Differences Between Follower and Dyad Measures of LMX as Mediators of Emotional Intelligence and Employee Performance, Well-Being and Turnover Intention

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EMOTIONAL INTELLIGENCE AND LEADER MEMBER EXCHANGE

Differences Between Follower and Dyad Measures of LMX as Mediators of Emotional Intelligence and Employee Performance, Well-Being and Turnover Intention

Abstract

Both leader and follower emotional intelligence (EI) have been posited in the literature to influence leader member exchange. Yet hardly any empirical data has been published supporting a relationship between leader emotional intelligence and LMX. We collected data from 203 independent leader-follower dyads working in the Insurance industry in Malaysia. We examined relationships between leader and follower trait-EI and follower outcomes mediated through leader-member exchange (LMX). We added a further dimension to our study by comparing results using first follower only, and then a dyadic measure of LMX. We found that leader EI predicted a dyadic measure of LMX, whilst only follower EI predicted a follower measure of LMX. As hypothesized, leader EI had both direct and indirect effects on follower job performance. By contrast, follower EI demonstrated both direct and indirect effects on follower well-being. We found a dyadic measure of LMX to be a stronger predictor of follower job performance, well-being and turnover intention than a follower only measure. Our results suggest that significant relationships between leader and follower trait EI and LMX, depend on whether follower or dyadic measures of LMX are used.

Keywords: Leader Emotional Intelligence, Leader Member Exchange,
Introduction

Perspectives on the nature of leadership have shifted so that many now suggest it is better seen as a relational set of dynamics between leaders and followers (Brower, Schoorman & Tan 2000; Fairhurst & Uhl-Bien 2012; Uhl-Bien 2006). Alongside this literature, a significant body of research has also identified leadership as an intrinsically emotional process (Bono & Illies, 2006; George 2000; Dasborough & Ashkanasy 2002). Connecting on an emotional level with followers, is thought to be central to developing higher levels of trust and commitment (Sosik & Mergerian, 1999). Leban & Zulauf (2004) suggest that managers who understand the moods and emotions of others can help them to make better decisions about how strategies should be presented. Consequently they should gain greater goal acceptance from followers. Leadership practices that foster positive affectivity have also been found to be associated with increased team (Humphrey 2002; Pirola-Merlo, Hartel, Mann, & Hirst, 2002; Sy, Cote & Saavedra 2005) and organizational performance (Ozcelik, Langton & Aldrich 2008).

Such findings have led many to argue that emotional intelligence (EI) represents a unique set of capabilities that can result in better leadership outcomes (Ashkanasy & Daus 2005). Much of the previous empirical research examining emotional intelligence and leadership has focused on how EI contributes to, or may underpin transformational leader behaviors (e.g. Barling, Slater & Kelloway 2000; Brown & Moshavi 2005; Clarke 2010; Palmer, Walls, Burgess, & Stough, 2001). Far less research has looked at the role emotional intelligence plays in the leader-follower relationship as captured through leader-member exchange. We know relatively little about individual differences factors antecedent to LMX (Liden, Sparrowe & Wayne, 1997; Martin et al 2005). This is the first study to examine the contributions of both leader and follower emotional intelligence together to leader member exchange. Despite a number of authors suggesting that both are important in shaping
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leadership outcomes (Riggio & Pirozzolo 2002; Walter, Cole & Humphrey 2011), research has yet to examine their combined effects on LMX.

This study contributes to the literature in the following ways. First, we examine the effects of leader emotional intelligence in predicting follower performance, turnover intention and well-being as mediated through leader-member exchange. Despite a number of authors suggesting a positive role for leader EI in contributing to LMX (Newcombe & Ashkanasy 2002; Smith 2006), only one study to date has shown this to be the case, and this was based on a sample of Chinese managers and the findings published in Chinese (Yu & Yuan 2008). This is the first study reported in an English language journal. Next, both theoretically and empirically LMX has been shown to be a dyadic construct (Markham, Yammarino, Murry & Palanski 2010). It follows therefore, that any insights regarding the significance that leader emotional intelligence might have for LMX, should be based on a dyadic measure of LMX rather than a follower measure. We make a methodological contribution to the literature through comparing the results of our analyses using two differing approaches to measuring LMX. Follower and dyadic LMX. Next, in contrast to previous research that has examined EI-LMX relationships, this is the first study to use a trait measure of emotional intelligence. Given contrasting measures of EI capture differing domains associated with emotional functioning and reasoning (Zeidner, Matthews, & Roberts, 2012), our study provides alternative insights into the role this aspect of leader personality has on LMX. Finally, despite consistent arguments in the literature emphasizing the importance of considering the appropriate level for examining leadership effects (Gooty, Serban, Thomas, & Yammarino 2012) most research examining LMX-outcome relationships has not tested relationships at the dyadic level of analysis (Schreisheim, Castro, Zhou, & Yammarino 2001; Yammarino, 20005). We build on the work of Markham et al (2010) in examining dyadic level LMX-
outcome relationships, specifically follower job performance, well-being and turnover intention.

