



# **IT'S HAPPINESS THAT COUNTS: FULL MEDIATING EFFECT OF JOB SATISFACTION ON THE LINKAGE FROM LMX TO TURNOVER INTENTION IN CHINESE COMPANIES**

Shuhong Wang  
*Radford University, USA*

Xiang Yi  
*Western Illinois University, USA*

---

This study suggests mediation analysis as a better way to understand the inconsistency of findings on how leader member exchange (LMX) leads to turnover intention in Chinese companies. Job satisfaction and job stress are hypothesized as two possible mediation paths. In a relationship-oriented culture setting, inquires as such are particularly important and meaningful. Findings include that job satisfaction fully mediates the relation between LMX and the intention of turnover, and that job stress does not mediate the linkage between LMX and turnover intentions. Theoretical and practical implications including cross-cultural meanings are discussed.

---

Voluntary job turnover has long been an important area of research in several disciplines (e.g. psychology, sociology, economics, and organizational behavior) (Williams & Hazer, 1986). There are obvious problems that turnover can present concerning the efficient functioning of organizations. However, actual turnover behaviors are hard to measure (Breukelen et al, 2004). The theory of planned behavior (Ajzen, 1991) suggests that behavioral intention is a good predictor of actual behavior. Turnover intention represents an attitudinal orientation or a cognitive manifestation of the behavioral decision to quit. There is considerable empirical support for the notion that turnover intention is probably the most important and immediate antecedent of turnover decisions (Mobley et al, 1979; Mitchel, 1981; Bluedorn, 1982). Mobley et al., (1979) have even suggested that intentions offer a better explanation of turnover because

they encompass one's perception and judgment. Therefore, turnover intentions are usually measured and accepted as a precursor to the actual turnover behavior.

It has long been believed in literature pertaining to turnover that supervisor-related antecedents play a critical role in employee turnover (Morrow, Suzuki, Crum, Ruben & Pautsch, 2005). Constructing and maintaining good relationships between supervisors and subordinates provides a disincentive for employees to quit (Morrow, Suzuki, Crum, Ruben, & Pautsch 2005). Leader-Member Exchange, or LMX, examines the relationship quality between superiors and subordinates and specifies factors that determine the quality of the relationship (Liden et al, 1997; Maslyn & Uhl-Bien, 2001). According to Graen and Scandura (1987), LMX refers to the quality of the relationship shared by supervisors and subordinates. LMX has been one of the most researched models of leadership since the 1960s (Gerstner & Day, 1997). It has long been suggested by researchers (e. g., Dienesch & Liden, 1986; Gerstner & Day, 1997; Graen & Scandura, 1987; Graen & Uhl-Bien, 1995) that fewer “outcome-oriented” LMX studies (i.e., with performance as the dependent variable) are needed and more basic LMX correlates should be investigated. On the other hand, some recent studies (e.g., Maertz & Griffeth, 2004; Morrow et al., 2005) identified leader-member relationship as a neglected antecedent of turnover and found that LMX has rarely been included in turnover studies. In addition, far less empirical attention in leadership literature has been given to the mechanism that operates between LMX and various work outcomes (Bhal, Gulati & Ansari, 2009). This paper responds by examining the mechanism between turnover intentions and LMX by addressing the multiple mediating effects of job satisfaction and job stress.

Job satisfaction and job stress as predicting factors of employee turnover has been a topic widely studied and established. (e.g., Brotheridge & Grandey, 2002; Mobley, et al., 1979). Among all the potential mediating variables, job satisfaction was chosen as it has been considered the most important factor in voluntary turnover research (Trevor, 2001). It plays a major role in almost all turnover theories (Lee et al., 1999) and was tested to be the key psychological predictor in most turnover studies (Dickter, Roznowski, & Harrison, 1996). It has been proposed that leader support can possibly reduce employee turnover directly or indirectly through job satisfaction (Griffeth & Hom, 2001; Mowday et al., 1982). Extensive research has shown that job satisfaction reduces turnover (e.g., Griffeth et al., 2000) and increases retention (Kim et al., 1996).

We also examine job stress as a possible mediating factor between LMX and turnover intention because of its psychological and financial importance to both the employees and employers. While turnover cost could be as high as 1.5-2.5 times the employee's salary (Griffeth & Hom, 2001; Cascio, 2003), or as much as 5% of the organization's annual operating budget (Hinkin & Tracey, 2000), workplace stress was estimated to cost US employers more than \$200 billion every year (DeFrank & Ivancevich, 1998). Stress is important for employees as well as employers (DeFrank & Ivancevich, 1998; O'Driscoll & Beehr, 1994) because of the potential effects on employee psychological conditions such as depression, frustration, anxiety, as well as physical problems such as high blood pressure. (Ganster & Schaubroeck, 1991; Jex & Beehr, 1991). Past research has shown that stress is a key predictor of turnover intentions (e.g., Brotheridge & Grandey 2002; Mayes & Ganster 1988; O'Driscoll & Beehr 1994; Parasuraman & Alluto 1984; Rahim 1997).

An important contribution of the current study is its application in the Chinese context. China has experienced rapid economic growth for almost 30 years since it launched the open reform policy, and has attracted a great amount of foreign direct investment (FDI) from the

Western business world. It was suggested by Sloman (2007) the increasing need for further study and understanding of people in China given the rapid change in the Chinese economy. It is especially important for the Western world to understand how employees in China respond to the organizational practices and policies commonly utilized in Western companies in order to succeed in attracting and maintaining the best talent in China, therefore increasing competitiveness in the global market.

Most leadership studies have been conducted in the Western society, and there is a need to add the empirical cross-cultural validity of the LMX-work outcomes relationships to current literature (Bhal, et al., 2009). It has been questioned whether Western leadership models can apply to collectivist, "high-power-distance" (authoritarian) cultures such as most Asian countries, but interestingly past research has shown that LMX relationships hold true in several cultures such as Japan (Graen et al., 1990), Turkey (Erdogan et al., 2006), and Malaysia (Ansari et al., 2007). An increasing number of leadership studies have been conducted in China (e.g., Chan & Farh, 1999; Hackett et al., 2003; Hui, Law, & Chen, 1999; Wang, et al., 2005) and have revealed remarkably consistent results across cultures (Wang, et al., 2005).

It was suggested by the growing literature that the basic relationships between leadership and workplace outcomes established in the West are supported in China, thereby increasing the generalizability of previous findings from Western samples (Wang, et al., 2005).

That being said, we should recognize that some of the significant cultural, political, economic and social factors that are unique in China might confound the current study. For example, it is suggested that Chinese employees behave differently from their Western counterparts under the traditional Chinese culture, including personalism and *guanxi* (Chen, 2000). The traditional cultural value may also have an impact on the extent to which individuals feel supported by organizations, which may be important in Chinese environments, and thus affecting their turnover intentions (Hui, et al., 2007). It should also be noted that our conclusions need to be kept in the evolving Chinese institutional and social context. China has experienced a large-scale privatization process for state-owned enterprises. There is a unique economic environment where different types of ownership coexist: private organizations, foreign-owned companies, as well as state-owned enterprises, are strong competitors in the marketplace (Zhu et al. 2008; Ahlstrom, Foley, Young & Chan, 2005). It has been suggested that ownership structure does have an impact on employee attitude and behaviors (Wang, et al., 2009), which cannot be translated to the Western context.

