationship between a leader and a subordinate is predictive of various organizational outcomes (Gerstner & Day, 1997; Grane & Uhl-Bien, 1995). According to social exchange theory, when leaders provide better benefits and treatments to in-group members, these members are more apt to reciprocate with more positive attitudes, perceptions, and behaviors (Blau, 1964). Considerable research has investigated different critical outcomes in organizational research. The meta-analytical review by Gerstner and Day (1997) showed that LMX quality had strong relationships with subordinates' satisfaction with supervision (ρ = .71), performance ratings (ρ = .55), organizational commitment (ρ = .42) and overall satisfaction (ρ = .50). Moreover, LMX quality was also associated with increased role clarity (ρ = .43), reduced role conflict (ρ = -.31), and reduced turnover intentions (ρ = -.31). Furthermore, the meta-analytic review by Ilies, Nahrgang, and Morgeson (2007) also revealed that LMX quality was positively related to subordinates' OCB, with LMX quality more strongly related to individual-targeted citizenship behavior (ρ = .38) than to organization-targeted citizenship behavior (ρ = .31) (For a review of other empirical findings in the LMX literature, which is outside the scope of this study, please see Graen & Uhl-Bien, 1995; Liden, Sparrowe, & Wayne, 1997; and Schriesheim, Castro, & Cogliser, 1999).

2.1.2 Some Limitations of Leader-Member Exchange Studies

While LMX theory has garnered a lot of attention from researchers in the last several decades, there are some limitations facing the studies of LMX theory. First, meta-analytical

www.manaraa.com

reviews have masked the mixed findings that have been reported in individual empirical studies. For example, in the studies by Vecchio and Gobdel (1984) and Duarte et al. (1994), no statistically significant association was found between LMX quality and employee productivity. Similarly, Vecchio (1985) found that the correlation between LMX quality and employee turnover was .02 whereas Vecchio et al. (1986) found it to be -.08 only. It is likely that there are some mechanisms operating between the quality of LMX relationships and outcomes or there are some individual as well as contextual characteristics which can explain these mixed findings.

Scandura's (1999) conceptual model linking LMX to organizational justice is an attempt to understand some of these possible mechanisms. This model depicted how the differentiation of LMX quality in work groups might affect the emergence of organizational justice concerns, which might further impact subordinate performance. The study by Graen, Scandura, and Graen (1986) represents an endeavor to understand how individual characteristics may alter the effects of LMX. In their study, training designed to improve managers' LMX quality with their subordinates was effective only when subordinates' growth need strength was high. This suggests that individual differences may act as some boundary conditions for the effectiveness of LMX (House & Aditya, 1997). Likewise, the studies by Hofmann, Morgeson, and Gerras (2003) and Chen, Lam, and Zhong (2007) showed that work group climate – a contextual variable – moderated the impact of LMX quality on subordinates' in-role and extra-role performance. To explore these avenues of research, more studies examining individual and contextual variables as moderators are necessary (Liden, Sparrowe, & Wayne, 1997).

A second limitation of existing LMX research is its need to explore higher levels of analysis. While most studies of LMX theory have focused on the consequences of dyadic leader-member relationships at the individual-level of analysis, much less attention has been paid to the

www.manaraa.com

consequences of LMX in the larger social context. As previous studies have shown the existence and impact of differential relationships between a leader and his/her subordinates, the next question that arises is "How may this differentiation affect the way subordinates react toward one another and the group as a whole?" Subordinates do not work in isolation; they interact with others in the same social context, be it a work group or a department, and their behaviors are interlocked (Weick, 1979). Some researchers have raised similar questions about higher levels of analysis (e.g. Forret & Turban, 1994; Graen & Uhl-Bien, 1995) but few empirical studies have addressed this issue (e.g. Boies & Howell, 2006; Ford & Seers, 2006; Liden, Erdogan, Wayne, & Sparrowe, 2006; Mayer, 2004). This is a critical issue because past research has suggested that differential leader treatments in the workplace can cause problems. For instance, they may elicit workplace jealousy among subordinates (Miner, 1990). They may also trigger different frequencies and patterns of communications among subordinates (Lee, 1997; Sias & Jablin, 1995). Worse still, extreme differentiation of dyadic leader-follower relationships may lead to resentment from out-group to in-group members (McClane, 1991; Yukl, 1989). These negative reactions among subordinates may well cause problems in group processes that, in turn, can affect other critical group-level outcomes such as group performance and group OCB.

Given these limitations in LMX research, more studies of LMX are necessary at both individual- and group-levels of analysis.

2.2 Organizational Justice

Organizational justice refers to the extent to which employees perceive organizational events as fair (Greenberg, 1987). It is a topic that has been examined since the 1960s and has drawn a great deal of attention from researchers starting from the 1990s (Colquitt & Greenberg,

www.manaraa.com

2003) because many critical attitudes and behaviors in organizations can be directly linked to employees' fairness perceptions (Roch & Shanock, 2006). Recently, researchers have suggested the understanding of organizational justice with leadership is one of the future directions of justice research (Colquitt & Greenberg, 2003).

Research on organizational justice began with a focus on the study of distributive justice. In the mid-1960s, Adams (1965) developed equity theory in which he proposed that people determine whether their outcomes are fair or not through social comparison. Specifically, a person develops an equity ratio of his/her inputs to outcomes and compares this ratio to that of a referent other. From this perspective, this person's perception of distributive justice is tied to the similarity of his/her equity ratio with the referent other's. While equity theory has the equity rule as the focus, other researchers have proposed different allocation rules such as rules of equality and need as standards that people may also consider when evaluating fairness regarding outcome distribution (Deutsch, 1975; Leventhal, 1976).

A decade later, Thibaut and Walker (1975) introduced another dimension of justice – procedural justice. They suggested that people are concerned about not only the outcomes they receive but also the procedures employed to derive those outcomes. In their studies of third-party dispute resolution, Thibaut and Walker found that if disputants were given sufficient time and influence over the presentation of their cases and arguments (process control), they were willing to give up their influence over the decisions (decision control) and still considered the procedures fair. Leventhal (1980) extended this idea of procedural justice into organizational settings and developed a list of principles that would also affect employees' procedural justice perceptions. These principles include bias suppression, consistency, accuracy of information, correctability, representativeness, and ethicality.

www.manaraa.com

Bies and Moag (1986) introduced still a third dimension of organizational justice. From a series of interviews, they discovered that people were also concerned about the quality of interpersonal treatment they received during the enactment of procedures and tied perceptions of justice to it. Bies and Moag termed these fairness perceptions "interactional justice" and proposed that interactional justice is determined by at least four criteria: truthfulness, justification, respect, and propriety. Later, Greenberg (1993a) suggested that interactional justice be separated into two sub-dimensions: interpersonal justice and informational justice. Interpersonal justice is related to respect and propriety and refers to the extent to which employees are treated with dignity and respect by the authorities when procedures are enacted or outcomes are decided. On the other hand, informational justice concerns truthfulness and justification. It is the degree to which employees are provided with sufficient information regarding the procedures and outcomes from the authorities (Colquitt, 2001).

2.2.1 Empirical Findings of Organizational Justice Consequences

In early studies of organizational justice, researchers primarily focused on testing the prediction of Adam's equity theory (1965). According to equity theory, people use the equity norm to make distributive justice judgments. When people realize that their equity ratios are less favorable than referent others' (i.e. underpayment) or more favorable than referent others' (i.e. overpayment), they are motivated to engage in a variety of cognitive or behavioral responses to restore equity (Donovan, 2001). While empirical studies have shown support to the predicted reactions to underpayment, there has been much less support to the predicted reactions to overpayment (Greenberg, 1982; Mowday, 1991). Specifically, evidence has revealed that people tend to be less tolerant for underpayment than overpayment (Donovan, 2001). Moreover,

www.manaraa.com

Deutsch (1975) pointed out that in addition to the equity norm, people also use other norms such as equality norms and needs to evaluate distributive justice. Although the equity norm tends to be dominant (Greenberg, 1982), the choice of norms may also depend on the resources to be allocated and cultural differences (Miles & Greenberg, 1993).

Since the introduction of procedural and interactional justice, there have been more studies examining the relationship between different dimensions of organizational justice and various attitudinal, emotional, and behavioral outcomes. The meta-analytic review by Colquitt and his colleagues (Colquitt, Conlon, Wesson, Porter, & Ng, 2001) showed that distributive, procedural, and interactional justice were moderately to strongly positively related to outcome satisfaction (ρ = .30 - .61), job satisfaction (ρ = .35 - .62), organizational commitment (ρ = .19 - .57), and OCB for individuals (ρ = .15 - .26). Distributive and procedural justice were both moderately related to OCB for organizations (ρ = .25 and .27, respectively). Finally, while procedural justice was pretty strongly related to performance (ρ = .36), other justice dimensions were more weakly related to performance.

This meta-analytic review indicates that the three dimensions of justice do not have the same strength of relationship to different outcomes. In fact, researchers have long proposed that different justice dimensions are likely to demonstrate different importance in outcome prediction. For example, Alexander and Ruderman (1987) found that procedural justice was a stronger predictor of attitudes than distributive justice. In response to these findings, McFarlin and Sweeney (1992; Sweeney & McFarlin, 1993) proposed a two-factor model. They contended that because procedures were more related to organizational context while distributions were more personal, procedural justice would be more predictive of organization-oriented outcomes such as organizational commitment and subordinates' evaluation of their supervisors whereas

www.manaraa.com

distributive justice would be more predictive of person-oriented outcomes including pay satisfaction and job satisfaction. Their empirical findings supported this two-factor model. Furthermore, the relative predictability of interactional and procedural justice was also compared in the literature. The study by Masterson and her colleagues (Masterson, Lewis, Goldman, & Taylor, 2000) showed that interactional justice predicted outcomes related to the person carrying out the interpersonal treatment (i.e. the supervisor) such as supervisor-directed OCB while procedural justice predicted outcomes related to the entity to which the procedures were attributable (i.e. the organization) such as organization-oriented OCB and organizational commitment.

Yet, the relationships between justice and outcomes seem to be more complicated. Outcome distribution and procedural implementation have been found to interact to determine employees' justice perceptions. The "fair process effect" suggests that the negative impact of an unfair outcome may be mitigated or even eliminated when people perceive that fair procedures were employed to distribute the outcomes (Folger, Rosenfeld, Grove, & Corkran, 1979). A lot of studies tested and confirmed this proposition. Employee theft in response to pay cut, for instance, was attenuated when employees were provided with adequate explanation to address the pay cut (Greenberg, 1990a; 1993b). Summarizing the 45 studies that had examined the interactive effects of distributive and procedural justice, Brockner and Wiesenfeld (1996) found general support for the "fair process effect". In addition, interactional justice seems to matter as well. In the study by Skarlicki and Folger (1997), low distributive justice was found to have the greatest impact on employees' retaliatory behaviors such as damaging equipment and spreading rumors about coworkers when both procedural and interactional justice perceptions were also low.

www.manaraa.com

While most research on organizational justice has focused on individuals' justice perceptions, researchers have recently proposed that individuals also have justice perceptions regarding their context. These justice perceptions, then, focus on justice climates of the context.

2.2.2 Justice Climates

The idea and study of "justice climates" are relatively new but the idea and study of organizational climates have a long history. Forehand and Gilmer (1964: 362) defined an organization's climate as "the set of characteristics that describe an organization and that (a) distinguish it from other organizations, (b) are relatively enduring over time, and (c) influence the behavior of people in the organization". Although Forehand and Gilmer's definition focuses on organizational characteristics, most climate researchers agree that organizational climates are more subjective: they are determined by the organization members' perceptions of those characteristics and the meanings attached to them (Hollmann, 1976; Litwin & Stringer, 1968; Payne & Pugh, 1976; Powell & Butterfield, 1978; Schneider & Reichers, 1983).

Apart from organizational climates, researchers have also suggested the existence of subsystem climates in organizations (Hollmann, 1976; Powell & Butterfield, 1978; Schneider & Reichers, 1983). Because employees' perceptions are significantly affected by the environment they most immediately experience, it is likely that employees in different departments or work groups form different perceptions, resulting in subsystem climates (Powell & Butterfield, 1978). Moreover, because employees often have common perceptions about different features within a given context, numerous climates for different organizational characteristics are likely to emerge (Schneider & Reichers, 1983), such as a climate for safety (Hofmann et al., 2003) and a climate for empowerment (Chen, et al., 2007).

www.manaraa.com

In early studies, overall organizational climates were found to affect employees' job performance and job satisfaction (e.g. Downey, Hellriegel, & Slocum, 1975; Waters, Roach, & Batlis, 1974). Attention then shifted to specific subsystem climates. For example, studies have shown that teams' safety climates can affect team members' safety citizenship behaviors (Hofmann et al., 2003) while team-level empowerment climates can impact team members' in-role performance (Chen et al., 2007). Considering the influence organizational and subsystem climates can have on employee behaviors, organizational justice researchers have recently begun to investigate justice climates in groups. Mossholder, Bennett, and Martin (1998) conducted the first study of organizational justice at the group-level of analysis. This study focused on procedural justice climates, defined as the distinct team-level cognitions about how fairly a team is treated with respect to procedural justice (Naumann & Bennett, 2000; Mossholder et al., 1998). Mossholder and his colleagues argued that when employees evaluated their work context, they would include their perceptions of procedural justice. They further contended that because employees were grouped into distinct structural units, they would tend to develop similar cognitive evaluations of the procedural justice of the context, resulting in a commonly perceived procedural justice climate unique to the unit. Their findings supported these arguments and demonstrated that procedural justice climates differed across units (bank branches). Moreover, they found that procedural justice climates accounted for variance in employees' job satisfaction and organizational commitment beyond that accounted for by individuals' procedural justice perceptions. In other studies, procedural justice climates have also been found to predict group-level OCB and helping behavior (Ehrhart, 2004; Naumann & Bennett, 2000).

Group climates can also be operationalized in terms of level (i.e. the group mean of climate perceptions) and strength (i.e. within-group variance of climate perceptions; Lindell &

www.manaraa.com

Brandt, 2000). In one study, procedural justice climate level and strength were found to interact to affect group performance and absenteeism (Colquitt, Noe, & Jackson, 2002). Specifically, climate level was most strongly related to these outcomes in teams where climate strength was also high. Apart from procedural justice climates, group climates of other justice dimensions have also been investigated. Both procedural and interpersonal justice climates were found to predict employees' attitudes and discretionary behavior, as well as guest service satisfaction in hotel chains (Simons & Roberson, 2003). Yet, foci of justice climates seem to matter as well. Different foci of justice climates (e.g. organization- vs. supervisor-focused procedural, interpersonal, and informational justice climates) seem to have different impacts on supervisor- and organization-directed outcomes (Liao & Rupp, 2005).

In addition to consequences, different approaches to how justice climates emerge have also received attention from researchers. According to the seminal thesis by Schneider and Reichers (1983), organization or group climates are developed through one or more of three approaches: people's social interaction, the attraction-selection-attrition process, and the exposure to similar policies, practices, and procedures. The social interactionist approach suggests that through interactions, people's perceptions of their context converge, resulting in a common view of climates. Through attraction, selection, and attrition processes, people within a context are more likely to become similar and thus likely to develop similar perceptions of the context. Also, when people are exposed to similar policies, practices, and procedures, they tend to develop similar perceptions of various characteristics in the context. Drawing upon these approaches to climate development, researchers have examined and identified several factors that can affect the emergence of group justice climates, such as work group cohesion, visibility of supervisors in demonstrating justice, team size, and team collectivism (Colquitt et al., 2002;

www.manaraa.com

Naumann & Bennett, 2000). For example, in support of the social interactionist approach to climates suggested by Schneider and Reichers (1983), Roberson (2006) found that groups that engaged in discussion about their collective experiences developed stronger distributive and procedural justice climates and the more so the longer the discussion.

2.3 Summary

Both LMX and organizational justice have received considerable attention for several decades in social science research. Studies of LMX have shown that LMX quality can affect individuals' attitudes as well as performance. Individual characteristics also play a critical role by moderating the LMX quality – outcome linkage. Organizational justice has been found to impact various important organizational outcomes as well. Nevertheless, little research has linked these two topics together for investigation, especially the influence of LMX quality on perceptions of organizational justice. It is possible that the integration of them can explain some mixed findings in past LMX literature and extend our understanding of their inter-relationships as well as their influence on individual outcomes.

In addition, the examination of LMX at the group-level of analysis is limited. This examination, however, is warranted because researchers have suggested that differential leader treatments may elicit negative attitudes and even interactions among group members. Likewise, research on justice climates is only emerging but the limited findings have suggested that leaders can affect the emergence of justice climates, which have significant impact on various group processes and outcomes. The integration of these two research areas at the group-level of analysis can help us extend our current understanding of these two areas at the individual-level

www.manaraa.com

of analysis. The integration of these two literatures at the individual- and group-levels of analysis represents the major purposes of this dissertation.

www.manaraa.com

CHAPTER III

CONCEPTUAL MODELS AND HYPOTHESES DEVELOPMENT

In this Chapter, two independent conceptual models – one at the individual-level of analysis and the other at the group-level of analysis – are developed to integrate LMX and organizational justice research. In the individual-level model, employees' perceptions of organizational justice are hypothesized to mediate the relationship between LMX quality and individual outcomes. Also, three individual and contextual characteristics are proposed as moderators. In the group-level model, the impact of LMX differentiation within groups on justice climates, group dynamics such as conflict and exchanges, and group-level outcomes will be investigated.

3.1 A Model of LMX and Organizational Justice at the Individual-Level of Analysis

This individual-level model aims at integrating and extending the research on LMX and organizational justice at the individual-level of analysis. The integration of the two streams of literature is important and theoretically sound. From a leadership perspective, organizational justice perceptions are necessary for effective leadership (Scandura, 1999). From an organizational justice perspective, the development of subordinates' justice perceptions is strongly based on leaders' behaviors such as their distribution of outcomes, implementation of procedures, and interpersonal treatments.

This model integrates perceptions of distributive, procedural, and interactional justice as mediators into the relationship between LMX quality and individual outcomes including commitment to the leader, satisfaction with the leader, job performance, and OCB. In addition,

www.manaraa.com

LMX differentiation within a group, intra-group communication, and individuals' role breadth self-efficacy (RBSE) are examined as moderators in the association between LMX quality and perceptions of organizational justice. The model is presented in Figure 1.

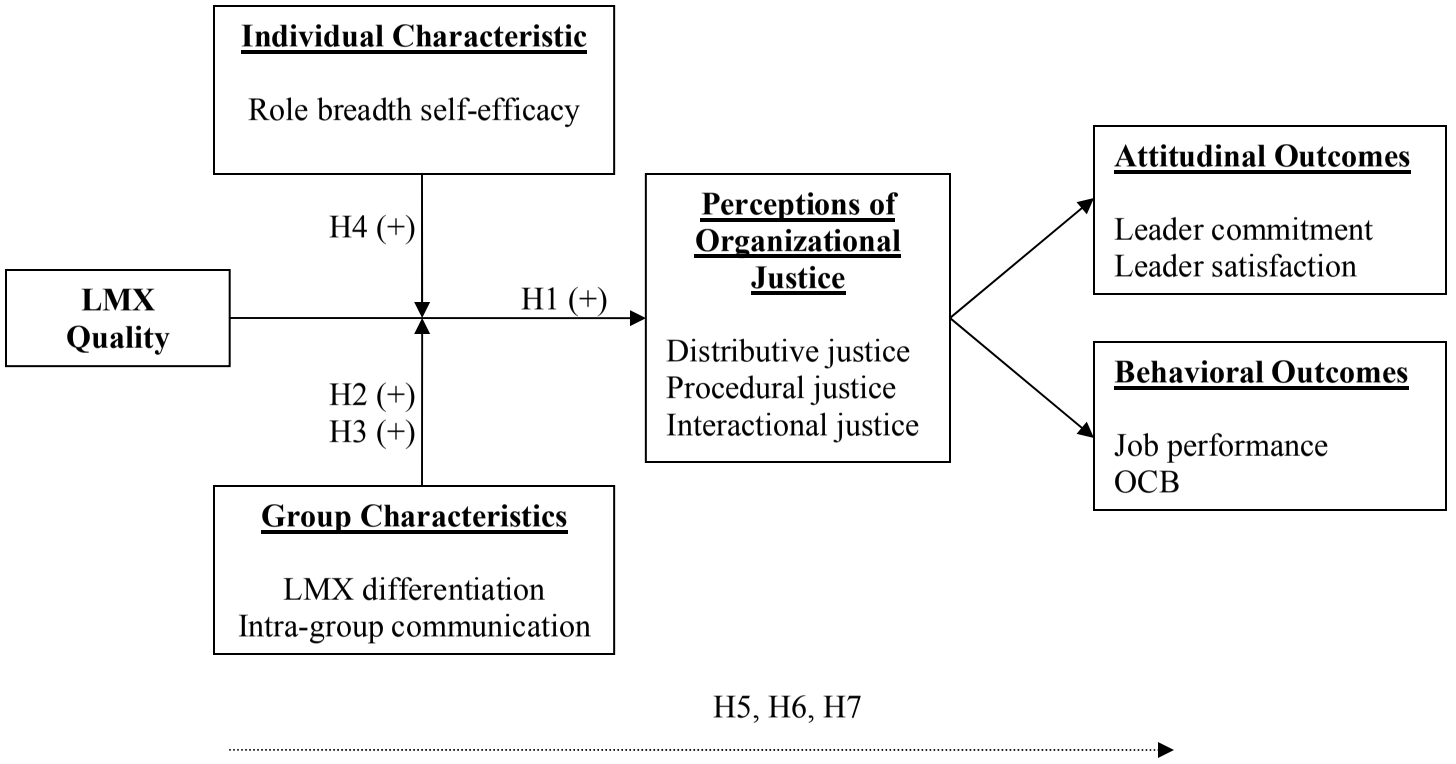
In the following paragraphs, I will first discuss the association between LMX quality and justice perceptions. This is followed by a discussion of how several individual and group characteristics may moderate the LMX quality – justice perceptions association. Finally, I will discuss the mediating role of justice perceptions between LMX quality and various individual outcomes.

www.manaraa.com

المنارة للاستشارات

FIGURE 1

A Model of LMX and Organizational Justice at the Individual-Level of Analysis



www.manaraa.com

3.1.1 Relationship between LMX Quality and Organizational Justice

Given that leaders differentiate their treatments to group members of different levels of LMX quality, not only will group members' attitudes and job performance be affected but their perceptions of justice can also be influenced. To understand how LMX quality may impact justice perceptions, I first review the existing literature with a literature search and then develop arguments with a social comparison perspective using equity theory, the group value model, and fairness theory.

A comprehensive literature search was conducted to locate empirical studies which had examined the impact of LMX quality on perceptions of organizational justice. First, empirical studies published in major journals in organizational behavior and psychology (*Academy of Management Journal, Journal of Management, Leadership Quarterly, Journal of Applied Psychology, Organizational Behavior and Human Decision Processes, Journal of Personality and Social Psychology, Administrative Science Quarterly, Journal of Social Psychology, and Journal of Applied Social Psychology*) between 1975 and February in 2007 were reviewed. Second, a literature search was conducted with the ABI/Inform and Psyc INFO databases using keywords such as leader-member exchange, LMX, fairness, and justice. Third, reference lists of relevant studies were examined to locate any other articles. Table 1 summarizes the relevant empirical studies found. It should be noted that this table shows only studies that theoretically argued for the influence *from* LMX quality *to* organizational justice.

Table 1 shows that although there have been some studies linking LMX theory to organizational justice, only two studies (Bhal, 2005; Elicker, Levy, & Hall, 2006) examined all three dimensions of organizational justice. In addition, the dependent variables examined were often the justice perceptions per se rather than other attitudinal or behavioral outcomes. Thus,

www.manaraa.com

gaps still exist in the examination of the LMX quality – organizational justice association as well as in the examination of moderators in this association. Colquitt and Greenberg's (2003) recommendation still stands: a more thorough theoretical integration of leadership and organizational justice is necessary.

www.manaraa.com

المنارة للاستشارات

TABLE 1

A Summary of Empirical Studies Examining the Association from LMX Quality to Organizational Justice

Study	Independent Variable	Moderators (M) or Mediators (I)	Dependent Variable(s)	Correlation between LMX and justice
Andrews and Kacmar (2001)	LMX		Distributive justice	.26
			Procedural justice	.30
Bhal (2005)	LMX	Distributive justice (I)	Loyalty	.16[a], .06
		Procedural justice (I)		.41, .20
		Interactional justice (I)		.38, .23
Elicker, Levy, and Hall (2006)	LMX	Perceptions of voice in performance appraisal (I)	Distributive justice	.45
			Procedural justice	.50
			Interactional justice	.51
Lee (2000)	LMX	Distributive justice (I)	Job satisfaction	.86
		Procedural justice (I)	Organizational commitment	.90
			Turnover intentions	
Lee (2001)	LMX		Distributive justice	.29
			Procedural justice	.68

www.manaraa.com

المنارة للاستشارات

TABLE 1 (continued)

Study	Independent Variable	Moderators (M) or Mediators (I)	Dependent Variable(s)	Correlation between LMX and justice
Mansour-Cole, and Scott (1998)	LMX	Source of layoff announcement (M)	Distributive justice	.28-.30
			Procedural justice	.32-.34
Pillai, Scandura, and Williams (1999)	LMX	Distributive justice	Job satisfaction	.26 - .40
		Procedural justice (I)		.40 - .64
Vecchio, Griffeth, & Hom (1986)	LMX	Perceived inequity[b] (I)	Turnover	-.19 - -.35

[a]In this study, Bhal (2005) measured two dimensions of LMX: perceived contribution which deals with the on-the-job dimension of interaction, and affect which is about the affective feelings of liking that goes beyond the work situation between the leader and the subordinate.
[b]In this study, the measure of perceived inequity included perceived inequity in pay rules, pay administration, work pacing, pay level, and work rule administration.

www.manaraa.com

Theories of organizational justice have long suggested that in forming judgments of organizational justice, people use social comparison processes (Adams, 1965; Folger & Cropanzano, 2001; Lind & Tyler, 1988). One's perceptions of fairness, for example, are influenced not only by how he/she is treated by the leader but also by the ways others are treated (Ambrose, Harland, & Kulik, 1991; Liden et al., 2006). In the following paragraphs, equity theory, the group value model, and fairness theory are used to tie the social comparison processes likely to occur with LMX leadership to perceptions of organizational justice.

Equity theory can help understand the relationship between LMX and perceptions of distributive justice. According to equity theory (Adams, 1965), when evaluating the fairness of distributive outcomes, an individual compares his/her equity ratio to that of a referent other. An equity ratio is the ratio of ones' outcomes to inputs. When the individual perceives that his/her equity ratio is comparable to the referent other's, distributive justice is perceived.

In organizational settings, differential LMX relationships are likely to result in disproportional allocation of organizational resources and rewards such that high-LMX subordinates benefit more than low-LMX subordinates (House & Aditya, 1997). High-LMX subordinates, for example, consistently receive more favorable outcomes (Gerstner & Day, 1997), including both formal and informal rewards (Dienesch & Liden, 1986). Differential LMX treatments, then, may well impact perceptions of distributive justice. If a subordinate in a low-quality LMX relationship chooses a colleague in a high-quality LMX relationship as the referent other, comparison of equity ratios may lead to perceptions of unfair distributive outcomes for at least two reasons. First, owing to attribution bias, the subordinate of low LMX quality may well attribute the referent other's favorable treatment to external factors such as luck or brownnosing (Sias & Jablin, 1995) rather than legitimate contributions. As a consequence, this low-LMX

www.manaraa.com

subordinate is apt to perceive underpayment. Second, people are less tolerant for underpayment than overpayment (Donovan, 2001). Therefore, this low-LMX subordinate will perceive the distribution as less fair. On the other hand, if a high-LMX subordinate compares his/her equity ratio to a counterpart of low LMX quality, he/she is still likely to perceive justice. First, the self-serving bias leads the individual to think that the more and better outcomes received are caused by his/her personal effort (Sias & Jablin, 1995) and would not be regarded as overpayment. Second, as shown in past studies, even if overpaid, people may not perceive any unfairness due to a higher tolerance level for this condition (Donovan, 2001). High-LMX subordinates in the group, therefore, tend to perceive the outcomes of differential LMX treatments as distributively fair.