Emotional Intelligence and Leader-Member Exchange

Leader-Member Exchange (LMX) refers to the quality of the interpersonal relationship between a leader and follower (Uhl-Bien, Graen & Scandura, 2000; Graen & Uhl-Bien, 1995). The theory argues that high-quality leader-member exchanges reflect high levels of mutual trust, respect and obligation. This results in leaders providing support well beyond basic contract assistance, and followers responding with behaviors that exceed those normally expected through typical employment contract requests (Uhl-Bien et al., 2000). A number of studies have shown these high quality relationships to be positively associated with a range of important work outcomes including employee performance, job satisfaction, organizational commitment and organizational citizenship behavior (Bauer, Erdogan, Liden, & Wayne, 2006; Dulebohn et al 2012; Erdogan & Liden 2002; Graen & Uhl-bien 1995; Illies, Nahrgang & Morgeson 2007; Liden, Sparrowe & Wayne 1997).

Although a number of authors have theorised that leader and follower EI should be expected to play a significant role in LMX (Jordan & Troth 2011; Newcombe & Ashkanasy 2002; Smith 2006), empirical evidence is sparse. Yu & Yuan (2008) collected data from 218 managers and 640 employees from the manufacturing sector in China. They found that employee perceived LMX played a role as a mediator between manager emotional intelligence and employee task performance. Sears & Holmvall (2010) drawing on data collected from public service executives in Canada, found that supervisor-follower EI similarity was significantly and positively associated with employee LMX. Other research has shown support for the significance of follower EI in forming high quality LMX relationships. Karim (2008), in a study involving 98 government and private sector employees in Pakistan, found that employee EI predicted follower LMX and that follower
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LMX was associated with organizational commitment. Chen, Lam & Zhong (2012) found that LMX mediated the effect of supervisor-rated follower EI and follower trust in the supervisor on work performance. This was based on a sample of 285 supervisor-follower dyads from a manufacturing firm in China. More recently, Jordan & Troth (2011) collected data from 579 employees from a pathology company in Australia. They also found that follower LMX either fully or partially mediated the relationship between some employee emotional intelligence abilities and either job satisfaction or turnover intention.

One study suggested follower EI may operate as a moderator of LMX. Huang, Chan, Nan, & Lam, 2010), in their study of 493 leader-follower dyads from a call center in China, showed that differing dimensions of follower EI were found to moderate the effects of follower LMX. Whilst LMX predicted work performance for employees demonstrating high use of emotion, it did not do so for employees with low use of emotion. Similarly, follower LMX predicted work performance for employees with low self emotional appraisal but not for employees with high self emotional appraisal. Despite these statistically significant results, a problem with this latter study is insufficient theoretical explanation to account for these findings.

Together, these previous studies also suffer from two significant limitations. First, research has yet to demonstrate whether leader and follower EI contribute independent effects to LMX relationships. Second, no studies to date have considered whether LMX measurement issues affect the findings obtained. Schreisheim, Castro & Cogliser (1999) emphasised that LMX is a relational phenomenon that operates at the dyadic level. They argue that any LMX measure should represent the joint perception of both supervisor and subordinate. Previous studies of emotional intelligence and LMX have only looked at the follower’s view of the relationship. Typically, authors argue that follower measures of LMX
are sufficient since it is their perception of the relationship that matters (Nishii & Mayer 2009).

Recently however, Markham, Yammarino, Murry, & Palanski, 2010) found that the relationship between LMX and employee job performance showed the strongest effects when leader and follower measures of LMX were in agreement. They also confirmed that the relationship between LMX and performance was strongest at the dyadic level.

Theory and Hypotheses Development

Explanations as to why leader EI should contribute to high quality LMX can be found in social exchange theory (Masterson, Lewis, Goldman, & Taylor, 2000; Wilson, Sin & Conlon 2010). This suggests that high quality relationships develop through norms of reciprocity. These grow stronger through successive exchanges between leader and follower. Followers offer higher levels of job performance, greater commitment and a willingness to undertake tasks beyond job role requirements. Leaders in turn reciprocate through offering greater empowerment, opportunities for development and advancement, social support and other work-based rewards and resources. It is theorised that emotional intelligence assists leaders to understand the personal situations of followers, provide more appropriate feedback, and better recognise those situations where additional levels of support are needed (George 2000; Prati, et al 2003). This instils follower obligation, and they respond by exerting greater effort on job-related tasks. This then results in higher levels of job performance. Based on social exchange theory, studies have found significant, positive relationships between LMX and employee performance (Masterton et al 2000; Schreisheim, Castro & Cogliser 1999). This comes about as a result of increased performance related feedback, rewards as well as increased access to and communication with supervisors (Elicker, Levy & Hall 2006; Graen & Scandura 1987; Graen & Uhl-Bien 1995).
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LMX has also been found to be associated with follower well-being (Erdogan & Enders, 2007). High-quality LMX relationship enhances follower well-being by providing followers with tangible benefits such as influence on decisions, empowerment, career advancement, and salary increases and intangible benefits such as understanding and friendliness. In these situations, the leader invests resources to maximize follower development (Uhl-Bien, Tierney, Graen & Wakabayashi, 1990). This also increases the flow of job-related information between follower and leader (Murphy, Wayne, Liden & Erdogan, 2003). This then helps promote favorable feelings of self-concept (Arndt, Schimel, Greenberg & Pyszczynski, 2002) and self-worth (Cialdini & Goldstein, 2004). Both of these promote follower well-being.