## Literature Review

### Person-Environment Fit Theory and LMX

LMX theory posits that the relationship between a supervisor and an employee develops as a result of work-related exchanges between the two individuals. These relationships can be characterized as high in quality or "good" (i.e. reflecting trust, respect and loyalty) and low in quality or "bad" (i.e. reflecting mistrust, low respect and a lack of loyalty) (Morrow, Suzuki, Crum, Ruben & Pautsch, 2005).

Person-environment fit theory (French et. al., 1974) states that incongruence or mismatch in the relationship between employee and the job environment (e.g. LMX) explains a variety of outcomes such as turnover intention. Bad LMX is highly related to incongruence of values between supervisors and employees (Testa, 2009). Researchers find that when the incongruence

between the employee and the job environment increases (e.g., LMX), the employee is more likely to display increased intention of turnover (Edwards, 1991). A meta-analytic finding, albeit based on a very small number of samples, indicates that the quality of LMX is negatively related to intended turnover (Gerstner & Day, 1997) and actual turnover (Griffeth et al, 2000). Bad LMX has been viewed as an undesirable attribute or a type of person-environment misfit and has been observed to explain employees' turnover decisions (Griffeth & Hom, 2001). Firms have therefore sought to maximize LMX perceptions among subordinates as an approach to combat turnover (Morrow et al., 2005). However, the meta-analysis of Gerstner and Day (1997) only suggested a small statistical relationship between LMX and turnover and the more recent meta-analysis by Griffeth et al. (2000) also shows a weak relationship between the two. In addition, Sparrowe (1994) and other researchers find that the path from LMX to turnover intentions was not significant when LMX was tested along with other variables in structural equation models (Sparrowe, 1994; Wayne et al., 1997). Wilhelm (1993) further investigated the circumstances under which LMX was significant when entered with equity perception and job satisfaction in a regression model. Fascinatingly, Harris (2004) suggested that LMX may actually be curvilinearly related to turnover intentions and turnover. Clearly, the conclusions drawn about the relationship between turnover intentions and LMX have not been consistent, with some studies finding a significant negative relation (Dansereau et al., 1975, 1985; Graen & Ginsburg, 1977; Graen, Liden & Hoel, 1982) but others finding an insignificant correlation (Vecchio, 1985; Vecchio et al., 1986). Research is needed to investigate the mechanisms through which LMX influences turnover intention and to shed light on these contradictory findings; however, empirical investigation documenting these mediating mechanisms has lagged (Griffeth & Hom, 2001).

Person-environment fit theory (French, 1974) proposes that when low person-environment (P-E) congruence (e.g., bad LMX) exists, individuals tend to experience changes in their emotional and attitudinal states at work such as job stress and job satisfaction. These emotional and attitudinal states could be antecedents for behavioral consequences such as turnover or turnover intentions. Individuals tend to suffer from lower levels of job satisfaction and higher levels of job stress (Furnham & Schaeffer, 1984) when this incongruence or misfit (e.g., bad LMX) persists. On the other hand, a better environmental fit (e.g., good LMX) predicts greater job satisfaction and lower job stress (Beatty, 1998; Flaherty, Dahlstrom & Skinner, 1999; Furnham & Schaffer, 1984; Posner, 1985; Siguwaw, Brown & Widing, 1994). In the mean time, job stress and lack of job satisfaction are among the most relevant factors that contribute to people's intention to quit their jobs (Moore, 2002). However, there has been no empirical research examining these two factors as mediators on the linkage between LMX and turnover intentions. This study attempts to examine the possible mediation effects of job stress and job satisfaction, thus to render a better understanding of the paradoxes in the existing research. In essence, we argue that employees who have different qualities of LMX experience different levels of job satisfaction and job stress, which are direct antecedents of voluntary turnover intention. In other words, job satisfaction and job stress transfer the effect of LMX onto turnover intention. This is a very important inquiry given that, "if an indirect effect does not receive proper attention, the relation between two variables of interest may not be fully considered" (Raykov & Marcoulides, 2000, p. 7).

Baron and Kenny (1986) suggested a set of required tests for mediation. Three essential steps to establish a mediation relation were reviewed and hypotheses were developed accordingly.

## LMX and Turnover Intention

The first condition for mediation is that the independent variable(s) must relate to the dependent variable(s) in the absence of the mediator(s). Thus, LMX should be directly related to their turnover intention. Reviewing past research on the relationship between LMX and turnover intention, LMX has been hypothesized as an important antecedent for turnover intention. Previous research has suggested that a negative linear relation exists between LMX quality and turnover intentions (e.g., Vecchio & Gobdel, 1984; Wilhelm, Herd, & Steiner, 1993). A meta-analytic finding also indicated that the quality of leader member exchange (LMX) is negatively related to intended turnover (Gerstner & Day, 1997) and actual turnover (Griffeth et al, 2000). Poor LMX has similarly been viewed as an undesirable attribute in an employment relationship and has been observed to explain employees' turnover decisions (Griffeth & Hom, 2001; Morrow, et al., 2005). As these relations have been established previously, they are not formally hypothesized here, although in the analyses we checked for them as a condition of mediation.

## LMX – Job Satisfaction and Job Stress

The second condition for mediation is that the independent variable(s) must be significantly related to the mediator(s), that is, LMX is significantly related to both job satisfaction and job stress. Previous research has shown that job satisfaction is positively related to LMX and that interpersonal relationship is a significant job stressor. These two lines of research are considered separately below.

**LMX and job satisfaction.** Job satisfaction is the affective attachment to the job viewed either in its entirety (satisfaction with the job itself) or with regard to a particular aspect (e.g., satisfaction with supervisor) (Tett & Mayer, 1993). Therefore, job satisfaction could be a multi-faceted function of several diverse factors, including satisfaction with pay, supervisor, and coworkers (Trevor, 2001). Meta-analytic research on the effect of job satisfaction on turnover shows that overall satisfaction with the job explains more variance than satisfaction with job facets (Hom & Griffeth, 2005)