The group value model of organizational justice (Lind & Tyler, 1988) is also relevant to the differential treatments that occur in leader-follower relationships. The group value model focuses on social bonds and relationships (Ambrose et al., 1991) as well as the meaning they have for employees (Lind & Tyler, 1988). It suggests that group membership is critical to individuals because individuals are predisposed to social groups and membership can assist them to understand their own social identity. In addition, individuals are concerned with signs and symbols because they can communicate information about the individuals' positions within the groups such as value and respect – "symbols of group values" (Tyler & Lind, 1992: 140). Liden et al. (2006) and Lind and Tyler (1988) point to three particularly important and salient symbols: the quality of one's relationship with the leader, the degree to which one feels that the leader creates a "level playing field" in the treatment of group members, and the extent to which one feels that the leader treats group members fairly. By comparing these three symbols of group value with the characteristics of LMX relationships, subordinates having lower LMX quality

www.manaraa.com

may well find these symbols unsatisfying for them. For example, they have poorer relationships with their leader and they receive less favorable treatments (e.g. less negotiating latitude and empowerment) from their leader. Consequently, these subordinates may tend to perceive lower levels of procedural fairness.

Fairness theory (Folger & Cropanzano, 2001) is also relevant to applications of LMX theory. In fairness theory, "the central topic of social justice is the assignment of blame" (Folger & Cropanzano, 2001: 1). It focuses on explaining when authorities are held accountable for unfavorable events (Colquitt & Chertkoff, 2002). When individuals perceive harm, they cognitively process situational information to assess attribution of responsibility and blame. This cognitive process incorporates "counterfactual thinking": mental simulations about what *would*, *could*, and *should* have happened if the courses of events were different from those that led to the harm (Folger & Cropanzano, 2001). The "Would" counterfactual depicts what the situation would have been if the authority had made a different decision, followed a different procedure, or performed different interpersonal interactions: Would the harm have been less? The "Could" counterfactual addresses whether the authority could have acted differently or could have made a different decision, and whether the negative event was under the authority's control. The "Should" counterfactual is related to moral standards, evaluating whether the decision was made, the procedure was enacted, or the interpersonal treatment was performed in accordance with prevailing moral standards (Colquitt & Greenberg, 2003; Folger & Cropanzano, 2001). When an individual encounters a negative event, a "Would" counterfactual is first activated. The individual will evaluate if a better outcome or situation would have been possible. If any discrepancy between the current state of being and the "would-have-been" situation exists, "Could" and "Should" counterfactuals are further triggered. When all of these three

www.manaraa.com

counterfactuals stand, the individual will perceive injustice. Otherwise, no one is to blame and no perceptions of injustice exist (Folger & Cropanzano, 2001).

From an LMX perspective, the fact that high-LMX subordinates receive higher levels of formal and informal rewards, discretion, respect, and trust places low-LMX subordinates in relative deprivation of these same outcomes. When making judgments of organizational justice, then, low-LMX subordinates may well ask: Would my state of being have been better if my leader had developed a better relationship with me? In fact, they can easily imagine the would-have-been situation because they can visualize it from the experience of those coworkers who are receiving high-quality LMX relationships with their leader. They can thus easily perceive the discrepancy between their current state of being and the would-have-been condition.

What comes next is the "Could" counterfactual: Could the boss have treated me differently, like the high-LMX colleagues? Considering that the leader has the discretion to choose how to distribute outcomes, how to implement procedures, and how to interact with subordinates, the low-LMX subordinates will likely think that the leader could have treated them better (e.g. If the leader can treat them that way, why not me as well?). Worse still, if the consequences are extreme (e.g. a low-LMX subordinate is passed over for a challenging task which is beneficial for promotion), the tendency for these low-LMX subordinates to blame the leader further increases (Folger & Cropanzano, 2001).

Finally, the last counterfactual thought emerges: should the boss have treated me differently, like those coworkers having high-quality LMX relationships with the leader? People employ different norms and moral standards when making different fairness judgments (Sias & Jablin, 1995). When leaders' decisions and behaviors are incompatible with subordinates' decision rules, perceptions of unfairness may arise. Conlon, Porter, and McLean Parks (2004)

www.manaraa.com

found that people perceived the equality rule to be fairer for allocation of concrete, non-monetary resources than the equity rule. Similarly, Colquitt and Jackson (2006) found that the equality rule was more preferable than other rules in a task-interdependent context. Hence, when low-LMX subordinates receive fewer resources, especially concrete non-monetary resources, than their high-LMX counterparts, they may think that the leader should have allocated the resources equally. Perceptions of a lack of distributive justice form. Also, the rule of equality signifies that members within a group have equal value and status (Kabanoff, 1991) which are important symbols in the evaluations of procedural justice (Lind & Tyler, 1988). As procedures are implemented on low-LMX subordinates in a different manner and these subordinates are of a lower status than their high-LMX counterparts, they are apt to perceive a violation of the equality rule. Procedural unfairness may thus be perceived. Finally, people tend to perceive it fairer if socioeconomic goods such as interpersonal treatment by others that conveys respect and interpersonal sensitivity – elements involved in the judgment of interactional justice – are allocated via an equality rule (Martin & Harder, 1994). This suggests that low-LMX subordinates who receive less respect and interpersonal sensitivity from the leader will tend to think the leader should have treated them differently – that is to say equal to high-LMX subordinates.

Based on the above arguments built on equity theory, the group value model, and fairness theory, it is hypothesized that the quality of LMX relationships is positively related to the three dimensions of organizational justice perceptions.

Hypothesis 1 (H1): Quality of LMX relationship is positively related to perceptions of (a) distributive justice, (b) procedural justice, and (c) interactional justice.

www.manaraa.com

3.1.2 Moderators in the LMX Quality – Organizational Justice Relationship

As shown in Table 1, no research was found on what factors might moderate the connection from LMX quality to organizational justice perceptions. Research on moderators in this relationship is critical for at least three reasons. First, past studies of LMX theory have suggested that individual differences as well as task characteristics may constitute boundary conditions for the impact of LMX (Dunegan, Duchon, & Uhl-Bien, 1992; Graen et al., 1986; House & Aditya, 1997). Second, little is known about how individual or contextual characteristics may affect one's perceptions of organizational justice. In fact, organizational justice researchers have called for more research on the moderators of the development of organizational justice perceptions (Colquitt & Greenberg, 2003). Third, given the importance of leader behavior on justice perceptions, and vice versa, such a research path serves well to integrate and extend both LMX and justice theory and research. In this study, two group and one individual characteristics are explored: LMX differentiation, intra-group communication, and role breadth self-efficacy.

3.1.2.1 LMX Differentiation

According to fairness theory, perceptions of injustice develop when there is a discrepancy between the current state of being and the would-have-been state (Folger & Cropanzano, 2001). Therefore, a potential moderator of fairness perceptions should be one that captures the characteristics of this discrepancy. LMX differentiation is a group-level variable that characterizes the size of this discrepancy. It is defined as the variation in the quality of LMX relationships within a group (Boies & Howell, 2006; more discussion of LMX differentiation can be found in the hypothesis development of the group-level model). The greater the LMX

www.manaraa.com

differentiation within a group, the more variation in leader-member treatments group members receive from their leader, such as trust, respect, information, and challenging assignments.

This variation has important implications for subordinates' justice perceptions. Fairness theory would predict, for instance, that as the differences in treatments for subordinates intensify, a larger discrepancy between the current state of being and the would-have-been situation can be imagined by the low-LMX subordinates. This triggers a higher tendency to conduct the "Would" counterfactual thinking. To them, the consequences of the leader's differential treatments become more extreme and significant. As a result, they become more likely to seek a social actor to blame – a higher tendency to conduct both the "Could" and "Should" counterfactual thinking (Folger & Cropanzano, 2001). In addition, the more the treatments differ, the more the subordinates tend to think the outcomes and procedures are being allocated and implemented by the leader in an inconsistent manner, especially those in low-quality LMX relationships with the leader. From the perspective of the rules of equality (Deustch, 1975) and procedural justice (Leventhal, 1980), this higher inconsistency will trigger stronger perceptions of distributive and procedural unfairness among the low-LMX subordinates. Likewise, because high-quality LMX relationships are characterized by trust and respect (Graen & Uhl-Bien, 1995), when there is large LMX differentiation, low-LMX subordinates receive much less trust and respect from their leader than high-LMX subordinates. They are likely to perceive that the rules of interactional justice (Bies & Moag, 1986) are violated, resulting in perceptions of interactional unfairness. On the other hand, when LMX differentiation is low, even if the low-LMX subordinates identify some discrepancy between their current state of being and the would-have-been state, the discrepancy is so small that even if the "Would" counterfactual is activated, it would be less likely to lead to the "Could" and "Should" counterfactuals.

www.manaraa.com

LMX differentiation may impact those subordinates in high-quality LMX relationships as well. Although it is hard for them to imagine any would-have-been situation given that they are already better off than their low-LMX coworkers, they may be worried about the future fairness considering the current unfair treatments to those low-LMX coworkers (Cobb & Frey, 1996; Liden et al., 2006). As Sias and Jablin (1995) have shown, when employees are aware of some unfavorable treatments from their supervisor to their coworkers, they begin to worry and feel vulnerable to similar treatments. However, compared to the low-LMX subordinates' current inferior experience, high-LMX subordinates' worries about the future are remote and therefore relatively less significant. The impact of LMX differentiation on high-LMX subordinates, then, should be smaller. Based on the above arguments, I hypothesize that:

> *Hypothesis 2 (H2): LMX differentiation will moderate the association between LMX quality and perceptions of (a) distributive justice, (b) procedural justice, and (c) interactional justice such that subordinates with low LMX quality in a group of high LMX differentiation will report the lowest justice perceptions.*

3.1.2.2 Intra-group Communication

Another group-level moderator that is related to the discrepancy between the current state of being and the would-have-been state is intra-group communication. While LMX differentiation concerns the degree of the variation of LMX quality within a group, intra-group communication is related to subordinates' opportunities to identify this LMX quality variation. In groups with high frequency of in-group communication, information about differential treatments is more available and subordinates are more likely to identify the differential treatments they receive from the same leader.

www.manaraa.com

Intra-group communication can be formal task-related interactions or informal non-task-related interactions. Task-related interactions are often necessary for individuals to complete their jobs. Individuals have to communicate with each other for information or resources especially when task interdependence is high. It is partly through this kind of communication that group members learn of their leader's differential treatments (Sias, 1996). For instance, through the discussion about how to complete a task, some group members may hear about others who are receiving more resources or information from the leader or are given more discretion in decision making. In addition to formal communication, individuals may also become aware of the leader's differential treatments through informal social conversation. In a qualitative study by Sias and Jablin (1995), for example, a respondent reported that he was often invited to have dinner with his boss but his coworkers did not receive similar invitations. He recalled that one time, he was talking with his coworker when his coworker suddenly asked, "Well, what did you do last night?" and the respondent replied, "Oh, I had dinner with Don [the supervisor]." Casual talk such as this, then, lets employees discover that their coworkers receive different treatments or resources from their leader.

As suggested by Folger and Cropanzano (2001), "the easier it is to imagine a positive alternative, the more likely it is that a negative event will cause distressful emotion" (p.10). As intra-group communication intensifies, low-LMX subordinates find it easier to uncover the discrepancy between their current state of being and the possible would-have-been situation. They are thus more likely to develop the "Would" and "Could" counterfactual thoughts that lead them to seek a person to blame. From a perspective of organizational justice rules, the identification of the discrepancy in LMX treatments will also lead the low-LMX subordinates to perceive violations of rules of procedural and interactional justice (Leventhal, 1980; Bies &

www.manaraa.com

Moag, 1986). Social comparison of distributive outcomes also results in perceived distributive unfairness (Adams, 1965).

In contrast, when intra-group communication is low, low-LMX subordinates are less aware of the differential treatments existing in the group because they can only get limited information about what their high-LMX counterparts receive through observation. The imagination of the would-have-been situation becomes less likely. As previously argued, even if high-LMX subordinates are aware of the less favorable treatments their low-LMX coworkers receive, the impact of these treatments on them should be less. Therefore, it is hypothesized that:

> *Hypothesis 3 (H3): Intra-group communication will moderate the association between LMX quality and perceptions of (a) distributive justice, (b) procedural justice, and (c) interactional justice such that subordinates with low LMX quality in a group of high intra-group communication will report the lowest justice perceptions.*

3.1.2.3 Role Breadth Self-Efficacy

Given that the development of unfairness perceptions is an outcome of the generation of counterfactuals (Gilliland et al., 2001), an individual characteristic that enhances or hinders the likelihood of such generation can be a potential moderator. Role breadth self-efficacy (RBSE) is proposed to be associated with one's likelihood to develop these counterfactuals.

Parker (1998) defined RBSE as the degree to which "people feel confident that they are able to carry out a broader and more proactive role, beyond traditional prescribed technical requirements" (p. 835). Consistent with Bandura's (1986) conceptualization of self-efficacy, RBSE emphasizes one's *perceptions* of his/her capabilities (Parker, 1998). A person high in self-perceived RBSE, however, is not necessarily perceived as such by his/her leader. This

www.manaraa.com

discrepancy in perceptions, then, may affect the relationship between LMX quality and perceived organizational justice.

In high-quality LMX relationships, leaders have higher expectations of the subordinates and give them more obligations as well as more challenging and developmental assignments (i.e. a broader role) because the subordinates are expected to be more competent and dependable and thus to complete the assignments successfully (Boies & Howell, 2006; Graen & Uhl-Bien, 1995). Compared to high-LMX subordinates, low-LMX subordinates tend to receive less challenging and developmental assignments. Subordinates of different levels of RBSE may react to these roles and task assignments in various ways.

Low-LMX subordinates with high RBSE are likely to wonder why they do not receive the same level of challenging assignments that high-LMX subordinates receive. Believing that they have the capabilities to take up a broader role, low-LMX subordinates are likely to think that had the leader given them challenging assignments, they would have handled them appropriately. Their state of being would then have improved by receiving a higher status as well as more power and discretion in decision-making. The discrepancy between their current state of being and the would-have-been state enlarges. This gives way to more counterfactuals and stronger perceptions of unfairness from these group members (c.f. Folger & Cropanzano, 2001). In contrast, low-LMX subordinates with low RBSE would believe that even if they had been given a broader role, their state of being would not have been better because they lack the necessary capabilities to complete the tasks. Hence, their performance would not have been better and their state of being would have remained more or less the same. Without any perceived discrepancy between the current state and the would-have-been state, no "Would"

www.manaraa.com

counterfactual is activated (Folger & Cropanzano, 2001). These subordinates, therefore, are less likely to perceive unfairness.

High-LMX subordinates with high RBSE are likely to develop high justice perceptions. Following attribution theory (Jones et al., 1971; Weiner, 1974), these subordinates tend to attribute what they receive to internal factors and believe that the more challenging and developmental assignments as well as more favorable leader treatments are the outcomes of their high capabilities. They will thus perceive their favorable treatments from the leader to be justified. However, for high-LMX subordinates with low RBSE, the impact of RBSE on the LMX quality – justice perception relationship is less clear. Past studies have shown that subordinates who have higher self-perceptions of competence are more likely, although not necessarily, to develop high-quality LMX relationships with leaders (Murphy & Ensher, 1999; Snyder & Bruning, 1985). If true, subordinates with low RBSE may be less likely to develop high-quality LMX relationships with their leaders. If they do, perhaps they are apt to perceive high justice because this situation can be regarded as overpayment to them and people are more tolerant for overpayment (Donovan, 2001).

Therefore, it is argued that subordinates with low-quality LMX relationships and high RBSE will have the lowest levels of justice perceptions. The impact of RBSE on the LMX quality – organizational justice relationship, however, is less significant when LMX is high. It is thus hypothesized that:

> *Hypothesis 4 (H4): Role breadth self-efficacy will moderate the association between LMX quality and perceptions of (a) distributive justice, (b) procedural justice, and (c) interactional justice such that subordinates with low LMX quality and high RBSE will report the lowest justice perceptions.*

www.manaraa.com

3.1.3 Mediating Role of Organizational Justice Perceptions

Both attitudinal and behavioral outcomes are examined in this study. Past studies have found that LMX quality is positively related to subordinates' organizational commitment, satisfaction with supervision, job performance, and OCB (Gerstner & Day, 1997; Illies et al., 2007). In addition, organizational justice research has found positive associations between organizational justice perceptions and these attitudinal and behavioral outcomes (Colquitt et al., 2001; Philips, Douthitt, & Hyland, 2001). In fact, as shown in Table 1, there is emerging research demonstrating the mediating roles of organizational justice perceptions between LMX quality and various organizational outcomes. For instance, Bhal (2005) showed that all three forms of organizational justice perceptions mediated the impact of LMX quality on employees' loyalty. Lee (2000) also revealed that distributive and procedural justice perceptions acted as mediators in the association from LMX quality to job satisfaction, organizational commitment, and turnover intentions. Yet similar empirical support was obtained from the study by Pillai et al. (1999) who showed that distributive and procedural justice perceptions mediated the influence of LMX quality on job satisfaction.

Thus, it is reasonable to propose that LMX quality affects employees' attitudes and behaviors through their justice perceptions. Specifically, the quality of the relationship an employee has with his/her leader tends to affect the employee's perceptions of organizational justice. In turn, these perceptions of justice or injustice will impact the employee's attitudinal and behavioral reactions in the organizational settings.

Considering that the focus of organizational justice perceptions in this study is the leader rather than the organization, I examine attitudinal outcomes related to the leader. Given the emerging research above, it is reasonable to hypothesize that the influence of LMX quality on

www.manaraa.com

followers' commitment to the leader, satisfaction with the leader, individual job performance, and individual OCB will be mediated by the followers' perceptions of organizational justice.

Hypothesis 5 (H5): Perceived distributive justice will mediate the relationships between LMX quality and (a) commitment to the leader, (b) satisfaction with the leader, (c) job performance, and (d) OCB.

Hypothesis 6 (H6) H6: Perceived procedural justice will mediate the relationships between LMX quality and (a) commitment to the leader, (b) satisfaction with the leader, (c) job performance, and (d) OCB.

Hypothesis 7 (H7): Perceived interactional justice will mediate the relationships between LMX quality and (a) commitment to the leader, (b) satisfaction with the leader, (c) job performance, and (d) OCB.

3.1.4 Summary

In this section, I specified a model at the individual-level of analysis linking LMX quality to subordinates' perceptions of distributive, procedural, and interactional justice. I further specified that these justice perceptions would be mediators between LMX quality and four outcomes (commitment to the leader, satisfaction with the leader, job performance, and OCB). In addition, I identified two situational characteristics (LMX differentiation and intra-group communication) and one individual difference (role breadth self-efficacy) as moderators in the LMX quality – organizational justice relationship. Attention now turns to extending and integrating LMX and justice theory research at the group-level of analysis.

www.manaraa.com

3.2 A Model of LMX and Organizational Justice at the Group Level of Analysis

LMX relationships can be viewed as "systems of interdependent dyadic relationships" (Graen & Uhl-Bien, 1995: 233) that operate within larger systems such as groups and other networks (Bhal, 2005; Mueller & Lee, 2002). Nevertheless, most studies of LMX theory have focused on the individual-level of analysis (Mayer, 2004). Researchers, however, have encouraged the investigation of LMX theory from a systems-level perspective, examining the patterns of LMX relationships as well as the connection between LMX quality and outcomes in groups (Forret & Turban, 1994; Gerstner & Day, 1997; Graen & Uhl-Bien, 1995). The group-level model in this dissertation aims at addressing this issue by integrating and extending the research on LMX and organizational justice to the group-level of analysis. Specifically, this model focuses on how variation of the quality of LMX relationships in groups can affect the strength of group justice climates, which may affect group dynamics such as conflict and member exchanges, as well as a range of group-level outcomes. This model is presented in Figure 2.

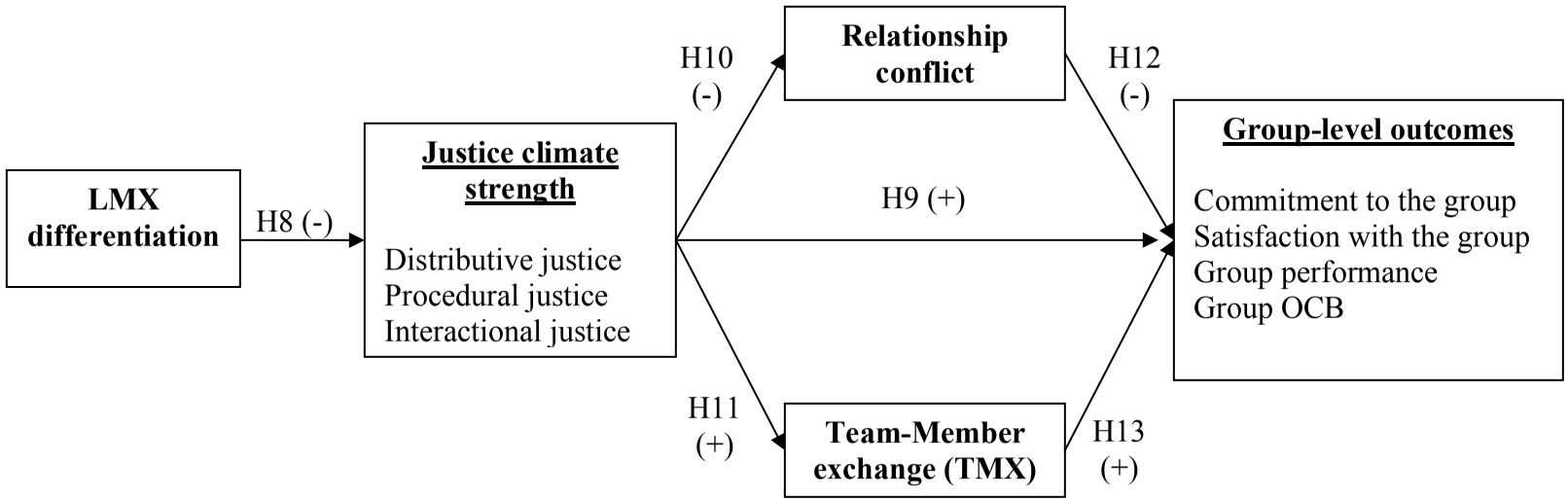
In the following paragraphs, I will present the model by first discussing the relationship between LMX differentiation and justice climate strength. This is followed by a discussion of the relationship between justice climate strength and group-level outcomes. Afterwards, I will discuss the association between justice climate strength and two group dynamics – relationship conflict and team-member exchange. Finally, the attention will turn to the discussion of the connection between these two group dynamics and group-level outcomes.

www.manaraa.com

المنارة للاستشارات

FIGURE 2

A Model of LMX Differentiation and Justice Climate Strength at the Group-Level of Analysis



www.manaraa.com

3.2.1 Relationship between LMX Differentiation and Justice Climate Strength

A basic tenet of LMX theory is that leaders cannot develop high-quality relationships with all subordinates. What they can do, instead, is to allocate more support and resources to the selected some (Graen & Uhl-Bien, 1995). Within any functional unit or work group, then, some members have higher-quality relationships with the leader than others. Accordingly, differentiation in the quality of LMX relationships becomes inevitable within groups.

LMX differentiation is an important group-level construct that is beginning to receive some well deserved attention. To assess this attention, empirical studies published in major journals in organizational behavior and psychology between 1975 and February in 2007 were reviewed to locate any studies of LMX differentiation (i.e. *Academy of Management Journal, Journal of Management, Leadership Quarterly, Journal of Applied Psychology, Organizational Behavior and Human Decision Processes, Journal of Personality and Social Psychology, Administrative Science Quarterly, Journal of Social Psychology, and Journal of Applied Social Psychology*). In addition, literature search was conducted with the ABI/Inform and Psyc INFO databases using keywords such as leader-member exchange differentiation, leader-member exchange level, LMX differentiation, LMX level, group leader-member exchange, and group LMX. Reference lists of relevant studies were also examined to locate any other articles. Table 2 presents a summary of the relevant studies.

Table 2 shows that LMX differentiation is a group phenomenon that affects a variety of group outcomes such as team satisfaction, potency, conflict, and climates (e.g. Boies & Howell, 2006; Ford & Seers, 2006; Mayer, 2004; McCline, 1991). Because the examination of LMX differentiation on group processes and outcomes remains limited, more investigation is warranted.

www.manaraa.com

المنارة للاستشارات

TABLE 2

A Summary of Empirical Studies Examining LMX Differentiation

Study	Independent Variable	Moderators (M) or Mediators (I)	Dependent Variable(s)	Correlation between LMX Differentiation and Dependent Variables
Boies & Howell (2006)	Mean LMX	LMX differentiation (M)	Team potency	.24
			Team conflict	-.22
Ford & Seers (2006)	Mean LMX	LMX differentiation (M)	Disagreement in climates	.23-.39[a]
Liden, Erdogan, Wayne, & Sparrowe (2006)	LMX differentiation	Individual LMX (M)	Individual performance	-.00
		Task interdependence (M)	Group performance	.07
		LMX median (M)		
Mayer (2004)	LMX strength	Task interdependence (M)	Procedural justice climate level	.35
		Group size (M)	Interpersonal justice climate level	.39
			Informational justice climate level	.39
McClane (1991)	Differences in member negotiating latitude		Team satisfaction with the leader	-.34[b]
			Team satisfaction with coworkers	-.14[b]
			Team satisfaction with tasks	-.20[b]

[a] In this study, five climates were examined: supportive management, contribution, recognition, challenge, and senior management effectiveness. Climate strength was operationalized as the SD score of perceptions of climates within a group.
[b]These are beta coefficients obtained by regressing each of the dependent variables on the sum of differences in negotiating latitude.

www.manaraa.com

In the current study, distributive, procedural, and interactional justice climates are examined. They are defined as team-level, shared collective cognitions regarding how fairly the group is being treated as a whole distributively, procedurally, and interactionally (Colquitt et al., 2002; Naumann & Bennett, 2000; Mossholder et al., 1998). Justice climate strength is defined as the agreement among group members on their perceptions of how fairly the group is being treated (Lindell & Brandt, 2000). Hence, the higher the group members' agreement, the stronger is the group justice climate.

Subordinates who experience different levels of LMX quality tend to develop different perceptions (Roberson & Colquitt, 2005) of the same set of organizational characteristics. As a result, they are likely to have different perceptions of group climates. As revealed in past studies, LMX quality is related to one's climate perceptions. For example, in-group members report more positive climates of understanding, responsibility, teamwork, inter-group cooperation, autonomy, recognition, and encouragement than out-group members (Dunegan, Tierney, & Duchon, 1992; Kozlowski & Doherty, 1989). This suggests that group members have a tendency to infer their personal experience to a broader context. If they receive more encouragement from the leader, for instance, they are also likely to perceive a climate of higher encouragement in the group, and vice versa. When viewed from a higher-level of analysis, then, LMX differentiation is likely to lead to low agreement among group members in their perceptions of group climates. This is evidenced in Ford and Seers' (2006) study which showed that groups having high LMX differentiation tended to report a higher level of disagreement among group members regarding climates of supportive management and contribution.