Finally, a number of studies have found negative relationships between LMX and withdrawal intention (Bauer, Erdogan, Liden and Wayne 2006; Saks 2006). The results of meta-analyses have found general support for a negative relationship between LMX and turnover intention or actual turnover (Gerstner & Day 1997; Griffeth, Hom & Gaertner 2000). Based on Maertz & Griffith (2004), both affective and calculative forces can influence an individual’s decision to leave an organization. LMX may serve a key role in both cases. The strength and content of the relationship may combine to serve as a powerful affective force, making it less likely an individual will quit due to their job embeddedness (Mitchell et al 2001).

Hypothesis 1: The relationship between Leader EI and follower job performance, well-being and turnover intention will be mediated by leader-member exchange.

The behavior of followers can also affect the LMX relationship (Deluga & Perry, 1991). Emotional intelligence should also be of value to followers in assisting them to form better quality relationships with their supervisors (Jordan & Troth 2011). Emotional intelligence has previously been found to be associated with pro-social behaviors and
individuals with higher levels of EI enjoy more satisfying social relationships (Law, Wong & Song 2004; Lopes, Salovey & Strauss 2003; Lopes et al 2004). Given that social interaction is suggested to lay at the heart of LMX (Liden, Wayne & Stilwell 1993), then follower emotional intelligence is likely to impact the quality of such relationships. EI should assist subordinates to read the feelings of their supervisors and as a result, anticipate better their needs and the standards of performance they require. In so doing, they can then offer enhanced performance in areas which matter most to their supervisors (Jordan et al 2011).

We therefore suggest the following:

**Hypothesis 2: Follower EI will be positively associated with leader-member exchange.**

We argue that dyad LMX (defined as a high level of agreement between leaders and followers on LMX) is more likely to capture the mechanisms by which LMX brings about its effects on follower self-concept than follower perceptions of the LMX relationship alone. For example, research in other domains has argued that mutuality in relationships brings additional benefits to that suggested by simple social exchange. Drawing upon theories of interdependence and mutual responsiveness (Kelley & Thibault 1978; Murray & Holmes 2009), research in the areas of interpersonal relationships has suggested that it is the mutual quality of the relationship between people that is significant in bringing about increasing feelings of self-validation that enhances the social ties that bind them (Coyne & Bolger 1990; Genero, Miller, Surey & Baldwin 1992).

**Hypothesis 3: The relationships between LMX and follower job performance, well-being and turnover intention will be stronger for dyadic than follower LMX.**

Although follower emotional intelligence is only likely to influence their job performance in jobs requiring high emotional labor (Wong & Law 2002), we suggest leader emotional intelligence will have direct effects on employee job performance irrespective of the job subordinates perform. Affective events theory (Weiss & Cropanzano 1996) posits that
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job performance and workplace attitudes are influenced by the moods and emotions of employees. Positive-inducing affective incidents in the workplace bring about lasting positive emotional states. These then feed through to positive affective reactions manifested in job performance, well-being and favourable organizational appraisals (Saavedra & Kwun 2000; Wegge, et al, 2006). Leaders’ high in emotional intelligence should be able to recognize when followers are frustrated or experiencing negative emotions, and attempt to manage the emotional states of their followers to encourage optimism and confidence (George 2000; McColl-Kennedy & Anderson 2002; Pirola-Merlo, et al, 2002). This promotes positive affect in followers that results in increased job performance. We therefore suggest the following:

Hypothesis 4: Leader EI will have a direct effect on follower job performance

Emotional intelligence is theorised to be an important aspect of individual difference that determines how a person manages stress and copes with emotionally challenging situations (Zeidner et al, 2012). Studies of trait EI in particular have found this to be positively associated with adaptive coping (Bastian, Burns, & Nettelbeck, 2005; MacCann, Fogarty, Zeidner, & Roberts, 2011). As a result, it is suggested to be a major predictor of subjective well-being (Gallagher & Vella-Brodrick, 2008). Recent meta-analyses have also generally found empirical support for the positive relationship between EI and well-being (Martins, Ramalho, & Morin, 2010; Schutte, et al, 2007).

Hypothesis 5: Follower EI will be positively associated with follower well-being.

Leaders high in EI should also be better able to adopt multiple perspectives when assessing a problem. This enables them to assist their followers to resolve conflicting emotions and adopt appropriate emotional states for problem solving (Jordan et al, 2002; Kellet, Humphrey and Sleeth 2002; 2006; Wolff, Pescosolido & Druskat 2002). Again based on affective events theory, emotional intelligence should enable leaders to be more aware of how their followers are feeling and better able to regulate their followers’ emotions. This should then result in
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lower levels of follower distress and increase followers’ sense of psychological well-being.

