MEMBERS, LEADERS AND THE TEAM:
EXTENDING LMX TO CO-WORKER RELATIONSHIPS

Leader-Member Exchange (LMX) theory and Team-Member Exchange (TMX) theory provide the foundation for development of a model of the interpersonal relationships among work groups. The model extends the findings of a quarter-century of LMX research to all dyadic relationships within a work group. This cluster of dyadic member-member relationships ($M_iM_jX$), as well as the Leader-Member relationship (LMX) and Team-Member relationship (TMX), were analyzed for their association with individual job outcomes. Over four hundred (429) individual workers’ work relationships were tested in a field study of three organizations in two North American countries.

The foundation of dyadic organizing can be traced to Chester Barnard (Graen & Scandura, 1987) and his sense that cooperation between individuals in an organization was essentially acts of negotiation in which individuals sought balance between contributions and inducements. Simon (1957) expanded on this process of balance between contributions and inducements by stating that the negotiations take place largely at the dyadic level. Social exchange theory (Blau, 1964; Homans, 1958; Hollander & Julian, 1969) also proposed that each party to an exchange offers contributions deemed valuable to the other with expectation of mutually derived benefit. Individual interaction patterns between two people can be seen as the basis for more complex patterns of social behaviour in groups (Jacobs, 1970). These patterns of interlocked behaviour (Weick, 1969) represent the process through which individuals come to know their roles in the organization (Graen, 1976).

Leadership in the Leader-Member Exchange (LMX) model (Graen & Uhl-Bien, 1995) is developed from this role-making process, in which leaders and members exchange behaviours and develop mutual expectations about future behaviours (Gabarro, 1987). In role-making, leaders may develop relationships marked by high levels of support and trust with some of their subordinates and relationships based strictly on the formal employment contract with others (Graen & Cashman, 1975). A leader thus builds a working team or unit composed of some members with whom he/she shares a high quality relationship (“in-group”) and others with whom he/she shares a low quality relationship (“out-group”) based on these differential leader-member exchanges.

A large number of empirical studies have confirmed the relationship between the quality of the Leader-Member Exchange (LMX) relationship and individual member outcomes. A recent meta-analysis (Gerstner & Day, 1995) of 86 studies reported that LMX was correlated at significant levels with member-reported outcomes of organizational commitment (.35), overall
job satisfaction (.46), satisfaction with supervisor (.64), role clarity (.34), and role conflict (-.29). Organizational measures of performance ratings (.29), and turnover (-.12) were also significantly correlated with the quality of the leader-member relationship (LMX).

The recently developed Team-Making model (Uhl-Bien & Graen, unpublished) extends the role making (Graen & Scandura, 1987) and the Leadership-Making (Graen & Uhl-Bien, 1995) processes to all relationships in a work unit. The focus here is the dyadic relationship each member of the unit forms with each other member, including the leader. The relationship building process does not assume that all relationships will reach the mature stage; rather, some will remain at the “stranger” or “acquaintance” stage. This is consistent with empirical findings regarding leader-member relationships (Graen & Cashman, 1975; Vecchio & Gobbin, 1984). Other research also supports a four-stage development process and the stabilization of relationships at varying degrees of mutuality, efficacy, and intensity (Gabarro, 1987). The team model (Katzenbach & Smith, 1993) also acknowledges that the leader does not treat all members equally, but recognizes different contributions to the team at different times.

Current business practices call for investigation of this entire complement of relationships. Seers and his colleagues (Seers, 1989; Seers, Petty, & Cashman, 1995), have examined the exchange relationship between an individual member and the work group as a whole. Conceptualized as comparable to leader-member exchange relationship (LMX), the team-member exchange relationship (TMX) is founded on the reciprocation of influence and behaviours between the member and the entire team as a group. High quality team-member relationships (TMX) significantly influenced job satisfaction beyond that demonstrated by LMX (Seers, 1989). Members of self-managed teams reported higher levels of TMX than those of traditional groups and the higher the quality of TMX in those self-managed groups, the higher was the group’s effectiveness (Seers et al., 1995).