To understand the relationship between LMX differentiation and agreement in justice climates, I turn to the climate development framework developed by Schneider and Reichers

www.manaraa.com

(1983). According to this framework, there are three approaches to climate development: the structural, attraction-selection-attrition, and symbolic interactionist approaches. In the structural approach, climates are influenced by the structure of organizational settings. Specifically, if people are exposed to the same rules, policies, and practices, they are likely to attach similar meanings and perceptions to them. This similarity in perceptions, in turn, results in the emergence of a group climate. The attraction-selection-attrition approach proposes that after attraction, selection, and attrition processes, members within a unit become more homogeneous in surface- and deep-level attributes. Owing to the similarity among them, these members are apt to attach similar meanings to organizational characteristics and have similar perceptions of them. A group climate thus arises. Finally, the symbolic interactionist approach suggests that a climate emerges through social interactions among group members who develop some consensual meanings regarding certain characteristics within the group. The more the group members are involved in communicative interactions, the higher the tendency that they will respond to, define, and interpret the characteristics in similar ways.

With respect to organizational justice, when group members receive differential leader treatments, they are exposed to different rules, policies, and practices related to outcome distribution, procedural implementation, and interpersonal interactions – structural antecedents to climate development as proposed by Schneider & Reichers (1983). It becomes likely that subordinates having different levels of LMX quality with their leader will develop different group justice climate perceptions. Specifically, because high-LMX subordinates receive better outcome distribution, procedural implementation, and interpersonal interactions, they tend to develop higher distributive, procedural, and interactional justice climate perceptions in spite of the fact that the awareness of the low-LMX coworkers' less favorable treatments may impact

www.manaraa.com

their justice perceptions. This is because of their higher tolerance for overpayment (Donovan, 2001) and internal attribution bias (Sias & Jablin, 1995). On the contrary, based on their personal experience of leader treatments, low-LMX subordinates tend to perceive there is a lack of justice within the group. As a consequence, disagreement among group members regarding group justice climates will increase with higher LMX differentiation.

The disagreement in group justice climates can also be understood from the symbolic interactionist approach to climates. Studies have shown that subordinates with different quality of leader-follower relationships tend to engage in less cooperative communication (Lee, 1997, 2001; Sias & Jablin, 1995). With limited communication and interaction, it becomes more difficult for group members of various levels of LMX quality to develop consensual perceptions regarding how fairly the group is being treated (Schneider & Reichers, 1983). As a result, these diverse group justice perceptions will lead to low strength (i.e. high within-group variation; Lindell & Brandt, 2000) of distributive, procedural, and interactional justice climates.

As the differential leader treatments get more extreme, followers will develop even more diverse perceptions of group fairness and engage in even less communication, resulting in lower agreement on justice climates. This is likely to happen regardless of the average level of LMX quality within the group. Thus far, only one study was found that examined the relationship between LMX differentiation and justice climates (Mayer, 2004), which, however, did not examine distributive justice climates. Because leaders offer different tangible and intangible resources and outcomes to subordinates in different LMX relationships, LMX differentiation is likely to affect distributive justice climates in addition to procedural and interactional justice climates. This dissertation thus contributes by also taking distributive justice climates into consideration.

www.manaraa.com

Therefore, based on the above discussion, I hypothesize that when differential leader treatments exist, whatever the average quality of LMX within a group, justice climate strength will decrease.

Hypothesis 8 (H8): LMX differentiation is negatively related to the strength of (a) distributive justice climates, (b) procedural justice climates, and (c) interactional justice climates, after controlling for LMX level.

3.2.2 Justice Climate Strength and Group Outcomes

In this group-level model, two attitudinal outcomes are examined: group members' commitment to and satisfaction with their group. Because research on group-level LMX and justice climates is still at the infancy stage, group members' attitudes have yet to be fully studied at the group-level of analysis. Nevertheless, past studies have suggested that organizational or work group climates can influence members' attitudes (e.g. Hollmann, 1976). Considering that group members' commitment to and satisfaction with their work groups are important in group and organization performance, these two attitudinal outcomes are examined in this model.

At the individual-level of analysis, when employees perceive unfairness, they have lower levels of commitment and satisfaction (Colquitt et al., 2001). At the group-level of analysis, when justice climate strength is low, regardless of the climate level, there is likely to be perceived violation of a number of justice rules applied throughout the group. Some group members will be receiving more and better outcomes, procedural implementation, and interpersonal treatments than others. This kind of inconsistent treatments is likely to be perceived as unfair and will trigger some negative attitudes from the group members toward the group (Roberson & Colquitt, 2005), especially from those having lower perceptions of justice

www.manaraa.com

climates. Consequently, these group members will become less committed to and less satisfied with the group. Overall, the group-level commitment and satisfaction will suffer.

Additionally, two group behavioral outcomes are examined: group performance and group OCB. When studying leadership, both required and discretionary behaviors performed by followers should be considered (Ilies et al., 2007). Adopting the definition by Ehrhart (2004), group OCB is defined as the group-level OCB performed within the group. This construct is structurally different from the average individual-level OCB because it focuses on how group members perceive the citizenship behaviors performed by the group as a whole, referring to the standard mode of citizenship behavior within the group. Therefore, it has the group instead of the individual employees as the referent in the conceptualization (Ehrhart, 2004).

Justice climate strength is prone to increase group members' behavioral outcomes regardless of the justice climate level. When group members agree that the group is being treated fairly or unfairly as a whole, they also perceive that everyone in the group is of similar status and value (Lind & Tyler, 1988). Because these group members have certain degree of task interdependence, one's task completion depends upon others. Therefore, when perceiving one another as of similar status and value in the group, group members tend to be willing to exert effort to complete their tasks which in turn will be advantageous to others' task completion as well, thus benefiting the group's overall performance. Likewise, they are also willing to offer extra help to others when necessary, resulting in higher OCB within the group. On the other hand, when justice climate strength is low, the inconsistency in outcome distribution, procedural implementation, and interpersonal treatment suggests that at least some members will perceive violation of justice rules, which is likely to exert negative influence on group performance. Group members may deliberately withhold their effort to perform so as to impede others'

www.manaraa.com

performance. Support can be obtained from Colquitt's (2004) study, which found that inconsistency in procedural treatments across group members led to lower levels of performance in groups. Extending this study, it is reasonable to hypothesize that the impact of justice climate strength on group performance will also occur for distributive and interactional justice climate strength. In addition, as argued above, when justice climate strength is low, group members may resort to retaliatory behaviors by withholding their extra effort to assist others. Citizenship behaviors, then, are likely to be withheld, resulting in a low level of group OCB.

Therefore, it is hypothesized that justice climate strength has positive impact on group members' attitudes and performance whatever the average levels of justice climates:

Hypothesis 9 (H9): Justice climate strength is positively related to (a) group members' commitment to the group, and (b) group members' satisfaction with the group, (c) group performance, and (d) group OCB, after controlling for justice climate level.

3.2.3 Justice Climate Strength and Group Processes

Justice climate constitutes a group environment which may also affect group dynamics. Recently, Roberson and Colquitt (2005) proposed that shared and configural group justice would be predictive of group processes and outcomes. In this study, two group processes are examined: intra-group relationship conflict and team-member exchange.

3.2.3.1 Justice Climate Strength and Relationship Conflict

Relationship conflict is examined in this group-level model because it has been found to be important in organizational settings in general and detrimental to group members' attitudes and group performance in particular (Simons & Peterson, 2000). Relationship conflict pertains

www.manaraa.com

to real and perceived interpersonal clashes caused by differences in personality, values, perceptions, attitudes, and interpersonal styles. It typically involves dislike between the disputing parties and feelings such as tension, annoyance, and animosity (De Dreu & Weingart, 2003; Jehn, 1995, 1997; Jehn & Mannix, 2001; Simons & Peterson, 2000).

Perceptions of injustice can evoke various unexpected negative reactions and behaviors in the workplace. When perceive to be treated unfairly, employees not only experience feelings of outrage and resentment towards their organizational decision makers (Greenberg, 1990b) but they may also choose to "get even" by engaging in various organizational retaliatory behaviors such as employee theft (Greenberg, 1990a) in order to punish those blamed for the problem (Skarlicki & Folger, 1997). However, beyond punishing the decision makers, employees who perceive a lack of justice may also develop psychological tension or distress and engage in retaliatory behaviors towards some of their coworkers. For example, low-LMX members who tend to report lower perceptions of organizational justice than their high-LMX counterparts are likely to report lower levels of coworker satisfaction (McClane, 1991). Perceiving a lack of justice, employees may choose to express their negative emotions and attitudes by responding in a negative manner toward their coworkers (Lee, 2001; Sias & Jablin, 1995). Further, workplace jealousy may emerge. Employees may become jealous of those receiving more favorable treatments and try to convince others of the unfairness of the situation (Miner, 1990), thus triggering more interpersonal clashes within the group. What's more, when group members perceive unfair treatments, they are likely to tease others (Sias & Jablin, 1995) or spread rumors about coworkers (Skarlicki & Folger, 1997). All of these negative interpersonal interactions, then, will give way to intra-group relationship conflict. On the other hand, when group members share the consensus that there is justice within the group, they are more likely to engage in

www.manaraa.com

helping behaviors and conflict management behaviors (Colquitt, 2001; Naumann & Bennett, 2000; Roberson & Colquitt, 2005), thus mitigating the potential of relationship conflict.

Low procedural justice climate strength is indicative of variation in procedural implementation (Colquitt et al., 2002) and similarly, low distributive and interactional justice climate strength is indicative of variation in distributive outcomes and interpersonal treatment across group members, respectively. The above discussion suggests that the lack of group members' agreement on their justice climate perceptions can lead to relationship conflict whatever the average levels of justice climate perceptions within the group. It is therefore hypothesized the three dimensions of justice climate strength have negative associations with relationship conflict when justice climate level is controlled.

Hypothesis 10 (H10): The strength of (a) distributive justice climates, (b) procedural justice climates, and (c) interactional justice climates is negatively related to relationship conflict, after controlling for justice climate level.

3.2.3.2 Justice Climate Strength and Team-Member Exchange

Team-member exchange (TMX) pertains to an individual's perceptions of his/her role within the group as well as his/her exchange relationship with the peer group (Seers, 1989). Similar to LMX, TMX was heavily built on social exchange theory (Blau, 1964). It assesses the reciprocity between a group member and the group. Specifically, TMX measures a focal member's perceptions of his/her "willingness to assist other members, to share ideas and feedback and in turn, how readily information, help, and recognition are received from other members" (Seers, 1989: 119). Therefore, the quality of one's exchange relationship with the group reflects the effectiveness of the working relationship between this employee and the group.

www.manaraa.com

At the individual-level of analysis, TMX has been related to job satisfaction (Golden, 2006; Major et al., 1995; Seers, 1989; Seers, Petty, & Cashman, 1995) and organizational commitment (Major et al., 1995) whereas at the group-level of analysis, mean values of TMX (i.e. TMX level) within groups have been associated with group production efficiency (Seers et al., 1995).

In a group of employees receiving different leader treatments, the (in)justice perceptions triggered are apt to affect the reciprocal relationships among the group members. Group members tend to isolate those coworkers who are receiving fairer or more favorable treatments from the group's communication network while they include those who are receiving less favorable treatments into the network (Sias & Jablin, 1995). In addition, group members who perceive a higher level of unfairness show a lower tendency to perform exchanges with others. They share fewer ideas, resources, and information with their coworkers, especially with those in higher-quality LMX relationships (Sherony & Green, 2002). When coworkers approach them for help, they may also choose to give them silent treatments or even refuse to give them any required information as a kind of retaliatory behavior (Lee, 2001; Skarlicki & Folger, 1997). It therefore can be posited that when group members have diverse perceptions of group justice climates, they may also engage in similar uncooperative exchange behaviors. Those who report lower group justice climate perceptions tend to engage in fewer reciprocations with the coworkers. These patterns of exchange relationships will likely segregate the group into subgroups with information sharing restricted to members within their own subgroups. As a result, the overall cooperative communication and resource exchange within the group will suffer, impacting group functioning.

In contrast, as LMX differentiation reduces, group members' perceptions of group justice climates tend to converge. Because justice represents a symbol of status within the group (Lind

www.manaraa.com

& Tyler, 1988), when group members have agreement on their perceptions of group justice, they also tend to perceive themselves to be of similar status within the group. Communication within the group will in turn become more cooperative (Lee, 2001) such that group members will show more willingness to share ideas and information with others. This is evidenced in Colquitt's (2001) study which showed that procedural justice climate strength in a group was positively related to team member cooperation. I contend that such positive relationship will extend to distributive and interactional justice climate strength as well. Again, because the existence of disagreement in justice climate perceptions can well impact team members' exchange relationships regardless of the average levels of justice climate perceptions, it is thus hypothesized that:

Hypothesis 11 (H11): The strength of (a) distributive justice climates, (b) procedural justice climates, and (c) interactional justice climates is positively related to TMX level, after controlling for justice climate level.

3.2.4 Group Processes as Antecedents to Group-Level Outcomes

A lot of research has found relationship conflict to be negatively associated with group members' attitudes (De Dreu & Weingart, 2003). Relationship conflict is negatively related to member satisfaction at the group-level of analysis (De Dreu & Weingart, 2003). This is understandable considering that when there are ongoing personal attacks and interpersonal clashes within a group, group members will become increasingly dissatisfied with the work environment. In addition, they will feel uncomfortable working in a group in which members are attacking one another (Jehn, Northcraft, & Neale, 1999), resulting in their decreasing commitment to the group and increasing tendency to withdraw from group participation.

www.manaraa.com

The impact of relationship conflict may extend to group performance. This is because group members are distracted when involved in relationship conflict. They have to devote a lot of time and resources to resolving the conflict issues instead of the group's task-related problems (De Dreu & Weingart, 2003). What's more, conflict tends to reduce employees' motivation and productivity (Wall & Callister, 1995). Consequently, the amount of effort that group members are able and willing to put on their tasks is attenuated. Moreover, when there are extensive interpersonal clashes within a group, it becomes likely that group members will limit their extra-role behaviors for their leader as well as other group members. OCB is unlikely to become a norm within the group and therefore, group OCB will suffer.

It is thus hypothesized that intra-group relationship conflict will attenuate not only group members' attitudes towards the group but also group performance, both required and discretionary.

Hypothesis 12 (H12): Relationship conflict is negatively related to (a) group members' commitment to the group, (b) group members' satisfaction with the group, (c) group performance, and (d) group OCB.

The cooperative environment developed by high TMX should affect group members' attitudes toward the group. Past studies have shown a positive relationship between group members' exchanges and organizational commitment and job satisfaction (Golden, 2006; Seers, 1989; Sherony & Green, 2002). When there is extensive reciprocity within the group, group members receive more ideas, support, and feedback from their coworkers. These sharing and reciprocation behaviors foster a positive environment for group members to work in and provide satisfying experiences to the group members (Seers et al., 1995), generating high satisfaction

www.manaraa.com

with the group. These cooperative environment and satisfying experiences may also lead to group members' stronger emotional attachment to the group. As a result, individual group members will become more committed to and satisfied with the group.

The study by Seers et al. (1995) showed that group-level TMX was also beneficial to group productivity. When a group enjoys high TMX level, there is high average reciprocity across the group that reflects a high level of teamwork (Seers et al., 1995). Group members are willing to offer help, feedback, information, and recognition to one another in expectations of similar resources in return. These exchanges reflect the kind of effective reciprocal relationships that can promote group performance. Likewise, group-level TMX should be beneficial to group OCB as well. When group members are willing to share resources and information with one another, they are at the same time creating a cooperative environment. This cooperative environment should encourage extra-role behaviors among the group members who become more willing to extend a helping hand to one another, resulting in the development of a norm about OCB performance within the group. Therefore, high TMX level should result in high in-role performance as well as group OCB.

Based upon the above discussion, it is contended that at the group-level of analysis, high TMX level is likely to result in high levels of group members' commitment to and satisfaction with the group as well as in-role and extra-role performance.

Hypothesis 13 (H13): Team-member exchange level is positively related to (a) group members' commitment to the group, (b) group members' satisfaction with the group, (c) group performance, and (d) group OCB.

www.manaraa.com

3.2.4 Summary

In this section, I developed a group-level model to integrate LMX differentiation and justice climates. I specified that as LMX differentiation increases, the strength of distributive, procedural, and interactional climates decreases. In addition, justice climate strength tends to increase group members' commitment to and satisfaction with the group as well as group behavioral outcomes, specifically group performance and group OCB. Also, I specified that justice climate strength will affect two group processes – relationship conflict and TMX. Particularly, I hypothesized that justice climate strength will reduce relationship conflict but increase TMX. Finally, I specified that these two group processes will affect the four group-level outcomes.

www.manaraa.com

CHAPTER IV

METHODS

4.1 Sample

A cross-sectional online survey design was used in this study. Participants were cadets in a corps of cadets in a large university in the United States. They are members in a military program receiving training about military and leadership skills.

This sample was suitable for the current study for several reasons. First, the corps of cadets has a very well-defined group structure and each group has an assigned leader. Second, group membership is clear and easily identifiable (Boies & Howell, 2006) owing to the clear group structure. Third, the corps of cadets has a high emphasis on leadership. In addition, the discussion with the Colonel and interviews with several cadets revealed that the corps of cadets, despite its formal hierarchical structure, still has flexibility that resembles an organizational setting. For example, there are a lot of opportunities for informal interactions between leaders and followers as well as among the followers. Moreover, the relationship between leaders and followers is not only characterized by orders and commands but also opportunities for followers to voice out their ideas and opinions and take part in some decision-making. This is because the cadets in the training program are not required to go to any military camps after finishing the program. Rather, they can choose to return to the business world as "civilians". Also, because the cadets are still undergoing leadership training, it is likely that variance in LMX styles and justice climates across groups can be found. Last but not least, a lot of studies on leadership have also been conducted in military-related settings (e.g. Boies & Howell, 2006; Bass, Avolio, June, & Berson, 2003; Dvir, Eden, Avolio, & Shamir, 2002) and in general, leadership studies

www.manaraa.com

conducted in military and civilian organizational settings have generated similar patterns of results (Boies & Howell, 2006).

There are several levels in the hierarchy of the corps of cadets. Considering that the squad leaders would benefit the most from this survey in terms of their leadership development, the Colonel and I decided to collect data from squad leaders and followers. Invitation emails were sent to 87 groups of cadets with an average group size of six members. Completed questionnaires were collected from 87 leaders (100% response rate) and 413 followers (81.14% response rate). These high response rates could be partly attributed to the high support from the management level of the corps. For the leaders, 73.6% were Caucasian/White, 3.4% were African American/Black, 2.3% were Hispanic, 16.1% were Asian/Pacific Islander, 3.4% were native American and the rest, 1.1%, were others. Eighty-one percent of the leaders were male. On average, they had spent 27.47 months (SD = 5.75 months) in the corps and have had 27.98 months (SD = 20.20 months) of work experience. For the followers, 81.2% were Caucasian/White, 6.1% were African American/Black, 2.7% were Hispanic, 6.4% were Asian/Pacific Islander, 0.7% were native American and 2.9% were others. Eighty-four percent of the followers were male. On average, they had spent 15.64 months (SD = 11.68 months) in the program and had had 23.47 months (SD = 21.53 months) of work experience.

4.2 Procedure

Two survey websites were developed to collect data, one for leaders and one for followers (survey items are discussed below; see Appendices A and B for the survey items). Leaders provided data on individual and group performance, as well as individual-level and group-level OCB. Followers provided data on the rest of the measures. Likewise, two versions

www.manaraa.com

of an invitation email were developed. The email was sent out to all selected cadets to invite them to participate in this survey (see Appendices C – D for the invitation emails). Each email contained a link which directed the cadet to the corresponding survey website. Once the cadet clicked on the link and completed the questionnaire, the system recorded the source of the data. These procedures allowed me to match the data from leaders and followers. All participants were assured of the confidentiality of their input. They were given a seven-day window to complete the questionnaire. During the seven-day period, several email reminders were sent out to those who had not completed the questionnaire. No significant differences in demographic characteristics were found between early and late respondents.

4.3 Measures

All individual-level measures are presented in Appendix A whereas all group-level measures are presented in Appendix B. All measures were assessed on a 5-point scale (1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree) except the measure of LMX quality. These measures had been tested and validated in a pilot study with 15 groups of cadets randomly selected.

4.3.1 Individual-Level Measures

Leader-member exchange. Quality of LMX relationships was measured using the seven-item LMX-7 Scale (Graen, Novak, & Sommerkamp, 1982). It is the most commonly used measure of LMX (Gerstner & Day, 1997). Liden and Maslyn (1998) reported that this scale has high internal consistency and test-retest reliability. The measure was slightly adapted and the alpha reliability was .90.

www.manaraa.com

Organizational justice. Niehoff and Moorman's (1993) measures were used to assess the three dimensions of organizational justice: distributive, procedural, and interactional justice. These measures had demonstrated discriminant validity as the items of these measures loaded on their corresponding factors (Niehoff & Moorman, 1993). In the current study, the distributive justice measure contained three items, the procedural justice measure contained five items, and the interactional justice measure also contained five items. The alpha reliability was .95 for distributive justice, .93 for procedural justice, and .95 for interactional justice.

Role breadth self-efficacy. A three-item measure was developed to measure RBSE in the current study. These three items assessed followers' confidence in taking up a broader role such as performing more challenging and developmental tasks, as well as their confidence in taking up more responsibilities in the group. The alpha reliability reached .94.

Commitment to the leader. Following the approach adopted by Clugston, Howell, and Dorfman (2000) and Becker and Kernan (2003), followers' commitment to their leader was measured with a three-item measure adapted from the organizational affective commitment scale developed by Allen and Meyer (1990). This scale had been validated as distinct from other foci and bases of commitment (Clugston et al., 2000). The alpha reliability was .82.

Satisfaction with the leader. The three-item measure developed by Van der Vegt, Emans, and Van de Vliert (2001) for measuring satisfaction with the group was adapted to measure satisfaction with the leader in this study. The referent in the items was changed from the group to the leader. The measure showed an alpha reliability of .93.

Job performance. Group leaders provided performance ratings of their followers. Podsakoff and MacKenzie's (1989) five-item measure was used to assess group members' job

www.manaraa.com

performance. It had been validated by Janssen and Van Yperen (2004). The items were slightly adapted and the measure showed acceptable reliability of .92.

Organizational citizenship behavior. Group leaders also provided OCB ratings of their individual followers. Followers' individual-targeted OCB was assessed by a measure adapted from the altruism measure developed by Podsakoff, MacKenzie, Moorman, and Fetter (1990). The item "helps orient new people even though it is not required" in the original measure was dropped because newcomers (or mid-joiners) are very unlikely after squads have been formed in the corps of cadets. The current five-item measure contained items which assessed followers' helping behaviors to other members with organizationally relevant tasks or problems within the group. The original altruism scale had been shown to be distinct from other dimensions of OCB and such constructs as trust in leaders and employee satisfaction (Podsakoff et al., 1990). It showed an alpha reliability of .87 in the current study.

4.3.2 Group-Level Measures

Leader-member exchange differentiation. Following the approach adopted by Liden et al. (2006), LMX differentiation for each group was operationalized as the within-group variance in individual-level LMX scores. LMX level was operationalized as the within-group average of individual-level LMX scores.

Intra-group communication. Intra-group communication was measured with three items adapted from the 2-item measure (r = .66) developed by Gilson and Shalley (2004) that captures how frequently group members socialize with their coworkers outside of work. The measure in this study assessed the communication among cadets both inside and outside of work. The measure showed an alpha reliability of .88.

www.manaraa.com

Justice climate strength. Because justice climates are conceptualized with a focus on the unit (i.e. group) as a referent (Roberson & Colquitt, 2005), followers' perceptions of justice climates were measured with Niehoff and Moorman's (1993) scales reworded to reference the group-level of analysis. For example, the distributive justice item "My squad leader has given me a fair work schedule" was reworded to "Our squad leader has given our squad a fair work schedule". This approach corresponds to the "referent-shift consensus approach" recommended by Chan (1999) and has been adopted in previous studies (e.g. Ehrhart, 2004). The alpha reliability was .96 for the distributive justice climate, .92 for the procedural justice climate, and .93 for the interactional justice climate. Justice climate strength was operationalized as the within-group variance in individual scores whereas justice climate level was operationalized as the within-group average of individual justice climate scores.

Relationship conflict. The four-item measure developed by Jehn (1995) was used to assess relationship conflict. This measure is the most commonly used in the literature. It has been validated as distinct from task conflict (Pelled, Eisenhardt, & Xin, 1999) and had an alpha reliability of .92 in this study.

Team-member exchange. TMX was measured with eight items adapted from the 10-item measure developed by Seers (1989). These eight items assessed the degree of sharing of information and suggestions as well as the degree of understanding between the focal group member and other members in the group. The measure showed an alpha reliability of .89.

Commitment to the group. Following the approach adopted by Clugston et al. (2000) and Becker and Kernan (2003), group members' commitment to their group was assessed with a three-item measure adapted from the organizational affective commitment scale developed by Allen and Meyer (1990). The original group commitment scale had been validated as distinct

www.manaraa.com

from other foci and bases of commitment (Clugston et al., 2000). The alpha reliability of the measure reached .82.

Satisfaction with the group. The three-item measure developed by Van der Vegt, Emans, and Van de Vliert (2001) was used to assess group members' satisfaction with the group. This measure had been validated and shown to be distinct from individual job satisfaction by Van der Vegt and his colleagues (2001). The measure reported an alpha reliability of .91.

Group performance. Group leaders rated the performance of their groups. Three items of the five-item measure developed by Zellmer-Bruhn and Gibson (2006) were used for measuring group performance. The original measure had been validated and found to be distinct from other group-level variables such as quality of interpersonal relations, group learning, and knowledge management in Zellmer-Bruhn and Gibson's (2006) study. The alpha reliability reached .80.

Group organizational citizenship behavior. Similarly, group leaders rated the citizenship behaviors performed in their groups. Group OCB was assessed with the four-item individual-level OCB measure reworded to reference the group-level of analysis. This approach had been adopted by Ehrhart (2004) to assess group OCB. The measure reported an alpha reliability of .79.

www.manaraa.com

CHAPTER V

RESULTS

5.1 Results of the Individual-Level Model

Given that LMX and justice perceptions may share some conceptual space, confirmatory factor analysis (CFA) was conducted to examine the discriminant validity of LMX, distributive, procedural, and interactional justice perceptions. The CFA measurement models were estimated using LISREL 8.80 and reported with likelihood ratio chi-square statistic, root-mean-square error of approximation (RMSEA; Steiger & Lind, 1980), standardized-root-mean-square residual (SRMR), comparative fit index (CFI; Bentler, 1990), and normed fit index (NFI; Bentler & Bonett, 1980). Specifically, structural-equation modeling was applied to examine the model fit of three measurement models – a four-factor model, a two-factor model, and a single-factor model. In the first model, the items measuring LMX and the three dimensions of justice perceptions were allowed to load on their corresponding factors. In the second model, two factors were developed – LMX and justice perceptions. The items assessing LMX were allowed to load on the LMX factor whereas all justice perceptions items were to load on the justice perceptions factor. Finally, in the single-factor model, all items were forced to load on one single factor. Table 3 presents the fit indices of these three models.

www.manaraa.com

TABLE 3

Confirmatory Factor Analysis Results for Leader-Member Exchange and Justice Perceptions

	df	χ^2	RMSEA	SRMR	NFI	CFI
Four-factor model	164	362.21	.06	.03	.97	.99
Two-factor model	169	3174.21	.23	.18	.77	.78
Single-factor model	170	4002.49	.29	.16	.71	.72

Note: RMSEA: Root-Mean-Square Error of Approximation; SRMR = Standardized Root-Mean-Square Residual; NFI = Normed Fit Index; CFI = Confirmatory Fit Index.