We therefore suggest the following:

*Hypothesis 6: Leader EI will be positively associated with follower well-being.*

**Method**

**Procedure**

We collected data from a large insurance organization with 615 offices in Malaysia using a self-administered questionnaire at two separate time points. Measures of LMX and emotional intelligence were collected from followers and leaders at the first administration. Measures of turnover intention and well-being were collected from followers and a measure of follower in-role performance collected from leaders, at a second administration two months later. Prior to collecting data, we secured agreement from the senior HR Director for the organization to participate in the research. We obtained a list of the senior managers in each of the branch offices, whom we then contacted and enlisted to distribute questionnaires to one middle manager and their direct reports in their branch office. We ensured that only one follower was matched to each leader, thus making these dyads independent of one another.

To ensure the correct correspondence in each dyad, leader and follower dyad questionnaires were given matched codes. The questionnaires explained that participation in the research was voluntary, and that all responses would be confidential. To enhance the response rate, a lucky draw for a chance to win a local superstore voucher was offered to participants. Questionnaires were returned to the branch senior manager in sealed envelopes, who then forwarded these to the research team. We translated scales from English to Malaysian according to Brislin’s (1980) recommendations. A professional bilingual translator was initially hired to translate the English version into Malay. A bilingual speaker who was blind to the study, then back-translated the Malay version into English. A
comparison was then made between the back-translation and the original version of the questionnaire. Some discrepancies were found in some of the Malay questions examined, and these questions were subsequently redrafted. The process was then repeated again, with a further bilingual speaker translating the Malay scale items into English. This finally produced a Malay copy of the scale items that we deemed was satisfactory and lacked ambiguity.

Sample

Complete sets of questionnaires were received from 203 matched leader-follower dyads (33% response rate). The majority of the leaders were male (54%) and their ages ranged from 31 to 55 years. 63% of leaders had been working in the organization for more than 5 years. The subordinates were 69% female and 31% male, with 94% having ages ranging from 20 to 50 years. The length of time managers had been supervising their subordinates varied as follows: 16% < 1 year, 23% 1-3 years, 24% 3-5 years and 35% > 5 years. 42% of subordinates had been working with the current organization for more than five years and 31% occupying their current job role for more than five years.

Measures

Leader member exchange. Leader and follower perceptions of the leader-member exchange relationship were measured using the 12-item LMX scale by Liden & Maslyn (1998). This measures four dimensions: affect (3 items), loyalty (3 items), contribution (3 items) and professional respect (3 items). The measure was assessed on a 7-point scale, ranging from 1 = strongly disagree to 7 = strongly agree. An overall measure of follower LMX was obtained by summing LMX scores. (Leader LMX $\alpha=0.78$, Follower LMX $\alpha=0.76$).

Emotional intelligence. Measures of emotional intelligence are generally classified into three streams which represent fundamental differences in the operationalization of the EI construct. (1) The four branch ability test developed by Mayer and Salovey (1997) referred to as the MSCEIT relies on right or wrong answers and is said to capture maximum
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performance in how an individual processes emotional information, (2) trait EI which are self-report measures and is said to capture preferred behavior and (3) mixed model approaches that extend the conceptualisation of EI to include social skills (Ashkanasy & Daus 2005). There have been a number of reports in the literature suggesting that the MSCEIT suffers from validity problems in non-western cultural settings (Karim & Weisz 2010) and there have been criticisms raised regarding how judgements regarding correct responses are arrived at (Brody, 2004). Since our research was conducted in Malaysia and given validity concerns in similar populations, we decided the MSCEIT (stream 1) was not a suitable option for use in this study. Stream 2 EI measures have been found to correlate far less with personality than stream 3 measures thus differentiating more clearly their actual predictive power. Recent research for example, has found stream 2 measures to explain significant variation in job performance over and above cognitive ability and the Big 5 (Joseph & Newman 2010; O’Boyle et al 2011).

We therefore selected the Assessing Emotions Scale (Schutte et al., 1998, Schutte, Malouff, & Bhullar, 2009) which is a stream 2 measure that captures trait emotional intelligence. The scale assesses how effectively respondents typically identify, understand, regulate, and harness emotions in themselves and others. In previous research, the scale had internal consistency of between 0.87 and 0.90, a two-week test–retest reliability of 0.78, and evidence of construct validity through association with related constructs (Schutte et al., 1998, Schutte, Malouff & Bhullar, 2009; Schutte & Malouf 2011). This includes associations with other measures of trait emotional intelligence (Kirk, Schutte, & Hine, 2008) and ability emotional intelligence (Schutte, Malouff, & Hine, 2011). In the present study the internal consistency of the scale as assessed by Cronbach’s alpha, was 0.87 (Leaders) and 0.88 (Followers).
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In-role performance. Leaders rated the follower in their dyad on their in-role performance. Scores were obtained using a 7-item measure of in-role performance developed by Williams & Anderson (1991). This assesses the leaders’ judgement of the subordinates’ level of achievement in their assigned job duties. Sample items include ‘This follower adequately completed assigned duties’. All responses were scored on a 5-point scale, ranging from 1 = strongly disagree to 5 = strongly agree. (α = 0.86).