TMX reflects what Ekeh (1974) termed generalized exchange. In generalized exchange, patterns of reciprocation develop across a group of individuals. Ekeh (1974) cited the example of the neighbor (Person A) who calls the fire department upon noticing a fire in Person B's house, not simply in the expectation that Person B would reciprocate, but instead with the expectation that any neighbor (C through Z) would do the same. Subsequent research investigating generalized exchange, e.g., Lazega and Pattison (1999), Uehara (1990), and Yamagishi, Jin, and Kiyonari (1999) shows that generalized exchange promotes a sense of group identity, cohesiveness, and social structure.

The third type of exchange relationship is between each of the member-member dyads which Sherony and Green (2000) termed coworker member exchange (CMX) and we term member-member exchange (MMX). The MMX relationships as an aggregate provide an overall assessment of the character of the team relationship patterns. These patterns are expected to define the overall character of the team by indicated the quality of the exchange relationship between each set of dyads in the team. It is expected that the MMX relationships have a unique and significant contribution to work group outcomes beyond the dyadic LMX relationships and the overall TMX relationships.

The model and study detailed in this paper address the need for theoretical development and empirical testing of the association between the full complement of an individual’s working relationships and that individual’s job outcomes. The proposed model of an individual’s network of working relationships and it antecedents and consequences is found in Figure 1. For the sake of simplicity, a four-member group is illustrated. As the size of a work group increases, the number of dyadic relationships becomes larger and the network increasingly complex. The quality of each of the interpersonal relationships is a latent variable, as illustrated by the oval in the model.
The model defines the relationships that an individual member (Member _x_ in the model) forms within a work unit as a cluster of differentiated dyadic relationships, with both peers and leader. The dyad is the basic unit of relational analysis, which has been widely applied in the social sciences (Anderson, 1994). Its application in work unit research has been the leader-member dyad (Duchon, Green, & Taber, 1987; Tsui & O’Reilly, 1989), and the proposed model acknowledges the importance and the differentiation of the leader-member relationship and then extends it to member-member relationships. Thus, an individual will form a relationship with the leader, marked by particular characteristics and quality level; this relationship is identified as the Subordinate Leader-Member Exchange Relationship or SLMX. The leader’s perspective of that dyadic relationship is the Leader-Member Exchange Relationship or LMX.

The individual will also form a relationship with each of a number of co-workers and a quality level characterizes each of these member-member relationships (M_xM_y and M_xM_i). This member-member exchange is consistent with the conceptualization offered by Sherony and Green (2000). The combination of the member-member relationships among peers is the Cluster of Member-Member Relationships (M_xM_yXCO) indicated in the model. The quality level, or value, of this cluster is the averaged quality of all the member-member relationships an individual has within the established work group.

The third type of work relationship illustrated in the model is that of the individual with the team as an entire group, based on Team-Member Exchange (TMX) (Seers, 1989; Seers, et al., 1995). Studies have suggested that an individual member may evaluate the relationship he/she has with individual group members differently than he/she would evaluate the relationship with the group as a whole (Cartwright, 1968). Thus, it is expected that perception of dyadic relationships and the average of those dyadic relationships (M_xM_yXCO) will be distinct from the relationship an individual perceives with the group as a whole (TMX).

The proposed model thus addresses three discrete types of intra-group relationships: leader-member (LMX and SLMX), member-member (MMX), and team-member (TMX). Each of these relationships is characterized by a degree of quality, based on the levels of mutual support, trust, and loyalty found in the relationship. The model also includes the averaged quality value of an individual’s cluster of member-member relationships (M_xM_yXCO).