The results show that the four-factor model had the best fit to the data compared to the other two alternative models. Its RMSEA (.06) and SRMR (.03) values were both lower than the recommended cut-off values (.08 and .05, respectively; Byrne, 1998). In addition, its NFI (.97) and CFI (.99) values were both higher than .90 – the recommended cut-off value (Bentler, 1990, 1992). In contrast, the two-factor and single-factor models both demonstrated poor fit to the data as shown in their high RMSEA and SRMR values as well as their low NFI and CFI values. As a result, it can be concluded that these four measures were assessing distinct constructs.

Table 4 presents the descriptive statistics and zero-order correlations of all major variables in the individual-level model. An examination of Table 4 reveals that not only was LMX quality related to justice perceptions (r = .42 to .47) but it was also related to attitudinal as well as behavioral outcomes including commitment to the leader, satisfaction with the leader, in-role performance, and OCB (r = .36 to .72). These results were consistent with the findings in the existing literature. Moreover, compared to commitment to the leader, satisfaction with the

www.manaraa.com

leader was more strongly related to LMX quality and justice perceptions. Specifically, for satisfaction with the leader, its correlations with LMX and justice perceptions ranged from .44 to .72 whereas the correlations were between .23 and .51 for commitment to the leader. In addition, while distributive justice perceptions were related to both job performance and OCB, it seems that distributive justice perceptions had a stronger association with in-role (r = .34) rather than extra-role behaviors (r = .28). The opposite was true, however, for procedural justice (job performance: r = .18; OCB: r = .24) and interactional justice (job performance: r = .15; OCB: r = .32).

Demographic variables such as age, gender, race, and work experience had only non-significant association with the outcome variables in the individual-level model. I, therefore, decided to not include any of these demographic variables as controls in the regression analyses testing Hypotheses 1 to 7.

Hypothesis 1 proposed positive relationships between one's LMX quality and his/her justice perceptions. As shown in Table 4, LMX quality had moderate positive correlations with distributive (r = .47; $p < .001$), procedural (r = .44; $p < .001$), and interactional (r = .42; $p < .001$) justice perceptions. Therefore, Hypothesis 1 was supported: The higher one's leader-follower relationship, the higher are the perceptions of distributive, procedural, and interactional justice.

www.manaraa.com

المنارة للاستشارات

TABLE 4

Means, Standard Deviation, and Inter-Correlations of Variables in the Individual-Level Model

	1	2	3	4	5	6	7	8	9
Individual-level variables									
1) LMX	1								
2) Distributive justice	.47***	1							
3) Procedural justice	.44***	.32***	1						
4) Interactional justice	.42***	.24***	.36***	1					
5) RBSE	.37***	.36***	.12*	.10*	1				
6) Leader commitment	.51***	.23***	.25***	.34***	.15**	1			
7) Leader satisfaction	.72***	.50***	.44***	.46***	.33***	.55***	1		
8) Job performance	.36***	.34***	.18***	.15***	.12*	.16***	.26***	1	
9) OCB	.41***	.28***	.24***	.32***	.10*	.21***	.28***	.63***	1
Mean	3.47	3.97	3.73	3.97	4.24	3.13	3.81	3.79	3.69
SD	.88	.84	.96	.94	.83	.96	.94	.79	.79
Group-level variables									
1) LMX differentiation	1								
2) Communication	-.37***	1							
Mean	.76	3.51							
SD	.61	.63							

Note. $n = 413$ for individual-level variables; $n = 87$ for group-level variables. LMX = Leader-member exchange; RBSE = Role breadth self-efficacy; OCB = Organizational citizenship behavior. *** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$.

www.manaraa.com

Considering that Hypotheses 2 and 3 involved group-level moderators (LMX differentiation and intra-group communication), I used cross-level regression models for testing these two hypotheses. The Hierarchical Linear Modeling (HLM) program allows the investigation of both lower-level (individual) and higher-level (group) variance in the outcome variable (Hofmann, Griffin, & Gavin, 2000). In testing these two hypotheses, Level 1 models examined the relationship between individual LMX quality and justice perceptions while Level 2 models examined the influence of group-level moderators on the relationship between individual-level LMX quality and justice perceptions.

Hypothesis 2 predicted that LMX differentiation would moderate the positive association between LMX quality and justice perceptions such that subordinates with low-quality LMX relationships facing high LMX differentiation would have the lowest justice perceptions. To begin, a series of null models with no predictors were tested. These models were to examine if the outcome variables (justice perceptions) differed significantly across groups. Significant difference across groups indicated that some group effects might be operating that caused the differences. For distributive justice perceptions as the outcome variable in the null model, $\chi^2_{86} =$ 90.46 ($p = .35$), showing that there was no statistically significant difference existing across groups. For procedural and interactional justice perceptions, however, the test results suggested the presence of significant difference. Specifically, $\chi^2_{86} = 161.60$ ($p < .001$) for procedural justice and $\chi^2_{86} = 261.57$ ($p < .001$) for interactional justice. Tests for moderating effects were therefore conducted with full models.

Given that I was interested in examining whether the two contextual variables would predict individual-level outcomes, grand-mean centering was used according to the recommendation by Hofmann and Gavin (1998) for each multi-level regression model estimated.

www.manaraa.com

Considering that the average within-group LMX quality may affect one's justice perceptions (Mayer, 2004), I controlled LMX level in the models. Three models were tested in total, with each having one dimension of justice perceptions as the outcome variable. In each model, two steps were taken. In the first step, only the control variable (LMX level) and the main effects (individual LMX quality and LMX differentiation) were included whereas in the second step, the interaction term of LMX quality and LMX differentiation was added. The results are presented in Table 5. Unstandardized regression coefficients are reported.

As shown in Table 5, LMX differentiation did not moderate the relationship from LMX quality to distributive justice perceptions ($\gamma = .12$; $p = .16$). The interaction term of LMX quality and LMX differentiation, however, had significant effects on procedural justice perceptions ($\gamma = .24$; $p < .05$). Hence, LMX differentiation moderated the LMX – procedural justice relationship. Also, the results indicated that 13.65% of the variance in the LMX – procedural justice slopes across groups was attributable to LMX differentiation. Figure 3 depicts the interactive effects. The predicted procedural justice perceptions ratings from individual LMX ratings one standard deviation higher and lower than average (high LMX and low LMX, respectively) combined with LMX differentiation ratings one standard deviation higher and lower than average (high LMX differentiation and low LMX differentiation, respectively) were plotted, following the procedures recommended by Cohen, Cohen, West, and Aiken (2003). It demonstrates that when LMX differentiation was low, although people with low LMX quality still reported lower procedural justice perceptions than their high-LMX counterparts, they all reported higher justice perceptions than those encountering high LMX differentiation in the group. Besides, a combination of low LMX quality and high LMX differentiation in the group

www.manaraa.com

gave rise to the lowest perceptions of procedural justice. These results are thus consistent with the prediction of the hypothesis.

Similarly, LMX differentiation also moderated the association between LMX quality and interactional justice perceptions ($\gamma = .43$; $p < .001$). The results suggested that 33.34% of the variance in the LMX – interactional justice slopes across groups was explained by LMX differentiation. A graphic representation was produced to display the interactive effects. Figure 4 shows that when LMX differentiation was one standard deviation below average, group members with both high- and low-levels of LMX quality reported similar levels of interactional justice perceptions. When LMX differentiation was high, however, those low-LMX group members reported much lower interactional justice perceptions. Again, regardless of the LMX quality, group members in groups with high LMX differentiation tended to report lower interactional justice perceptions than those in groups with low LMX differentiation. Overall, these findings are consistent with the prediction of Hypothesis 2.

With all results taken together, because LMX differentiation did not moderate the relationship between LMX quality and distributive justice perceptions, Hypothesis 2 was only partially supported.

www.manaraa.com

المنارة للاستشارات

TABLE 5

Regression Analysis Testing Interaction of Leader-Member Exchange and Leader-Member Exchange Differentiation on Organizational Justice (H2)

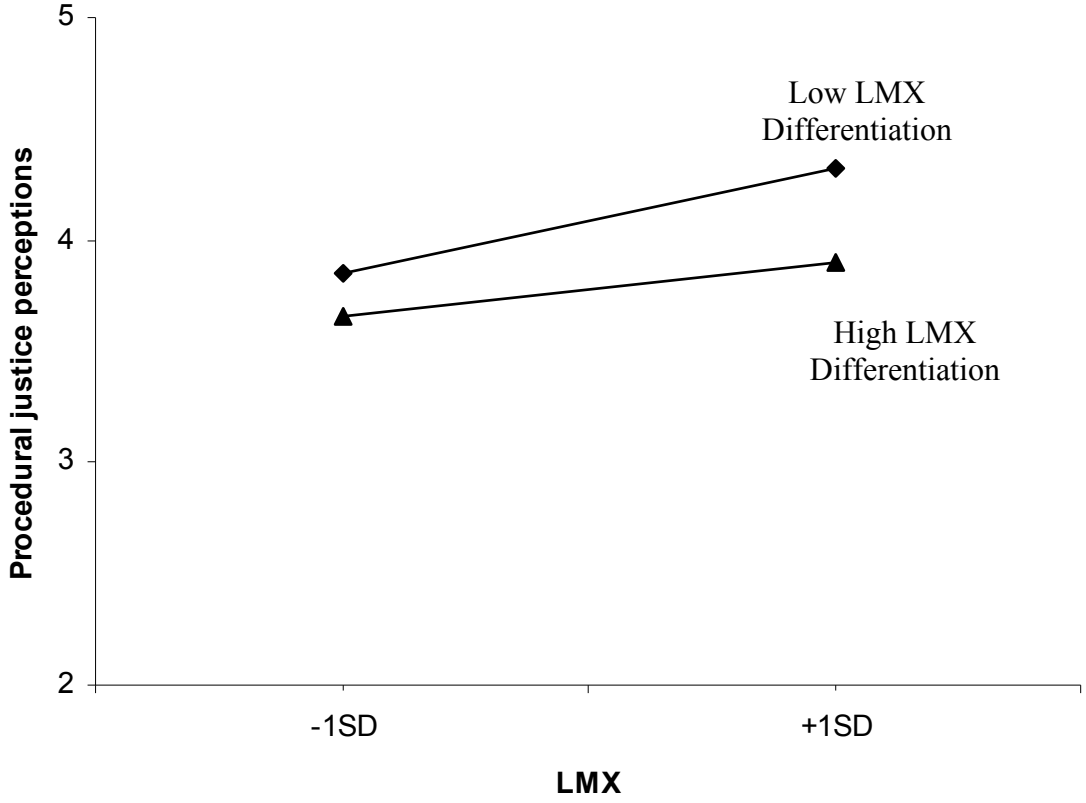
	Model 1 DV = Distributive justice		Model 2 DV = Procedural justice		Model 3 DV = Interactional justice	
Step 1						
Constant	3.97***	3.98***	3.74***	3.75***	3.99***	4.00***
LMX level	.21*	.24*	-.12	-.06	-.07	-.01
LMX	.37***	.35***	.45***	.41***	.29***	.24***
LMX differentiation	-.01	-.03	-.54***	-.55***	-.97***	-.99***
Step 2						
LMX x LMX differentiation		.12		.24*		.43***

Note. $n = 413$ for individual-level data; $n = 87$ for group-level data. LMX = Leader-member exchange; LMX level = Within-group average of LMX quality (control variable); LMX differentiation = Within-group variance of LMX quality. Unstandardized regression coefficients are reported.
*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$.

www.manaraa.com

FIGURE 3

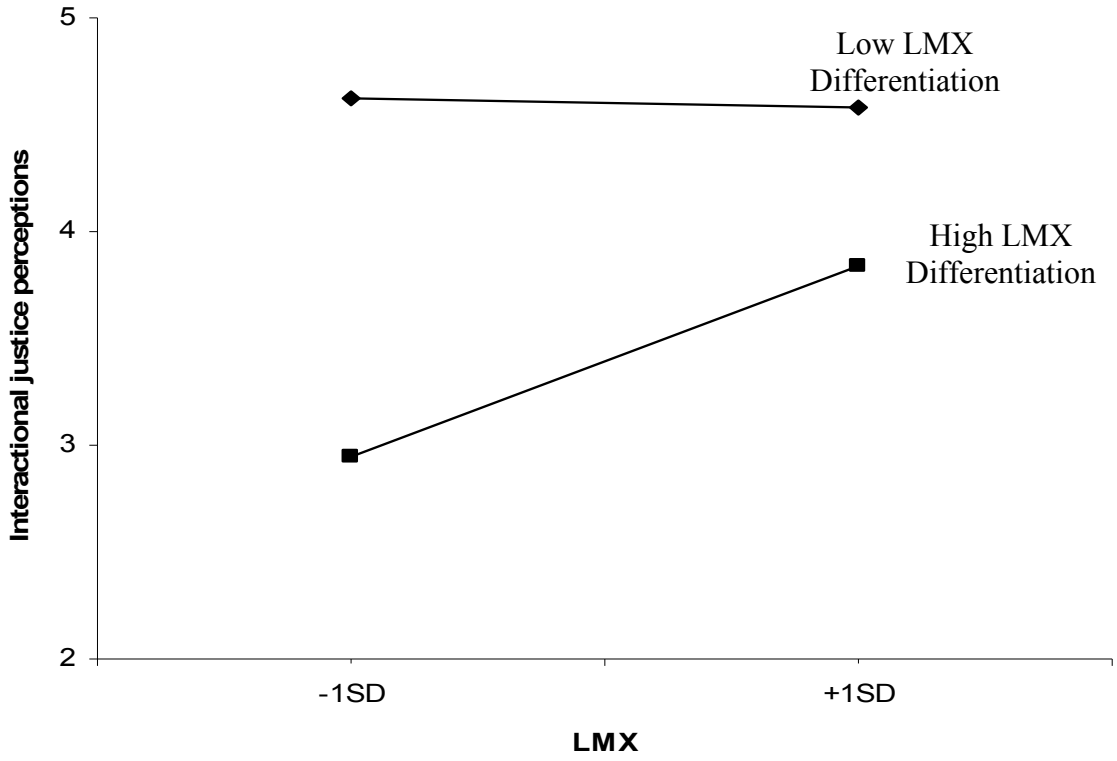
Interaction of Leader-Member Exchange and Leader-Member Exchange Differentiation on Procedural Justice



www.manaraa.com

FIGURE 4

Interaction of Leader-Member Exchange and Leader-Member Exchange Differentiation on Interactional Justice



www.manaraa.com

Hypothesis 3 proposed that intra-group communication would alter the association between one's LMX quality and his/her justice perceptions such that a combination of low LMX and high communication would lead to the lowest justice perceptions. Because intra-group communication was measured by aggregating individual data to the group level for a more reliable group-level measure (Bliese, 2000), before testing the hypothesis, a series of indices was calculated to ensure data aggregation was appropriate.

First, r_{wg} index was calculated (James, Demaree, & Wolf, 1993). This index assesses the degree of agreement on intra-group communication among group members. Its value ranges from 0 to 1 with .70 proposed as the acceptable level (George, 1990). Second, ICC(1) (James, 1982) which indicates whether there is a group effect on intra-group communication was estimated (Bliese, 2000). Its value can be interpreted as the amount of total variance of intra-group communication that can be explained by the grouping variable (Bryk & Raudenbush, 1992). A value different from zero is desirable with .20 regarded as a high score (Bliese, 2000). Third, ICC(2) (James, 1982) was calculated. This estimate indicates whether the groups can be reliably differentiated on intra-group communication (Bliese, 2000) and its proposed acceptable level is .60 (Glick, 1985). It should be noted that these indices were not relevant for LMX differentiation (in H2) because it was not about group members' agreed perceptions of some shared unit properties (Bliese, 2000). These indices were not relevant for LMX level (control variable) either because LMX level was the average LMX quality within a group – again, not group members' shared perceptions about a group phenomenon.

Intra-group communication reported acceptable agreement (mean r_{wg} = .83; ICC(1) = .23; ICC(2) = .64). To test this hypothesis, the analysis approach employed in testing Hypothesis 2 was used. Table 6 presents the results.

www.manaraa.com

Although communication did not moderate the LMX quality – distributive justice relationship (γ = -.01; p = .98), it did interact with LMX quality to affect procedural justice perceptions (γ = -.20; p < .05). The results suggested that 17.30% of the variance in the LMX – procedural justice slopes across groups was attributable to intra-group communication. Figure 5 demonstrates the role of communication as a moderator. The positive association between LMX quality and procedural justice perceptions was stronger when communication was low. Moreover, when intra-group communication was high, group members generally reported higher procedural justice perceptions than when communication was low. Group members with high LMX quality in groups with high communication reported the highest whereas those with low LMX quality in groups with low communication reported the lowest procedural justice perceptions.

Intra-group communication also interacted with LMX quality to affect interactional justice perceptions (γ = -.20, p < .10). The results indicated that in the LMX – interactional justice slopes across groups, 5.63% of the variance could be explained by intra-group communication. Again, to better understand the moderated relationship, a graphical representation was produced. Figure 6 reveals that in groups with high communication, the relationship of LMX quality to interactional justice perceptions was less positive such that group members' interactional justice perceptions were less affected by their LMX quality. On the contrary, when intra-group communication was low, group members with low LMX quality reported interactional justice perceptions much lower than those reported by their high-LMX counterparts. Overall, the general pattern of the moderated relationships was similar to those obtained in Figure 5.

www.manaraa.com

To reiterate, Hypothesis 3 proposed that *high* intra-group communication would worsen low-LMX subordinates' justice perceptions by the greatest extent. However, both Figures 5 and 6 show that the group members with low LMX quality in groups with *low* communication had the lowest justice perceptions. Therefore, Hypothesis 3 received no support.

www.manaraa.com

المنارة للاستشارات

TABLE 6

Regression Analysis Testing Interaction of Leader-Member Exchange and Intra-Group Communication on Organizational Justice (H3)

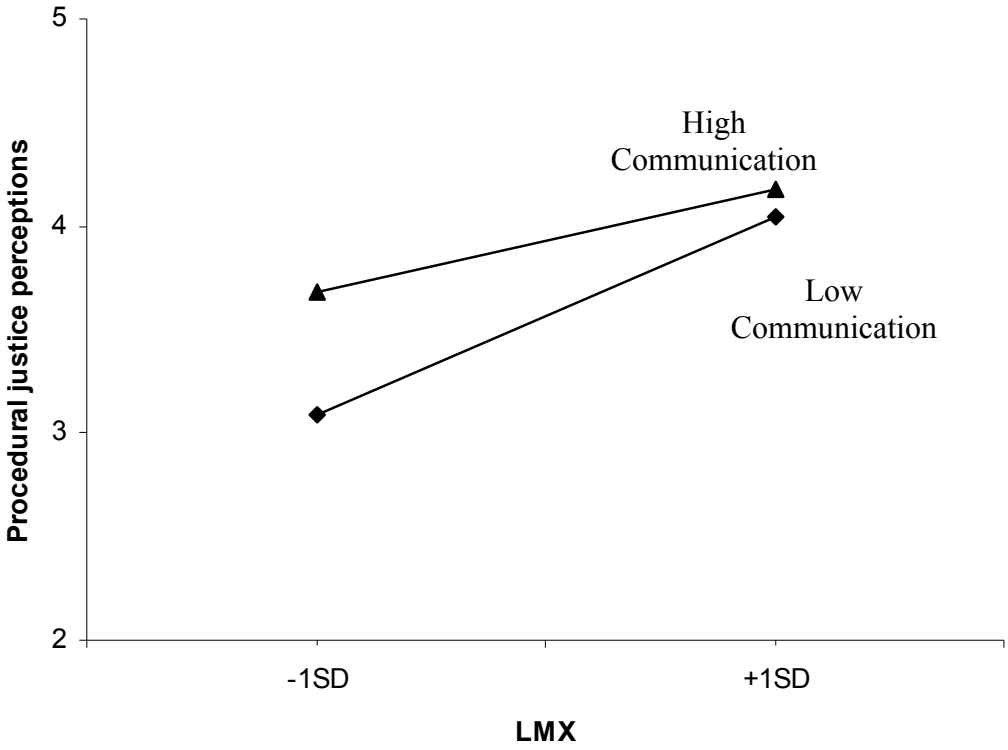
	Model 1 DV = Distributive justice		Model 2 DV = Procedural justice		Model 3 DV = Interactional justice	
Step 1						
Constant	3.97***	3.97***	3.74***	3.75***	3.99***	4.00***
LMX	.42***	.42***	.42***	.41***	.25***	.24***
Communication	.01	.01	.25**	.29**	.32***	.40***
Step 2						
LMX x Communication		-.01		-.20*		-.20+

Note. $n = 413$ for individual-level data; $n = 87$ for group-level data. LMX = Leader-member exchange. Unstandardized regression coefficients are reported.
*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$.

www.manaraa.com

FIGURE 5

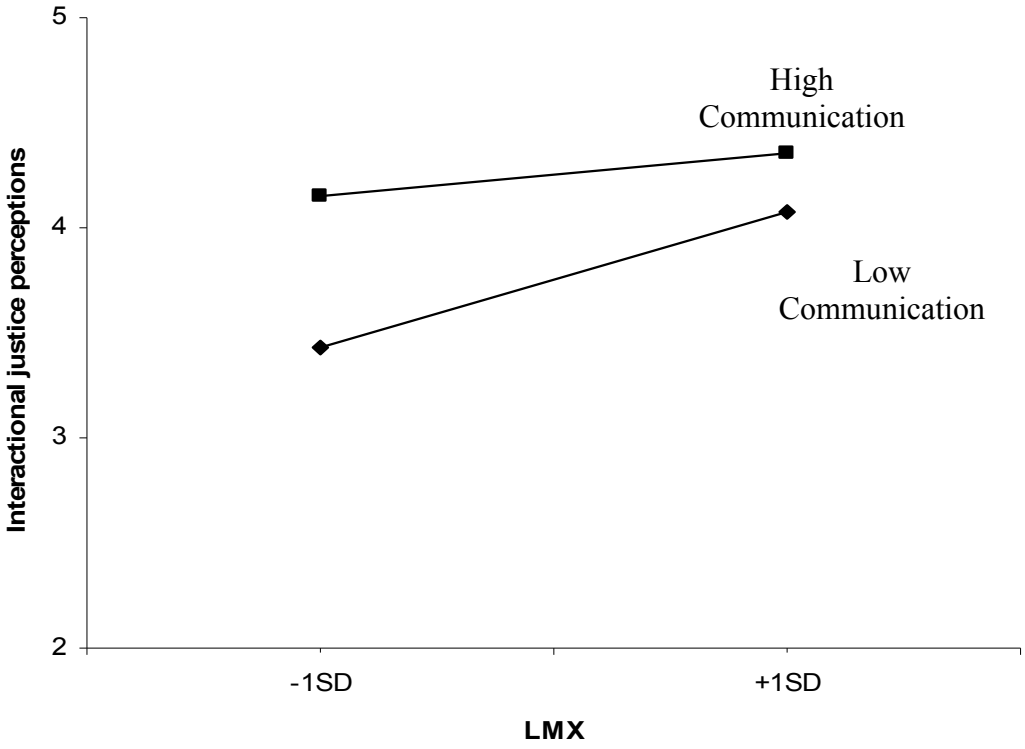
Interaction of Leader-Member Exchange and Intra-Group Communication on Procedural Justice



www.manaraa.com

FIGURE 6

Interaction of Leader-Member Exchange and Intra-Group Communication on Interactional Justice



www.manaraa.com

Hypothesis 4 predicted that one's role breadth self-efficacy (RBSE) would moderate the relationship of LMX quality to organizational justice perceptions. To test this hypothesis, moderated hierarchical regression analysis was used. To reduce multicollinearity, the scores on the independent variable and the moderator were first centered (Cohen et al., 2003). As shown in Table 7, three regression models were developed, each having one dimension of justice perceptions as the outcome variable. In each model, two steps were taken. In the first step, only the main effects (LMX and RBSE) were entered in the regression model. Then, in the second step, the interaction term of LMX and RBSE was added. Unstandardized regression coefficients are reported as recommended by Cohen et al. (2003).

The results indicate that RBSE did not have any moderating effects on distributive justice perceptions (B = -.03; p = .43). However, RBSE did act as a moderator in the LMX – procedural justice perceptions relationship (B = -.17; p < .001). Including the interaction term into the regression model increased the explained variance of procedural justice perceptions by 3%. To better understand the moderation, Figure 7 depicts the interactive effects of RBSE. As Figure 7 indicates, respondents with high LMX quality plus low RBSE reported procedural justice perceptions higher than those with both high LMX quality and RBSE. On the other hand, those respondents with low LMX quality, regardless of their RBSE, reported similarly low levels of procedural justice perceptions. This test revealed that the positive relationship between LMX quality and procedural justice perceptions was stronger when RBSE was low. However, low-LMX subordinates with high RBSE did not report the lowest justice perceptions as predicted by the hypothesis.

Likewise, Table 7 also shows that RBSE was a moderator in the relationship between LMX and interactional justice perceptions (B = -.18; p < .001). The inclusion of the interaction

www.manaraa.com

term into the regression model improved the explained variance of interactional justice perceptions by 3%. Again, to look into how RBSE moderated the LMX – interactional justice perceptions relationship, a similar approach used for procedural justice perceptions was used to graphically represent the LMX-RBSE interactive effects. Figure 8 reveals a similar pattern of relationship. Specifically, when LMX quality was high, respondents with low RBSE reported higher interactional justice perceptions than those with high RBSE. When LMX was low, however, respondents with high or low RBSE reported similarly low levels of interactional justice perceptions.

Hypothesis 4 proposed that low-LMX subordinates with high RBSE would report the lowest justice perceptions. The findings here do not support this prediction. In addition, RBSE did not moderate the LMX quality – distributive justice perceptions association. Therefore, Hypothesis 4 was not supported.

www.manaraa.com

المنارة للاستشارات

TABLE 7

Regression Analysis Testing Interaction of Leader-Member Exchange and Role Breadth Self-Efficacy on Organizational Justice (H4)

	Model 1 DV = Distributive justice		Model 2 DV = Procedural justice		Model 3 DV = Interactional justice	
Step 1						
Constant	4.01***	4.02***	3.73***	3.78***	3.96***	4.01***
LMX	.39***	.39***	.49***	.50***	.50***	.47***
RBSE	.21***	.19***	-.05	-.12*	-.06	-.14*
Step 2						
LMX x RBSE		-.03		-.17***		-.18***
F	80.35***	53.72***	49.38***	37.46***	42.67***	33.35***
R^2	.28	.28	.19	.22	.17	.20
ΔR^2		.00		.03***		.03***

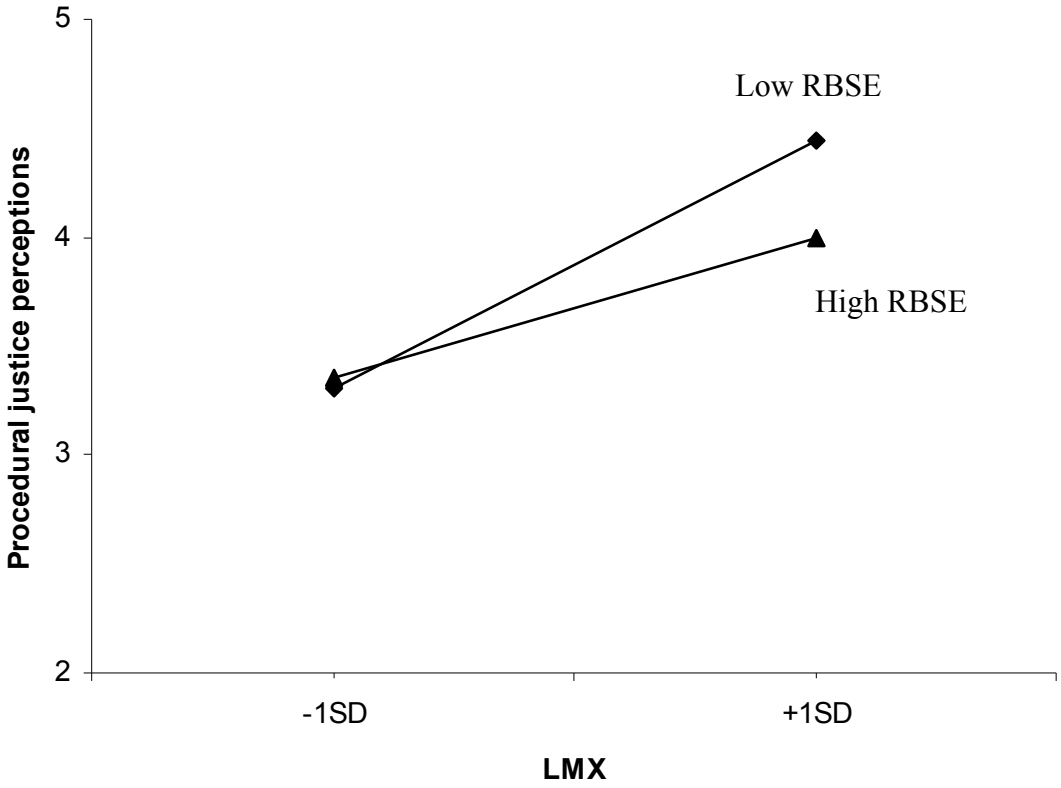
Note. $n = 413$. LMX = Leader-member exchange; RBSE = Role breadth self-efficacy. Unstandardized regression coefficients are reported.