Psychological well-being. This was assessed using the 5-item Satisfaction with life scale developed by Diener, Emmons, Larsen, & Griffin, (1985). Sample items include “I am satisfied with my life”, and ‘In most ways my life is close to my ideal’. All items were rated between 1 = strongly disagree and 7 = strongly agree. (α = 0.89).

Turnover intention. This scale is based on the 3-item measure developed and validated by Mobley, Horner and Hollingsworth (1978) and uses a 7-point response scale. The scale assesses the intentions of the employee to withdraw from his/her organization and is widely used in the literature (Michaels and Spector, 1982). Sample item include: “I think a lot about leaving this organisation”.

Data Analysis & Hypothesis Testing

We used AMOS v21 to undertake structural equation modelling in order to test the mediating effects of leader member exchange between leader and follower emotional intelligence and our three outcome variables, follower in-role job performance, follower well-being and follower turnover intention. For parsimony, we decided to parcel our items on our trait EI constructs, creating 4 new items by summing each successive 8 items then finally 9 items from our 33 item measure (Little, Cunningham, & Shahar 2002). We also parcelled our follower and leader LMX items by summing each of the 3 scale items on the four subscales, contribution, competence, affect and professional respect. Prior to commencing hypothesis testing, we conducted a confirmatory factor analysis (CFA) to establish the discriminant
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validity of measures used in the study. We compared three separate estimated models using our data. The first model loaded all items from each of our scales on to a 1-factor model. Our estimated model demonstrated a very poor fit to the data ($\chi^2 = 2138.53$, $df = 405$; $p<.000$; CFI = .39, NFI = .35, TLI = .34, RMSEA = .15, ECVI = 11.18). Next, we estimated a 3-factor model loading all emotional intelligence items on to one factor, all LMX items on to the second factor and then all items from our dependent variables loading on to a third factor. Again, our results showed a poor fit to the data ($\chi^2 = 1798.99$, $df = 402$; $p<.000$; CFI = .51, NFI = .45, TLI = .47, RMSEA = .13, ECVI = 9.53). Finally, we estimated a 7-factor model with each of the items loading on to its corresponding factor. This measurement model showed a good fit to the data ($\chi^2 = 672.45$, $df = 384$; $p<.000$; CFI = .90, NFI = .80, TLI = .90, RMSEA = .06, ECVI = 4.13).

Overall, the results showing a good fit for our 7-factor model supports the discriminant validity of our scales. Given that we had collected both LMX and trait-EI measures from the same source and at the same time we next sought to determine whether common source bias would affect our findings. We tested for common method variance using Harman’s one factor test by entering all our seven variables into an unrotated exploratory factor analysis using SPSS and forcing a one-factor solution (Podsakoff, MacKenzie, & Podsakoff, 2012). The results indicated the single factor accounted for only 13.90% of the variance. This would suggest that common method bias is not of major concern. We now proceed to the first stage of analysing our results.

We began initial tests using simple correlation analyses, to examine the relationships between all variables included in the study. Next, we performed our first set of analyses testing our hypothesized relationships using only a follower measure of LMX. We then repeated the analysis using our dyadic measure of LMX.

Results
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Inter-Correlations

Inter-correlations between all variables in the study are shown in Table 1. Here we see both leader and follower EI are significantly correlated with each other, as are leader LMX and Follower LMX. Leader EI was significantly correlated with Leader LMX, and Follower EI was significantly correlated with Follower LMX. However correlations between member EI and other member LMX were insignificant. Both leader LMX and follower LMX were significantly correlated with follower job performance, while only follower LMX was significantly correlated with follower well-being.

[Insert Table 1 About Here]

Results using a Follower Measure of LMX

The hypothesised model demonstrated a good fit to the data ($\chi^2 = 532.84, df = 290; p<.000; CFI = .90, NFI = .81, TLI = .89, RMSEA = .06$). All paths were found to have significant regression coefficients save the path running from Leader EI to follower LMX and Leader EI to well-being. Hypotheses 2, 4 and 5 were therefore supported. Hypotheses 1 and 6 were not supported. Our resulting model displaying regression coefficients is shown in figure 1.

[Insert Figure 1 About Here]

Aggregating LMX data to dyad level

Converting individual level measures to group level (dyad or team) is a process that involves arriving at the mean of the individual measures of a particular variable obtained from a specific group on condition that the data meet certain criteria relating to one or more tests as described by Klein & Kozlowski (2000). Here we report the results of three tests we employed that justify our approach to data aggregation.