The effects of the entire network of working relationships on behavioural outcomes can be derived from LMX research. That research, spanning several decades, documents the mediating role that LMX has on the relationship between leader behaviours and outcomes of the follower and work unit (Gerstner & Day, 1995). High quality LMX relationships have consistently led to the most positive outcomes for the member and the work group as a whole (e.g., Crouch & Yetton, 1988; Kozlowski & Doherty, 1989). Members who have high quality relationships with the leader have been found to enjoy greater job satisfaction (Gerstner & Day, 1995; Graen, Novak, & Sommerkamp, 1982; McClane, 1991; Turban, Jones, & Rozelle, 1990) and higher levels of organizational commitment (Gerstner & Day, 1995; Kinicki & Vecchio, 1994; Seers & Graen, 1984). Members who reported higher quality relationships with the group as a whole (TMX) were also found to have greater job satisfaction (Seers, 1989). Katzenbach & Smith (1993) have noted that high performance teams are characterized by members’ deep commitment to one another, implying that working relationships among members will influence outcomes as well. Extending these findings to the relationships identified in the model, Figure 1 suggests that the quality level of the cluster of member-member relationships (M_xM_yXCO) and the quality level of the team-member relationship (TMX), as well as LMX, will be positively related to individual outcomes and perceptions of the group and its work.

Job satisfaction, an emotional response to different facets of a job, is one of the most-often-studied outcome variables in organizational behaviour, and has been shown to be related to
a variety of organizational factors, such as organizational commitment and turnover. Furthermore, LMX has been shown to consistently influence levels of job satisfaction. The interpersonal work relationships are expected to be positively related to job satisfaction.

**H1:** Relationship quality measures (LMX, MxMcXCO, and TMX) will each have a positive main effect on an individual’s job satisfaction.

The second outcome variable is that of affective organizational commitment, defined as an emotional attachment to the organization such that a committed individual identifies with the organization, is involved in it, and enjoys membership in the organization. Organizational commitment is strongly and positively related to job satisfaction (Tett & Meyer, 1993) and has been found to positively influence one’s performance (Matheiu & Zajac, 1990). This emotional facet of organizational commitment has shown to be more closely related to job satisfaction and turnover intention than has the continuance component, defined as a motivation to stay with an organization because of the high cost of leaving it.

**H2:** Relationship quality measures (LMX, MxMcXCO, and TMX) will each have a positive main effect on an individual’s affective organizational commitment.

Group cohesiveness may be defined as an interpersonal attraction among members and between a member and the group as a whole, a closeness or identification with the group, and the extent to which members feel they want to remain in a group. It is thought to contribute to a group’s strength and viability as well as increasing the importance of group membership for an individual (Cartwright, 1968). It is expected that as the quality of an individual’s relationships increase, so too will his/her perception of group cohesiveness.

**H3:** Relationship quality measures (LMX, MxMcXCO, and TMX) will have a positive main effect on an individual’s perception of group cohesiveness.

Intra-group processes, such as open communication of ideas and feelings, supportiveness, and low interpersonal conflict, are likely to be present in high quality relationships. These processes have been found to be a significant predictor of member-rated effectiveness and satisfaction (Gladstein, 1984). Therefore, the higher quality relationship will produce positive perceptions of group effectiveness. Effectiveness has diverse definitions, but the literature (Gladstein, 1984; Sundstrom et al., 1990) confirms the inclusion of the two factors of productivity and satisfaction with group output. It is expected that individuals who believe that their group is effective will rate the performance of the group as superior and will report satisfaction with the productivity of the group.

**H4:** Relationship quality measures (LMX, MxMcXCO, and TMX) will each have a positive main effect on an individual’s perception of group effectiveness.

**H5:** Relationship quality measures (LMX, MxMcXCO, and TMX) will each have a positive main effect on an individual’s perception of group performance.
Method

Sample and Procedure

Data were collected by written survey from employees in two municipal governments and one private multi-specialty medical clinic. One municipal work force was located in a medium-sized Canadian city and the other two employee groups were in a small northern U.S. city. The sample was thus comprised of professional and non-professional employees in both the public and private sectors, with a diversity of occupations, structure, and individuals. The overall response rate was 72%; however, some of the departments in two of the organizations were not organized in appropriate structures to assess dyadic relationship data. When those surveys were removed from the database, 429 surveys remained, representing a 58% response rate.

