

THE QUALITY OF LEADER MEMBER EXCHANGE AND IN-ROLE
PERFORMANCE: TEST OF THE MEDIATING AFFECTS OF TRUST,
EMPOWERMENT, AND SATISFACTION WITH THE LEADER

By

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ABSTRACT

This study looked at the relationship between Leader-Member Exchange (LMX) quality and in-role performance. Trust, satisfaction with leader, and empowerment were looked at as possible mediators of the relationship between LMX quality and in-role performance. This was investigated using a regression analysis and three multiple regression analyses. Participants participated in this study if they worked full-time for six months under the same leader. The results revealed that there was a significant relationship between LMX quality and in-role performance. It was also found that two mediators significantly mediated the relationship between LMX quality and in-role performance. Satisfaction with leader partially mediated the relationship between LMX quality and in-role performance, while trust fully mediated the relationship. Empowerment increased the relationship between LMX quality and in-role performance, but have a non-significant relationship between empowerment and in-role performance.

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CHAPTER I: LITERATURE REVIEW

Leadership has been studied in a variety of aspects throughout the last century. One of those theories is Leader Member Exchange theory (LMX). Researchers began looking for a type of leadership that focused not only on the leader or the subordinate, but on the relationship between the two (Danseraeu, Graen & Haga, 1975; Liden & Graen, 1980; Northouse, 2000). This study will look at in-role performance as an outcome of the LMX relationship (see Figure 1). While there may be a direct relationship between the LMX theory and in-role performance, Martin, Guillaume, Thomas, Lee, & Epitropaki (2016) said that there are mediators between the LMX relationship and in-role performance. This study will look at trust, satisfaction with the leader, and empowerment as mediators of the LMX relationship and in-role performance (see Figures 2, 3, and 4).

Figure 1

Relationship between leader-member exchange quality of relationship and in-role performance

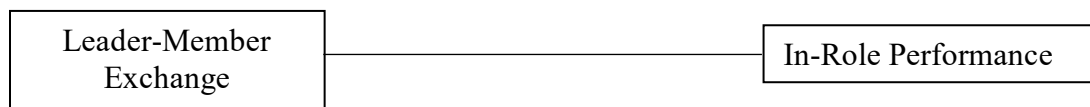


Figure 2

Trust as a mediator of the relationship between leader-member exchange quality of relationship and in-role performance

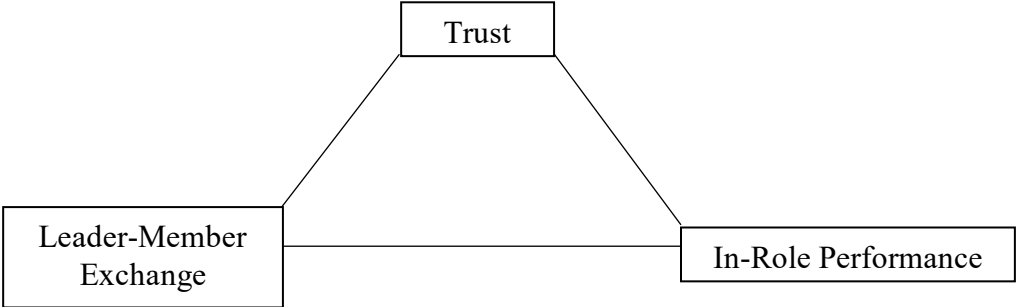


Figure 3

Empowerment as a mediator of the relationship between leader-member exchange quality of relationship and in-role performance

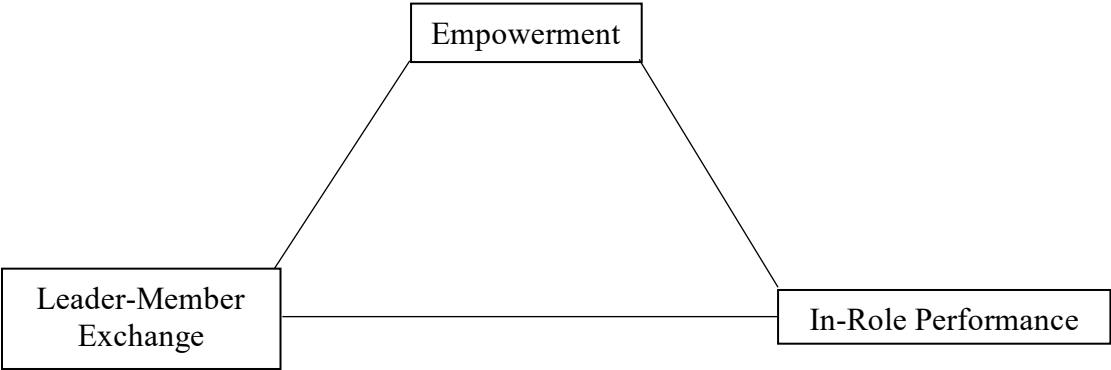
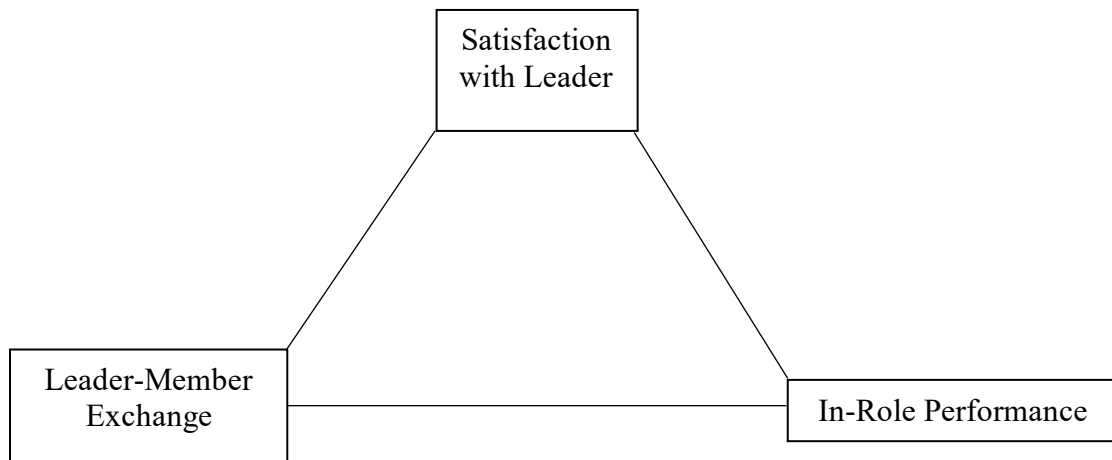