Levels of Analysis Results: Leader-Follower Dyads
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Our first step in justifying whether we would treat LMX as a dyadic construct involved determining whether LMX effects are significant either between or within groups. Given that we collected measures of both trait EI and LMX from both leaders and followers we were able to perform a within and between analysis on the trait EI-LMX relationship. Our primary interest here though is what the analysis tells us about LMX. We present the results from our WABA analyses in Table 2. The results indicate that LMX operates at the dyadic (between groups) level as indicated by both statistical and practical or geometric tests. Our first set of results thus support the importance of treating LMX as a dyadic construct. The relationship between trait emotional intelligence and LMX by contrast is shown to be equivocal at the dyadic level suggesting only individual differences are operating.

Data Aggregation

Given the positive results indicating LMX is a dyadic construct, we proceeded to undertake two further tests to determine whether we could aggregate our individual set of LMX measures to the dyadic level. We began by first calculating the intra-class correlations (ICC1s) and followed this by then obtaining the within dyad agreement estimate $r_{wg}(j)$. The intra-class correlation represents the variation that can be accounted for by group or in this case dyad membership (Bliese 2000). In other studies ICC1s are generally found to have a median of 0.12 and vary between 0 and 0.50 (James, 1982). Here we obtained a value of 0.51 ($F=28.64, p<.000$), which surpasses the recommended minimum value of 0.47 for aggregation (Schneider, White & Paul 1998). Our mean $r_{wg}$ value was also calculated to be 0.96, which again exceeds the traditionally accepted value of 0.70 for data aggregation (James, Demaree & Wolf 1984, 1993). The $r_{wg}$ value is particularly important since this represents the degree of inter-rater agreement, i.e. the extent to which both a particular leader and their follower agree on similar values for LMX thus suggesting a high degree of mutuality in the relationship.
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Results using a Dyad Measure of LMX

We then repeated our analyses using our dyadic measure of LMX. The hypothesised model demonstrated a good fit to the data ($\chi^2 = 535.35$, $df = 290$, $p < .000$; $CFI = .90$, $NFI = .81$, $TLI = .89$, $RMSEA = .06$). Similar to our results using a follower measure of LMX, we found regression weights indicating significant relationships between dyadic LMX and follower job performance, well-being and turnover intention. However in this instance, only leader EI was found to be positively associated with dyadic LMX, whilst the relationship between follower emotional intelligence and dyadic LMX was insignificant. Relationships between LMX and follower job performance, well-being and turnover intention were all statistically significant. Hypothesis 1 was therefore supported. However contrary to our earlier findings using a follower measure of LMX, the path from follower EI to dyadic LMX was insignificant. Hypothesis 2 was therefore not supported. The relationships between LMX and follower job performance, well-being and turnover intention were also of far greater significance or achieved higher beta weights using a dyadic measure of LMX. Hypothesis 3 was therefore supported. Leader EI also had a direct effect on follower job performance supporting hypothesis 4. We found follower EI had a direct effect on follower well-being supporting hypothesis 5. However the relationship between leader EI and follower well-being was not significant. Hypothesis 6 was therefore not supported. Our model with regression coefficients is shown in figure 2.

[Insert Figure 2 About Here]

Discussion

Despite much theorizing that leader emotional intelligence should be associated with leader member exchange, there has been limited empirical evidence to date to support this. Of the handful of studies that have examined emotional intelligence and LMX, these have nearly all looked at follower emotional intelligence and used follower perceptions of leader member...
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exchange. Our analyses have highlighted some interesting findings. We found that the
significant and positive associations between leader and follower emotional intelligence and
LMX, was dependent upon the measure of LMX used. When using a follower measure of
LMX we found a positive relationship between only follower EI and LMX. We cannot
completely rule out that this may be due to methodological factors arising from collecting
both follower EI and LMX from the same source and at the same time. However results from
our confirmatory factor analyses and Harman’s one factor test suggest no significant concerns
regarding common method bias. Nevertheless, there may be an underlying methodological
problem when relying on same source measures of both trait EI and LMX. Recently,
Lindebaum & Cartwright (2010) found significant relationships between trait EI and
transformational leadership were influenced by common method variance to the extent that
the relationship was insignificant when non-same source data was used. A further problem
could also be that trait EI measures have been found to suffer from social desirability bias
(Schutte et al 1998). There have also been similar concerns raised regarding LMX measures
(Schriesheim, Wu & Cooper 2011). That we found different statistically significant
relationships between leader EI and follower EI and LMX depending on our measure of
LMX, does call into question the use of single source measures of these variables together in
future studies. It also raises some concerns in the confidence that can be placed in previous
studies that have found positive relationships between EI and LMX using only single source
measures.

We found both follower and dyad measures of LMX were positively associated with
follower job performance. However as predicted, these relationships were stronger for dyadic
LMX. Not only was the beta coefficient greater, it also occurred at a much higher level of
significance. Our findings thus support those of Markham et al, (2010) in showing that the
power of LMX for predicting follower performance is stronger when there is a high level of
agreement between leaders and followers on LMX. We also found this to be case in relation to relationships between follower well-being and turnover intention.