*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$.

www.manaraa.com

FIGURE 7

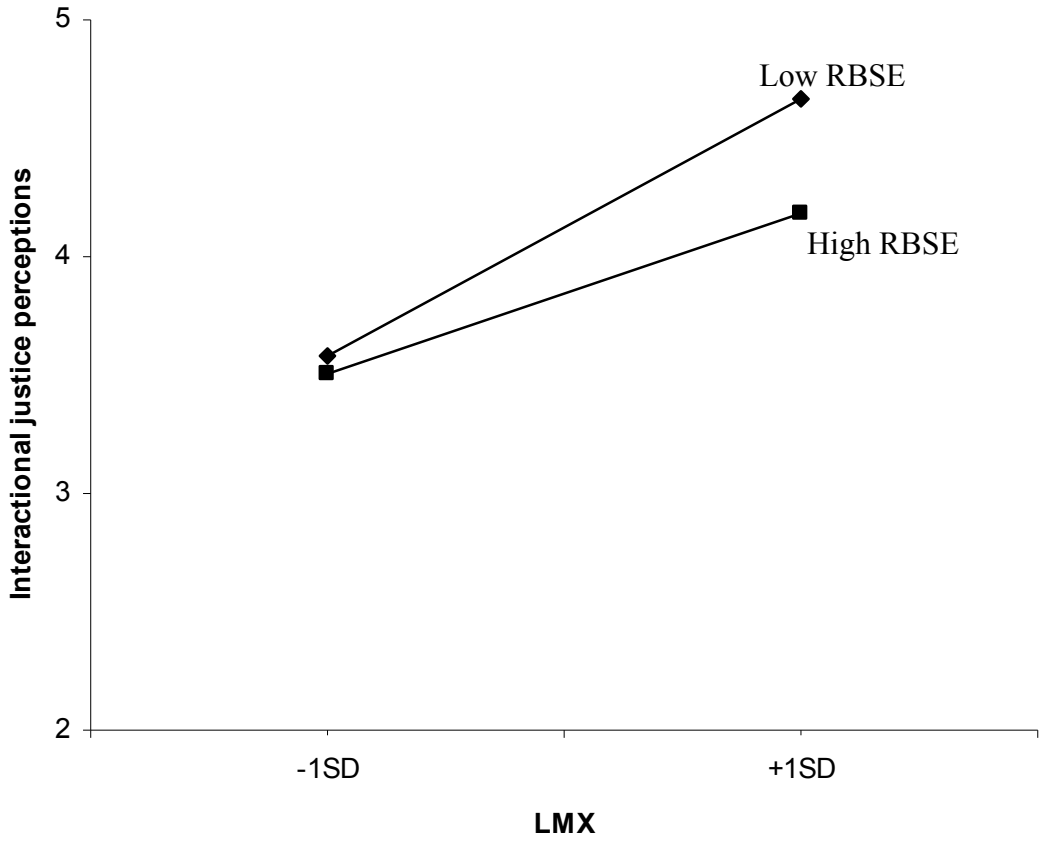
Interaction of Leader-Member Exchange and Role Breadth Self-Efficacy on Procedural Justice



www.manaraa.com

FIGURE 8

Interaction of Leader-Member Exchange and Role Breadth Self-Efficacy on Interactional Justice



www.manaraa.com

Hypotheses 5, 6, and 7 predicted that justice perceptions would mediate the impact of LMX quality on individuals' commitment to the leader, satisfaction with the leader, job performance, and OCB. Results pertaining to each outcome variable are presented in four separate tables (Tables 8 – 11).

Baron and Kenny's (1986) approach to mediation was adopted. Each outcome variable was first regressed on LMX in Model 1. Because no control variables were included in the model, the regression coefficient of LMX was the same as the correlation between LMX and the outcome variable. A significant relationship between LMX and the outcome variable would satisfy the first rule in Baron and Kenny's (1986) approach. The second rule suggests that the independent variable has to be related to the mediator. This rule was satisfied as LMX was related to all three dimensions of justice perceptions as shown in Table 4. The third rule suggests that when the dependent variable is regressed on both the independent variable and the mediator, the regression coefficient of the mediator has to be statistically significant whereas the fourth rule suggests that the regression coefficient of the independent variable has to reduce if mediation exists. To test these two rules, Model 2 was developed. In Model 2, the outcome variable was regressed on distributive justice in the first step. Then in the second step, LMX was added into the regression model. If distributive justice still had a significant regression coefficient, the third rule was satisfied. Finally, the regression coefficient of LMX obtained in the second step in Model 2 was compared to that obtained in Model 1. If it declined to zero and the unique variance of the outcome variable accounted for by LMX dropped to zero, full mediation by distributive justice was concluded. If the regression coefficient of LMX remained significantly different from zero and LMX still explained a significant amount of variance of the outcome variable, partial mediation was concluded. If, however, the regression coefficient of

www.manaraa.com

LMX remained unchanged and LMX explained the same amount of variance of the outcome variable as when no mediators were included, no mediation was concluded. In addition, to better understand if the mediated effects were significantly different from zero, a Sobel test (Sobel, 1986) was conducted whenever partial or full mediation was detected. The same process was applied to procedural justice in Model 3 and interactional justice in Model 4.

Table 8 presents the regression results with commitment to the leader as the outcome variable. Model 1 shows that LMX had a positive relationship to commitment to the leader (β = .51; p < .001). When distributive justice as well as LMX quality were present in the regression model (Step 2 in Model 2), distributive justice did not have a significant regression coefficient (β = -.02; p = .52). Similarly, as shown in Step 2 in Model 3, the regression coefficient of procedural justice was not statistically significant (β = .02; p = .61). Hence, both distributive and procedural justice perceptions did not mediate the impact of LMX quality on commitment to the leader. On the other hand, interactional justice had a significant regression coefficient (β = .16; p < .001) even when LMX quality was included into the regression model (Step 2 in Model 3). Moreover, the regression coefficient of LMX declined from .51 to .44 (p < .001) after adding interactional justice into the regression model and LMX itself also uniquely explained 16% of the variance of commitment to the leader even when interactional justice was present in the model. The results of Sobel test showed that the mediating effects by interactional justice were statistically significant (t = 3.02; p < .01). These results therefore suggested that interactional justice was a partial mediator in the association between LMX quality and commitment to the leader.

Next, satisfaction with the leader was the outcome variable in the mediation test and the results pertaining to this test are presented in Table 9. First, as indicated in Model 1, LMX was

www.manaraa.com

positively related to satisfaction with the leader ($\beta = .72$; $p < .001$). Second, when LMX quality was included in the regression models, distributive justice ($\beta = .18$; $p < .001$), procedural justice ($\beta = .16$; $p < .001$), and interactional justice ($\beta = .20$; $p < .001$) were all significantly related to the dependent variable, as shown in Step 2 in Models 2, 3, and 4, respectively. Third, the regression coefficient of LMX quality reduced from .72 to .63 ($p < .001$) when distributive justice was present and it uniquely explained 30% of the variance of the dependent variable. When procedural justice was present, the regression coefficient of LMX quality reduced to .65 ($p < .001$) and it uniquely explained 34% of the variance of the dependent variable. Similarly, when interactional justice was present in the regression model, the regression coefficient of LMX quality declined from .72 to .64 ($p < .001$) and 34% of the variance of satisfaction with the leader was still uniquely explained by LMX quality. Finally, the Sobel test results showed significant mediating effects by distributive justice ($t = 4.76$; $p < .001$), procedural justice ($t = 3.49$; $p < .001$), and interactional justice ($t = 4.37$; $p < .001$). Therefore, it can be concluded that all justice perceptions partially mediated the relationship between LMX quality and satisfaction with the leader.

www.manaraa.com

المنارة للاستشارات

TABLE 8

Regression Analysis Testing the Mediation of Justice Perceptions on Commitment to Leader (H5, H6, H7)

	DV = Commitment to leader							
	Model 1		**Model 2**		**Model 3**		**Model 4**	
		Step 1						
LMX	.51***	Distributive justice	.23***	-.02				
		Procedural justice			.25***	.02		
		Interactional justice					.34***	.16***
		Step 2						
		LMX		.52***		.50***		.44***
F	143.84***		22.71***	71.70***	26.96***	71.92***	56.09***	79.90***
R^2	.26		.05	.26	.06	.26	.12	.28
ΔR^2				.21***		.20***		.16***

Note. $n = 413$. LMX = Leader-member exchange. Standardized regression coefficients are reported.
*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$.

www.manaraa.com

المنارة للاستشارات

TABLE 9

Regression Analysis Testing the Mediation of Justice Perceptions on Satisfaction with Leader (H5, H6, H7)

	DV = Satisfaction with leader							
	Model 1		**Model 2**		**Model 3**		**Model 4**	
		Step 1						
LMX	.72***	Distributive justice	.50***	.18***				
		Procedural justice			.44***	.16***		
		Interactional justice					.46***	.20***
		Step 2						
		LMX		.63***		.65***		.64***
F	455.08***		134.62***	251.63***	100.55***	244.82***	113.07***	258.03***
R^2	.52		.25	.55	.20	.54	.22	.55
ΔR^2				.30***		.34***		.34***

Note. $n = 413$. LMX = Leader-member exchange. Standardized regression coefficients are reported.
*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$.

www.manaraa.com

Table 10 presents the results with job performance as the outcome variable. Model 1 shows that LMX had a positive relationship with job performance ($\beta = .36$; $p < .001$). As shown in the second step in Model 2, distributive justice perceptions still had a significant relationship with job performance ($\beta = .21$; $p < .001$) when LMX was added into the regression model. Also, the regression coefficient of LMX quality dropped from .36 to .25 ($p < .001$). LMX itself explained 5% of the variance of job performance in the presence of distributive justice. The results of Sobel test also suggested that the reduction of the effects from LMX quality to job performance with the presence of distributive justice was statistically significant ($t = 3.77$; $p < .001$). Hence, distributive justice was a partial mediator. However, as shown in Step 2 in Model 3 and Model 4, the regression coefficients of procedural justice ($\beta = .03$; $p = .57$) and interactional justice ($\beta = .01$; $p = .95$) were not statistically significant. Hence, no mediation by procedural and interactional justice existed.

Finally, the results of the mediation test with OCB as the outcome variable are presented in Table 11. Model 1 indicates that LMX had a positive association with OCB ($\beta = .41$; $p < .001$). When distributive justice and LMX were both included in the regression model in Step 2 in Model 2, distributive justice had a significant impact on OCB ($\beta = .10$; $p < .001$). An examination of the coefficient of LMX in Model 1 and that in Step 2 in Model 2 reveals that it dropped from .41 to .36 ($p < .001$). Also, LMX uniquely explained 11% of the variance of the dependent variable in this model. Together with the results from Sobel test that the mediated effects were statistically significant ($t = 1.97$; $p < .05$), a conclusion that distributive justice partially mediated the relationship from LMX to OCB was drawn. Similarly, as shown in Step 2 in Model 4, when both interactional justice and LMX quality were included in the regression model, the regression coefficient of interactional justice was significantly different from zero (β

www.manaraa.com

= .18; $p < .001$). The regression coefficient of LMX quality also dropped from .41 to .33 ($p < .001$) in Step 2 in Model 4 where LMX quality uniquely explained 9% of the variance of OCB. Moreover, the Sobel test results suggested that the mediated effects by interactional justice were statistically significant ($t = 3.46$; $p < .001$). Hence, it can be concluded that interactional justice was a partial mediator between LMX quality and OCB. However, because as shown in Step 2 in Model 3 that the regression coefficient of procedural justice was not statistically significant ($\beta = .07$; $p = .16$), no mediation by procedural justice existed.

In summary, because not all dimensions of justice perceptions mediated the impact of LMX on these four individual-level outcomes as proposed in the hypotheses, Hypotheses 5, 6, and 7 were only partially supported.

www.manaraa.com

المنارة للاستشارات

TABLE 10

Regression Analysis Testing the Mediation of Justice Perceptions on Job Performance

(H5, H6, H7)

	DV = Job performance							
	Model 1		**Model 2**		**Model 3**		**Model 4**	
		Step 1						
LMX	.36***	Distributive justice	.33***	.21***				
		Procedural justice			.18***	.03		
		Interactional justice					.15***	.01
		Step 2						
		LMX		.25***		.34***		.36***
F	61.93***		50.85***	39.17***	14.37***	31.08***	9.34***	30.90***
R^2	.13		.11	.16	.03	.13	.02	.13
ΔR^2				.05***		.10***		.11***

Note. $n = 413$. LMX = Leader-member exchange. Standardized regression coefficients are reported.
*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$.

www.manaraa.com

المنارة للاستشارات

TABLE 11

Regression Analysis Testing the Mediation of Justice Perceptions on Organizational Citizenship Behavior (H5, H6, H7)

	DV = OCB							
	Model 1		**Model 2**		**Model 3**		**Model 4**	
		Step 1						
LMX	.41***	Distributive justice	.27***	.10***				
		Procedural justice			.24***	.07		
		Interactional justice					.32***	.18***
		Step 2						
		LMX		.36***		.38***		.33***
F	87.17***		33.60***	44.52***	25.63***	44.69***	48.14***	51.69***
R^2	.17		.07	.18	.06	.17	.11	.20
ΔR^2				.11***		.11***		.09***

Note. $n = 413$. LMX = Leader-member exchange; OCB = Organizational-citizenship behavior. Standardized regression coefficients are reported.
*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$.

www.manaraa.com

5.2 Results of the Group-Level Model

Following the approach used for the individual-level data, confirmatory factor analysis was conducted for LMX and all three dimensions of justice climate perceptions considering their potential conceptual overlap. Data collected from individual respondents were used. In the four-factor model, the items assessing LMX, distributive, procedural, and interactional justice climate perceptions were allowed to load on their corresponding factors. In the two-factor model, items assessing the three dimensions of justice climate perceptions were forced to load on one factor, resulting in only two factors: LMX and justice climate perceptions. Finally, in the single-factor model, all items measuring LMX and justice climate perceptions were to load on one single factor. The following Table 12 presents the fit indices of the confirmatory factor analysis.

TABLE 12

Confirmatory Factor Analysis Results for Leader-Member Exchange and Justice Climates

	df	χ^2	RMSEA	SRMR	NFI	CFI
Four-factor model	164	550.37	.07	.03	.98	.98
Two-factor model	169	1846.31	.17	.06	.93	.93
Single-factor model	170	2339.49	.19	.08	.91	.91

Note: RMSEA: Root-Mean-Square Error of Approximation; SRMR = Standardized Root-Mean-Square Residual; NNFI = Normed Fit Index; CFI = Confirmatory Fit Index.

The results reflect that the four-factor model had the best fit to the data compared to the other two alternative measurement models. Its RMSEA was only .07 – lower than the recommended cut-off value for moderate good fit to data (.08; Byrne, 1998) and much lower

www.manaraa.com

than those of the two-factor and single-factor models. Similarly, its SRMR value was .03 which again fell below the recommended value for acceptable model fit (.05; Byrne, 1998). Although all three models had CFI and NFI values above the recommended cut-off value for adequate model fit (.90; Bentler, 1990, 1992), the four-factor model had the highest CFI and NFI values. These results, taken together, suggested that these LMX and justice climate measures were assessing distinct constructs.

Because relationship conflict, TMX, commitment to the group, and satisfaction with the group were group-level constructs operationalized by aggregating individual scores to the group-level of analysis, r_{wg}, ICC(1) and ICC(2) were calculated for these variables to ensure sufficient agreement among group members. Table 13 presents the values of these indices. All four variables reported mean r_{wg} above the recommended cut-off value (.70; George, 1990). Except for commitment to the group, all variables reported ICC(1) and ICC(2) values below the recommended cut-off values (ICC(1) cut-off value = .20 and ICC(2) cut-off value = .60; Bliese, 2000). However, as suggested by Schneider, White, and Paul (1998), these values are moderate values and are not as low as to make data aggregation inappropriate. Hence, the aggregation of individual data on these variables to the group-level of analysis was considered appropriate.

TABLE 13

Group Agreement Indices

	Mean r_{wg}	ICC(1)	ICC(2)
Relationship conflict	.80	.16	.52
TMX	.92	.19	.59
Commitment to group	.86	.21	.61
Satisfaction with group	.82	.12	.44

www.manaraa.com

The means, standard deviations, and zero-order correlations of major variables in the group-level model are presented in Table 14. LMX differentiation was positively related to all three dimensions of justice climate *variance* (distributive justice climate variance: $r = .21$, $p < .01$; procedural justice climate variance: $r = .55$, $p < .001$; interactional justice climate variance: $r = .51$, $p < .001$). That is, the higher the variation in LMX treatments within a group, the *lower* the justice climate *strength* as predicted by Hypothesis 8. Also, relationship conflict had a positive association with all three dimensions of justice climate variance (distributive justice climate variance: $r = .28$, $p < .01$; procedural justice climate variance: $r = .36$, $p < .001$; interactional justice climate variance: $r = .19$; $p < .10$). These results supported Hypothesis 10. In addition, TMX was negatively related to both procedural justice climate variance ($r = -.26$; $p < .05$) and interactional justice climate variance ($r = -.18$; $p < .10$). These results partially supported Hypothesis 11.

When attention is switched to the group outcomes – commitment to the group, satisfaction with the group, group performance, and group OCB, the correlation table confirms that all three dimensions of justice climate variance had negative relationships to all group outcomes, albeit some were non-significant. For distributive justice climate variance, its correlation with group performance was -.16 ($p = .13$), with group OCB it was -.17 ($p = .12$), with commitment it was -.29 ($p < .01$), and satisfaction it was -.28 ($p < .01$). The correlations of procedural justice climate variance with group performance was -.19 ($p < .10$), with group OCB it was -.31 ($p < .01$), with commitment it was -.27 ($p < .01$), and with satisfaction it was -.23 ($p < .01$). Interactional justice climate variance's correlation with group performance was -.21 ($p < .05$), with group OCB it was -.29 ($p < .01$), with commitment it was -.22 ($p < .05$), and with satisfaction it was -.27 ($p < .01$). These results lend partial support to Hypothesis 9.

www.manaraa.com

Relationship conflict also showed negative associations with these outcomes. Specifically, the correlation of relationship conflict with group performance was -.37 ($p < .001$), with group OCB was -.28 ($p < .01$), with commitment to the group was -.16 ($p = .13$), and with satisfaction with the group was -.22 ($p < .05$). Finally, TMX was positively related to these group-level outcomes. The correlation of TMX with group performance reached .23 ($p < .05$), with group OCB was .28 ($p < .05$), with commitment to the group was .29 ($p < .01$), and with satisfaction with the group reached .41 ($p < .001$). These results lend partial support to Hypotheses 12 and 13.

The above correlations provide some tentative support to the hypotheses. To provide more sophisticated analysis to data, hierarchical regression analysis was employed and the results are presented in the next Chapter.

Because group size and group diversity have been shown to affect TMX (e.g. Baugh & Graen, 1997) and intra-group conflict (e.g. Wall & Callister, 1995; Williams & O'Reilly, 1998), and because the literatures on climates and organizational justice have also suggested that group size and group diversity can affect the formation and pattern of justice climates (Colquitt et al., 2002; Schneider & Reichers, 1983), both group size and group diversity in several demographic variables such as gender, age, and work experience was included as control variables in the group-level model when they were found to be significantly related to the outcome variables. Blau's (1977) index of heterogeneity, $1 - \sum p_i^2$, where p is the proportion of the group in a particular demographic category and i is the number of groups represented, was used for calculating diversity in categorical variables. Allison's (1978) coefficient of variation, on the other hand, was used for calculating diversity in continuous variables and it was calculated by dividing the standard deviation by the mean.

www.manaraa.com

In addition, past studies have shown that the average of LMX quality within a group may affect group members' perceptions and attitudes (e.g. Boies & Howell, 2006; Ford & Seers, 2006; Mayer, 2004). Therefore, I included LMX level which was operationalized as the mean level of LMX quality within a group as a control variable in testing Hypothesis 8. Similarly, the average of group members' perceptions of group fairness may affect their interactions, attitudes, and performance outcomes (e.g. Colquitt et al., 2002). Therefore, justice climate level which was operationalized as the average of individual justice climate scores within a group was controlled when testing Hypotheses 9, 10, and 11.

LMX differentiation and justice climate strength were operationalized as the variance scores. To examine if any assumptions of regression analysis were violated with a variance score as a predictor, a series of residual plots were developed. First, to test the assumption of homoscedasticity, plots of residuals against the predictors and residuals against the predicted values were constructed. Second, to examine if the assumption of independence of residuals was observed, index plots with the case number on the x-axis and residuals on the y-axis were created. Finally, normal q-q plots were created to examine whether the assumption of normality of residuals held (for detailed explanation of these plots, please see Cohen et al., 2003: 117-150). In general, the plots produced by SPSS 15.0 suggested that the assumptions were all held.

www.manaraa.com

المنارة للاستشارات

TABLE 14

Means, Standard Deviation, and Inter-Correlations of Variables in the Group-Level Model

	1	2	3	4	5	6	7	8	9	10
1) LMX Differentiation	1									
2) DJC variance	.21^{+}	1								
3) PJC variance	.55***	.54***	1							
4) IJC variance	.51***	.51***	.67***	1						
5) Relationship conflict	.33**	.28**	.36***	.19^{+}	1					
6) TMX	-.25*	.05	-.26*	-.18^{+}	-.25*	1				
7) Group performance	-.24*	-.16	-.19^{+}	-.21*	-.37***	.23*	1			
8) Group OCB	-.11	-.17	-.31**	-.29**	-.28**	.28*	.47***	1		
9) Commitment to group	.01	-.29**	-.27*	-.22*	-.16	.29**	.05	.24*	1	
10) Satisfaction with group	-.01	-.28**	-.23*	-.27**	-.22*	.41***	.16	.35***	.77***	1
Mean	.76	.57	.63	.61	1.76	3.47	4.05	3.78	3.29	3.79
SD	.61	.66	.58	.54	.53	.49	.64	.72	.62	.46

Note. n = 87; LMX = Leader-member exchange; DJC = Distributive justice climate; PJC = Procedural justice climate; IJC = Interactional justice climate; TMX = Team-member exchange; OCB = Organizational citizenship behavior.
*** $p < .001$, ** $p < .01$, * $p < .05$, $^{+}$ $p < .10$.

www.manaraa.com

Table 15 displays the results pertaining to Hypothesis 8 which suggested that LMX differentiation would have a negative impact on justice climate strength (i.e. positive impact on justice climate variance). Accordingly, three regression models were developed, each with one dimension of justice climate variance as the outcome variable. In the first step, only demographic-related control variables were entered into the models. LMX mean was then included into the models as a control in the second step. Finally, the predictor – LMX differentiation – was added in the third step.

As shown in Table 15, LMX differentiation had a positive impact on procedural and interactional justice climate variance after controlling for group size, work experience diversity, and LMX mean. Specifically, for procedural justice climate variance, $\beta = .51$ ($p < .001$) and for interactional justice climate variance, $\beta = .50$ ($p < .001$). Moreover, the addition of LMX differentiation into the regression models improved the variance of the dependent variables explained (procedural justice climate variance: $\Delta R^2 = .25$; $p < .001$; interactional justice climate variance; $\Delta R^2 = .24$; $p < .001$). On the other hand, the regression coefficient of LMX differentiation was only marginally significant ($\beta = .20$; $p < .10$) when the dependent variable was distributive justice climate variance. Hypothesis 8 was therefore only partially supported.

www.manaraa.com

المنارة للاستشارات

TABLE 15

Regression Analysis Testing Leader-Member Exchange Differentiation on Justice Climate Strength (H8)

	Model 1 DV = DJC variance			Model 2 DV = PJC variance			Model 3 DV = IJC variance		
Step 1									
Group size	-.10	-.09	-.07	-.20^{+}	-.21^{+}	-.13	-.18	-.18^{+}	-.11
Work experience diversity	.13	.13	.10	.23*	.24*	.16^{+}	-.03	-.02	-.09
Step 2									
LMX mean		.05	.07		-.09	-.02		-.10	-.04
Step 3									
LMX differentiation			.20^{+}			.51***			.50***
F	.89	.64	1.31	3.36*	2.47^{+}	10.19***	1.52	1.32	8.16***
R^2	.02	.02	.06	.07	.08	.33	.03	.05	.29
ΔR^2		.00	.04^{+}		.01	.25***		.02	.24***

Note. n = 87. LMX = Leader-member exchange; DJC = Distributive justice climate; PJC = Procedural justice climate; IJC = Interactional justice climate. Standardized regression coefficients are reported.
*** $p < .001$, ** $p < .01$, * $p < .05$, $^{+}$ $p < .10$.

www.manaraa.com

Tables 16 to 19 present the regression results testing Hypothesis 9 which predicted positive associations between justice climate strength and commitment to the group, satisfaction with the group, group performance, and group OCB (i.e. negative associations between justice climate variance and these group outcomes), with one table dedicated to one outcome variable. In total, four regression models were developed. In Model 1, only demographic-related control variables were included. In Models 2, 3, and 4, the dependent variable was regressed on distributive, procedural, and interactional justice climates, respectively. Moreover, in Models 2, 3, and 4, two steps were taken such that control variables and justice climate level were entered into the regression model in the first step and justice climate strength – the predictor – entered in the second step.

Presented in Table 16 are results of group members' commitment to the group regressed on justice climate variance. The results confirmed that distributive justice climate variance had a negative association with group members' commitment (β = -.24; p < .05). The inclusion of distributive justice climate variance into the regression model explained an additional 5% of the variance of commitment. It thus suggested that group members' disagreement on their distributive justice climate perceptions would lower their commitment to the group, which was consistent with the prediction of Hypothesis 9. However, the regression coefficient of procedural justice climate variance was only marginally significant as shown in Model 3 (β = -.20; p < .10) whereas that of interactional justice climate variance was not significant as shown in Model 4 (β = -.13; p = .23).