Figure 4

Satisfaction with leader as a mediator of the relationship between leader-member exchange quality of relationship and in-role performance



Leader Member Exchange Theory – Background

Vertical Dyad Linkage. LMX theory began in the mid 1970's (Danseraeu et al., 1975; Liden & Graen, 1980; Northouse, 2000) and was known as Vertical Dyad Linkage Theory (VDL). VDL theory was one of the first theories to look at a dyadic relationship when looking at leadership, and not just from the individual perspectives of the leader or the subordinate. VDL theory suggested that leaders should change the way they deal with subordinates based upon what the subordinate needs (Pearce & Conger, 2003). Before this time, most theories suggested that one style of leadership fit all subordinates. The assumptions that all subordinates who report to the same leader need the same style of leadership, and that leaders act the same to each subordinate, was challenged by Danseraeu et al. (1975) when he proposed VDL theory. The researchers proposed that each leader has a different relationship with each of their subordinates. This relationship is what they called a vertical dyad relationship. They said that vertical dyadic

relationships are all different and may need drastically different styles of leadership between each dyad.

In addition to identifying that dyads may be different, researchers also found that there may be in-groups and out-groups (Danseraeu et al., 1975). Researchers defined in-groups as a close relationship between the leader and subordinate that is less formal and more interactive. Out-groups were defined as formal relationships between a leader and subordinate. Out-groups focused more on transactional interactions and less on the informal, friendly interactions. VDL theory focused on the difference between in-group and out-group interactions. Northouse (2000) suggested that the dyadic relationship was not only about in-group or out-groups, but also the mutual interaction of the leader and subordinate in the relationship and how those interactions led to different levels of productivity within an organization. While VDL theory was useful, it focused on the dyadic relationship of leaders and subordinates. It was later expanded to focus on the interaction between leaders and subordinates and the quality of that relationship (Graen & Uhl-Bien, 1991; Graen & Uhl-Bien, 1995; Liden, Wayne & Stillwell, 1993). This expanded theory was named Leader-Member Exchange Theory (LMX).

Leader-Member Exchange Theory (LMX). Graen and Uhl-Bien (1995) explained that effective leadership consists of three domains. There is the leader domain, which is a more traditional approach, looking at the characteristics, traits, and actions of the leader alone. There is the follower domain that looks at characteristics of the follower and their response to the environment around them. The third domain is the interaction

between the leader and the subordinate and the resulting quality of the dyadic relationship.

The interaction between leaders and subordinates affects much more than just their dyadic interaction (Graen & Uhl-Bien, 1991; Graen & Uhl-Bien, 1995; Liden, Wayne & Stillwell, 1993). Instead of focusing only on in-group and out-group dynamics, as in VDL theory, researchers began focusing on the quality of the dyadic relationship and how that contributes to organizational effectiveness. Graen & Uhl-Bien (1995) said that the move from an in-group/out-group perspective to a focus on the level of the quality of the relationship moves the research and subsequent results to focus on the possible partnership and outcomes of the dyadic relationship. This shift in thinking led to the development of Leader Member Exchange Theory (LMX) (Graen & Uhl-Bien, 1995). Graen & Uhl-Bien (1995) said that a significant difference between the original VDL theory and the change to the LMX theory is that in VDL leaders treat subordinates different based on the dyadic relationship they have with each follower, while in LMX theory leaders offer the same relationship to all subordinates. After the possibility for a high-quality relationship is offered to a subordinate, subordinates are able to choose whether to pursue a high-quality relationship with the leader or continue in a low-quality, transactional relationship. The resulting quality of the relationship between leaders and subordinates may lead to a variety of organizational outcomes (Graen & Uhl-Bien, 1991; Graen & Uhl-Bien, 1995; Liden, Wayne & Stillwell, 1993). While the leader offering the same relationship to all subordinates is the ideal, it does not seem likely that all leaders will offer the same relationship to all subordinates. Graen and Uhl-Bien (1995) go on to

say that leaders need to be trained to offer the same possibility to develop a high-quality relationship to all subordinates. However, it seems unlikely that even with training, all leaders would offer the exact opportunity to each of their subordinates. The possibility of unequal offers from the leader to his or her subordinates and the consequences of that inequality, was not explored by Graen and Uhl-Bien (1995).

Graen & Uhl-Bien (1991) suggested that performance outcomes may be a result of the quality of relationship between the subordinate and the leader. They proposed that the best outcome “occurs when leaders develop mature leadership relationships with their followers” (Graen & Uhl-Bien, p. 29). Graen and Uhl-Bien (1991) defined this as a “high LMX” relationship. A high-LMX relationship is “more social in nature involving mutual respect, affect, support and loyalty, and felt obligation” (Martin et al., 2016, p. 71). Formal relationships are the interactions that take place in the workplace. Usually, formal relationships are when a leader leads and the subordinate follows directions and defers to the leader for guidance or feedback. However, informal relationship interactions can take place in or out of the workplace. In a high-quality LMX relationship, the leader and subordinate not only work together in a formal capacity, but they like, respect, and trust the other person in the dyadic relationship (Graen & Uhl-Bien, 1991; Martin, et al. 2016).