Of the 429 respondents retained in the database, 43.8% were male and 55.5% female. They had a relatively high level of education, with over 30% having a bachelor’s degree or more and another 32.4% reporting a professional designation or 1-2 years of college. The sample tended to be in the 36-55 year age groups (63.4%), with much smaller numbers in the younger and older age categories. The employees in this sample had relatively short tenure in their present jobs, with 55.5% reporting less than 5 years in the current position, but 46.2% had worked for their organization in some capacity for more than 10 years. The groups in which these employees work were of four different sizes: 19.3% in very small groups (1-3 people); 47.6% in medium size (4-6); 19.8% in large groups (7-10); and 13.3% in very large (over 10) groups.

Measures

The LMX 7 scale (Graen & Scandura, 1987; Graen & Uhl-Bien, 1995) was designed to reflect the multi-dimensionality of the leader-member relationship. Of the many scales used to measure the LMX construct, the LMX 7 scale has been used most widely (Gerstner & Day, 1995). It has proven to have high reliability (e.g., $\alpha=.87$ in Phillips & Bedeian, 1994) and consistent criterion-related validity (Liden, Wayne, & Stilwell, 1993). Six of the items of the LMX 7 scale were used to measure both sides of the dyadic leader-member relationships. One item was omitted due to repetitive language. The coefficient alpha was .92 for LMX.

The relationship between the member and the group was measured by the 10-item Team-Member Exchange scale developed by Seers (1989). Half of the items deal with the contributions of the individual to the group and the other half with what the person receives from the group. Coefficient alpha of the 10-item TMX scale was $\alpha=.82$.

The quality of the cluster of member-member relationships, $M_iM_jXCO$, is an average of all dyadic relationships (MMX) that an individual has with his/her peers in the work group. The MMX scale was a slightly modified version of the LMX7 which used other members as the focal comparison person to rate in the exchange relationship. The items were altered only to replace “leader” with “this member”. The coefficient alpha MMX was .91. The overall $M_iM_jXCO$ average is calculated by dividing the summed values of all member-member relationships by the number of peer relationships an individual has.

General job satisfaction was measured with the three general job satisfaction measures from the revised Job Descriptive Survey (Hackman & Oldham, 1980). This measure has been widely used in the organizational behaviour literature. The “affective responses” facet, of which general job satisfaction is one factor, has shown Spearman-Brown internal consistency estimates from .56 to .84 (Bearden, Netemeyer, & Mobley, 1993). Meta-analysis of 14 samples reported reliability scores in a range of .65 to .95 for the overall job satisfaction items, with the median
of .82 (Fried & Ferris, 1987). A sample item is, “Generally speaking, I am very satisfied with this job.” The response scale was a 5-point Likert-type scale of Strongly Agree (5) to Strongly Disagree (1). The scale had a coefficient of reliability of .58 in this study.

Affective organizational commitment was assessed with items developed by Allen and Meyer (1990). These authors conceived of organizational commitment as a multi-dimensional construct of affective, normative, and continuance commitment. While evidence confirms both conceptual and empirical distinction among the three components (Hackett, Bycio, & Hausdorf, 1994), the affective component has shown the lowest error variance of the three (Allen & Meyer, 1990; Hackett, et al, 1994). Affective commitment bears the closest resemblance to the often-used Organizational Commitment Questionnaire (Mowday, Steers, & Porter, 1979), but without the behavioural aspects such as intention to leave the organization. This affective component of organizational commitment was found to be associated with increased job satisfaction and decreased turnover intentions (Jenkins & Thomlinson, 1992) and better performance record (Hackett et al., 1994). Based on this research, organizational commitment was measured using the 8 affective commitment items from the Allen and Meyer scale. An example of those items is “This organization has a great deal of personal meaning for me”. The response scale was a 5-point Likert-type of Strongly Agree (5) to Strongly Disagree (1). Coefficient alpha for this scale was .80.