Employee job satisfaction derives from individual organizational identification, open and effective communication, and high quality interpersonal relationships between supervisors and employees (Herzberg et al., 1959; Randolph & Johnson, 2005). LMX research has suggested that supervisors and employees share mutual trust, respect and obligation when leaders and followers have good exchanges or effective LMX relationships (Graen, 1976; Graen & Schieman, 1978; Graen et al., 1982a,b), as well as positive support, common bonds, open communication, shared loyalty (Dansereau et al., 1975; Dienesch & Liden, 1986; Graen & Uhl-Bien, 1995), and affection (Liden et al., 1993). Good LMX is seen as a function of the interpersonal relations of the leader and member resulting in work related emotional social exchanges or psychological benefits of favors such as trust, support, consideration, and esteem (Graen & Uhl-Bien, 1995). Subordinates with high quality LMX are likely to experience extrinsic rewards of better performance ratings (Graen et al., 1982), and career advancement (Scandura & Schriesheim, 1994; Wakabayashi & Graen, 1984) as well as intrinsic rewards such as negotiation latitude, autonomy, and challenging tasks (Bhal, et al., 2009). According to the findings of Gardenswartz and Rowe (1998), when employees perceive that they are valued and respected, that the organization's promotional system is open and fair, and that resources are spent on developing

staff, they often stay and communicate openly about their experiences with other coworkers.. Past LMX researchers have documented many positive outcomes of high quality LMX on subordinates, including higher levels of job satisfaction (Gerstner & Day, 1997; Liden et al., 1997; Schriesheim et al., 1999). In contrast to these findings, conflict in the work place leads to depression and reduced self-esteem, and conflicts with supervisors especially result in many negative outcomes such as job dissatisfaction. (Frone, 2003). Stringer's (2006) study also contends that high-quality LMX and job satisfaction are positively correlated.

**Bad LMX as a stressor.** Job stress has been conceptualized as an individual's subjective feeling that work demands exceed the individual's capacity (Edwards, 1992). Keenan and Newton (1985) used the Stress Incident Report (SIR), an open-ended method, to collect stressful incidents that occurred at the work place in the prior month with a sample of young engineers. Seventy-four percent of the incidents reported were social in nature.

Levinson (1980, p. 497) contended "leadership is central to the anticipation, alleviation, and amelioration of stress." LMX theory proposes that leaders form unique relationships with each of their subordinates so that high-LMX employees receive higher levels of support (Kraimer, Wayne, & Jaworski, 2001). Acknowledging employees' needs and providing social support may significantly affect their followers' perceptions of stressors. Nelson, Basil and Purdie (1998) have proposed that the quality of leader-member exchange will affect followers' perceptions of stressors at work. They systematically argued that because higher quality exchanges are more likely to be associated with greater resources, attention, autonomy, desirable work assignments, and time and energy from the leader than lower quality exchanges (Dansereau et al., 1975; Graen & Cashman, 1975; Vecchio & Gobdel, 1984; Basu, 1991), followers in such exchanges are less likely to perceive work stressors. The authors have also suggested that these factors, many of which represent elements of social support, are more likely to generate a sense of control among followers. "To the extent that leaders provide psychologically secure environments, the infrastructure necessary for accomplishing tasks, and the latitude to make decisions, followers are likely to perceive situations as being governable and nonthreatening" (Nelson, Basil & Purdie, 1998, p.106). Research in leadership has also documented the linkage between high LMX and lower levels of stress (Gerstner & Day, 1997; Liden et al., 1997; Schriesheim et al., 1999).

On the other hand, bad LMX has been identified as a leading source of stress by numerous researchers (Bolger et al., 1989; Hahn, 2000; Keenan & Newton, 1985; Narayanan, Menon & Spector, 1999). Stress researchers have found that conflict, as a social stressor, is associated with behavioral strains. Chen and Spector (1992) reported a number of behavioral and intentional reactions to interpersonal conflict at work, and the findings included that conflict had a significant positive correlation with sabotage, interpersonal aggression, hostility and complaints, and intention to quit. Edwards (1992) also suggested that low quality of LMX leads to individuals' feelings of loss of control and overwhelming uncertainty. Researchers have identified all feelings of uncertainty, lack of control, and being threatened as potential stressors that result from bad relationships with supervisors (e.g., Edwards; Parker & DeCotis, 1983). The quality of relationships has been shown to be a significant stressor in this research stream. Nelson, Basil and Purdie (1998) suggested that bad LMX could be seen as a failure to provide secure environments and is more likely to result in feelings of isolation, solitude, and lack of control (Nelson, Basil & Purdie, 1998). Bruk- Lee et al. (2006) argued again that conflict is a

predominant source of social stress in the workplace across occupations (Bruk-Lee & Spector, 2006). Based on the discussion above, we hypothesize that:

*Hypothesis 1:* Quality of LMX is positively associated with job satisfaction.

*Hypothesis 2:* Quality of LMX is negatively associated with job stress.

The current study aims to provide further evidence on the detrimental impact that bad LMX, as a social stressor, can have on employees' affective states, which further leads to turnover intention.

The final condition for mediation is that, when both the independent variable(s) and mediator(s) are included, the direct relation(s) should become significantly smaller, indicating partial mediation, or insignificance, indicating full mediation. In this study, we specifically hypothesize that job stress and job satisfaction partially mediate the relation between LMX and turnover intention.

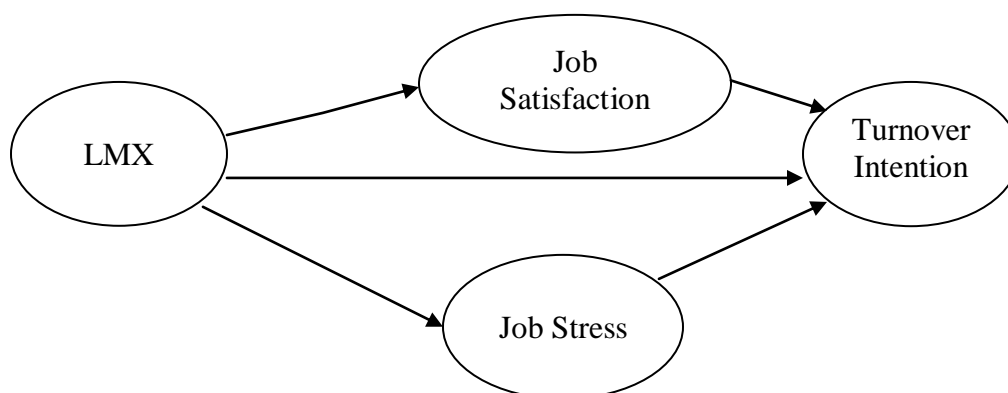
Based on previous discussion, LMX is a precursor to both job satisfaction and job stress. In addition, LMX is related to job turnover intentions, as are both job satisfaction and job stress. Therefore, Hypotheses 3 and 4 follow:

*Hypothesis 3:* Job satisfaction will partially mediate the relation between LMX and turnover intentions.

*Hypothesis 4:* Job stress will partially mediate the relation between LMX and turnover intentions.

The model below depicts all four of these main hypotheses.

Figure 1 *Hypothesized model of job satisfaction and job stress mediating the linkage from LMX to turnover intentions*



## Methods

### Sample

Four manufacturing companies in China participated in this study. All of these firms were Chinese-owned enterprises. There were 568 employees in total from the four organizations that completed the survey. The surveys were anonymous and the questionnaires were returned to the researchers. Completion of the surveys was voluntary. These organizations are in heavy manufacturing industries and light manufacturing industries. Although there were some supervisors and mid-level managers participating in the survey, most participants were lower-level workers in factories. 79% percent of the questionnaires were returned, thus, the bias that might be associated with voluntary participation is not a major concern.