While a high-quality LMX relationship is the ideal type of relationship quality, it is not always possible or preferred by all subordinates. The opposite of high-quality LMX relationships are low-quality LMX relationships (Graen & Uhl-Bien, 1991; Martin et al., 2016). Low-quality LMX relationships are characterized by “a low-quality and weak exchange, based on more formal and contractual relationship emphasizing economic

exchanges, compliance and self-interest” (Choy, McCormack & Djurkovic, 2016, p. 6). In low-quality relationships, the interactions between leaders and subordinates are more limited to the leader telling the subordinate what to do or how to complete a task (Choy et al., 2016; Graen, 2003). Subordinates in low-quality relationships normally only do what is in their job description and do not participate in organizational citizenship behaviors (OCB). Spector (1997, p. 57) defines OCB’s as “behavior by an employee intended to help coworkers or the organization.” The lack of organizational citizenship behaviors from subordinates may lead to lower performance outcomes; however, low-quality LMX relationships are not necessarily a negative type of relationship (Choy et al., 2015; Graen, 2003; Martin et al., 2016). The quality of the level (high or low) LMX relationship has been positively linked to subordinate performance outcomes (Kacmer, Witt, Zivnuska, & Gully, 2003; Kim, Liu, & Diefendorff, 2015; Liden & Maslyn, 1998; Martin et al., 2016).

LMX Quality and In-Role Performance

In-role performance, or task performance, is “a group of behaviors involved in the completion of tasks... [and] includes behaviors that contribute to the production of a good or the provision of a service” (Martin et al., 2016, p. 70). In-role performance refers to the degree in which a subordinate completes a task and the quality with which they complete that task. This type of performance is measured in a variety of ways (Breevaart, Bakker, Demerouti, & Heuvel, 2015; Casimir, Waldman, Bartram, & Yang, 2006; Joo, 2012; Kim et al., 2015; Mayfield, Mayfield, & Kopf, 1998). While aspects of measuring performance may be objective, such as quantifying how many tasks a

subordinate completes, other aspects are subjectively measured through a performance review by their leader.

Objective performance measures may be preferable since they remove the possibility of human bias, but they are not always possible (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Gerstner & Day, 1997; Martin et al., 2016). There are many types of work, such as that of an office supervisor, which do not have tangible, objectively measurable outcomes. Also, even jobs that have objectively measurable outcomes may also have aspects of the job that may not be measured quantitatively. These types of jobs are usually measured using a subjective method of evaluation, such as graphic rating scales, behavioral observation scales, and behaviorally anchored rating scales. These can include a standard set of questions a leader uses to rate a subordinate's performance as ranging from poor to excellent. Measuring in-role performance is one way to identify how successful an individual is in his or her job (Dulebohn et al., 2012; Gerstner & Day, 1997; Martin et al., 2016).

As the exchange relationship grows, the level of performance by the subordinate also tends to grow (Dulebohn et al., 2012; Gerstner & Day, 1997; Martin et al., 2016; Rockstuhl, Dulebohn, Ang, & Shore, 2012). The ratings of the subordinate's in-role performance tend to increase as the LMX relationship increases. This was found whether the in-role performance ratings were measured by the leader or the follower (Dulebohn et al., 2012; Gerstner & Day, 1997; Martin et al., 2016; Rockstuhl et al., 2012). Martin et al. (2016) found that there was a significant positive relationship between in-role performance and LMX when rated by the follower ($r = .24$). Since there is evidence to

show that there is a relationship between LMX and in-role performance when rated from the subordinate's perspective, the authors hypothesize:

Hypothesis 1: There will be a positive relationship between the ratings of LMX quality and in-role performance when performance is rated by the subordinate.

Mediators of the LMX and In-Role Performance Relationship

As identified in the previous section, there is a significant positive relationship between the LMX theory and in-role performance of the follower (Dulebohn et al., 2012; Gerstner & Day, 1997; Martin et al., 2016; Rockstuhl et al., 2012). However, there are other constructs that have been shown to mediate the relationship between LMX theory and in-role performance. The three that will be focused on in this study are: trust, empowerment and satisfaction with leader.

Trust. Trust has been defined in a variety of ways: as a construct that is parallel to trustworthiness, cooperation, or a behavioral construct (Colquitt, Scott, & LePine, 2007). Butler and Cantrell (1984) and McKnight, Cummings, and Chervany (1998) argue that trust is the same as trustworthiness. McKnight et al., (1998) posit that upon initially meeting another individual, it is common for a person to immediately make a determination as to the trustworthiness of the other person. McKnight et al. (1998) say that the initial social interaction two individuals have defines the trust they have in each other.

Rousseau, Sikin, Burt & Camerer (1998) defined trust as “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the

intentions or behavior of another” (p. 395). Rousseau et al.’s (1998) definition is broad enough to cover multiple aspects of historical trust definitions but narrow enough to ensure that trust is still a testable construct. This definition of trust will be the one used in this study.

If Rousseau et al.’s (1998) definition is accepted, it makes sense that trust has been studied as an integral part of LMX theory as suggested by Martin et al. (2016): “Trust is at the heart of the LMX construct as LMX has been defined as a trust-building process” (p. 73). Other research has defined trust in a similar fashion (Bauer & Green, 1996; Chen, Lam & Zhong, 2010; Gomez & Rosen, 2001; Liden, et al. 1993; Scandura & Pellegrini, 2008; Sue-Chan, Au, & Hackett, 2012). Butler (1991) and Liden and Graen (1980) both said that trust is an important part of managers building a quality relationship with subordinates, and Chen, and colleagues (2010) suggest that a “higher quality of LMX may result in higher work performance” (p. 598). Consequently, trust should be important in the relationship between LMX quality and in-role performance relationship.

Martin et al. (2016) found that “trust in the leader accounted for the most variance in the mediation models for both task performance and citizenship behavior” (p. 97). For example, if a subordinate has little trust in their leader, this will negatively affect their task performance. As the leader and subordinate continue to have an exchange relationship, their level of trust increases and they begin to expect more positive interactions and exchanges (Sue-Chan et al., 2012). Trust has been shown by many studies to lead to higher in-role performance. This concept has been well researched in leadership literature. Based on current literature, LMX theory, and the research outlined

in this section on trust, this study hypothesizes that trust will mediate the relationship between LMX and in-role performance.

Hypothesis 2: Trust will mediate the relationship between LMX quality and in-role performance.