An individual’s perceptions of his/her group function were measured with three constructs: cohesiveness, effectiveness, and performance. A group cohesiveness index of five items was based on items developed by Seashore (1954). An example of the four items was “If you had the chance to do the same kind of work for the same pay in another work group within the organization, would you do so?” and the response categories ranged from Definitely Would (5) to Definitely Would Not (1). This particular item was reverse-scored. This scale had a Cronbach’s alpha reliability score of $\alpha = .85$ in the current study.

Three items formed a construct of perceived group effectiveness. The two items developed by Bushe and Coetzer (1995) that measure the perception of the group’s work are “I am satisfied with the work of this team” and “We do an excellent job for this department and the organization”. The third item was developed for this study and complements the other two items: “Our group’s efforts have positively affected the organization. This scale had an internal reliability score of $\alpha = .65$.

In a second format based on judgments of performance (Campion, Medsker, & Higgs, 1993), respondents were asked to rate “quality of work”, “customer service”, and “productivity” on a scale of Exceptional (5) to Very Poor (1). Internal consistency for the three perceived group performance items was $\alpha = .78$.

All of the scales were measured on five point Likert scales.

Results

Means, standard deviations and zero-order correlations for all variables are shown in Table 3, and reliability estimates (Cronbach’s alpha) of each variable are found on the diagonal. Means are based on five-point scales. The data in Table 1, below, is based on bi-variate correlation analysis, using pairwise deletion, of the individual-level data (n=429). It reflects each individual’s perception of his/her relationships and the workplace, as well as job attitudes. Performance variables (group cohesiveness, perceived group effectiveness, and perceived group performance) are highly correlated with one another, as are job satisfaction and organizational commitment. Of more direct relevance to the present study is the significant correlation between
relationship variables and those of individual job outcomes. As illustrated in previous studies, Leader-Member Exchange (LMX) and Team Member Exchange (TMX), were significantly correlated (p<.001) to all other variables except leader-assessed performance. Member-Member Exchange Composite (M_x,M_y,XCO), the average quality of dyadic relationships that an individual has with peers in the work group, also showed significant correlation (p<.001) with other relationship variables and with all job outcomes, including leader-assessed performance.

Partial correlations among the same variables are found in Table 1, above the diagonal. These are correlations among relationship and criterion variables, controlled for the influence of age, gender, education, organization, group size, tenure in the organization and tenure in the job. Some differences are evident between the partial correlations and the zero-order correlations, but those differences are confined to relationships between Leader-Assessed Performance and other variables.

Confirmatory factor analyses and structural equation modeling was conducted, using AMOS 3.61 to test the theoretical structure of the three exchange relationship variables, and the relationships between the variables as specified in Figure 1. The confirmatory factor analyses supported the definitional structure of the exchange variables. These analyses are available from the authors.

The overall model, as outlined in Figure 1 was then tested with structural equation modeling. The structural model tested the significance of all of the paths between the exchange variables and the outcome variables. The overall fit statistics for the model were Chi^2(6) = 11.54, p < .073). This test indicates a moderate fit to the model. The comparative fit index (CFI) related the fit of the tested model against a baseline model. Values range from 0 to 1, with values close to 1 indicating a very good fit. The RFI, or Bollen’s relative fit index, also measures the tested model against a baseline model and values close to 1 indicate a very good fit. In contrast to the Chi^2 results reported above, both the CFI (.999) and the RFI (.989) indicate a close fit with the baseline or hypothetical model. Overall, while somewhat contradictory, the above statistics indicate an adequate fit of the hypothetical model to the data.