Hypothesis 9 also predicted that justice climate strength would be positively related to group members' satisfaction with the group. Because group size and group diversity were not significantly related to satisfaction with the group, they were not included in these regression

www.manaraa.com

models. The results pertaining to this prediction are presented in Table 17. Distributive justice climate variance had a negative regression coefficient (β = -.25; p < .05) as shown in Model 1. Moreover, the inclusion of distributive justice climate variance into the regression model improved the variance explained by 6%. However, Model 2 shows that the regression coefficient of procedural justice climate variance did not reach the level of significance (β = -.16; p = .12). Also, the regression coefficient of interactional justice climate variance was only marginally significant (β = -.19; p < .10) as presented in Model 3. Hence, these results suggest that only distributive justice climate variance had statistically significant impact on members' satisfaction with the group.

www.manaraa.com

المنارة للاستشارات

TABLE 16

Regression Analysis Testing Justice Climate Strength on Commitment to Group (H9)

	Model 1	Model 2		Model 3		Model 4	
Step 1							
Age diversity	-.20^{+}	-.24*	-.20^{+}	-.23*	-.20^{+}	-.23*	-.23*
Step 2							
DJC mean		.22*	.18^{+}				
PJC mean				.27*	.22*		
IJC mean						.31**	.26*
Step 3							
DJC variance			-.24*				
PJC variance					-.20^{+}		
IJC variance							-.13
F	3.63^{+}	3.95*	4.54**	5.24**	4.81**	6.53**	4.87**
R^2	.04	.09	.14	.11	.15	.13	.15
ΔR^2		.05*	.05*	.07*	.04^{+}	.09*	.02

Note. n = 87. DJC = Distributive justice climate; PJC = Procedural justice climate; IJC = Interactional justice climate. Standardized regression coefficients are reported.
$^{***}p < .001$, $^{**}p < .01$, $^{*}p < .05$, $^{+}p < .10$.

www.manaraa.com

المنارة للاستشارات

TABLE 17

Regression Analysis Testing Justice Climate Strength on Satisfaction with Group (H9)

	Model 1		Model 2		Model 3	
Step 1						
DJC mean	.34***	.31**				
PJC mean			.42***	.39***		
IJC mean					.32**	.25*
Step 2						
DJC variance		-.25*				
PJC variance				-.16		
IJC variance						-.19+
F	11.33***	9.07***	18.00***	10.38***	9.38**	6.35**
R^2	.12	.18	.17	.20	.09	.13
ΔR^2		.06*		.03		.04+

Note. $n = 87$. DJC = Distributive justice climate; PJC = Procedural justice climate; IJC = Interactional justice climate. Standardized regression coefficients are reported.
*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$.

www.manaraa.com

As shown in Table 18, the regression results indicated that the regression coefficients of both distributive (β = -.14; p = .20) and procedural (β = -.14; p = .19) justice climate variance were not statistically significant. In addition, the regression coefficient of interactional justice climate variance was only marginally significant (β = -.20; p < .10) as shown in Model 4. Hence, all three dimensions of justice climate strength had only limited impact on group performance.

The regression models with group OCB predicted by the three dimensions of justice climate variance are presented in Table 19. Consistent with the prediction of Hypothesis 11, both procedural (β = -.23; p < .05) and interactional (β = -.26; p < .05) justice climate variance had negative associations with group OCB. The variance of group OCB explained also increased by 5% and 6%, respectively, after the inclusion of procedural and interactional justice climate variance into the regression models as revealed in Model 3 and Model 4. Nevertheless, the regression coefficient of distributive justice climate variance was not significant (β = -.13; p = .23).

These results taken together suggest that after controlling for relevant demographic-related group characteristics and the average levels of group justice climate perceptions, justice climate variance was, in general, negatively associated with group members' commitment to the group, their satisfaction with the group, group performance, and group OCB. However, because of the small sample size, there was not enough power to detect the significance of the effects. Hence, Hypothesis 9, which suggested positive relationships between justice climate strength and these group outcomes received only partial support.

www.manaraa.com

المنارة للاستشارات

TABLE 18

Regression Analysis Testing Justice Climate Strength on Group Performance (H9)

	Model 1	Model 2		Model 3		Model 4	
Step 1							
Age diversity	-.20^{+}	-.20^{+}	-.18	-.22*	-.20^{+}	-.21^{+}	-.20^{+}
Step 2							
DJC mean		.01	-.01				
PJC mean				.17	.14		
IJC mean						.10	.04
Step 3							
DJC variance			-.14				
PJC variance					-.14		
IJC variance							-.20^{+}
F	3.47^{+}	1.72	1.72	3.09^{+}	2.64^{+}	2.21	2.57^{+}
R^2	.04	.04	.06	.07	.09	.05	.09
ΔR^2		.00	.02	.03	.02	.01	.04^{+}

Note. n = 87. DJC = Distributive justice climate; PJC = Procedural justice climate; IJC = Interactional justice climate. Standardized regression coefficients are reported.
$^{***}p < .001$, $^{**}p < .01$, $^{*}p < .05$, $^{+}p < .10$.

www.manaraa.com

المنارة للاستشارات

TABLE 19

Regression Analysis Testing Justice Climate Strength on Group Organizational Citizenship Behavior (H9)

	Model 1	Model 2		Model 3		Model 4	
Step 1							
Group size	.16	.14	.13	.12	.08	.15	.11
Experience diversity	-.16	-.18	-.16	-.19^{+}	-.13	-.18	-.18
Step 2							
DJC mean		.09	.07				
PJC mean				.26*	.22*		
IJC mean						.15	.07
Step 3							
DJC variance			-.13				
PJC variance					-.23*		
IJC variance							-.26*
F	1.79	1.41	1.43	3.36*	3.74**	1.86	2.80*
R^2	.04	.05	.07	.10	.15	.06	.12
ΔR^2		.01	.02	.06*	.05*	.02	.06*

Note. n = 87. DJC = Distributive justice climate; PJC = Procedural justice climate; IJC = Interactional justice climate. Standardized regression coefficients are reported.
$^{***}p < .001$, $^{**}p < .01$, $^{*}p < .05$, $^{+}p < .10$.

www.manaraa.com

Hypothesis 10 proposed that justice climate strength would be negatively related to relationship conflict (i.e. justice climate variance positively related to relationship conflict). The approach used for testing Hypothesis 9 was used to test this hypothesis. The results of the regression models are shown in Table 20. As the results indicate, after controlling for gender and work experience diversity as well as the average levels of justice climates, all three dimensions of justice climate variance were positively associated with relationship conflict (distributive justice climate variance: $\beta = .26$, $p < .01$; procedural justice climate variance: $\beta = .32$, $p < .01$; interactional justice climate: $\beta = .33$, $p < .01$). In addition, the inclusion of these justice climate variance variables into the regression models also improved the explained variance of relationship conflict by 7% when the predictor was distributive justice climate variance, and 10% when the predictor was procedural and interactional justice climate variance. Therefore, Hypothesis 10 was supported such that the higher the justice climate disagreement among group members, the higher the relationship conflict experienced by them.

Justice climate strength was proposed to have a positive association with TMX (i.e. justice climate variance negatively related to TMX) in Hypothesis 11. The regression analysis approach used to test this hypothesis was similar to that used for testing Hypothesis 10. Table 21 presents the results. Consistent with the hypothesis, procedural justice climate variance had a negative relationship to TMX ($\beta = -.21$; $p < .05$). Moreover, the increase in the explained variance of TMX reached 4% when procedural justice climate variance was included in Model 3. However, the regression coefficient of distributive justice climate variance was not statistically significant ($\beta = .06$; $p = .56$), as was that of interactional justice climate variance ($\beta = -.12$; $p = .27$). Hence, Hypothesis 11 was only partially supported.

www.manaraa.com

المنارة للاستشارات

TABLE 20

Regression Analysis Testing Justice Climate Strength on Relationship Conflict (H10)

	Model 1	Model 2		Model 3		Model 4	
Step 1							
Gender diversity	.18^{+}	.19^{+}	.20*	.18^{+}	.19^{+}	.20^{+}	.23*
Work experience diversity	.36***	.34**	.30**	.36***	.29**	.34***	.35***
Step 2							
DJC mean		.07	.11				
PJC mean				.02	.09		
IJC mean						.18^{+}	.29**
Step 3							
DJC variance			.26**				
PJC variance					.32**		
IJC variance							.33**
F	7.93***	5.41**	6.14***	5.23**	6.99***	6.53***	8.15***
R^2	.15	.16	.23	.16	.26	.19	.29
ΔR^2		.01	.07**	.01	.10**	.04^{+}	.10**

Note. n = 87. DJC = Distributive justice climate; PJC = Procedural justice climate; IJC = Interactional justice climate. Standardized regression coefficients are reported. *** $p < .001$, ** $p < .01$, * $p < .05$, $^{+}$ $p < .10$.

www.manaraa.com

المنارة للاستشارات

TABLE 21

Regression Analysis Testing Justice Climate Strength on Team-Member Exchange (H11)

	Model 1	Model 2		Model 3		Model 4	
Step 1							
Gender diversity	-.22*	-.21*	-.21+	-.21*	-.21*	-.20+	-.21*
Step 2							
DJC mean		.11	.12				
PJC mean				.31**	.27**		
IJC mean						.26*	.22*
Step 3							
DJC variance			.06				
PJC variance					-.21*		
IJC variance							-.12
F	4.27*	2.68+	1.89	7.11***	6.37***	5.51**	4.10**
R^2	.05	.06	.06	.15	.19	.12	.13
ΔR^2		.01	.00	.10**	.04*	.07*	.01

Note. $n = 87$. DJC = Distributive justice climate; PJC = Procedural justice climate; IJC = Interactional justice climate. Standardized regression coefficients are reported.
*** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$.

www.manaraa.com

To investigate Hypothesis 12 which proposed that relationship conflict would be negatively related to group outcomes including group members' commitment to the group, their satisfaction with the group, group performance, and group OCB, , these group outcomes were regressed on relationship conflict with age diversity controlled in the first step and relationship conflict entered in the second step. Table 22 displays the results. Consistent with the prediction of Hypothesis 12, relationship conflict had negative influence on satisfaction with the group (β = -.22; $p < .05$), group performance (β = -.35; $p < .001$), and group OCB (β = -.27; $p < .05$). Furthermore, the inclusion of relationship conflict into the regression models improved the explained variance of these group outcomes (satisfaction with the group: $\Delta R^2 = .05$, $p < .05$; group performance: $\Delta R^2 = .12$, $p < .001$; group OCB: $\Delta R^2 = .07$, $p < .05$). The regression coefficient of relationship conflict, however, was not statistically significant (β = -15; $p = .18$) when the outcome variable was commitment to the group as shown in Model 1. These results thus lend partial support to Hypothesis 12 that the higher the relationship conflict within a group, the worse the group members' attitudes towards the group and the lower the group's required and voluntary performance.

Finally, Hypothesis 13 predicted that TMX would have positive relationships to these four group outcomes. A similar regression approach used for testing Hypothesis 12 was used. The results pertaining to this hypothesis are presented in Table 23. Supporting the hypothesis, the results showed that TMX's regression coefficient was .31 ($p < .01$) when the outcome variable was commitment to the group, .41 ($p < .001$) when it was satisfaction with the group, .24 ($p < .05$) when it was group performance, and .29 ($p < .01$) when it was group OCB. Besides, when TMX was entered into the regression models, the explained variance of commitment to the group improved by 10% ($p < .01$), satisfaction with the group by 17% (p

www.manaraa.com

< .001), group performance by 6% ($p < .05$), and group OCB by 8% ($p < .01$). These results thus showed support to Hypothesis 13 such that the higher the quality of exchanges among group members, the better these attitudinal and performance group outcomes.

www.manaraa.com

المنارة للاستشارات

TABLE 22

Regression Analysis Testing Relationship Conflict on Group Outcomes (H12)

	Model 1 DV = Commitment to group		Model 2 DV = Satisfaction with group		Model 3 DV = Group performance		Model 4 DV = Group OCB	
Step 1								
Age diversity	-.20^{+}	-.19^{+}	-.06	-.03	-.20^{+}	-.16	-.07	-.04
Step 2								
Relationship conflict		-.15		-.22*		-.35***		-.27*
F	3.63^{+}	2.77^{+}	.26	2.16	3.47^{+}	8.12***	.43	3.60*
R^2	.04	.06	.00	.05	.04	.16	.01	.08
ΔR^2		.02		.05*		.12***		.07*

Note. n = 87. OCB = Organizational citizenship behavior. Standardized regression coefficients are reported.
*** $p < .001$, ** $p < .01$, * $p < .05$, $^{+}$ $p < .10$.

www.manaraa.com

المنارة للاستشارات

TABLE 23

Regression Analysis Testing Team-Member Exchange on Group Outcomes (H13)

	Model 1 DV = Commitment to group		Model 2 DV = Satisfaction with group		Model 3 DV = Group performance		Model 4 DV = Group OCB	
Step 1								
Age diversity	-.20^{+}	-.22*	-.06	-.08	-.20^{+}	-.21*	-.07	-.09
Step 2								
Team-member exchange		.31**		.41***		.24*		.29**
F	3.63^{+}	6.54**	.26	8.83***	3.47^{+}	4.59*	.43	4.04*
R^2	.04	.14	.00	.17	.04	.10	.01	.09
ΔR^2		.10**		.17***		.06*		.08**

Note. n = 87. OCB = Organizational citizenship behavior. Standardized regression coefficients are reported.
*** $p < .001$, ** $p < .01$, * $p < .05$, $^{+}$ $p < .10$.

www.manaraa.com

Table 24 presents a summary of the analysis results pertaining to the hypotheses in both of the individual- and group-level models in this dissertation.

TABLE 24

A Summary of Analysis Results

H1	Quality of LMX relationship is positively related to perceptions of DJ, PJ, and IJ.	Supported
H2	LMX differentiation will moderate the association between LMX quality and perceptions of (a) DJ, (b) PJ, and (c) IJ such that subordinates with low LMX quality in a group of high LMX differentiation will report the lowest justice perceptions.	Partially supported
H3	Intra-group communication will moderate the association between LMX quality and perceptions of (a) DJ, (b) PJ, and (c) IJ such that subordinates with low LMX quality in a group of high intra-group communication will report the lowest justice perceptions.	Not supported
H4	Role breadth self-efficacy will moderate the association between LMX quality and perceptions of (a) DJ, (b) PJ, and (c) IJ such that subordinates with low LMX quality and high RBSE will report the lowest justice perceptions	Not supported
H5	Perceived DJ will mediate the relationships between LMX quality and commitment to the leader, satisfaction with the leader, job performance, and OCB.	Partially supported
H6	Perceived PJ will mediate the relationships between LMX quality and commitment to the leader, satisfaction with the leader, job performance, and OCB.	Partially supported
H7	Perceived IJ will mediate the relationships between LMX quality and commitment to the leader, satisfaction with the leader, job performance, and OCB.	Partially supported
H8	LMX differentiation is negatively related to the strength of DJC, PJC, and IJC, after controlling for LMX level.	Partially supported

www.manaraa.com

TABLE 24

A Summary of Analysis Results (continued)

H9	Justice climate strength is positively related to group members' commitment to the group, satisfaction with the group, group performance, and group OCB, after controlling for justice climate level.	Partially supported
H10	The strength of DJC, PJC, and IJC is negatively related to relationship conflict, after controlling for justice climate level.	Supported
H11	The strength of DJC, PJC, and IJC is positively related to TMX level, after controlling for justice climate level.	Partially supported
H12	Relationship conflict is negatively related to group members' commitment to the group, satisfaction with the group, group performance, and group OCB.	Partially supported
H13	TMX level is positively related to group members' commitment to the group, satisfaction with the group, group performance, and group OCB.	Supported

Note: LMX = Leader-member exchange; DJ = Distributive justice; PJ = Procedural justice; IJ = Interactional justice; RBSE = Role breadth self-efficacy; OCB = Organizational citizenship behavior; DJC = Distributive justice climate; PJC = Procedural justice climate; IJC = Interactional justice climate.

www.manaraa.com

CHAPTER VI

DISCUSSION

Leader-member exchange and organizational justice are two important topics in organizational studies. Research on each has proliferated for over 30 years. However, little research has integrated these two streams of research and extended them to a higher level of analysis. This dissertation not only brings these two literatures together but also examines their relationships at both individual- and group-levels of analysis. In the following sections, some patterns of results that emerged from both the individual- and group-level data and that are relevant for research on LMX theory and organizational justice are discussed.

6.1 Individual-Level Model

Consistent with previous studies (e.g. Bhal, 2005; Elicker et al., 2006), the results of the individual-level model suggest that LMX quality is positively related to all three dimensions of justice perceptions – distributive, procedural, and interactional justice. In addition, the results indicate that LMX differentiation interacts with LMX quality to affect both procedural and interactional justice perceptions. Specifically, when LMX differentiation is low, high-LMX subordinates have significantly higher procedural justice perceptions than low-LMX subordinates. When LMX differentiation is high, the procedural justice perceptions of high- and low-LMX subordinates are not significantly different. Also, their procedural justice perceptions are lower than subordinates in groups with low LMX differentiation. For interactional justice, the pattern of the LMX quality – justice perception relationship is slightly different. In groups where LMX differentiation is low, the interactional justice perceptions of subordinates of

www.manaraa.com

different levels of LMX quality are not significantly different. On the other hand, when leader treatments substantially differ across subordinates, subordinates of low LMX quality have significantly lower interactional justice perceptions than those of high LMX quality. Moreover, subordinates under a high LMX differentiation condition generally perceive lower interactional justice than those under a low LMX differentiation condition.

The results thus suggest that LMX differentiation affects procedural and interactional justice perceptions of subordinates of different levels of LMX quality. For those subordinates having more favorable leader treatments, although their situations are better off than their low-LMX counterparts, their justice perceptions are still hampered when LMX differentiation is high. This phenomenon may be explained by a recent exploration of third-parties' reactions to injustice (Skarlicki & Kulik, 2005). These high-LMX subordinates may feel vulnerable and be worried about their future treatments (Cobb & Frey, 1996; Liden et al., 2006; Sias & Jablin, 1995). Moreover, when LMX differentiation is low, those members having relatively higher LMX quality may perceive their favorable treatments and others' less favorable treatments justified because of objective criteria (e.g. differences in capabilities) or subjective biases (e.g. self-serving bias). When the differentiation intensifies, however, they may become more aware of the leader's violation of justice rules such as consistency (Leventhal, 1980) and respect (Bies & Moag, 1986) that they start to wonder if such differentiation is justified and necessary. In short, they may begin to see their leader as violating their moral assumptions regarding how human beings should be treated by a leader (Folger, 2001). The self-interest concerns, then, together with the violation of moral and social norms may lower the high-LMX subordinates' justice perceptions under high LMX differentiation (Skarlicki & Kulik, 2005).

www.manaraa.com

Contrary to the hypothesis and to the prediction of the notion of contagious justice (Degoey, 2000) as well as that of social information processing theory (Salancik & Pfeffer, 1978), intra-group communication appears to improve both high- and low-LMX subordinates' procedural and interactional justice perceptions. These unexpected results may be attributable to the content of communications among group members. Drawing upon fairness theory (Folger & Cropanzano, 2001), I hypothesized that when group members have more formal and informal interactions, they have more opportunities to recognize differential leader treatments in the group. It becomes easier for them to imagine the difference between their current state of being and the would-have-been condition, resulting in stronger perceptions of injustice. This line of argument, however, assumed that the content of communications would include enough topics of LMX quality to raise concerns of differential leader treatments and thus concerns of injustice. This may not be the case for the sample – the corps of cadets. If the content of the members' communication focuses more on the development of a cohesive group or the completion of group work and less on the leader treatments they receive, it is then possible that the formal conversation as well as the informal casual talk among group members will limit their opportunities to figure out differential leader treatments. The development of a cohesive and cooperative environment may even improve their perceptions of their leaders. To better understand the role of intra-group communication on justice perceptions, future studies have to focus more on the content of communication among group members.

The results of the individual-level model confirm that role breadth self-efficacy (RBSE) moderates the LMX – justice relationships for both procedural and interactional justice perceptions. This demonstrates the need to explore further how individual differences may influence one's justice perceptions. With low LMX quality, group members of high or low

www.manaraa.com

RBSE seem to develop similar levels of procedural and interactional justice perceptions. This situation, however, changes when LMX quality improves. Group members with low RBSE and high-quality LMX relationships report the highest justice perceptions. Adam's (1965) social comparison theory is likely relevant to distributive justice perceptions as well as procedural and interactional justice perceptions. For those who have low RBSE, a high LMX quality resembles an overpayment. They lack the self-efficacy that they can take up broader and more important responsibilities, yet their leaders are treating them as in-group members with high-quality social exchanges. These subordinates, then, may try to rationalize the leader treatments and perceive them as justified, thus developing high perceptions of procedural and interactional justice.

The interactive results found for procedural and interactional justice, however, do not extend to perceptions of distributive justice. This lack of interaction may be attributable to the operationalization of distributive justice. The measure of distributive justice in this study focuses only on leaders' fairness in assigning work schedules, work load, and task responsibilities. Fairness perceptions related to the distribution of pay, rewards, and other outcomes were not measured mainly because cadet leaders are not directly responsible for their allocation. It may be that the association between LMX quality and distributive justice perceptions related only to work schedules, work load, and task responsibilities is less affected by individual differences and external factors. Another possible reason for a lack of interaction may stem from the unique characteristics of this cadet sample. The relationship between cadets' LMX quality and distributive justice perceptions may be less subject to the influence by individual differences and contextual characteristics. To further understand the reasons for this lack of interaction, future studies may consider using a different operationalization of distributive justice as well as a different sample.

www.manaraa.com

Finally, the results show that LMX quality influences one's attitudinal and behavioral responses partly through justice perceptions. It is not surprising that justice perceptions only partially mediate the association. After all, there is a lot of robust evidence suggesting the direct impact of LMX quality on these individual outcomes (Gerstner & Day, 1997; Ilies et al., 2007; Liden et al., 1997). The results of the mediated model, however, shed additional light on the underlying mechanism operating from the quality of LMX relationships to both individual attitudes and performance. They also help integrate the studies that have examined the separate components of this mediated model together.

6.2 Group-Level Model

While most studies on justice climates have focused on climate level (i.e. the average of justice climate perceptions among group members), climate strength (i.e. the within-group variance of justice climate perceptions among group members) represents a crucial area to explore in climate research. Weak climates – regardless of the level of climate perceptions – can result in inconsistent and less predictable behaviors among group members (Schneider, Salvaggio, & Subirats, 2002). Therefore, an understanding of the antecedents as well as the consequences of justice climate strength is warranted. Given the small sample size (n = 87) in the group-level model, many of my findings are not statistically significant. Nevertheless, these group-level results can still provide useful insights for discussion and make contributions to the literature.

The group-level model shows that LMX differentiation has a significant negative impact on justice climate strength. Moreover, the relationships of LMX differentiation to procedural and interactional justice climate strength appear to be stronger than that to distributive justice

www.manaraa.com

climate strength. These findings offer the literature a new perspective to understand antecedents to group justice climates. Most of the limited studies examining the determinants of group justice climates have been devoted to team characteristics such as team size, team cohesion, and team collectivism (Colquitt, et al., 2002; Naumann & Bennett, 2000). The results obtained in this dissertation highlight the pivotal role played by leadership: When leaders differentiate their treatments across subordinates, the strength of group justice climates can be negatively affected.

This dissertation also investigated the influence of justice climate strength on group members' attitudes and behaviors, as well as leader evaluations of group performance. The results suggest that stronger group justice climates are beneficial to members' attitudes and their in-role and extra-role behaviors. When groups have strong justice climates, group members tend to be more committed to and satisfied with their groups. Among all three dimensions of justice climate strength, distributive justice climate strength seems to have the strongest impact on these attitudes. In addition, strong justice climates result in higher leader ratings on group performance and group OCB. In this case, interactional justice climate strength has the strongest impact when compared to distributive and procedural justice climate strength.

The results further suggest that weak group justice climates can significantly undermine more proximal group outcomes such as group dynamics. When group members have different perceptions regarding how fairly the group is being treated as a whole, those who perceive a lack of group justice may develop and express more negative attitudes and emotions towards their coworkers (Lee, 2001; Sais & Jablin, 1995). In addition, they may resort to less cooperative behaviors or even confrontations with their peers (Sias & Jablin, 1995; Skarlicki & Folger, 1997). As the findings suggest, high disagreement about distributive, procedural, and interactional justice climates among group members can promote more interpersonal clashes in the group.

www.manaraa.com

Future studies might explore if these findings extend to task and process conflict considering that these three types of conflict are inter-related (Jehn, 1997). Furthermore, the findings suggest that low procedural justice climate strength may dampen social exchange relationships among group members. Disagreement about how procedurally fair the group is being treated can significantly deter group members from sharing useful resources, providing feedback, and suggesting new and helpful work methods to one another. These findings, together with those regarding relationship conflict, are important to the justice climate literature because little research has explored how justice climates can impact group dynamics.

Unexpectedly, distributive justice climate variance seems to have a positive impact on TMX. The higher the disagreement among group members about distributive justice climate, the more social exchanges they have. The magnitude of the regression coefficient as well as the correlation between TMX and distributive justice climate variance were small (.06 in Table 21 and .05 in Table 14, respectively) but we might speculate some reasons for these findings. Given that the sample in this dissertation is cadet members, their military context demands that they do their best to accomplish their tasks. With these kinds of commanded obligations, even those who perceive a low group distributive justice climate may have no choice but to strengthen their reciprocations so as to neutralize the unequal distribution of resources across members and get their job completed. Hence, they are likely to increase the exchanges with their coworkers, especially with those they see as having more favorable resources, in hopes of getting the necessary resources to finish their tasks. As a result, the overall exchanges at the group level are perceived to increase rather than decrease.

At first the negative association between distributive justice climate strength and relationship conflict may seem contradictory to the negative association between distributive

www.manaraa.com

justice climate strength and TMX. Relationship conflict and TMX, however, are two unique constructs capturing different types of interactions among group members. Relationship conflict is more emotion- and attitude-based with little basis on task issues (Jehn, 1995, 1997; Simons & Peterson, 2000). On the other hand, TMX is more task-oriented in which the reciprocations are related to exchange of task feedback and information among group members (Seers, 1989; Seers et al., 1995). As the results suggest, a weak distributive justice climate may trigger more non-task related interpersonal clashes leading group members to develop stronger feelings of anxiety and tension. However, considering that they are obligated to fulfill their task requirements, even though group members may perceive unfairness in resource distributions, they may still choose to engage in more exchanges to complete their assignments. This is consistent with the conflict literature that shows employees can distinguish between task and interpersonal issues quite well (Jehn, 1997). Future studies will have to explore how robust these findings are.

Consistent with previous studies on relationship conflict, the findings in this dissertation show that relationship conflict is detrimental to group performance and group members' attitudes to the group (De Dreu & Weingart, 2003; Simons & Peterson, 2000). What adds value to the conflict literature is that the findings also show a negative association between relationship conflict and group OCB. Hence, when a group is suffering from relationship conflict, not only will the group members be distracted from their tasks and develop less positive attitudes to the group but they will also show more reluctance to perform voluntary citizenship behaviors for the group. Finally, TMX is found to be advantageous to group functioning as it is positively related to group performance, group OCB, as well as commitment to and satisfaction with the group. These findings enrich our limited knowledge about the consequences of TMX at the group-level of analysis and encourage future studies of TMX.

www.manaraa.com

6.3 Contributions

By integrating and extending the research on LMX and organizational justice, this dissertation contributes to both literatures.