Empowerment. Empowerment has been widely studied since the start of the new millennium and has been found to be a key part of organizational effectiveness (e.g. Alessandri, Borgogni, & Latham, 2017; Bartram & Casimir, 2007; Liden, Wayne & Sparrowe, 2000; Shermuly & Meyer, 2016; Shermuly, Meyer & Dammer, 2013). Conger and Kanungo (1988, p. 474) defined empowerment as the “process of enhancing feelings of self-efficacy.” To understand the definition of empowerment as defined by Conger and Kanungo (1988), it is important to understand self-efficacy, which is defined by Bandura, (1977, p. 193) as “expectations of personal mastery affect both the initiation and the persistence of the followers’ task-oriented behaviors.” In other words, empowerment is the process of enhancing feelings of the expectations of personal mastery” (Bandura, 1977; Conger & Kanungo, 1988).

Empowerment assists in organizational effectiveness. One of the ways that empowerment works in organizational effectiveness is that when leaders successfully empower their subordinates, the subordinates have greater task performance. Bartram and Casimir (2007) stated that subordinates will perform better when they are empowered by their leaders. These researchers found there is a significant, positive correlation between empowerment and the in-role performance of subordinates ($r = 0.35, p < 0.01$) (Bartram & Casimir, 2007).

In addition to empowerment being related to in-role performance, it is also related to the LMX relationship. A number of studies have looked at empowerment and how it relates to LMX and performance (Breevaart et al., 2015; Gomez & Rosen, 2001; Joo, 2012; Kim et al., 2015; Liden et al., 2000; Martin et al., 2016). Empowerment has been found to be a significant mediator of the LMX and performance relationship in a variety of studies (Breevaart et al., 2015; Harris, Wheeler, & Kacmer, 2009; Joo, 2012; Kim et al., 2015; Martin et al., 2016). In order to further the literature on the study of LMX and in-role performance, this study expects that empowerment will be a significant mediator between LMX and in-role performance.

Hypothesis 3: The relationship between LMX quality and in-role performance will be mediated by empowerment.

Satisfaction with Leader. A third, and final, mediator that has been shown to relate to both LMX and in-role performance is satisfaction with the leader (Bartram, and Casimir, 2007; Gerstner & Day, 1997; Martin et al., 2016). There have been multiple different definitions of the concept of job satisfaction. From defining it as an emotional state (Locke, 1976) to “an attitude toward the present job (Hirschfeld, 2000, p. 257)”. Martin et al. (2016, p. 73) stated that job satisfaction is “work reactions followers exchange with their leaders in return for rewards and valued outcomes.” Job satisfaction can be studied in multiple facets. One of the ways to measure the facets of job satisfaction is to use the Job Satisfaction Survey (JSS) (Spector, 1985).

Within the JSS, nine different facets of job satisfaction are measured. The facets are satisfaction with supervision, coworkers, pay, fringe benefits, contingent rewards,

operating conditions, nature of work, communication and promotion. Since LMX theory is focused on the relationship between the leader and the subordinate, this study will use the satisfaction with supervision as a mediator of the LMX theory and in-role performance.

Martin et al. (2016, p. 73) built on previous research by proposing that satisfaction is not only an outcome of LMX but also an “explanatory mechanism of LMX and performance.” A high LMX relationship is shown to have high levels of affect and liking for the leader, which leads to higher levels of job satisfaction (Dulebohn et al., 2012). In addition, work attitudes, more specifically satisfaction, have been shown to positively correlate with performance outcomes. In satisfaction literature, it is shown that there is more than one aspect of job satisfaction (Bellou, 2010). Job satisfaction can be split into multiple dimensions, such as work satisfaction and satisfaction with supervisors. While other studies have shown a correlation between LMX and job satisfaction, and in-role performance and job satisfaction, this study focuses on the dimension of job satisfaction that identifies satisfaction with the leader. Gregarus and Ford (2006) found that LMX quality significantly ($p = .05$) related to satisfaction with supervisor when using both supervisor ($r = .59$) and subordinate ($r = .39$) participants. In order to further the literature on the study of LMX and in-role performance, this study expects to find that satisfaction with the leader will mediate the relationship between LMX and in-role performance.

Hypothesis 4: The relationship between LMX quality and in-role performance will be mediated by the level of subordinate satisfaction with their leader.

CHAPTER II: METHODS

Participants

Amazon Mechanical Turk (MTurk), was used to find participants that met the criteria that they had been a full-time, subordinate under the same manager for six months or more. MTurk linked to the Qualtrics survey (an online survey tool) for participants. After checking the box agreeing to the consent form, they began the survey. Participants were paid \$0.50 to complete the survey. There were 332 participants that participated in the survey. 94 participants were removed from the analysis. 19 participants were removed because they did not sign the informed consent. 74 participants were removed from the study if they did not meet the criteria of being under the same manager for 3 months or more. They were also removed if they did not answer three of the five quality control items correctly (see Appendix G), or if they did not answer the in-role performance (Williams & Anderson, 1991) or LMX-7 (Graen & Uhl-Bien, 1995) questions. 1 participant was removed for more than 50% of the survey being incomplete. There were 162 male and 76 female participants. Participants ranged in age from 18 to over 65 with 128 between the ages of 25-34. Participant classified their ethnicities as White, Black or African American, American Indian or Alaska Native, Asian, or another ethnicity, with 123 classifying themselves as White, 83 as Asian, and 25 as Black or African American.

Measures

Leader Member Exchange. LMX-7 (Dansereau, et al. 1975; Graen & Uhl-Bien, 1995; Scandura & Graen, 1984) was used to measure the quality of the LMX relationship (see Appendix A). Graen and Uhl-Bien (1995) noted that LMX is multidimensional, however it may have seemed unidimensional due to the high correlation of the LMX dimensions. Scandura and Pelligrini (2008) found that LMX and trust were positively correlated, $r = 0.29$, $p < .01$. According to Yukl, O'Donnell and Taber (2009), the LMX-7 was the most used measure for measuring LMX quality. An example item from this measure was "How would you characterize your working relationship with your leader" (Graen & Uhl-Bien, 1995). Questions on the LMX-7 were rated on a five-point Likert scale. Each response was worded appropriately for the items. Subordinate ratings had a Cronbach's $\alpha=0.89$ (Matta, Scott, Koopman, & Conlon, 2015), which indicated that the seven items on the LMX-7 scale were highly intercorrelated. According to the scoring guide for LMX-7, analysis should be based on the total score for each participant, as opposed to using an average score. Therefore, an overall score for the LMX-7 was used to assess the quality of the leadership relationship.