### Measures

**LMX.** For Leader-Member Exchange, Liden and Maslyn (1998) proposed a 12-item multidimensional scale. Since being proposed, Maslyn and Uhl-Bien (2001) empirically validated this scale. We used this scale in the study because previous research indicated that this scale for LMX was culturally meaningful for a Chinese sample (Alpha = 0.79). (Wang et al, 2005) An example item was ‘I like my manager very much as a person.’”

**Stress.** Stress in General Scale (SIG; Smith, Sademan, & McCrory, 1992) is used to measure stress level, and it is composed of nine items. This scale simply presents a list of adjectives (e.g., hectic, tense, pressured), and respondents indicate (no or yes) as to whether each term applies to their jobs (Alpha=.87).

**Job satisfaction.** We used the Smith et al. (1969, 1985) twenty-seven item Job Descriptive Index (JDI) to measure the three facets of job satisfaction: satisfaction with co-workers, with supervisors, and with work in general. Example items included: “People I work with are intelligent” and “My supervisor praises good work.”

**Turnover intention.** The scale developed by Hanisch and Hulin (1990, 1991) was used to measure turnover intention. Sample items are “How often do you think about QUITTING your job?”, “How likely is it that you will QUIT your job in the NEXT SEVERAL MONTHS?” and “All things considered, how desirable is it for you to QUIT your job?” (reverse coded). The scale is composed of six items (Alpha= 0.70).

All measures (except job stress) used a 5-point scale, with 1 presenting extremely disagree (or unlikely, depending on specific questions) and 5 presenting extremely agree (or likely, depending on specific questions).

**Control variable.** Past meta-analytic assessments by Griffeth et al (2000) indicate that company tenure ( $p=-0.20$ ) is negatively related to turnover. Other previous studies have indicated that individual differences such as age, organizational tenure, marriage status (Cotton & Turtle, 1986) can account for significant variance in turnover. Therefore, we used the following demographic variables as controls in this study: age, company tenure and marital status.



In addition, perception of alternative job opportunities was used as a control variable. Numerous scholars (i.e., Dreher & Dougherty, 1980; Kirschenbaum & Weisberg, 2002; Martin, 1979; Mobley, Griffeth, Hand & Meglino, 1979) suggest that perceived alternative job opportunities positively predict turnover intentions. Perceived alternative job opportunities were measured by rating “I have a great deal of opportunities available for me”. This scale was used and validated by previous research (i.e., Kirschenbaum & Weisberg, 2002).

**Translation.** All translators (outside of research team) were native Chinese speakers who were fluent in English. The entire questionnaire, including the items, the introduction, and instructions, was double translated, first into Chinese and then back into English. The back translation process (Brislin, 1980) minimizes the systematic error due to the translation mechanism, and thus further ensures construct validity of the measures.

### Analyses

Using the Kolmogorov-Smirnov test, we tested the data and confirmed normal distribution, although the bootstrapping method for mediation analysis does not require normal distribution of data (Preacher & Hays, 2008). The potential problem of common method variance might be present when both independent and dependent variable measures come from the same source (Campbell & Fiske 1959). Consistent with recent research (e.g. McFarlin & Sweeney, 1992; Vandenberg & Scarpello, 1990), this study used Harman’s Single Factor procedure to address the issue of common method variance (Podsakoff & Organ, 1986; Podsakoff et al., 2003). An unrotated principal components factor analysis identified four factors with eigenvalues greater than one, explaining 69% of the total variance. Only the turnover intentions loaded on the first factor, which accounted for 36% of the variance. Thus, the threat of a single factor accounting for a majority of the variance in the data has been dealt with cautiously.

Indirect effects are generally very important in the sense that mediator variables are to explain the relation between a predictor and a criterion; mediators should explain why such an effect might occur (Baron & Kenny, 1986). In its simplest form, mediation analysis attempts to answer questions of how or by what means an independent variable exerts its effect on a dependent variable. However, it is rarely the case that effects can be attributed completely to a single intervening variable. Effects are usually transmitted from cause to outcome via multiple pathways and examining multiple mediators has the potential to improve scientific practice in a number of ways (Preacher & Hayes, 2008).

First, simultaneously including multiple mediators “purifies” indirect effects by controlling for all the other mediators. Second, investigating several indirect effects simultaneously, rather than in a series of single-mediator models, reduces the *alpha* inflation that inevitably accompanies multiple hypothesis tests. The omitted variable problem may lead to biased parameter estimates if multiple mediation hypotheses are tested with a set of simple mediator models (Judd & Kenny, 1981). Therefore, in this study we adopted the multiple-mediation approach to test two theoretically relevant mediators: job satisfaction and job stress.

This paper uses the bootstrapping/resampling method to test the multiple mediation hypotheses. Several approaches have been suggested for assessing total and specific indirect effects in multiple mediator models, among which the bootstrapping method has been argued as a superior approach, especially for testing multiple mediations. As Preacher & Hays (2006) are advocating, the primary advantage of bootstrapping is that no assumptions about the shape of the

sampling distribution of the indirect effect or its constituent paths are made. All bootstrapping requires a justifiable belief that the distributions of the measured variables in the sample closely approximate the population distributions. Moreover, MacKinnon et al. (2004) compared bootstrapping to the traditional product of coefficients approach in a large-scale simulation study and found that bootstrapping provided more accurate Type I error rates and greater power for detecting indirect effects than the product of coefficients strategy and other competing methods. This study used the “superior” method of bootstrapping for mediation analysis as suggested by Preacher & Hays (2006).

## Results

Hypotheses 1 and 2 are both supported (Table 2). Quality of LMX is positively associated with job satisfaction ( $p < .01$ ), Higher quality LMX leads to higher job satisfaction; lower quality LMX leads to lower job satisfaction. Quality of LMX is negatively associated with job stress ( $p < .01$ ). Low quality LMX leads to higher job stress. And higher quality LMX leads to lower job stress.

Table 1: *Intercorrelations among variables*

Variables	1	2	3	4
1. Turnover intention	(0.700)			
2. LMX	-.201(**)	(0.792)		
3. Job satisfaction	-.417 (**)	.545(**)	(0.700 )	
4. Job stress	.136 (**)	-.161(**)	-.318(**)	(0.87)
5. Alt. job opportunities	.2300 (*)	.1210	-.1421	-.126

N = 548. Reliabilities are in parentheses.