In the individual-level model, LMX quality is hypothesized to impact various attitudinal and behavioral outcomes through justice perceptions. In fact, many studies have examined the different links in this mediated relationship: the association between LMX quality and justice perceptions (e.g. Bhal, 2005; Lee, 2001); the relationship between justice perceptions and individual outcomes (e.g. Colquitt et al., 2001); and the connection between LMX quality and individual outcomes (e.g. Gerstner & Day, 1997; Ilies et al., 2007). Even so, studies connecting these three components are rare. By integrating justice perceptions into the LMX – outcome association, this individual-level model sheds light on the role of leadership in influencing individual outcomes through shaping one's justice perceptions. This also highlights the underlying mechanism through which LMX quality affects individual outcomes, which may help explain some of the mixed findings in the LMX literature regarding the effects of LMX quality on attitudes and behaviors (e.g. Duart et al., 1994; Vecchio & Gobdel, 1984; Vecchio et al., 1986). The exploration of moderators in this individual-level model may also help explain these mixed findings. The results suggest that both individual differences – such as RBSE – and group features – such as LMX differentiation and intra-group communication – can alter the impact of LMX quality, thus offering some insights about the boundary conditions of leader-follower relationships.

The individual-level model also contributes to the justice literature by answering the call for more studies linking justice to leadership (Colquitt & Greenberg, 2003). In addition, most studies of organizational justice have focused on two areas: the consequences of justice

www.manaraa.com

perceptions and the formation of justice perceptions from various justice rules enacted by leaders or organizations. This study therefore contributes by showing how individual differences and contextual characteristics may play a role in shaping justice perceptions. This hopefully will encourage more research exploring individual- and context-related antecedents to justice perceptions.

After 30 years of research, both LMX and organizational justice research are confronted with a similar challenge: their studies are generally limited to the individual-level of analysis (Colquitt & Greenberg, 2003; Graen & Uhl-Bien, 1995). This dissertation contributes by extending these two streams of literature to the group-level of analysis. Although LMX theory brings us a different perspective of leadership by focusing on the dyadic leader-follower relationships (Dansereau et al., 1975; Graen & Cashman, 1975), it neglects the fact that these leader-follower relationships are embedded in a broader social context such as a work group or an organization. While previous studies have provided us with a great deal of evidence of the benefits of high-quality LMX relationships, little is known about the potential problems stemming from the basic premise of LMX theory: leaders differentiate their treatments across their subordinates. By integrating and investigating the impact of LMX differentiation on justice climates, this dissertation enriches our limited knowledge about the consequences of LMX differentiation.

The group-level model in this dissertation also contributes to the growing research on justice climates. Past studies have explored factors that enhance the development of justice climates such as team collectivism and work group cohesion (Colquitt et al., 2002; Naumann & Bennett, 2000). This dissertation explores a leadership factor that has a potential to hinder the development of strong justice climates – LMX differentiation. The results show that leaders can

www.manaraa.com

affect subordinates' perceptions about how fairly the groups are being treated through their differential leader treatments. In addition, the results in this dissertation confirm that when group members are confronted with disagreement about their justice climate perceptions, they tend to encounter poorer group dynamics, which can dampen their attitudes to the group and group performance. In sum, these findings enrich the current literature of justice climates – both their antecedents and consequences.

6.4 Practical Implications

The major practical implications that follow from this dissertation concern the management of LMX differentiation in groups. The individual-level model suggests that if leaders favor certain group members to a very high extent, not only will out-group members develop stronger injustice perceptions but in-group members can also start to perceive a lack of procedural and interactional justice. The negative consequences of injustice perceptions, such as retaliatory behaviors in the workplace, are well-known (Skarlicki & Folger, 1997) and can be costly to employers. The group-level model further suggests that LMX differentiation can heighten group members' disagreement about how fairly the group is being treated as a whole. This disagreement tends to hurt group processes, lower group members' attitudes to their groups, and reduce the groups' overall in-role and extra-role performance. Therefore, when differentiating their treatments across group members in an attempt to garner the benefits from LMX differentiation, leaders also have to bear in mind the potential downside of differentiation. In this case, "balance" seems to be critical. There is no point for leaders to differentiate their leader-follower relationships in hopes of enjoying higher efficiency and effectiveness only to find that such differentiation has resulted in poorer individual and group outcomes. As discussed

www.manaraa.com

in the following section, leaders may also have to be aware of the resources being differentiated in order to enjoy the most benefits from LMX differentiation.

As shown in the results of the individual-level model, intra-group communication may improve group members' procedural and interactional justice perceptions, no matter that these group members are having high- or low-quality LMX relationships. Hence, leaders may consider offering their subordinates more opportunities for interactions in order to improve the subordinates' justice perceptions. These interactions can be formal ones such as group meetings and informal ones such as social gatherings. By encouraging more communications, leaders can not only enhance their followers' justice perceptions but can also improve their attitudinal and performance outcomes.

Subordinates with low RBSE in high-quality LMX relationships tend to develop high justice perceptions. Nevertheless, this combination of RBSE and LMX quality can be problematic as it implies that the leaders and the followers are having different expectations of one another. Specifically, leaders likely believe that these subordinates are capable of performing difficult and challenging assignments and that is why they have considered these subordinates as in-group members. However, these subordinates lack the self-efficacy that they can perform these challenging assignments successfully as reflected in their low RBSE. What may result, then, is the leaders will eventually figure out that these subordinates are not as capable as expected and may adjust their LMX relationships with these subordinates: from in-group to out-group. Also, if they fail to complete the assignments satisfactorily, these low-RBSE subordinates may suffer from even lower RBSE (Bandura, 1986). This "double impact" may lead to further complications down the road for these subordinates. As a precaution, leaders may act proactively by identifying these low-RBSE-high-LMX members and providing them with

www.manaraa.com

necessary training as well as mentoring so that these employees can be better equipped to handle challenging assignments.

6.5 Limitations and Future Directions

The use of cadets may pose a limitation on this study. Although these cadets work in groups, the environment in which they perform group tasks and the types of decisions cadet leaders make remain different from those in other organizational settings. In these cadet groups, the major group tasks are group activities related to military training. Although the leaders have discretion in making decisions and followers can participate in decision-making, many decisions are still constrained by the requirements in this military setting. In addition, because these cadet leaders are in a military training program, the impact of their decisions may be limited to their own groups or a few peer groups. Decisions made by managers in more typical organizational settings, on the other hand, may have more impact on the larger context, for example, other departments, the whole division, or even some external stakeholders such as customers. The relatively limited impact of cadet leaders, then, may affect how they make their decisions and what decisions they make. This, as a consequence, constitutes some possible boundary conditions of the results. Therefore, future studies need to test both the individual- and group-level models with samples from other organizational settings in order to investigate the generalizability of the results obtained in this dissertation.

Another limitation stems from the cross-sectional research design employed in this dissertation. Because data were collected from both leaders and followers in a cross-sectional manner, the causal relationships among the constructs proposed in the individual-level and group-level models could not be tested. In the individual-level model, while many studies have

www.manaraa.com

demonstrated in both cross-sectional and longitudinal studies that LMX quality is an antecedent to justice perceptions (e.g. Elicker et al., 2006; Lee, 2000, 2001; Mansour-Cole & Scott, 1998), some other studies have argued that justice perceptions can affect LMX quality (e.g. Masterson et al., 2000). Similarly, in the group-level model, based on the existing literature, it was proposed that justice climates would affect group dynamics such as TMX and relationship conflict. However, it could also be argued that the reduced interactions and communications due to a low level of TMX and a high level of relationship conflict could lead to disagreement among group members about their justice climate perceptions (Schneider & Reichers, 1983). Therefore, to better understand the causal relationships in the proposed models in this dissertation, a longitudinal design is necessary in future studies. This is not to suggest one direction of relationship is more likely than the other. Instead, the relationship between LMX and justice perceptions may well be inter-related such that one's LMX quality affects his/her justice perceptions, which in turn affect future LMX quality (Elicker et al., 2006; Erdogan, 2002). To examine this "loop of relationships", researchers will also need to conduct research with a longitudinal design.

In this dissertation, I argued that LMX differentiation can be detrimental to groups as it triggers perceptions of unfairness in the group and has negative impact on group dynamics as well as performance. Nevertheless, it should be noted that LMX differentiation is not necessarily bad. It is almost inevitable and generally agreed that leaders should distribute their resources unequally among group members to achieve a wide variety of benefits (Dansereau et al., 1977; Graen & Cashman, 1977; Graen & Uhl-Bien, 1995). Then what may matter more is *what* is being differentiated in the group. The operationalization of LMX differentiation in this study focused mainly on the differentiation of intangible resources between the two exchange parties

www.manaraa.com

including the degree to which the leader knows the subordinate's potential and job problems, as well as the likelihood that the subordinate will justify the leader's decision to others (Graen et al., 1982). Hence, the results in this study suggest that leaders' differentiation of intangible resources can be disadvantageous to group dynamics and functioning. What this study did not examine, however, is the differentiation of tangible resources across group members. LMX theory suggests that leaders can differentiate both tangible and intangible resources (Graen & Uhl-Bien, 1995). If a leader differentiates, for instance, assignments across subordinates, it is possible that group performance can benefit because more challenging tasks are taken up by in-group members whom the leader sees as more committed and competent. Therefore, future studies can examine the consequences of LMX differentiation on other resources to better understand the potential costs and benefits of LMX differentiation. In addition, it is unlikely that LMX differentiation of tangible resources can always provide benefits regardless of the degree of differentiation. An inverted-U curvilinear relationship may exist between LMX differentiation of tangible resources and outcomes such as performance. Future studies, therefore, may also explore the *optimal* level of LMX differentiation, figuring out if "diminishing returns" exist and if they do, which level of differentiation can bring the most benefits to groups.

Yet another direction for future research concerns the management of LMX differentiation in groups. If a certain degree of LMX differentiation is inevitable but has the potential to trigger negative group dynamics, managers need to know how to handle LMX differentiation with appropriate managerial tools. A potential tool for consideration is social accounts. Social accounts are explanations used to mitigate account receivers' negative reactions to some unexpected or untoward decisions made or behaviors performed (Bies, 1987; Scott &

www.manaraa.com

Lyman, 1968). The extensive literature on social accounts has demonstrated that managerial explanations, when perceived to be adequate, can successfully mitigate subordinates' negative reactions to a wide variety of actions and decisions in organizational settings (Shaw, Wild, & Colquit, 2003). With the use of appropriately designed and perceived adequate social accounts, managers may be able to alleviate group members' negative reactions to LMX differentiation.

Along this line, future research can investigate the types of social accounts to be employed. Several types of social accounts (e.g. excuses, justifications, referential accounts, penitential accounts) have been examined in the literature and each has its unique potential to mitigate subordinates' negative responses under different circumstances (Bies, 1987; Scott & Lyman, 1968). The meta-analytic review by Shaw and his colleagues (Shaw et al., 2003) compared the effectiveness of excuses and justifications and found that the former was more effective than the latter. Nevertheless, in some other studies, excuses have been found to cause unexpected consequences to leaders and organizations such as lowering subordinates' recognition of their managers' power and leadership (Bobocel, Agar, Meyer, & Irving, 1998) as well as transferring anger from one's leader elsewhere in the organization without mitigating the anger itself (Folger, McCline, & McDannell, 1994). Hence, researchers need to explore the extent to which different types of social accounts mitigate the negative outcomes stemming from LMX differentiation while simultaneously not giving way to unintended problems. Such examination can also offer practitioners more specific recommendations regarding what types of social accounts to employ when handling LMX differentiation.

The studies of LMX differentiation are at an infant stage and all studies in the literature focus on leaders who are leading individuals (Boies & Howell, 2006; Ford & Seers, 2006; Liden et al., 2006; Mayer, 2004; McClane, 1991). Jumping up yet another level of analysis may be a

www.manaraa.com

fruitful avenue of research. Leaders lead groups as well as individuals – they are division heads as well as first-line supervisors. In this dissertation, I only focused on leaders of individual subordinates. Leaders at higher levels may differentiate their treatments across groups as well. Hence, a division head may provide more favorable treatments to a particular department than other departments. If so, will the differential treatments that a division head provides across departments lead to lower justice climates in the division or even the whole organization? How may LMX differentiation at the division level affect inter-departmental communication and cooperation? Exploring these areas is warranted and by doing so, an even broader perspective of LMX theory can be developed.

Finally, another intriguing area for future research relates to the investigation of antecedents to LMX differentiation. At the individual-level of analysis, studies have mainly concentrated on the consequences of LMX quality. Relatively less research has examined how characteristics of leaders and followers may affect their LMX quality. This limitation has extended to the studies at the group-level of analysis. No attention has been paid to identifying factors that may drive leaders to develop differential leader treatments. In fact, both individual differences and contextual characteristics can be potential antecedents to LMX differentiation. For example, the leader's personal biases, prejudices, or past experiences with groups may serve as a cause of LMX differentiation. Similarly, organizational culture and norms may constitute an environment that promotes or discourages the degree of a leader's differentiation across team members. By having a better understanding of the antecedents to LMX differentiation, managers can better examine ways to adjust the contextual environment or provide appropriate training to leaders so as to help develop the desired level and quality of LMX differentiation in organizational settings accordingly.

www.manaraa.com

6.6 Conclusions

With a purpose of integrating and extending the research on LMX theory and organizational justice, this dissertation investigated an individual-level model and a group-level model. In the individual-level model, the findings suggest that one's LMX quality interacts with RBSE, LMX differentiation, and intra-group communication to affect different dimensions of justice perceptions, which lead to various individual outcomes. In addition, in the group-level model, the results reveal that LMX differentiation influences the strength of justice climates, which in turn impact such group dynamics as relationship conflict and TMX as well as group members' attitudinal and behavioral responses. This dissertation makes various contributions to both LMX and organizational justice research, at both individual- and group-levels of analysis. Also, these findings provide a promising direction for future studies regarding how leadership may interact with individual differences and contextual characteristics to affect individuals' justice perceptions and how differential leader treatments may alter group dynamics and functioning.

www.manaraa.com

REFERENCES

Adams, J. S. (1965). Inequity in social exchange. ***Advances in Experimental Social Psychology***, 2: 267-299.

Alexander, S., & Ruderman, M. (1987). The role of procedural and distributive justice in organizational behavior. ***Social Justice Research***, 1: 177-198.

Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization. ***Journal of Occupational Psychology***, 63: 1-18.

Allison, P. D. (1978). Measures of inequality. ***American Sociological Review***, 43: 865-880.

Ambrose, M. L., Harland, L. K., & Kulick, C. T. (1991). Influence of social comparisons on perceptions of organizational fairness. ***Journal of Applied Psychology***, 76: 239-246.

Andrews, M. C., & Kacmar, K. M. (2001). Discriminating among organizational politics, justice, and support. ***Journal of Organizational Behavior***, 22: 347-366.

Bacharach, S. B. (1989). Organizational theories: some criteria for evaluation. ***Academy of Management Review***, 14: 496-515.

Bandura, A. (1986). ***Social Foundations of Thought and Action: A Social Cognitive Theory***. Englewood Cliffs, NJ: Prentice-Hall.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. ***Journal of Personality and Social Psychology***, 51: 1173-1182.

Bass, B. M. (1990). ***Bass and Stogdill's Handbook of Leadership***, 3rd Edition. New York: Free Press.

www.manaraa.com

Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. ***Journal of Applied Psychology***, 88: 207-218.

Baugh, S. G., & Graen, G. B. (1997). Effects of team gender and racial composition on perceptions of team performance in cross-functional teams. ***Group & Organization Management***, 22: 366-383.

Becker, T. E., & Kernan, M. C. (2003). Matching commitment to supervisors and organizations to in-role and extra-role performance. ***Human Performance***, 16: 327-348.

Bentler, P. M. (1990). Comparative fit indexes in structural models. ***Psychological Bulletin***, 10: 238-246.

Bentler, P. M. (1992). On the fit of models to covariances and methodology to the *Bulletin*. ***Psychological Bulletin***, 112: 400-404.

Bentler, P. M., & Bonnett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. ***Psychological Bulletin***, 88: 588-606.

Bhal, K. T. (2005). LMX-citizenship behavior relationship: Justice as a mediator**.** ***Leadership & Organization Development Journal***, 27: 106-117.

Bies, R. J. (1987). The predicament of injustice: The management of moral outrage. In L. L. Cummings & B. M. Staw (Eds.), ***Research in Organizational Behavior*** (Vol. 9, pp. 289-319). Greenwich, CT: JAI Press.

Bies, R. J., & Moag, J. F. (1986). Interactional justice: Communication criteria of fairness. In R.J. Lewicki, B. H. Sheppard, & M. H. Bazerman (Eds.), ***Research on Negotiations in Organizations***, Vol. 1 (pp. 43-55). Greenwich, CT: JAI Press.

Blau, P. M. (1964). ***Exchange and Power in Social Life***. New York: John Wiley.

www.manaraa.com

Blau, P. M. (1977). ***Inequality and heterogeneity***. New York: Free Press.

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In Klein, K.J. & Kozlowski, S.W.J. (Eds.), ***Multilevel Theory, Research, and Methods in Organizations: Foundations, Extensions, and New Directions***: 349-381. San Francisco: Jossey-Bass.

Bobocel, D. R., Agar, S. E., Meyer, J. P., & Irving, P. G. (1998). Managerial accounts and fairness perceptions in conflict resolution: Differentiating the effects of minimizing responsibility and providing justification. ***Basic and Applied Social Psychology***, 20*:* 133-143.

Boies, K., & Howell, J. M. (2006). Leader-member exchange in teams: An examination of the interaction between relationship differentiation and mean LMX in explaining team-level outcomes. ***Leadership Quarterly***, 17: 246-257.

Brockner, J., & Wiesenfeld, B. M. (1996). An integrative framework for explaining reactions to decisions: Interactive effects of outcomes and procedures. ***Psychological Bulletin***, 120: 189-208.

Bryk, A. S., & Raudenbush, S. W. (1992). ***Hierarchical Linear Models***. Thousand Oaks, CA: Sage.

Byrne, B. M. (1998). ***Structural Equation Modeling with Lisrel, Prelis, and Simplis: Basic Concepts, Applications, and Programming***. Mahway, NJ: Lawrence Erlbaum Assiociates, Inc.

Chan, D. (1999). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. ***Journal of Applied Psychology***, 83: 234-246.

www.manaraa.com

Chen, Z., Lam, W., & Zhong, J. A. (2007). Leader-member exchange and member performance: A new look at individual-level negative feedback-seeking behavior and team-level empowerment climate. ***Journal of Applied Psychology***, 92: 202-212.

Clugston, M., Howell, J. P., & Dorfman, P. W. (2000). Does cultural socialization predict multiple bases and foci of commitment? Journal of Management, 26: 5-30.

Cobb, A. T. & Frey, F. M. (1996). The effects of leader fairness and pay outcomes on superior/subordinate relations. ***Journal of Applied Social Psychology***, 26: 1401- 1426.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). ***Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences***, 3rd Ed. Mahwah, NJ: Lawrence Erlbaum Associates.

Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. ***Journal of Applied Psychology***, 86: 386-400.

Colquitt, J. A. (2004). Does the justice of the one interact with the justice of the many? Reactions to procedural justice in teams. ***Journal of Applied Psychology***, 89: 633-646.

Colquitt, J. A., & Chertkoff, J. M. (2002). Explaining injustice: The interactive effect of explanation and outcome on fairness perceptions and task motivation. ***Journal of Management***, 28: 591-610.

Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, O. L. H., & Ng, K. Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. ***Journal of Applied Psychology***, 86: 425-445.

Colquitt, J.A., & Greenberg, J. (2003). Organizational justice: A fair assessment of the state of the literature. In J. Greenberg (Ed.), ***Organizational Behavior: The State of the Science***, 2nd Edition (pp. 165-210). Mahwah, NJ: Lawrence Erlbaum.

www.manaraa.com

Colquitt, J. A., & Jackson, C. L. (2006). Justice in teams: The context sensitivity of justice rules across individual and team contexts. ***Journal of Applied Social Psychology***, 36: 868-899.

Colquitt, J. A., Noe, R. D., & Jackson, C. L. (2002). Justice in teams: Antecedents and consequences of procedural justice climate. ***Personnel Psychology***, 55: 83-109.

Conlon, D. E., Porter, C. O. L. H., & McLean Parks, J. (2004). The fairness of decision rules. ***Journal of Management***, 30: 329-349.

Dansereau, F., Graen, G. B., & Haga, W. J. (1975). A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. ***Organizational Behavior and Human Performance***, 13: 46-78.

De Dreu, C. K. W., & Weingart, L. R. (2003). Task versus relationship conflict, team performance, and team member satisfaction: A meta-analysis. ***Journal of Applied Psychology***, 88: 741-749.

Degoey, P. (2000). Contagious justice: Exploring the social construction of justice in organizations. ***Research in Organizational Behavior,*** 22: 51-102.

Deutsch, M. (1975). Equity, equity, and need: What determines which value will be used as the basis of distributive justice? ***Journal of Social Issues***, 31: 137-150.

Dienesch, R. M., & Liden, R. C. (1986). Leader-member exchange model of leadership: A critique and future development. ***Academy of Management Review***, 11: 618-634.

Donovan, J. J. (2001). Work motivation. In N. Anderson, D.S. Ones, H.K. Sinangil, & C. Viswesvaran (Eds.), ***Handbook of Industrial, Work and Organizational Psychology, Vol. 2, Organizational Psychology:*** 53-75. Thousand Oaks, CA: Sage Publications.

www.manaraa.com

Downey, H. K., Hellriegel, D., & Slocum, J. W. (1975). Congruence between individual needs, organizational climate, job satisfaction, and performance. ***Academy of Management Journal***, 18: 149-155.

Duarte, N. T., Goodson, J. R., & Klich, N. R. (1994). Effects of dyadic quality and duration on performance appraisal. ***Academy of Management Journal***, 37: 499-521.

Dunegan, K. J., Duchon, D., & Uhl-Bien, M. (1992). Examining the link between leader-member exchange and subordinate performance: The role of task analyzability and variety as moderators. ***Journal of Management***, 18: 59-76.

Dunegan, K. J., Tierney, P., & Duchon, D. (1992). Perceptions of an innovative climate: Examining the role of divisional affiliation, work group interaction, and leader/subordinate exchange. ***IEEE Transactions of Engineering Management***, 39: 227-235.

Dvir, T., Eden, D., Avolio, B. J., & Shamir, B. (2002). Impact of transformational leadership on follower development and performance: A field experiment. ***Academy of Management Journal***, 45: 735-744.

Ehrhart, M. G. (2004). Leadership and procedural justice climate as antecedents of unit-level organizational citizenship behavior. ***Personnel Psychology***, 57: 61-94.

Elicker, J. D., Levy, P. E., & Hall, R. J. (2006). The role of leader-member exchange in the performance appraisal process. ***Journal of Management***, 32: 531-551.

Erdogan, B. (2002). Antecedents and consequences of justice perceptions in performance appraisals. ***Human Resource Management Review***, 12: 555-578.

Fairhurst, G. T. (1993). The leader-member exchange patterns of women leaders in industry: A discourse analysis. ***Communication Monographs***, 60: 321-351.

www.manaraa.com

Fairhurst, G. T., Rogers, L. E., & Sarr, R. A. (1987). Manager-subordinate control patterns and judgments about the relationship. In M. McLaughlin (Ed.), ***Communication Yearbook***, vol. 10: 395-415. Beverly Hills, CA: Sage.

Folger, R. (2001). Fairness as deonance. In S. Gilliland, D. Steiner, & D. Skarlicki (Eds.), ***Theoretical and Cultural Perspectives on Organizational Justice*** (pp. 3-33). Greenwich, CT: Information Age Publishing.

Folger, R., & Cropanzano, R. (2001). Fairness theory: Justice as accountability. In J. Greenberg & R. Cropanzano (Eds.), ***Advances in Organizational Justice*** (pp. 1-55). Stanford, CA: Stanford University Press.

Folger, R., McCline, R., & McDannell, J. (1994). ***What makes you think this policy is fair? Social accounts as weapons in the construction of "truth" and battle for commitment in organizations.*** Paper presented at the meeting of the Academy of Management, Dallas, TX.

Folger, R., Rosenfield, D., Grove, J., & Corkran, L. (1979). Effects of "voice" and peer opinions and responses to inequity. ***Journal of Personality and Social Psychology***, 37: 2253-2261.

Ford, L. R., & Seers, A. (2006). Relational leadership and team climates: Pitting differentiation versus agreement. ***Leadership Quarterly***, 17: 258-270.

Forehand, G. A., & Gilmer, B. v. H. (1964). Environmental variation in studies of organizational behavior. ***Psychological Bulletin***, 62: 361-382.

Forret, M. L., & Turban, D. (1994). ***The leader-member exchange model: A review and directions for future research.*** Paper presented at the Academy of Management annual meeting, Dallas, TX.

George, J. M. (1990). Personality, affect, and behavior in groups. ***Journal of Applied Psychology***, 75: 107-116.

www.manaraa.com

Gerstner, C., & Day, D. A. (1997). Meta-analytic review of leader-member exchange theory: Correlates and construct issues. ***Journal of Applied Psychology***, 82: 827-844.

Gilliland, S. W., Groth, M., Baker, R. C., Dew, A. F., Polly, L. M., & Langdon, J. C. (2001). Improving applicants' reactions to rejection letters: An application of fairness theory. ***Personnel Psychology***, 54: 669-703.

Gilson, L. L., & Shalley, C. E. (2004). A little creativity goes a long way: An examination of teams' engagement in creative processes. ***Journal of Management***, 30: 453-470.

Glick, W. H. (1985). Conceptualizing and measuring organizational and psychological climate: Pitfalls in multilevel research. ***Academy of Management Review***, 10: 601-616.

Golden, T. D. (2006). The role of relationships in understanding telecommuter satisfaction. ***Journal of Organizational Behavior***, 27: 319-340.

Graen, G. B., & Cashman, J. (1975). A role-making model of leadership in formal organizations: A development approach. In J. G. Hunt & L. L. Larson (Eds.), ***Leadership Frontiers:*** 143-165). Kent, OH: Kent State University.

Graen, G., Novak, M. A., & Sommerkamp, P. (1982). The effects of leader-member exchanges and job design on productivity and satisfaction: Testing a dual attachment model. ***Organizational Behavior and Human Performance***, 30: 109-131.

Graen, G. B., & Scandura, T. A. (1987). Toward a psychology of dyadic organizing. In L. L. Cummings, & B. M. Staw (Eds.), ***Research in Organizational Behavior***, vol. 9: 175-208. Greenwich, CT: JAI Press.

Graen, G. B., Scandura, T. A., & Graen, M. R. (1986). A field experiment test of the moderating effects of growth need strength on productivity. ***Journal of Applied Psychology***, 71: 484-491.

www.manaraa.com

Graen, G., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. ***Leadership Quarterly***, 6: 219-247.

Greenberg, J. (1982). Approaching equity and avoiding inequity in groups and organizations. In J. Greenberg, & R. L. Cohen (Eds.), ***Equity and Justice in Social Behavior***: 389-346. New York: Academic Press.

Greenberg, J. (1987). A taxonomy of organizational justice theories. ***Academy of Management Review***, 12: 9-22.

Greenberg, J. (1990a). Employee theft as a reaction to underpayment inequity: The hidden costs of pay cuts. ***Journal of Applied Psychology***, 75: 561-568.

Greenberg, J. (1990b). Organizational justice: Yesterday, today, tomorrow. ***Journal of Management***, 16: 399-432.

Greenberg, J. (1993a). The social side of fairness: Interpersonal and informational classes of organizational justice. In R. Cropanzano (Ed.), ***Justice in the Workplace: Approaching Fairness in Human Resource Management*** (pp. 79-103). Hillsdale, NJ: Erlbaum.