In-Role Performance. In-role performance was measured using seven items from the scale created by Williams and Anderson (1991) (see Appendix B). In-role performance measure had an $\alpha=0.74$ (Giacopelli, Simpson, Dalal, Randolph, & Holland, 2013). In-role performance and job satisfaction were positively correlated 0.33 , $p < .01$. Participants rated how often they completed the seven behaviors on the in-role

performance scale. An example item was “meets formal performance requirements of the job.” Items were measured on a five-point Likert scale (1 = *never*, 5 = *always*).

Trust. Trust was measured using the four-item measure developed by Bartram and Casimir (2006) (see Appendix C). Subordinate ratings had an $\alpha=0.78$ (Bartram & Casimir, 2006). Cook and Wall (1980) found that trust and satisfaction with their leader were positively correlated, $r = 0.61, p < .05$. An example item was “I feel quite confident that my manager will always try to treat me fairly.” Items were measured on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Empowerment. Spreitzer’s (1995) 12-item measure of empowerment was used to measure empowerment (see Appendix D). It was composed of four parts: Autonomy, competence, impact, and meaning. Example items of each component were: “I have significant autonomy in determining how I do my job” (autonomy), “I am confident in my ability to do my job (competence), “My impact on what happens in my department is large” (impact) and “The work I do is very important” (meaning). Subordinate ratings had an $\alpha=0.86$ (meaning), $\alpha=0.81$ (competence), $\alpha=0.82$ (autonomy), and $\alpha=0.88$ (impact) (Spreitzer, Janasz, & Quinn, 1999). Spreitzer, Janasz, and Quinn (1999), conducted a factor analysis and found that each component of the measure of empowerment loaded on the appropriate factor. They found a positive correlation between the 4 components of empowerment and upward influence, $r = .13, p < .05$ (autonomy); $r = 0.17, p < .01$ (competence); $r = 0.13, p < .05$ (impact); $r = 0.16, p < .01$ (meaning). Items were measured on a five-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*) and calculated based on individual components.

Satisfaction with Leader. Satisfaction with leader was measured using the satisfaction with the leader (supervision) section of the Job Satisfaction Survey (JSS) (Spector, 1985) (see Appendix E). Spector (1997) found that the satisfaction with leader had an internal consistency reliability of $r = 0.89$, $p \leq .05$. Overall, satisfaction and performance have historically been found to have a low correlation, $r = 0.25$, $p < .01$ (Spector, 1997). Spector (1997) states that although it is a low correlation, it may be due to the problems with performance measures (e.g. subjective vs. objective), and that the relationship between the two measures should continue to be studied. The JSS scale was compared to the Job Description Index (Smith, et. al., 1969), and the validity for the supervision scale was found to have a correlation of $r = 0.80$ (Spector, 1997). An example of a satisfaction with leader item is “My leader is quite competent in doing his/her job” (Spector, 1985). According to Spector (1997), the measure should be scored using a total score. Items were measured on a six-point Likert scale (1 = disagree very much, 5 = agree very much) and calculated based on a total score.

Analysis

A linear regression analysis was used to test hypothesis 1: the relationship between LMX quality and in-role performance (see Figure 1). Three mediated regression analyses were conducted to test the possibility of a mediation effect between LMX quality and in-role performance. The first mediator analysis conducted was used to test hypothesis 2: trust will mediate the relationship between LMX quality and in-role performance (see Figure 2). It was expected that trust would partially mediate the relationship between LMX quality and in-role performance. Martin et al. (2016)

explained that trust in the leader is a part of the relationship between LMX quality and task performance but does not account for all of it. The second mediator analysis was used to test hypothesis 3: the relationship between LMX quality and in-role performance will be mediated by empowerment (see Figure 3). It was expected that empowerment would partially mediate the relationship between LMX quality and in-role performance. Multiple studies looked at the mediation of empowerment between LMX quality and in-role performance and found that it was a partial mediator, not a complete mediator (Breevaart et al., 2015; Harris, Wheeler, & Kacmer, 2009; Joo, 2012; Kim et al., 2015; Martin et al., 2016). The third mediator analysis was used to test hypothesis 4: the relationship between LMX quality and in-role performance will be mediated by the level of subordinate satisfaction with their leader (see Figure 4). It was expected that satisfaction with leader would partially mediate the relationship between LMX quality and in-role performance. As previously stated, it was shown that satisfaction with leader was related to both LMX quality and in-role performance but did not seem to have been studied as a mediator between the two constructs (Dulebohn et al., 2012). Due to this, it was expected that satisfaction with leader would only partially mediate the relationship and not fully mediate it.

CHAPTER III: RESULTS

There were two main interests of the present study: 1) the effect of the quality of the LMX relationship between leader and subordinate on subordinate in-role performance, and 2) the possibility of a variable mediating the relationship between LMX quality and in-role performance (i.e. trust, satisfaction with leader, and empowerment).

The results section presents the outcome of the regression analyses between LMX quality and in-role performance. In addition, it presents the results of the multiple regression analyses, used to identify the effects of the mediator variables on the relationship between LMX quality and in-role performance.

Reliability Analysis

Before data analyzation occurred, the data were cleaned (see “Participants” in the Method section). Table 1 shows the means, standard deviations, coefficient alpha reliabilities and intercorrelations.