The results of these analyses may be seen in Figure 2. Only the significant paths have been shown in the Figure. As can be seen in the figure, the LMX relationships were related to the job satisfaction and organizational commitment variables, the MMXCO variable was related to the group variables, e.g., perceived group effectiveness, group cohesiveness and perceived group performance; and the TMX variable was related to all five outcome variables. This pattern of relationships confirms the relationship of LMX to individual outcomes, e.g., job satisfaction and organizational commitment. The MMX on the other hand, was more related to team variables, e.g., perceptions of group effectiveness, group cohesiveness and group performance. The overall relationship between the team and the leader was related to all of the individual and group level variables. These results provide partial support for all of the hypotheses but suggest more complex and differentiated relationships that were originally hypothesized.

Discussion

These results reveal the importance not only of the leader-member relationship, but also of the peer relationships in developing attitudes of job satisfaction, affective organizational commitment, perceived group performance and effectiveness, and group cohesiveness. Although the structural equation modeling results reveal that the model, as proposed and tested fit reasonably well with the data, the fit was far from perfect. This suggests that there are factors other than these relationships that play a role in forming an individual’s job attitudes. Given the number of elements that an employee encounters during his/her tenure in an organization, it is not
surprising that factors beyond interpersonal work relationships would be related to one’s job satisfaction and other attitudes. The organizational structure and culture, its leadership, characteristics of the task, as well as personal characteristics such as needs, are just a few of the additional factors that may influence an individual’s job attitudes. However, it has been demonstrated here that the relationships are a significant influence on job outcomes. Given that influence, it is crucial for an organization to nurture the existing relationships and to engage in team-building or organizational development efforts that can build others.

When data is collected by survey questionnaires from individuals only, the issue of common method variance is a concern (Avolio, Yammarino, & Bass, 1991). To address that issue, the dyadic reporting of the relationships helps to confirm the value or quality of each relationship. It should be noted that, while the relationships are clearly at a dyadic level, the job outcomes were measured and analyzed at an individual level only. The differentiated relationships lend evidence that common method variance was not a strong issue within the current study. It would benefit future studies if group level and data from independent sources was gathered to further study the network of exchange relationships.

This study moves the research of interpersonal work relationships within formal work groups forward at a time when organizations are increasingly assigning work, and resultant accountability and rewards, to groups rather than individuals (Katzenbach & Smith, 1993). Prior research has repeatedly confirmed the influence of the leader-member relationship upon individual job outcomes (Gerstner & Day, 1995; Graen, Novak, & Sommerkamp, 1982; Kinicki & Vecchio, 1994; McClane, 1991; Seers & Graen, 1984; Turban, Jones, & Rozelle, 1990). There has also been some early research into the relationship of an individual with his/her work group (Seers, Petty, & Cashman, 1995) and with its members (Sherony & Green, 2000). The current study is the first to test the influence of an individual’s entire network of dyadic relationships on his/her attitudes toward, and perceptions of the work group and organization.

Using an adaptation of the LMX VII scale for co-workers, each individual assessed the nature of his/her relationship with each of his/her peers. This form of the scale used for member-member relationships (MMX) also had high internal consistency, confirmation that the scale can be adapted to fit several types of relationship.

The Team-Member Exchange scale (TMX) proved to be valid in its relationship to all outcome variables, and the relationship it represents accounted for variance separate from that accounted for by the LMX construct, as reported earlier (Seers et al., 1995). There also appears to be discernible differences between the relationships measured by TMX and the network measured by a series of Member-Member Exchange relationships (MxiMyjXCO). In predicting the individual job outcomes, the TMX was the stronger of the two scales with MxiMyjXCO having non-significant main effects on job outcomes of job satisfaction and affective organizational commitment.