Greenberg, J. (1993b). Stealing in the name of justice. ***Organizational Behavior and Human Decision Processes***, 54: 81-103.

Hofmann, D. A., & Gavin, M. B. (1998). Centering decisions in hierarchical linear models: Theoretical and methodological implications for organizational science. ***Journal of Management***, 23: 623-641.

Hofmann, D. A., Griffin, M. A., & Gavin, M. B. (2000). The application of hierarchical linear modeling to organizational research. In Klein, K.J. & Kozlowski, S.W.J. (Eds.), ***Multilevel***

www.manaraa.com

Theory, Research, and Methods in Organizations: Foundations, Extensions, and New Directions (pp. 349-381). San Francisco: Jossey-Bass.

Hofmann, D. A., Morgeson, F.P., Gerras, S.J. (2003). Climate as a moderator of the relationship between leader-member exchange and content specific citizenship: Safety climate as an exemplar. ***Journal of Applied Psychology***, 88: 170-178.

Hollmann, R. W. (1976). Supportive organizational climate and managerial assessment of MBO effectiveness. ***Academy of Management Journal***, 19: 560-576.

House, R. J., & Aditya, R. N. (1997). The social science study of leadership: Quo Vadis? ***Journal of Management***, 23: 409-473.

Ilies, R., Nahrgang, J. D., & Morgeson, F. P. (2007). Leader-member exchange and citizenship behaviors: A meta-analysis. ***Journal of Applied Psychology***, 92: 269-277.

James, L. R. (1982). Aggregation bias in estimates of perceptual agreement. ***Journal of Applied Psychology***, 67: 219-229.

James, L. R., Demaree, R. G., & Wolf, G. (1993). r_{wg}: An assessment of within-group interrater agreement. ***Journal of Applied Psychology***, 78: 306-309.

Janssen, O., & Van Yperen, N. W. (2004). Employees' goal orientations, the quality of leader-member exchange, and the outcomes of job performance and job satisfaction. ***Academy of Management Journal***. 47: 368-384.

Jehn, K. (1995). A multimethod examination of the benefits and detriments of intragroup conflict. ***Administrative Science Quarterly***, 40: 256-282.

Jehn, K.A. (1997). A qualitative analysis of conflict types and dimensions in organizational groups. ***Administrative Science Quarterly***, 42, 530-557.

www.manaraa.com

Jehn, K. A., & Mannix, E. A. (2001). The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. ***Academy of Management Journal***, 44: 238-251.

Jehn, K. A., Northcraft, G. B., & Neale, M. A. (1999). Why differences make a difference: A field study of diversity, conflict, and performance in work groups**.** ***Administrative Science Quarterly***, 44, 741-763.

Jones, E. E., Kanouse, D. E., Kelley, H. H., Nisbett, R. E., Valins, S., & Weiner, B. (1971). ***Attribution: Perceiving the causes of behavior***. Morristown, NJ: General Learning Press.

Kabanoff, B. (1991). Equity, equality, power and conflict. ***Academy of Management Review***, 16: 416-441.

Konovsky, M. (2000). Understanding procedural justice and its impact on business organizations. ***Journal of Management***, 26: 489-511.

Kozlowski, S. W., & Doherty, M. L. (1989). Integration of climate and leadership: Examination of a neglected issue. ***Journal of Applied Psychology***, 74: 546-553.

Lee, H. (2000). ***An empirical study of organizational justice as a mediator of the relationships among leader-member exchange and job satisfiaction, organizational commitment, and turnover intentions in the lodging industry.*** Unpublished Ph.D. dissertation. Virginia Polytechnic Institute and State University, Blacksburg, Virginia.

Lee, J. (1997). Leader-member exchange, the "Pelz effect", and cooperative communication between group members. ***Management Communication Quarterly***, 11: 266-287.

Lee, J. (2001). Leader-member exchange, perceived organizational justice, and cooperative communication. ***Management Communication Quarterly***, 14: 574-589.

www.manaraa.com

Leventhal, G. S. (1976). The distribution of rewards and resources in groups and organizations. ***Advances in Experimental Social Psychology***, 9: 91-131.

Leventhal, G. S. (1980). What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. Gergen, M. Greenberg, & R. Willis (Eds.), ***Social Exchange: Advances in Theory and Research***: 27-55. New York: Plenum.

Liao, H., & Rupp, D. E. (2005). The impact of justice climate and justice orientation on work outcomes: A cross-level multifoci framework**.** ***Journal of Applied Psychology***, 90: 242-256.

Liden, R. C., Erdogan, B., Wayne, S. J., & Sparrowe, R. T. (2006). Leader-member exchange, differentiation, and task interdependence: Implications for individual and group performance. ***Journal of Organizational Behavior***, 27: 723-746.

Liden, R. C., & Graen, G. (1980). Generalizability of the vertical dyad linkage model of leadership. ***Academy of Management Journal***, 23: 451-465.

Liden, R. C., & Maslyn, J. M. (1998). Multidimensionality of leader-member exchange: An empirical assessment through scale development. ***Journal of Management***, 24: 43-72.

Liden, R. C., Sparrowe, R. T., & Wayne, S. J. (1997). Leader-member exchange theory: The past and potential for the future. ***Research in Personnel and Human Resources Management***, 15: 47-119.

Lind, E. A., & Tyler, T. R. (1988). ***The Social Psychology of Procedural Justice***. New York: Plenum.

Lindell, M. K., & Brandt, C. J. (2000). Climate quality and consensus as mediators of the relationship between organizational antecedents and outcomes. ***Journal of Applied Psychology***, 85: 331-348.

www.manaraa.com

Litwin, G. H., & R. A. Stringer, Jr. (1968). ***Motivation and Organizational Climate***. Boston: Harvard University Press.

Lord, R. G., Foti, R. J., & De Vader, C. L. (1984). A test of leadership categorization theory: Internal structure, information processing, and leadership perceptions. ***Organizational Behavior and Human Performance***, 34: 343-378.

Major, D. A., Kozlowski, S. W. J., Chao, G. T., & Gardner, P. D. (1995). A longitudinal investigation of newcomer expectations, early socialization outcomes, and the moderating effects of role development factors. ***Journal of Applied Psychology***, 80: 418-431.

Mansour-Cole, D. M., & Scott, S. G. (1998). Hearing it through the grapevine: The influence of source, leader-relations, and legitimacy on survivors' fairness perceptions. ***Personnel Psychology***, 51: 25-54.

Martin, J., & Harder, J. W. (1994). Bread and roses: Justice and the distribution of financial and socioemotional rewards in organizations. ***Social Justice Research***, 7: 241-264.

Masterson, S. S., Lewis, K., Goldman, B. M., & Taylor, M. S. (2000). Integrating justice and social exchange: The differing effects of fair procedures and treatment on work relationships. ***Academy of Management Journal***, 43: 738-748.

Mathieu, J. E., & Zajac, D. M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. ***Psychological Bulletin***, 108: 171-194.

Mayer, D. M. (2004). Are you in or out? ***A group-level examination of the effects of LMX on justice and customer satisfaction***. An unpublished Ph.D. dissertation. University of Maryland. College Park, Maryland.

McClane, W. E. (1991). Implications of member role differentiation: Analysis of a key concept in the LMX model of leadership. ***Group & Organization Studies***, 16: 102-113.

www.manaraa.com

McFarlin, D. B., & Sweeney, P. D. (1992). Distributive and procedural justice as predictors of satisfaction with personal and organizational outcomes. ***Academy of Management Journal***, 35: 626-637.

Miles, J. A., & Greenberg, J. (1993). Cross-national differences in preferences for distributive justice norms: The challenge of establishing fair resource allocations in the European Community. ***Research in Personnel and Human Resource Management***, 3: 133-156.

Miner, F. C., Jr. (1990). Jealousy on the job. ***Personnel Journal***, 69: 89-95.

Mossholder, K. W., Bennett, N., & Martin, C. L. (1998). A multilevel analysis of procedural justice context. ***Journal of Organizational Behavior***, 19: 131-141.

Mowday, R. T. (1991). Equity theory predictions of behavior in organizations. In R. M. Steers, & L. W. Porter (Eds.), ***Motivation and Work Behavior***, 5th ed: 111-131. New York: McGraw-Hill.

Mueller, B. H., & Lee, J. (2002). Leader-member exchange and organizational communication satisfaction in multiple contexts. ***The Journal of Business Communication***. 39: 220-244.

Murphy, S. E., & Ensher, E. A. (1999). The effects of leader and subordinate characteristics in the development of leader-member exchange quality. ***Journal of Applied Social Psychology***, 29: 1371-1394.

Naumann, S. E., & Bennett, N. (2000). A case for procedural justice climate: Development and test of a multilevel model. ***Academy of Management Journal***, 43: 881-889.

Niehoff, B. P., & Moorman, R. H. (1993). Justice as a mediator of the relationship between methods of monitoring and organizational citizenship behavior**.** ***Academy of Management Journal***, 36: 527-556.

www.manaraa.com

Parker, S. K. (1998). Enhancing role breadth self-efficacy: The roles of job enrichment and other organizational interventions. ***Journal of Applied Psychology***, 83: 835-852.

Payne, R. L., & Pugh, D. S. (1976). Organizational structure and organization climate. In M.D. Dunnette (Ed.), ***Handbook of Industrial-Organizational Psychology***. Chicago: Rand McNally.

Pelled, L. H., Eisenhardt, K. M., & Xin, K. R. (1999). Exploring the black box: An analysis of work group diversity, conflict, and performance. ***Administrative Science Quarterly***, 44: 1-28.

Phillips, J. M., Douthitt, E. A., & Hyland, M. M. (2001). The role of justice in team member satisfaction with the leader and attachment to the team. ***Journal of Applied Psychology***, 86: 316-325.

Pillai, R., Scandura, T. A., & Williams, E. A. (1999). Leadership and organizational justice: Similarities and differences across cultures. ***Journal of International Business Studies***. 30: 763-779.

Podsakoff, P. M., & MacKenzie, S. B. (1989). ***A second generation measure of organizational citizenship behavior***. Working paper, Indiana University, Bloomington.

Podsakoff, P. K., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors***. Leadership Quarterly***, 1: 107-142.

Powell, G. N., & Butterfield, D. A. (1978). The case for subsystem climates in organizations. ***Academy of Management Review***, 3: 151-157.

Roberson, Q. M. (2006). Justice in teams: The activation and role of sensemaking in the emergence of justice climates. ***Organizational Behavior and Human Decision Processes***, 100: 177-192.

www.manaraa.com

Roberson, Q. M., & Colquitt, J. A. (2005). Shared and configural justice: A social network model of justice in teams. ***Academy of Management Review***, 30: 595-607.

Roch, S. G., & Shanock, L. R. (2006). Organizational justice in an exchange framework: Clarifying organizational justice distinctions. ***Journal of Management***, 32: 299-322.

Salancik, G. R., & Pfeffer, J. (1978). A social information processing approaching to job attitudes and task design. ***Administrative Science Quarterly***, 23: 224-253.

Scandura, T. A. (1999). Rethinking leader-member exchange: An organizational justice perspective. ***Leadership Quarterly***, 10: 25-40.

Schneider, B., & Reichers, A. E. (1983). On the etiology of climates. ***Personnel Psychology***, 36: 19-39.

Schneider, B., Salvaggio, A. N., & Subirats, M. (2002). Climate strength: A new direction for climate research. ***Journal of Applied Psychology***, 87: 220-229.

Schneider, B., White, S. S., & Paul, M. C. (1998). Linking service climate and customer perceptions of service quality: Test of a causal model. ***Journal of Applied Psychology***, 83: 150-163.

Schriesheim, C. A., Castro, S. L., & Cogliser, C. C. (1999). Leader-member exchange (LMX) research: A comprehensive review of theory, measurement, and data-analytic practices. ***Leadership Quarterly***, 10: 63-113.

Scott, M. B. & Lyman, S. M. (1968). Accounts. ***American Sociological Review***, 33, 46-62.

Seers, A. (1989). Team-member exchange quality: A new construct for role-making research. ***Organizational Behavior and Human Decision Processes***, 43: 118-135.

www.manaraa.com

Seers, A., Petty, M. M., & Cashman, J. (1995). Team-member exchange under team and traditional management: A naturally occurring quasi-experiment. ***Group and Organization Management***, 20: 18-38.

Shaw, J. C., Wild, E., & Colquitt, J. A. (2003). To justify or excuse? A meta-analytic review of the effects of explanations. ***Journal of Applied Psychology***, 88, 444-458.

Sherony, K. M., & Green, S.G. (2002). Coworker exchange: Relationships between coworkers, leader-member exchange, and work attitudes. ***Journal of Applied Psychology***, 87: 542-548.

Sias, P. M. (1996). Constructing perceptions of differential treatment: An analysis of coworker discourse. ***Communication Monographs***, 63: 171-187.

Sias, P. M., & Jablin, F. M. (1995). Differential superior-subordinate relations, perceptions of fairness, and coworker communication. ***Human Communication Research***, 22: 5-38.

Simons, T., & Peterson, R. (2000). Task conflict and relationship conflict in top management teams: The pivotal role of intragroup trust. ***Journal of Applied Psychology***, 85: 102-111.

Simons, T., & Roberson, Q. (2003). Why managers should are about fairness: The effects of aggregate justice perceptions on organizational outcomes. ***Journal of Applied Psychology***, 88: 432-443.

Skarlicki, D. P., & Folger, R. (1997). Retaliation in the workplace: The roles of distributive, procedural, and interactional justice. ***Journal of Applied Psychology***, 82: 434-443.

Skarlicki, D. P., & Kulik, C. T. (2005). Third-party reactions to employee (mis)treatment: A justice perspective. ***Research in Organizational Behavior***, 26: 183-229.

Snyder, R. A., & Bruning, N. S. (1985). Quality of vertical dyadic linkages: Congruence of supervisor and subordinate competence and role stress as explanatory variables. ***Group and Organization Studies***, 10: 81-94.

www.manaraa.com

Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhart (Ed.), ***Sociological Methodology 1982***: 290-312. San Francisco: Jossey-Bass.

Sparrowe, R. T. (1994). Empowerment in the hospitality industry: An exploration of antecedents and outcomes. ***Hospitality Research Journal***, 17: 51-73.

Steiger, J. H., & Lind, J. C. (1980). Statistically based tests for the number of common factors. Paper presented at the annual meeting of the Psychometric Society, Iowa City.

Stogdill, R. M. (1948). Personal factors associated with leadership: A survey of the literature. ***Journal of Psychology***, 25: 35-71.

Sweeney, P. D., & McFarlin, D. B. (1993). Workers' evaluations of the "ends" and the "means": An examination of four models of distributive and procedural justice. ***Organizational Behavior and Human Decision Processes***, 55: 23-40.

Thibaut, J., & Walker, L. (1975). ***Procedural Justice: A Psychological Analysis***. Hillsdale, NJ: Erlbaum.

Tyler, T. R., & Lind, E. A. (1992). A relational model of authority in groups. In M.P. Zanna (Ed.), ***Advances in Experimental Social Psychology***, vol. 25: 115-191. San Diego: Academic Press.

Van der Vegt, G. S., Emans, B. J. M., & Van de Vliert, E. (2001). Patterns of interdependence in work teams: A two-level investigation of the relations with job and team satisfaction. ***Personnel Psychology***, 54: 51-69.

Vecchio, R. P. (1985). Predicting employee turnover from leader-member exchange: A failure to replicate. ***Academy of Management Journal***, 28: 478-485.

Vecchio, R. P., & Gobdel, B. C. (1984). The vertical dyadic linkage model of leadership: Problems and prospects. ***Organizational Behavior and Human Performance***, 34: 5-20.

www.manaraa.com

Vecchio, R. P., Griffeth, R. W., & Hom, P. W. (1986). The predictive utility of the vertical dyad linkage approach. ***Journal of Social Psychology***, 126: 617-625.

Wall, J. A., Jr., & Callister, R. R. (1995). Conflict and its management. ***Journal of Management,*** *21,* 515-558.

Waters, L. K., Roach, D., & Batlis, N. (1974). Organizational climate dimensions and job related attitudes. ***Personnel Psychology***, 27: 465-476.

Weick, K. (1979). ***The Social Psychology of Organizing***. Reading, MA: Addison-Wesley.

Weiner, B. (1974). ***Achievement Motivation and Attribution Theory***. Morristown, NJ: General Learning Press.

Williams, K. Y., & O'Reilly, C. A. (1998). Demography and diversity in organizations. ***Research in Organizational Behavior***, 20: 77-140.

Yukl, G. (1989). Managerial leadership: A review of theory and research. ***Journal of Management***, 15: 251-289.

Yukl, G. (2006). ***Leadership in Organizations***, 6th ed. Upper Saddle River, NJ: Prentice Hall.

Zellmer-Bruhn, M. & Gibson, C. (2006). Multinational organizational context: Implications for team learning and performance. ***Academy of Management Journal***, 49: 501-518.

www.manaraa.com

APPENDIX A

Measures Used for the Individual-Level Model

Measures filled by followers

Leader-member exchange

The following questions/statements are about your working relationship with your squad leader. Please choose the word that best describes your response to each question/statement.

1. How often do you know how satisfied your squad leader is with what you do?

Rarely Occasionally Sometimes Fairly often Very often

2. How well does your squad leader understand your job problems and needs?

Not at all A little Moderately Mostly Fully

3. How well does your squad leader know your potential?

Not at all A little Moderately Mostly Fully

4. Regardless of how much formal authority your squad leader has, what are the chances that your squad leader would use his/her power to help you solve problems in your work?

None Low Moderate High Very high

5. Regardless of how much formal authority your squad leader has, what are the chances that he/she would "bail you out", at his/her expense in a situation that does not involve the honor code?

None Low Moderate High Very high

6. I have enough confidence in my squad leader that I would defend and justify his/her decision if he/she were not present to do so.

Strongly disagree Disagree Neutral Agree Strongly agree

7. How would you characterize your working relationship with your squad leader?

Extremely ineffective	Worse then average	Average	Better than average	Extremely effective

www.manaraa.com

Distributive justice

For the following statements, think about what you receive in return from your squad leader compared to what you have put into your tasks. Please choose the number that best describes how much you agree with each statement.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. My squad leader has given me a fair work schedule.
2. My squad leader has given me a fair work load.
3. My squad leader has given me fair task responsibilities.

Procedural justice

For the following statements, think about the procedures your squad leader uses in the squad. Please choose the number that best describes how much you agree with each statement.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. My squad leader makes task decisions in an unbiased manner.
2. If I have any concerns about some task decisions, my squad leader makes sure that my concerns are heard.
3. To make task decisions, my squad leader collects accurate and complete information.
4. All task decisions made by my squad leader are applied consistently across all affected squad members.
5. I am allowed to appeal the task decisions made by my squad leader.

Interactional justice

For the following statements, think about how your squad leader treats you when he/she uses the procedures to make task decisions. Please choose the number that best describes how much you agree with each statement.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. My squad leader treats me with respect and dignity.
2. My squad leader is sensitive to my personal needs.
3. My squad leader deals with me in a truthful manner.
4. If I have any concerns about a task decision, my squad leader is willing to discuss the implications of the decision with me.
5. If necessary, my squad leader explains clearly the decisions made about my task.

www.manaraa.com

Role breadth self-efficacy

Now imagine that your squad leader asked you to take up a broader role and do some tasks that you have never done before. How confident would you feel doing the following? Please choose the number that best describes how confident you are with respect to each question.

1 = Not very confident; 3 = Neutral; 5 = Very confident

1. Completing new tasks that are more challenging than your current tasks?
2. Completing new tasks that would increase your job skills and knowledge?
3. Completing new tasks that would involve more responsibilities?

Commitment to the leader

Please think about how committed you are to your current squad leader. Please choose the number that best describes how much you agree with each statement.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. I would be very happy to spend the rest of my cadet training with my current squad leader.
2. I really feel as if my squad leader's problems are my own.
3. I feel emotionally attached to my squad leader.

Satisfaction with the leader

Please think about how satisfied you are with your current squad leader. Please choose the number that best describes how much you agree with each statement.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. I am satisfied with my current squad leader.
2. I am pleased with the way my squad leader and I work together.
3. I am satisfied with the leadership demonstrated by my squad leader.

www.manaraa.com

Measures filled by leaders

Job performance

The following statements describe the performance of each of your squad members. Now think about the individual performance of each of your members and choose the number that best describes your response to each of the following statements.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. This member always completes the duties assigned to him/her.
2. This member meets all formal performance requirements of the job.
3. This member fulfills all responsibilities required by his/her job.
4. This member never fails to perform essential duties.
5. This member never neglects aspects of the job he/she is obligated to perform.

Organizational citizenship behavior

The following statements describe the citizenship behaviors of each of your squad members. Now think about the citizenship behaviors of each of your members and choose the number that best describes your response to each of the following statements.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. When he/she can, this member helps other members who have been absent.
2. When he/she can, this member helps other members who have heavy work load.
3. When he/she can, this member willingly helps other members who have work related problems.
4. This member is always ready to lend a helping hand to other members.

www.manaraa.com

APPENDIX B

Measures Used for the Group-Level Model

Measures filled by followers

Distributive justice climate

For the following statements, think about what your squad puts into its jobs and what it receives in return as a whole from the squad leader. Please choose the number that best describes how much you agree with each statement.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. Our squad leader has given our squad a fair work schedule.
2. Our squad leader has given our squad a fair work load.
3. Our squad leader has given our squad fair responsibilities.

Procedural justice climate

For the following items, think about the procedures your squad leader uses in your squad as a whole. Please choose the number that best describes how much you agree with each statement.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. Our squad leader makes task decisions for our squad in an unbiased manner.
2. If we have any concerns about some task decisions, our squad leader makes sure that our squad's concerns are heard.
3. To make task decisions for our squad, our squad leader collects accurate and complete information.
4. All task decisions for our squad made by our squad leader are applied consistently across the whole squad.
5. Our squad is allowed to appeal the job decisions made by our leader.

www.manaraa.com

Interactional justice climate

For the following items, think about how your leader treats your squad as a whole when he/she uses the procedures to make task decisions. Please choose the number that best describes how much you agree with each statement.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. Our squad leader treats our squad with respect and dignity.
2. Our squad leader is sensitive to our squad's needs.
3. Our squad leader deals with our squad in a truthful manner.
4. If we have any concerns about a task decision, our squad leader is willing to discuss the implications of the decision with our whole squad.
5. If necessary, our squad leader explains clearly any decisions made for our squad.

Intra-group communication

The following questions are about your communication with your fellow squad members in the squad. Please indicate how often you communicate as stated in each question.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. I socialize a lot with my fellow squad members during the day (even outside of work).
2. I communicate a lot with my fellow squad members for purposes for performing my tasks.
3. Overall, I communicate a lot with my fellow squad members in work.

Relationship conflict

The following questions are about the conflict in your squad. Please choose the number that best describes the degree of conflict as stated in each question.

1 = Not at all; 3 = Moderate; 5 = Very much

1. How much friction is there among the members in your squad?
2. How much does personality conflict play a role among the members in your squad?
3. How much tension is there among the members in your squad?
4. How much emotional conflict is there among the members in your squad?

www.manaraa.com

Team-member exchange

The following statements are about how much you share information with your fellow squad members in the squad. Please choose the number that best describes the extent of your sharing as indicated in each question.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. I often make suggestions about better work methods to my fellow squad members.
2. I often tell my fellow squad members when they have done something that makes my tasks easier or harder.
3. I recognize my fellow squad members' potential.
4. I understand my fellow squad members' problems and needs.
5. My fellow squad members often make suggestions about better work methods to me.
6. My fellow squad members often tell me when I have done something that makes their tasks easier or harder.
7. My fellow squad members recognize my potential.
8. My fellow squad members understand my problems and needs.

Commitment to the group

Please think about how committed you are to the squad. Please circle the number that best describes how much you agree with each statement.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. I would be very happy to spend the rest of my cadet training working with my current fellow squad members.
2. I really feel as if my fellow squad members' problems are my own.
3. I feel emotionally attached to my fellow squad members.

Satisfaction with the group

Please think about how satisfied you are with the squad. Please choose the number that best describes how much you agree with each statement.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. I am satisfied with my fellow squad members.
2. I am pleased with the way my fellow squad members and I work together.
3. I am very satisfied with working in this squad.

www.manaraa.com

Measures filled by leaders

Group performance

The following statements describe the performance of your group as a whole. Please choose the number that best describes the degree to which you agree with each statement.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. My squad achieves its goals.
2. My squad accomplishes its objectives.
3. My squad meets the requirements set for it.

Group OCB

The following statements describe the citizenship behaviors of your group as a whole. Please choose the number that best describes the degree to which agree with each statement.

1 = Strongly disagree; 3 = Neutral; 5 = Strongly agree

1. When they can, my squad members help others in the squad who have heavy work loads.
2. When they can, my squad members willingly help others in the squad who have work-related problems.
3. My squad members are always ready to lend a helping hand to others in the squad.
4. When they can, my squad members help each other who have been absent.

www.manaraa.com

APPENDIX C

Invitation E-mail to Leaders

Dear Leader

You are invited to participate in this leadership survey. Its purpose is to understand the leader-follower relationships in the Corps of Cadets and to provide leaders with useful and practical feedback for leadership development. You will be asked to complete a questionnaire about your followers. This questionnaire will take about 20 minutes to complete.

Participation in this survey is voluntary. If you decide to take part in the survey, you are free to withdraw and refuse to answer any questions at any time without any penalty and with no impact to your status within the Corps of Cadets. All information you provide will be kept **strictly confidential**. No members in the Corps of Cadets will have access to completed questionnaires or electronic data files. No names will be disclosed and all information collected will be analyzed and reported as group data. To gather information about the leader-follower relationships from the followers' perspective, your group members will be completing another questionnaire. Again, please be assured that all information provided by you and your followers is kept strictly confidential. Also, all information will **not** be used for any personnel purposes.

Please **read carefully** the instructions at the beginning of each section and answer all questions as accurately as possible. To protect your identity, please **do not** share or forward this email to anyone. If you have any questions about this survey, please do not hesitate to contact me at <my phone number> or via email <my email address>. Your completion of the questionnaire by **<date and time>** is highly appreciated. Thank you very much for your time and participation.

Sincerely
Rebecca Lau
Pamplin College of Business, Virginia Tech

www.manaraa.com

APPENDIX D

Invitation E-mail to Followers

Dear Group Member

You are invited to participate in this leadership survey. Its purpose is to understand the leader-follower relationships in the Corps of Cadets and to provide leaders with useful and practical feedback for leadership development. You will be asked to complete a questionnaire about your leader. This questionnaire will take about 20 minutes to complete.

Participation in this survey is voluntary. If you decide to take part in the survey, you are free to withdraw and refuse to answer any questions at any time without any penalty and with no impact to your status within the Corps of Cadets. All information you provide will be kept **strictly confidential**. No members in the Corps of Cadets will have access to completed questionnaires or electronic data files. No names will be disclosed and all information collected will be analyzed and reported as group data. To gather information about the leader-follower relationships from the leaders' perspective, your leader will be completing another questionnaire. Again, please be assured that all information provided by you and your leader is kept strictly confidential. Also, all information will **not** be used for any personnel purposes.

Please **read carefully** the instructions at the beginning of each section and answer all questions as accurately as possible. To protect your identity, please **do not** share or forward this email to anyone. If you have any questions about this survey, please do not hesitate to contact me at <my phone number> or via email <my email address>. Your completion of the question by **<date and time>** is highly appreciated. Thank you very much for your time and participation.

Sincerely
Rebecca Lau
Pamplin College of Business, Virginia Tech

www.manaraa.com