Table 1

Means, standard deviations, coefficient alpha reliabilities, and intercorrelations

Variable	Mean	SD	1	2	3	4	5
1. Performance	4.0	.62	(.72)				
2. Leader-Member Exchange	27.90	5.0	.40*	(.91)			
3. Trust	3.81	.70	.62*	.65*	(.57)		
4. Satisfaction with Leader	16.17	4.16	.66*	.43*	.71*	(.75)	
5. Empowerment	4.01	.64	.25*	.72*	.40*	.24*	(.90)

Note. $N = 238$. Coefficient alpha internal consistency estimates are shown in the diagonal in parentheses

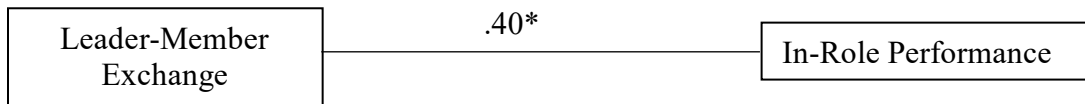
* $p < .001$

Regression Analysis

Hypothesis one stated that there would be a significant relationship between LMX quality and in-role performance (see Figure 5). This hypothesis was supported by the regression analysis that found a significant, positive relationship between LMX quality and in-role performance $r = 0.40, p < .01$.

Figure 9

Relationship between leader-member exchange quality of relationship and in-role performance



Note. $N = 238$.

* $p < .01$

Mediation Analysis

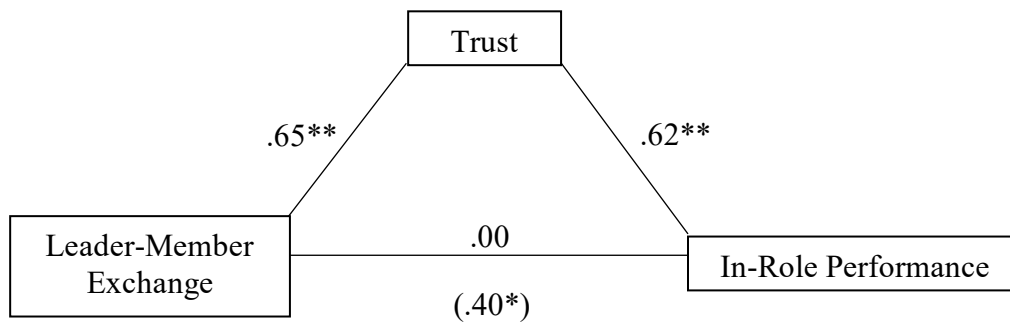
Hypotheses 2-4 theorized there was a mediation variable that affected the relationship between LMX quality and in-role performance. Hypothesis 2 stated that trust would mediate the relationship between LMX quality and in-role performance.

Consistent with hypothesis 2, the first multiple regression analysis found that trust fully mediated the relationship between LMX quality and in-role performance (see Figure 6).

The path between LMX and trust was $r = 0.65, p < .001$, 95 percent CI (0.30, 0.36). The path between trust and in-role performance was $r = 0.62, p < .001$, CI (0.45, 0.69). The path between LMX and in-role performance was $r = 0.00, p > .01$, CI (-0.17, 0.17).

Figure 12

Trust as a mediator of the relationship between leader-member exchange quality of relationship and in-role performance



Note. $N = 238$.

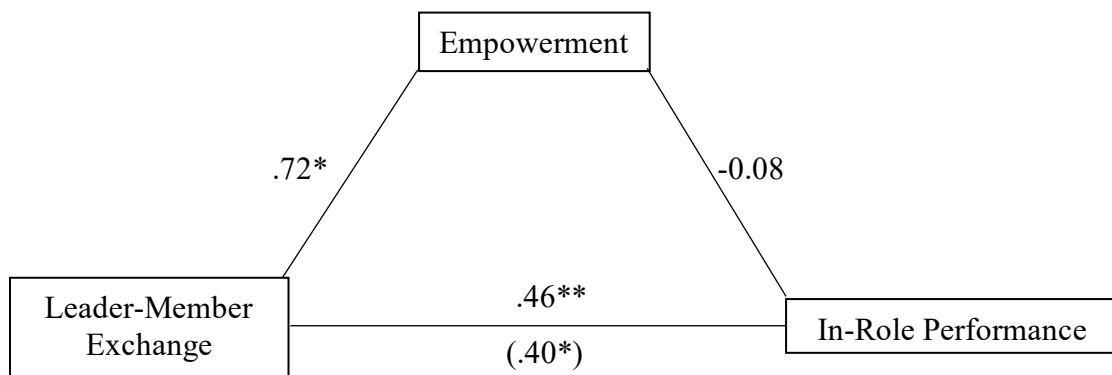
** $p < .001$, * $p < .01$

Hypothesis 3 stated that empowerment would mediate the relationship between LMX quality and in-role performance (see Figure 7). Hypothesis 4 was not supported. The multiple regression analysis found that empowerment had a significant, positive effect on the relationship between LMX quality and in-role performance. Empowerment

did not mediate the relationship between LMX and in-role performance. The path between LMX and empowerment was $r = 0.72, p < .001$, 95 percent CI (4.85, 6.22). The path between empowerment and in-role performance was $r = -0.08, p > .01$, CI (-0.24, 0.89). The path between LMX and in-role performance was $r = 0.46, p < .001$, CI (0.04, 0.08).

Figure 7

Empowerment as a mediator of the relationship between leader-member exchange quality of relationship and in-role performance