\*  $p < 0.05$ , \*\*  $p < 0.01$

The direct effects are the influences of one variable on another that are not mediated by any other variable, while indirect effects are those that are mediated by at least one other variable. The total effects are the sum of the direct and indirect effects. The difference between the total and direct effects is the total indirect effect through the mediators. The indirect and total effects can help to answer important questions that are not addressed by examining the direct effects (Bollen, 1989 p.376). The bootstrap estimates presented here are based on 5,000 bootstrap samples. Table 3 presents the indirect, direct, and total effects of each construct. As can be seen in the appendix, the total and direct effects of LMX on turnover intention are  $-0.1767$  where  $p < 0.00$ , and  $.0258$  where  $p < .5743$ , respectively. The difference between the total and direct effect is the total indirect effect through the two mediators, with a point estimate (see Table 2) of  $.1074$  and a 95% BC bootstrap CI of  $-.2548$  to  $-.1561$ , upon which we can claim that the direct relation between LMX and turnover intention became insignificant. The interpretation of these results is that, taken as a set, job satisfaction and job stress mediate the effect of LMX on turnover intention. An examination of the specific indirect effects indicates that only job satisfaction is a mediator, as its 90 percent CI does not contain zero. We can conclude that job stress fails to act as a mediator on the linkage from LMX to turnover intention. Job stress does not contribute to the indirect effect above and beyond job satisfaction. That is, job satisfaction fully mediates the relation between LMX and turnover intention. Therefore, leader-member

exchange affects employees' turnover intentions through its effects on employee's job satisfaction. The model that identifies the result is depicted in Figure 2.

Figure 2: *Confirmed model with job satisfaction fully mediating the linkage from LMX to turnover intention*

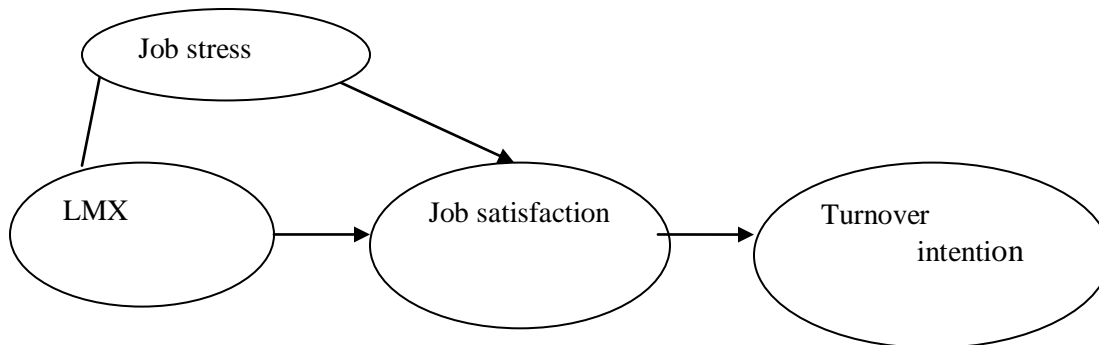


Table 2: *Results of testing different paths*

LMX to Mediators

	Coeff	se	t	p
stress	-.7141	.2193	-3.2560	.0012
jdiall	.5924	.0416	14.2253	.0000

Direct Effects of Mediators on DV

	Coeff	se	t	p
stress	.0110	.0080	1.3806	.1680
jdiall	-.3285	.0420	-7.8286	.0000

Total Effect of IV on DV

	Coeff	se	t	p
LMX	-.1767	.0417	-4.2355	.0000

Direct Effect of IV on DV

	Coeff	se	t	p
LMX	.0258	.0459	.5621	.5743

Partial Effect of Control Variables on DV

	Coeff	se	t	p
age	-.0198	.0228	-.8678	.3859
tenure	-.0174	.0045	-3.8749	.0001
marital	-.0135	.0644	-.2101	.8336
Alternativejob opportunity	-.0200	.0721	-.1231	.0600

## Fit Statistics for DV Model

R-sq	Adj R-sq	F	df1	df2	p
.2287	.2202	26.7398	6.0000	541.0000	.0000

Table 3: *Bootstrapped Confidence Intervals for the Total and Specific Indirect Effects*

	Percentile 90 % CI		BC 95 % CI	
	Lower	Upper	Lower	Upper
Stress	-.0197	.0025	-.0213	.0010
Jdiall	-.2492	-.1467	-.2482	-.1465
Total	-.2545	-.1556	-.2548	-.1561

Note: BC=biased corrected; 5000 bootstrap samples.

Table 4: *Bootstrap results for indirect effects.*

## Indirect Effects of IV on DV through Proposed Mediators (ab paths)

	Data	Boot	Bias	SE
TOTAL	-.2025	-.2033	-.0009	.0301
Stress	-.0079	-.0076	.0002	.0067
JobSat.	-.1946	-.1957	-.0011	.0309
C1	.1868	.1881	.0013	.0331

According to Preacher and Hays (2008), interpretation of the mediation analysis using the bootstrapping method does not focus at all on the statistical significance of the job satisfaction and job stress paths, as is required using the causal steps method. “Instead, emphasis is placed almost entirely on the direction and size of the effects. Because interpretation is based on substantially fewer inferential tests, in theory, decision errors are less likely; that is, power is enhanced and the probability of encountering a Type I error is reduced” (Preacher & Hays, 2006).

## Discussion

### Theoretical implications

This paper is concerned with whether LMX predicts turnover intentions in a Chinese context, if so, through what dynamic this relation is established. Job satisfaction and job stress are hypothesized to act as mediators to transfer LMX to turnover intentions. The bootstrapping analysis results revealed interesting results which include that job satisfaction fully mediates the linkage (even after controlling for perceived alternative job opportunities), and job stress fails to act as a mediator on the path from LMX to turnover intention. The current study provides several theoretical and practical implications.

Theoretically, this study addressed a need for researchers to evaluate competing theories about what intervening variables are better able to explain the process of LMX predicting turnover intention. It sheds light on underlying reasons for the relation between LMX and turnover intention by extending current research to further examine both job satisfaction and job stress and their mediating effects on the linkage. If an indirect effect does not receive proper attention, the linkage between two variables of interest may not be fully considered (Raykov & Marcoulides, 2000). Given the fact that prior research mainly examined the direct effect of LMX on turnover intentions, the current study can serve as a next step toward gaining a better understanding of how LMX can be related to intentions of turnover of subordinates, by incorporating potentially important mediating variables into the overall leadership process.

Another significant contribution of this study is that it introduces an innovative method of detecting mediation paths into management literature. Several approaches have been suggested for assessing indirect effects in multiple mediator models: the causal steps criteria (Barron & Kenny, 1986; Judd & Kenny, 1981), elaborations of the product of coefficients strategy (Sobel, 1982) and resampling methods. Causal steps and product of coefficients strategy have received many criticisms (Preacher & Hays, 2008). The criticisms include the following. First of all, they do not directly address the central question of mediation. They do not consider the estimate of the indirect effect, nor is there a standard error for this effect that permits direct investigation of statistical significance (Preacher & Hays, 2008). Instead, the conclusion of mediation must be drawn by jointly considering the results from disparate analyses, none of which directly addresses the hypothesis of interest. Secondly, the causal steps approach often is not powerful enough (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Besides the arguments that bootstrapping methods overcome these limitations of the traditional methods, bootstrapping does not make assumptions about sampling distributions, such as normality. MacKinnon et al. (2004) empirically compared bootstrapping to the traditional product of coefficients approach in a large-scale simulation study and found that bootstrapping provided more accurate Type I error rates and greater power than the product of coefficients strategy and other competing methods. This paper has some methodological contribution by serving as a good example executing bootstrapping as a “superior” (Preacher & Hays, 2006) approach to mediation analysis.