We would suggest that high level LMX agreement between leaders and followers is indicative of a relationship characterised by mutuality, and that mutuality itself is a relational property that confers its own particular benefits to partners. Jordan (1986) describes the process of mutuality as “openness to influence, emotional availability and a constantly changing pattern of responding to and affecting the others’ emotional state” (p.1). Mutuality has been found to be associated with positive psychological outcomes involving the self-concept such as increased self-esteem (Coyne & Bolger 1990; Genero et al 1992). Mutuality also fosters trust and commitment in inter-personal relationships (Martini, Sprenger & Colyvan 2012; Murray & Holmes 2009). Research on the concept of mutuality is relatively new. But significant interest has been shown in a range of fields. For example, studies have found mutuality to be associated with positive health outcomes in patients with rheumatoid arthritis (Kasle, Wilhelm & Zautra 2008), and caregiving behavior (Schumacher, et al, 2008). The absence of mutuality has been found to be associated with eating disorders in women (Sanftner, Tantillo, & Seidlitz, 2004) depression (Tantillo & Sanft 2003) and increased suicide attempts among latina women (Zayas, Hausmann-Stabile & Kuhlberg 2011). More recently research has demonstrated that relational mutuality plays a role in the neural response to threat. Coan, et al, (2013) suggested that mutuality is associated with decreased self-regulatory activity.

We argue that single source measures of LMX do not capture this relational quality of mutuality between leaders and followers. Although recognized as an important aspect of intimate and familial relationships (Murray & Holmes 2009), the concept of mutuality has yet to be explored fully in the context of workplace relationships. Our findings and those of Markham et al (2010) indicate that LMX agreement is a stronger predictor than follower
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measures of LMX alone. However, further studies are needed to examine whether this is the case more broadly in relation to other outcomes. Further research might also explore whether this holds in other cultural contexts, especially since a number of LMX-outcome relationships have been found to be weaker in collectivist while stronger in individualist cultures (Rockstuhl, Dulebohn, Ang, & Shore 2012).

Irrespective of whether our estimated models used follower or dyad measures of LMX, follower EI was found to have a significant and positive association with employee well-being. This supports research in the area of emotional intelligence more widely, that has found trait EI measures to predict individual well-being (Montasern, Brown & Harris 2013; Zeidner, Matthews & Roberts 2012; Zeidner & Olnick-Shemesh, 2010). Our findings also support the small number of studies that have examined and found a positive relationship between LMX and employee psychological well-being (Epitropaki & Martin 1999; Martin et al 2005).

We also found a positive and significant relationship between leader EI and employee performance in addition to the path mediated by dyad LMX. This finding is of interest since it suggests that LMX does not sufficiently account for the influence a leader’s emotional intelligence may have on employee performance. We suggested here that affective events theory can explain these alternative positive effects. However there may potentially be additional mechanisms involved. Based on social learning theory, self-efficacy is defined as an individual’s “beliefs in one’s capabilities to organize and execute the courses of action required to produce a given level of attainment” (Bandura 1998, p624). It plays an important role through influencing individuals’ choice, effort and persistence relating to task performance (Bandura & Locke 2003; Stajkovic 2006). Importantly, it has been shown to positively predict performance across a range of studies conducted in differing organizational settings (Stajkovic & Luthans 1998). Leader EI might also influence performance through
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directly affecting follower self-efficacy beliefs. High EI leaders should be better at clarifying to their followers how their efforts will contribute towards task performance and goal achievement, thereby improving the likelihood that successive task attempts will be successful (George 2000).

The perceived credibility of sources of feedback also has been found to play a significant part in determining self-efficacy development (Eden & Aviram 1993; Eden & Kinnar 1991). While, perceived credibility plays a role in determining who individuals perceive as acceptable or desirable role models for vicarious learning (Arnold & O’Connor 2006). In both instances, the emotional intelligence of leaders should be significant. Leaders high in EI should be perceived as more authentic by their followers (Dasborough and Ashkanasy 2002). This will strengthen follower perceptions of them as both credible role models and credible sources of feedback. This could also enhance opportunities for follower self-efficacy and further affect employee performance. Future research should seek to test whether the relationship between leader EI and follower job performance can be partially accounted for due to its effects on follower self-efficacy.

Implications

Our results have both theoretical and practical implications. First, we extend our understanding of leader-member exchange theory by showing that leader trait emotional intelligence is an additional aspect of individual differences that influences the quality of relationship between a supervisor and their subordinate. This then affects the follower work-related outcomes of in role job performance, follower well-being and turnover intention. We also found the relationships between LMX and these outcomes were far stronger when a dyadic rather than follower measure of LMX is used. A number of authors argue that follower measures of LMX are sufficient to use in research since it is follower perceptions of the relationship that matter in determining LMX-outcome relationships (Nishii & Mayer...
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2009). Our findings challenge this view and suggest follower measures may fail to sufficiently capture the range of mechanisms through which leader-member exchange produces its effects. Using a dyad measure of LMX, our findings suggest organizations should be aware of the importance of leader EI in helping to bring about high quality relationships between leaders and their followers.