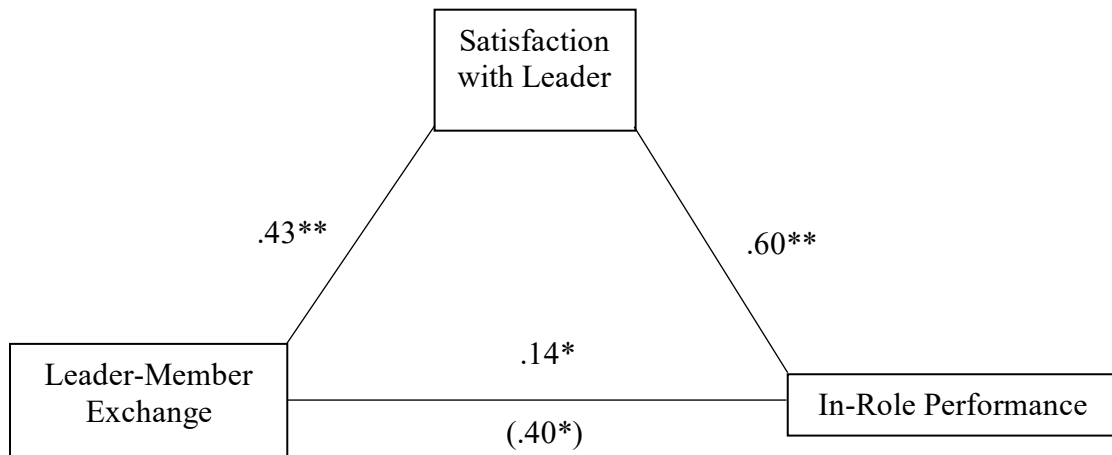


Note. $N = 238$.
 $**p < .001, *p < .01$

Hypothesis 4 stated that satisfaction with leader would mediate the relationship between LMX quality and in-role performance (see Figure 8). Consistent with hypothesis 3, the multiple regression analysis found that satisfaction with leader partially mediated the relationship between LMX quality and in-role performance. The path between LMX and satisfaction with leader was $r = 0.43, p < .001, 95 \text{ percent CI } (0.38, 0.65)$. The path between satisfaction with leader and in-role performance was $r = 0.60, p < .001, \text{ CI } (0.07, 0.11)$. The path between LMX and in-role performance was $r = 0.14, p < .01, \text{ CI } (0.01, 0.03)$.

Figure 8

Satisfaction with leader as a mediator of the relationship between leader-member exchange quality of relationship and in-role performance



Note. $N = 238$.
 $**p < .001, *p < .01$

CHAPTER IV: DISCUSSION

Summary

The current study examined the relationship between the quality of the LMX relationship between leaders and subordinates and the in-role performance of the subordinates. In addition, this study looked at possible mediators between the quality of the LMX relationship and in-role performance.

Consistent with current research, it was found that LMX quality and in-role performance had a significant, positive relationship (Dulebohn et al., 2012; Gerstner & Day, 1997; Martin et al., 2016; Rockstuhl, Dulebohn, Ang, & Shore, 2012). The current study showed that as the subordinate ratings for LMX quality improve, so did the in-role performance ratings. The findings from this study were consistent with the findings from Martin et al. (2016); when the subordinate rated LMX quality and in-role performance, there was a significant positive correlation.

Hypothesis two was supported in the current study. Trust was found to fully mediate the relationship between LMX quality and in-role performance. Martin et al. (2016) found that “trust in the leader accounted for the most variance in the mediation models” (p. 97). The finding in this study also showed that trust accounted for the most variance in the three mediation models. The findings showed that trust was imperative in the relationship between LMX quality and in-role performance.

Hypothesis three found that empowerment significantly increased the relationship between LMX quality and in-role performance. However, there was a non-significant, negative relationship between empowerment and in-role performance. The researchers

concluded that the high correlation between empowerment and LMX quality seemed to account for any relationship there may have been with in-role performance. This finding was different than what was shown in previous research (Breevaart et al., 2015; Gomez & Rosen, 2001; Joo, 2012; Kim et al., 2015; Liden et al., 2000; Martin et al., 2016).

Additional research needs to be completed to ascertain the specific aspects of empowerment that have an effect on the relationship and the aspects that do not have an effect on the relationship between LMX quality and in-role performance.

Finally, hypothesis four found that satisfaction with leader partially mediated the relationship between LMX quality and in-role performance. Martin et al. (2016) found that satisfaction may explain some of the relationship between LMX quality and performance. The current study found similar results to Martin et al. (2016). Bellou (2010) also found that satisfaction was positively correlated with performance. The current study focused on satisfaction with leader and the results were similar to those found in Gregarus and Ford (2006). Meaning, specifically, satisfaction with leader was significantly related to LMX quality.

Implications and Future Research

In the present study, most findings were significant. This can be useful in future studies and in practical applications of the results. This section discusses the possible reasons for the results and how they may be used.

First, the LMX-7 measure was missing one item when the survey was published. Before the survey was analyzed, a 7th item was created using an average of the other 6

items. Future research could replicate the survey with all the items in the original survey. This would ensure that the results are accurate and consistent with published research.

Second, future research could look at different types of leadership. While the present study used LMX theory, there are various other leadership theories. Future research could use a similar model but use transactional and transformational leadership (Bartram and Casimir, 2007). By using a different leadership theory, the amount that employers can link leadership to subordinate's performance may increase and allow for a more complete picture of the leadership and performance relationship.

Third, future research should continue to look at mediators. Bartram and Casimir (2007) looked at multiple constructs as possible mediators of leadership and in-role performance. The mediators in the present study should continue to be evaluated and other constructs that are related to in-role performance and LMX quality should be used in future research. For example, Graen and Uhl-Bien (1995) suggested that there is a social aspect and felt obligation as a part of the LMX relationship. Both felt obligation and the social aspect (e.g. respect, affect, support, loyalty) could be studied as possible mediators (Martin, et al., 2016). While the research presented in this study showed there is a link between the quality of the LMX relationship and in-role performance, it also showed there may be other constructs that affect the relationship.

Fourth, future research should use paired participants. LMX theory was based on the quality of the interaction between leaders and subordinates and how each member felt about that relationship (Graen & Uhl-Bien, 1991). To get a full picture of the quality of the LMX relationship between leaders and subordinates, subordinates and their current

leader should be paired to compare the data from each participant. This would allow the subordinates in-role performance to be self-rated and rated by their direct leader. It would also allow the quality of the LMX relationship to be studied from both the leader and the subordinate perspective. By pairing participants with their current subordinates and leaders, a stronger conclusion could be drawn about the relationship between the quality of the LMX relationship and subordinate in-role performance (Graen & Uhl-Bien, 1991; Martin et al., 2016).

One of the implications of the current study is that employers could use the research to link the in-role performance of their employees with the quality of their LMX relationship with their leader. This may help the organization find why certain subordinates have better in-role performance than other subordinates. It may also allow employers to learn how to train their leaders and their subordinate to have the best in-role performance (Graen & Uhl-Bien, 1991; Martin et al., 2016).