### **Practical implications**

The current research has implications for management. First, it draws managers' attention to the influences of LMX as sources of turnover intentions either directly or indirectly via job satisfaction. This recognition of job satisfaction as a mediator would presumably enhance managers' ability to develop the appropriate strategies to combat the influences of bad LMX on turnover intentions. An interesting implication could be that, besides focusing on enhancing LMX, all precursors of higher job satisfaction should receive more attention in order to reduce turnover intention. For instance, research indicates that employee job satisfaction results from individual organizational identification, feelings of being individually challenged, and experiencing open and effective communication (Herzberg et al., 1959; Randolph & Johnson, 2005).

This study is set in a Chinese context, where exchange relationships between employees and supervisors tend to be more emphasized due to the heightened importance of social relationships in Chinese culture. In addition, to the best of my knowledge, there has not been any study conducted in China addressing the linkage between LMX and turnover intention. It is well

worth investigating, particularly because both foreign and local Chinese companies are concerned about the turnover of well-qualified employees (Chiu, et al 2003). Investigation in a Chinese context might also be important because different patterns of relationships might be observed due to Chinese relational culture and employees' relationship-oriented mindset (Hwang, 1987).

### **Limitations and future research**

Overall, the contributions of this research should be viewed in light of several limitations. First, the data for this study were gathered at one point of time, and circular causality is possible; therefore, no inferences of causality can be conclusively established, nor can we discount the possibility of reverse causality.

This study was conducted with a Chinese sample; it is cross-cultural in nature because all the established scales were developed in the US and in the English language. The equivalence of the psychological meaning of the items of the questionnaires, and hence the comparability of the constructs in the different cultural samples has been the biggest methodological concern in cross-cultural research (Little 1997). This is a legitimate and relevant concern for the study. One way to ensure equivalence of meanings of the questions developed in the Western societies and those in Chinese is to conduct Simultaneous Factor Analysis in Several Populations (SIFASP) (Joreskog & Sorbom, 1993). SIFASP is the procedure to test the assumption that factor loadings are equivalent across different samples, and then additionally to test that the slopes in the regression of indicators on their latent factors are equivalent across samples by fitting progressively constrained models to multi-sample data (Robert, et al, 2000). This procedure was not conducted because of the lack of a sample from the West. Future study can validate and confirm these results with samples from a variety of sources.

Wasti (2003) has suggested that satisfaction with relations at the workplace does not predict commitment for employees with individualistic values, whereas for individuals who endorse collectivist values, good relationships with supervisors are an important determinant of organizational attachment and an impediment to quitting. This is an intriguing cultural perspective as it implies that in contrast to the North American literature, which has typically treated side-bets as consisting of material or monetary investment in the organization (Cohen & Lowenberg, 1990), there may be culture-specific side-bets that are considered to be more important obstacles to quitting (Wasti, 2003).

As suggested by some researchers (e.g., Liden, et al., 1997), searching for moderators could further clarify the problem. Although this study made a significant contribution by clarifying the inconsistency of findings on the relation between LMX and turnover intention by discovering a full mediation path (job satisfaction), future research can further examine relevant and theory-based moderators.

---

### **About the Authors:**

Shuhong Wang, Ph.D., serves as an assistant professor in the Department of Management in the College of Business and Economics at Radford University in Virginia, USA. Her research interests are creativity at workplace, leadership and idiosyncratic employment arrangements. Email: Shuwang@radford.edu

Xiang Yi, Ph.D. is an associate professor of human resource management at the Department of Management, Western Illinois University. She received her Ph.D. from the University of Illinois at Urbana-Champaign and Bachelor's degree from Peking University, China. Her research interests include international HR/OB, leadership, creativity, cross-cultural analysis, and careers. She has published in journals like *Journal of International Business Studies*, *Journal of Business Venturing*, and *Journal of Applied Behavioral Science*, among others.  
Email: x-yi@wiu.edu

---

### References

- Ahlstrom, D., Foley, S., Young, M. N., & Chan, E. S. (2005). Human resource strategies in post-WTO China. *Thunderbird International Business Review*, *47*, 263–285.
- Ansari, M. A., Kee, D. M. H., & Aafaqi, R. (2007a). Leader-member exchange and attitudinal outcomes: Role of procedural justice climate. *Leadership & Organizations Development Journal*, *28*, 690-709.
- Ansari, M. A., Lee, B. B., & Aafaqi, R. (2007b). Leader-member exchange and work outcomes: The mediating role of perceived delegation in the Malaysian business context. Paper presented at the annual meeting of the Academy of Management, Philadelphia, PA.
- Bahl, K. T., Gulati, N., & Ansari, M. A. (2009). Leader-member exchange and subordinate outcomes: Test of a mediation model. *Leadership & Organization Development Journal*, *30*(2), 106-122.
- 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*(6), 1173-82.
- Bass, B. M. (1990). *Handbook of leadership: Theory, research, and managerial allocations* (3rd ed.). New York: Free Press.
- Bauer, T. N., Erdogan, B., Liden, R. C., & Wayne, S. (2006). A longitudinal study of the moderating role of extraversion: Leader-member exchange, performance, and turnover during new executive development. *Journal of Applied Psychology*, *91*(2), 298–310.
- Bluedorn, A. C. (1982). A unified model of turnover from organizations. *Human Relations*, *35*, 135-153.
- Bolger, N., DeLongis, A., Kessler, R. C., & Schilling, E. A. (1989). Effects of daily stress on negative mood. *Journal of Personality and Social Psychology*, *57*, 808–818.
- Bollen, K. A. (1989). *Structural equations with latent variables*. New York: John Wiley & Sons.
- Brayfield, A. H., & Rothe, H. F. (1951). An index of job satisfaction. *Journal of Applied Psychology*, *35*, 307-311.
- Breukelen, W. V., Vlist, R. V., & Steensma, H. (2004). Voluntary employee turnover: Combining variables from the 'traditional' turnover literature with the theory of planned behavior. *Journal of Organizational Behavior*, *25*, 893–914.
- Brotheridge, C. M., & Grandey, A. A. (2002). Emotional labor and burnout: Comparing two perspectives of "people work." *Journal of Vocational Behavior*, *60*, 17–39.
- Bruk-Lee, V., & Specter, P. (2006). The social stressors-counterproductive work behaviors link: Are conflicts with supervisors and coworkers the same? *Journal of Occupational Health Psychology*, *11*(2), 145–156.