It was expected that the relationships one develops in a work group would influence the attitudes toward, and perceptions of, the workplace and one’s work. The role of the leader-member relationship is well documented over many years of research and the positive effect it has on job satisfaction and organizational commitment were confirmed here. It did not affect perceptions of the work group and its effectiveness and performance, however. Clearly, in the organizations sampled, the role of the leader remains central to an employee’s feelings of job satisfaction and the desire to remain in the organization, but the leader’s influence does not extend to opinions about the work group.
The relationship between a member of a work group and the group as a whole was first explored by Seers (1989) and Seers et al. (1995). This study confirms the distinctive role the Team-Member relationship has in determining positive personal job outcomes. It was the strongest and most consistent of the indicator variables and had significant correlation with all five of the measured job outcomes. It was hypothesized that the cluster of dyadic relationships that a worker has with each of his/her co-workers would be a distinctive construct from that of TMX. The two variables were operationalized in unique ways, and the two constructs differed in their effect on individual perceptions of personal and group outcomes. The Team-Member Exchange (TMX) measure was a significant factor in all of the outcomes, while the cluster of Member-Member Relationships (M_{xi}M_{yi},XCO) was related only to the group level outcomes of effectiveness, performance, and cohesiveness. The Team-Member Exchange requests a person to think about their “gestalt” relationship with the group while the M_{xi}M_{yi},XCO incorporates the whole differentiated range of relationships into the scale. The mean of these relationships may not be reflective of the individuals overall view of relationships – this observation receives some support by the relatively low correlation between the MMXCO and TMX (.32). Furthermore, the MMX weights all “others” equally, while TMX allows the respondent to over-weight salient dyads in the mental aggregation to the team level.

LMX theory was original in its early contributions due to the realization that leaders do establish differentiated relationships with subordinates. As organizations have changed to team based approaches, however, the emphasis has shifted once again to the relationship between leaders and the group as a whole, and relationships between members themselves as well as the dyadic relationships. The results from this study reinforce the need to continue to expand the analysis of team networks and the role the leader and other antecedents play in the development of those networks.

References


Table 1
Descriptive Statistics, Zero-Order Correlations, and Partial Correlations\textsuperscript{a, b, c}

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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<td>1. Cohesiveness</td>
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<td>.747</td>
<td>.85</td>
<td>.549**</td>
<td>.409**</td>
<td>.345**</td>
<td>.250**</td>
<td>.267*</td>
<td>.303**</td>
<td>.512**</td>
<td>.346**</td>
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<td>2. Group Effectiveness</td>
<td>3.866</td>
<td>.665</td>
<td>.557**</td>
<td>.65</td>
<td>.542**</td>
<td>.446**</td>
<td>.278*</td>
<td>.358**</td>
<td>.218**</td>
<td>.399**</td>
<td>.329**</td>
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<td>3. Group Performance</td>
<td>4.149</td>
<td>.574</td>
<td>.389**</td>
<td>.78</td>
<td>.314**</td>
<td>.235**</td>
<td>1.00**</td>
<td>.187**</td>
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<td>4. Job Satisfaction</td>
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<td>.456**</td>
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<td>.585**</td>
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<td>.668</td>
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<td>.285**</td>
<td>.179**</td>
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<td>.257**</td>
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<td>8. Team Member Exchange (TMX)</td>
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<td>.91</td>
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\textsuperscript{a} Partial correlations, controlling for age, gender, education, group size, organization, tenure with organization and tenure in the job, shown above the diagonal
\textsuperscript{b} Individual-level outcomes only
\textsuperscript{c} Reliability estimates ($\alpha$) of scales on the diagonal
* $p < .05$; ** $p < .01$. $n = 429$
Figure 1
An Individual’s Work Group Relationships and Predicted Outcomes

- Member_x
- Member_y
- Leader

Cluster of Member-Member Relationships (\(M_i,M_j\)XCO)

Leader-Member Relationship (LMX)

Member_x Relationship with Group as a Whole (TMX)

Job Satisfaction
Affective
Organizational Commitment

Perceived Group Effectiveness
Perceived Group
Performance

Cohesiveness
Figure 2
Significant Relationships Between the Exchange Variables and the Individual and Group Outcome Variables