Limitations and Conclusions

There are a number of limitations with our study. First, we obtained ratings of LMX and emotional intelligence from leaders and followers at the same time. We cannot rule out that individual ratings of their own EI may have influenced and biased their ratings of the LMX relationship. We followed recommendations by Podsakoff et al. (2012) for a temporal separation of measures and collected our outcome measures two months later. Our measure of follower in-role performance was collected from leaders thus ensuring distinct sources for our independent measures and dependent measure of performance. Our scales also demonstrated good discriminant validity. Next, we did not collect longitudinal measures. Although theoretically we propose the direction of the relationship to be LMX predicting follower work-related outcomes, we have not determined the direction of causality. Future studies that collect longitudinal leader and follower LMX measures would provide insights into the nature of reciprocity and mutuality within LMX relationships. This should help us to gain new insights into the theoretical mechanisms through which Leader EI operates beyond just social exchange considerations. Finally, we acknowledge our failure to control for personality given that previous studies have found some overlap with trait-EI measures (Antonakis 2003; O’Connor & Little 2003). This may have resulted in relationships between both leader and follower EI and other measures showing stronger effects than is the actual case.
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To conclude, this study has shown that dyad measures of LMX are better at predicting follower performance, well-being and turnover intention than follower measures of LMX. Authors have advocated for some time that LMX is a dyad level construct and should reflect both leader and follower perceptions of the relationship. Future studies should examine the significance of dyad compared to follower measures of LMX with alternative antecedents and outcomes. Finally, that leader EI can affect employee job performance independently of LMX suggests alternative theoretical mechanisms account for how leader EI exert its effects in leadership contexts.
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<thead>
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<th>Variable</th>
<th>M</th>
<th>SD</th>
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<th>2</th>
<th>3</th>
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<th>5</th>
<th>6</th>
<th>7</th>
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<tr>
<td>1. Leader Trait EI</td>
<td>129.46</td>
<td>11.98</td>
<td>-</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>2. Follower Trait EI</td>
<td>128.72</td>
<td>12.76</td>
<td>.23**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>3. Leader LMX</td>
<td>5.27</td>
<td>0.88</td>
<td>.41**</td>
<td>.06</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4. Follower LMX</td>
<td>5.21</td>
<td>1.20</td>
<td>.15*</td>
<td>.20**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5. Dyad LMX</td>
<td>5.24</td>
<td>.81</td>
<td>.27**</td>
<td>.15*</td>
<td>.69**</td>
<td>.85**</td>
<td>-</td>
<td></td>
<td></td>
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<tr>
<td>6. Performance</td>
<td>22.03</td>
<td>3.38</td>
<td>.44**</td>
<td>.09</td>
<td>.57**</td>
<td>.19**</td>
<td>.45**</td>
<td>-</td>
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<tr>
<td>7. Turnover Intention</td>
<td>14.42</td>
<td>3.63</td>
<td>-.13</td>
<td>-.06</td>
<td>.03</td>
<td>-.03</td>
<td>-.01</td>
<td>-.05</td>
<td>-</td>
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<tr>
<td>8. Employee Well-Being</td>
<td>23.95</td>
<td>4.89</td>
<td>.33**</td>
<td>.02</td>
<td>.26**</td>
<td>.23**</td>
<td>.10</td>
<td>-.24**</td>
<td>-</td>
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Note: *p < 0.05, **p < 0.01
### Table 2: Dyads: Results for Within and Between Analyses (WABA) of Trait EI-LMX Relationship

<table>
<thead>
<tr>
<th>Variables</th>
<th>Total Corr.</th>
<th>WABA I: variation source</th>
<th>WABA II: covariation source</th>
<th>Cumulative Components</th>
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<td></td>
<td>Eta Ratio</td>
<td>Correlation Ratio</td>
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<tr>
<td>LMX</td>
<td>.79 .60 1.32* 1.68* Between Dyad</td>
<td></td>
<td></td>
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<td>Trait EI</td>
<td>.71 .70 1.00 1.02 n.s. Equiv.</td>
<td></td>
<td></td>
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<td>LMX x TraitEI</td>
<td>.07 Equiv.</td>
<td>.04 .09 -.05 -.05 Equiv. .02 .04 Equiv.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Degrees of Freedom: N=406 individuals J=203 dyads

*P<.05, **p<.01, ***P<.001

*a significant by the 15th test
Figure 1: Relationships between Leader and Follower EI, Follower LMX and Outcome Variables
Figure 2 Relationships between Leader and Follower EI, Dyad LMX and Outcome Variables

- Leader Emotional Intelligence
- Subordinate Emotional Intelligence
- Dyad LMX
- Employee Performance
- Turnover Intention
- Subjective Well Being

- Leader Emotional Intelligence to Dyad LMX: .07***
- Subordinate Emotional Intelligence to Dyad LMX: .18**
- Dyad LMX to Subjective Well Being: .13***
- Dyad LMX to Turnover Intention: -.10**
- Subjective Well Being to Turnover Intention: .09**

Note: ns indicates non-significant correlations.