- Carsten, J. M., & Spector, P. E. (1987). Unemployment, job satisfaction, and employee turnover: A meta-analytic test of the Muchinsky model. *Journal of Applied Psychology, 76*, 199-212.
- Cascio, W. F. (2003). *Managing human resources: Productivity, quality of life, profits* (6th ed.). New York, McGraw-Hill.
- Chen, Z. X. (2000). Employee demography, organizational commitment, and turnover intentions in China: Do cultural differences matter? *Human Relations, 53*(6), 869-887.
- Chiu, R., & Francesco, A. M. (2003). Dispositional traits and turnover intention: Examining the mediating role of job satisfaction and affective commitment. *International Journal of Manpower, 24*(3), 284-301.
- Cohen, A., & Lowenberg, G. (1990). A re-examination of the side-bet theory as applied to organization commitment: A meta-analysis. *Human Relations, 43*, 1015-1050.
- Cotton, J. L., & Tuttle, J. M. (1986). Employee turnover: A meta-analysis and review with implications for research. *Academy of Management Review, 11*, 55-70.
- Dansereau, F., Graen, G., & Haga, W. J. (1975). A vertical dyad approach to leadership within formal organizations. *Organizational Behavior and Human Performance, 13*, 46-78.
- DeFrank, R. S., & Ivancevich, J. M. (1998). Stress on the job: An executive update. *Academy of Management Executive, 12*, 55-66.
- Dickter, D. N., Roznowski, M., & Harrison, D. A. (1996). Temporal tempering: An event history analysis of the process of voluntary turnovers. *Journal of Applied Psychology, 81*, 705-716.
- Dreher, G. F., & Dougherty, T. W. (1980). Turnover and competition for expected job openings: An exploratory analysis. *Academy of Management Journal, 23*, 766-772.
- Edwards, J. R. (1992). A cybernetic theory of stress, coping, and well-being in organizations. *Academy of Management Review, 17*, 238-274.
- Edwards, J. R., & Cooper, C. L. (1991). The person-environment fit approach to stress: Recurring problems and some suggested solutions. *Journal of Organizational Behavior, 11*, 293-307.
- Erdogen, B., Liden, R. C., & Kraimer, M. L. (2006). Justice and leader-member exchange: The moderating role of organizational culture. *Academy of Management Journal, 49*, 395-406.
- French, J. R. P., Jr., Rodgers, W. L., & Cobb, S. (1974). Adjustment as person-environment fit. In G. Coelho, D. Hamgurg, & J. Adamas (Eds.), *Coping and Adaptation* (pp. 316-333). New York: Basic Books.
- Frone, M. R. (2000). Interpersonal conflict at work and psychological outcomes: Testing a model among young workers. *Journal of Occupational Health Psychology, 5*, 246-255.
- Ganster, D. C., & Schaubroeck, J. (1991). Work stress and employee health. *Journal of Management, 17*, 235-271.
- Gerstner, C. R., & Day, D. V. (1997). Meta-analytic review of leader-member exchange theory: Correlates and construct issues. *Journal of Applied Psychology, 82*(6), 827-844.
- Graen, G. B., Liden, R. C., & Hoel, W. (1982). Role of leadership in the employee withdrawal process. *Journal of Applied Psychology, 67*(6), 868-872.
- Graen, G. B., Novak, M. A., & Sommerkamp, P. (1982). The effects of leader-member exchange and job design on productivity and satisfaction: Testing a dual attachment model. *Organizational Behavior and Human Performance, 30*, 109-131.



- Graen, G. B., Wakabayashi, M., Graen, M. R., & Graen, M. G. (1990). International generalizability of American hypotheses about Japanese management progress: A strong inference investigation. *Leadership Quarterly*, 1(1), 1-23.
- Griffeth, R. W., & Hom, P. W. (2001). *Retaining valued employees*. Thousand Oaks, CA: Sage.
- Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the new millennium. *Journal of Management*, 26(3), 463-88.
- Hahn, S. E. (2000). The effects of locus of control on daily exposure, coping and reactivity to work interpersonal stressors: A diary study. *Personality and Individual Differences*, 29, 729-748.
- Hanisch, K. A., & Hulin, C. L. (1990). Job attitudes and organizational withdrawal: An examination of retirement and other voluntary withdrawal behaviors. *Journal of Vocational Behavior*, 37, 60-78.
- Hanisch, K. A., & Hulin, C. L. (1991). General attitudes and organizational withdrawal: An evaluation of a causal model. *Journal of Vocational Behavior*, 39, 110-128.
- Harris, K. J., & Kacmar K. M. (2006). Too much of a good thing: The curvilinear effect of leader-member exchange on stress. *The Journal of Social Psychology*, 146(1), 65-85.
- Harris, J. K., Kacmar, K. M., & Witt, A. L. (2005). An examination of the curvilinear relationship between leader-member exchange and intent to turnover. *Journal of Organizational Behavior*, 26, 363-378.
- Hom, P. W., Carnikas-Walker, F., Prussia, G. E., & Griffeth, R. W. (1992.) A meta-analytical structural equations analysis of a model of employee turnover. *Journal of Applied Psychology*, 77, 890-909.
- Hom, P. W., & Griffeth, R. W. (1995). *Employee turnover*. Cincinnati, OH: South/Western.
- Hui, C., Wong, A., & Tjosvold, D. (2007). Turnover intention and performance in China: The role of positive affectivity, Chinese values, perceived organizational support and constructive controversy. *Journal of Occupational and Organizational Psychology*, 80(4), 735-351.
- Hwang, K. K. (1987). Face and favor: The Chinese power game. *American Journal of Sociology*, 92, 944-74.
- Irvine, D. M., & Evans, M. G. (1995). Job satisfaction and turnover among nurses: Integrating research finding across studies. *Nursing Research*, 44, 246-253.
- Jex, S. M., & Beehr, T. A. (1991). Emerging theoretical and methodological issues in the study of work-related stress. *Research in Personnel and Human Resources Management*, 9, 311-365.
- Judd, C. M., & Kenny, D. A. (1981). Process analysis: Estimating mediation in treatment evaluations. *Evaluation Review*, 5, 602-619.
- Kanungo, R. N. (1982). *Work alienation*. New York: Praeger.
- Keenan, A., & Newton, T. J. (1985). Stressful events, stressors and psychological strains in young professional engineers. *Journal of Occupational Behavior*, 6, 151-156.
- Kim, S., Price, J. L., Mueller, C. W., & Watson, T. W. (1996.) The determinants of career intent among physicians at a U.S. Air Force hospital. *Human Relations*, 49(7). 947-976.
- Kirschenbaum, A., & Weisberg, J. (2002). Employee's turnover intentions and job destination choices. *Journal of Organizational Behavior*, 23(1), 109-125.

- Kraimer, M. L., Wayne, S. J., & Jaworski, R. A. (2001). Sources of support and expatriate performance: The mediating role of expatriate adjustment, *Personnel Psychology*, *54*, 71–79.
- Lee, T. W., Mitchell, T. R., Holtom, B. C., McDaniel, L. S., & Hill, J. W. (1999). The unfolding model of voluntary turnover: A replication and extension. *Academy of Management Journal*, *42*, 450-462.
- Levinson, H. (1980). Power, leadership, and the management of stress. *Professional Psychology*, *11*, 497-508.
- 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., & Mitchell, T. R. (1988). Ingratiation behaviors in organizational settings. *Academy of Management Review*, *13*, 572–587.
- Liden, R. C., Sparrowe, R. T., & Wayne, S. J. (1997). Leader-member exchange theory: The past and potential for the future. In G. R. Ferris (Ed.), *Research in Personnel and Human Resource Management* (pp. 47–120). Greenwich, CT: JAI Press.
- Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of Industrial and Organizational Psychology* (pp. 1293-1349). Chicago: Rand McNally.
- Lucas, M. D., Atwood, J. R., & Haganan, R. (1993). Replication and validation of anticipated turnover model for urban registered nurses. *Nursing Research*, *24*, 29-41.
- MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, *7*, 83-104.
- Maertz, C. P., & Griffith, R. W. (2004). Eight motivational forces and voluntary turnover: A theoretical synthesis with implications for research. *Journal of Management*, *30*, 667-683.
- Martin, T. N. (1979). A contextual model of employee turnover intentions. *The Academy of Management Journal*, *22*(2), 313-324.
- Maslyn, J. M., & Uhl-Bien, M. (2001). Leader-member exchange and its dimensions: Effects of self-effort and other's effort on relationship quality. *Journal of Applied Psychology*, *86*, 697–708.
- Mayes, B. T., & Ganster, D. C. (1988). Exit and voice: A test of hypotheses based on fight/flight responses to job stress. *Journal of Organizational Behavior*, *9*, 199–216.
- Mobley, W. H., Griffeth, R.W., Hand, H. H., & Meglino, B. M. (1979). Review and conceptual analysis of the employee turnover process. *Psychological Bulletin*, *86*, 493-522.
- Morrow, P. C., Suzuki, Y., Crum, M. R., Ruben, R., & Pautsch, G. (2005). The role of leader-member exchange in high turnover work environments. *Journal of Managerial Psychology*, *20*(8), 681-695.
- Mowday, R. T., Porter, L. W., & Steers, R. M. (1982). *Employee-organization linkages*. New York: Academic Press.
- Narayanan, L., Menon, S., & Spector, P. E. (1999). Stress in the workplace: A comparison of gender and occupations. *Journal of Organizational Behavior*, *20*, 63–73.
- Nelson, D., Basil, R., & Purdie, R. (1998). An examination of exchange quality and work stressors in leader-follower dyads. *International Journal of Stress Management*, *5*(2), 103-112.

- O'Connell, M., & Kung, M. C. (2007). The cost of employee turnover. *Industry Management*, 49, 14-19.
- O'Driscoll, M. P., & Beehr, T. A. (1994). Supervisor behaviors, role stressors and uncertainty as predictors of personal outcomes for subordinates. *Journal of Organizational Behavior*, 15, 141-155.
- Pooyan, A., Eberhardt, B. J., & Szigeti, E. (1990). Work-related variables and turnover intention among registered nurses. *Nursing & Health Care*, 11, 254-258.
- Preacher, K., & Hayes, A. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in simple and multiple mediator models. *Behavior Research Methods*, 40(3), 879-891.
- Raykov, T., & Marcoulides, G. A. (2000). A method for comparing completely standardized solutions in multiple groups. *Structural Equation Modeling*, 7, 292-308.
- Scandura, T. A., & Schriesheim, C. A. (1994). Leader-member exchange and supervisor career mentoring as complementary concepts in leadership research. *Academy of Management Journal*, 37, 1588-1602.
- Schriesheim, C. A., Castro, S. L., & Coglisier, C. C. (1999). Leader-member exchange (LMX) research: A comprehensive review of theory, measurement, and data-analytic practices. *The Leadership Quarterly*, 10, 63-113.
- Slovan, M. (2007). Chinese puzzle. *People Management*, 13(1), 40-43.
- Smith, P. C., Kendall, L. M., & Hulin, C. L. (1985). *The revised job descriptive index*. Chicago: Rand McNally.
- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 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.
- Sparrowe, R. T., & Liden, R. C. (1997). Process and structure in leader-members exchange. *Academy of Management Review*, 22(2), 522-552.
- Steel, R. P., & Ovalle, N. K. (1984). A review and meta-analysis of research on the relationship between behavioral intentions and employee turnover. *Journal of Applied Psychology*, 69(4), 673-86.
- Stringer, L. (2006). The link between the quality of the supervisor-employee relationship and the level of the employee's job satisfaction. *Public Organizational Review*, 6, 125-142.
- Susskind, A. M., Borchgrevink, C. P., Kacmar, K. M., & Brymer, R. A. (2000). Customer service employees' behavioral intentions and attitudes: An examination of construct validity and a path model. *International Journal of Hospitality Management*, 19(1), 53-77.
- Testa, M. R. (2009). National culture, leadership and citizenship: Implications for cross-cultural management. *International Journal of Hospitality Management*, 28(1), 78-85.
- Tett, R. P., & Meyer, J. P. (1993). Job satisfaction, organizational commitment, turnover intention, and turnover: Path analysis based on meta-analytic findings. *Personnel Psychology*, 46, 259-293.
- Trevor, C. O. (2001). Interactions among actual ease-of-movement determinants and job satisfaction in the prediction of voluntary turnover. *Academy of Management Journal*, 44(4), 621-638.
- Van Dam, K. (2008). Time frames for leaving: An exploration study of employees' intentions to leave the organization in the future. *Career Development International*, 13(6), 560-571.

- Vecchio, R. P. (1985). Predicting employee's turnover from leader-member exchange: A failure to replicate. *Academy of management Journal*, 28, 478-485.
- 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.
- Wakabayashi, M., & Graen, G. B. (1984). The Japanese career progress study: A 7-year follow-up. *Journal of Applied Psychology*, 69, 603-614.
- Wakabayashi, M., Graen, G., Graen, M., & Graen, M. (1988). Japanese management progress: Mobility into middle management. *Journal of Applied Psychology*, 73, 217-227.
- Wang, H., Law, K. S., Wang, D. X., & Chen, Z. X. (2005). Leader-member exchange as a mediator of the relationship between transformational leadership and followers' performance and organizational citizenship behavior. *Academy of Management Journal*, 48(3), 420-432.
- Wasti, S. A. (2003). The influence of cultural values on antecedents of organizational commitment: An individual-level analysis. *Applied psychology: An International Review*, 52(4), 533-554.
- Wilhelm, C. C., Herd, A. M., & Steiner, D. D. (1993) Attributional conflict between managers and subordinates: An investigation of leader-member exchange effects. *Journal of organizational behavior*, 14, 531-544.
- Williams, L. J., & Hazer, J. T. (1986). Antecedents and consequences of satisfaction and commitment in turnover models: A reanalysis using latent variable structural equation methods. *Journal of Applied Psychology*, 71(2), 219-231.
- Wright, T. A., & Bonett, D. G. (2007). Job satisfaction and psychological well-being as nonadditive predictors of workplace turnover. *Journal of Management*, 33(2), 141-160.
- Zhu, J., Thomson, B., & Cieri, H. D. (2008). A retrospective and prospective analysis of HRM research in Chinese firms: Implications and directions for future study. *Human Resource Management*, 47, 133-156.