Another implication of the present study is the strength of the relationship between the quality of the LMX relationship and in-role performance and the mediators that were studied. The study showed that, while the relationship between LMX quality and in-role performance is significant, there can be a stronger relationship when looking at other constructs (Martin, et al., 2016). This study showed that to have a stronger relationship between LMX quality and in-role performance, it was good for subordinates to be satisfied with their leader and have trust in the relationship (Graen & Uhl-Bien, 1991; Martin et al., 2016). Implementing training for leaders to learn how to build trust

and satisfaction in their subordinates may help organizations have better in-role performance from their employees (Graen & Uhl-Bien, 1991).

Limitations

The present study did not collect data from paired participants (subordinates and their leaders). As mentioned in the previous section, paired participants would strengthen the outcomes of the study and the implications for implementing the findings in organizations (Graen & Uhl-Bien, 1991; Martin et al., 2016). The primary analysis was conducted from the subordinate perspective. A study which gathered data from leaders and subordinates was beyond the bounds of the current research. Additionally, it would have required paired groups of participants (i.e. participant data with their current leader's data) and would have required access to participants that were beyond the author's ability.

Also, one of the largest limitations of the present study was the missing item in the LMX-7 when the data were collected. The researchers used an average to account for the missing variable. The missing variable could change the significance, negative or positive, if it would have been included. Therefore, the study did not have the strength it could have had if the missing variable been included.

Due to the type of participants that were used in the study, the in-role performance data were based on self-report. Self-report data could be influenced by any number of statistical errors, such as self-report bias, social-desirability bias or recall bias (Dulebohn, et al., 2012). Any one of these biases could skew the participant in-role performance data. Objective performance measures, as opposed to self-report data, have

been shown to remove much of the possibility of human bias (Dulebohn, et al., 2012; Gerstner & Day, 1997; Martin et al., 2016).

Lastly, data were collected online through MTurk. Because the participants self-selected, it may have reduced the generalizability and limited the practical implications of the present study. The generalizability was limited because it may not be generalizable to populations outside of the MTurk, self-select population. The population who self-select for MTurk may be significantly different from the population of organizations, thus, making the results difficult to implement within an organization.

Conclusion

In conclusion, the present study found evidence that the quality of the LMX relationship between leaders and subordinates significantly influenced the subordinates in-role performance. In addition, when a subordinate trusts and is satisfied with their leader, it increases the strength of the relationship between LMX quality and in-role performance. The present study found that empowerment increased the relationship between LMX quality and in-role performance, but it was not significantly related to in-role performance. Future research should continue to look at the relationship between LMX quality and in-role performance and what additional constructs could mediate the relationship.

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APPENDICES

APPENDIX A: LMX-7 SCALE^{1,2}

Directions: Rate the following statements on the amount to which they relate to your leader (to whom you directly reported for six months or more).

1. Do you know where you stand with your leader...do you usually know how satisfied your leader is with what you do?

1	2	3	4	5
Rarely	Occasionally	Sometimes	Fairly Often	Very Often

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

1	2	3	4	5
Not a Bit	A Little	A Fair Amount	Quite a Bit	A Great Deal

3. How well does your leader recognize your potential?

1	2	3	4	5
Not at all	A little	Moderately	Mostly	Fully

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

1	2	3	4	5
None	Small	Moderate	High	Very High

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

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

¹ Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The Leadership Quarterly*, 6(2), 219-247. doi:10.1016/1048-9843(95)90036-5

² One item of the LMX-7 was not used in the final survey in error. The question was "Again, regardless of the amount of formal authority your leader has, what are the chances that he/she would 'bail you out,' at his/her expense?"

6. How would you characterize your working relationship with your leader?

1	2	3	4	5
Extremely Ineffective	Worse than Average	Average	Better Than Average	Extremely Effective

APPENDIX B: IN-ROLE PERFORMANCE SCALE³

Directions: Rate the following statements based on the way you perform in your current job.

1. I adequately complete assigned duties.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

2. I fulfill responsibilities specified in my job description.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

3. I perform tasks that are expected of me.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

4. I meet formal performance requirements of my job.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

5. I engage in activities that will directly affect my performance evaluation.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

6. I neglect aspects of my job that I am obligated to perform. (Reverse scored)

1	2	3	4	5
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³ Williams, L. J., and Anderson, S. E. (1991) Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17(3), 601-617. Retrieved from <https://ezproxy.mtsu.edu:3443/login?url=https://search.proquest.com/docview/215259771?accountid=4886>

Strongly Disagree Disagree Neutral Agree Strongly Agree

7. I fail to perform essential duties. (Reverse Scored)

1 2 3 4 5
Strongly Disagree Disagree Neutral Agree Strongly Agree

APPENDIX C: FOUR-ITEM TRUST SCALE⁴

Directions: Rate the following statements based on the amount to which you trust your leader (to whom you directly reported for six months or more).

1. I can trust my leader to make sensible decisions for the future of the company.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

2. I feel quite confident that my leader will always try to treat me fairly.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

3. My leader would be quite prepared to deceive me for his/her own benefit.
(Reverse Scored)

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

4. My leader can be relied on to uphold my best interests.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

⁴ Bartram, T., & Casimir, G. (2007). The relationship between leadership and follower in-role performance and satisfaction with the leader. *Leadership & Organization Development Journal*, 28(1), 4-19.
doi:10.1108/01437730710718218

APPENDIX D: 12-ITEM MEASURE OF EMPOWERMENT⁵

Directions: Rate the following based on the amount to which you agree with each statement about how you feel in your job.

1. The work I do is very important to me.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

2. My job activities are personally meaningful to me.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

3. The work I do is meaningful to me.⁶

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

4. I am confident about my ability to do my job.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

5. I am self-assured about my capabilities to perform my work activities.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

6. I have mastered the skills necessary for my job.⁷

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

⁵ Spreitzer, G. M. (1995). Psychological, empowerment in the workplace: Dimensions, measurement and validation. *Academy of Management Journal*, 38(5), 1442-1465. doi:10.2307/256865

⁶ Items 1, 2, and 3 measure the “Meaning” component of empowerment

⁷ Items 4, 5, and 6 measure the “Competence” component of empowerment

7. I have significant autonomy in determining how I do my job.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

8. I can decide on my own how to go about doing my work.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

9. I have considerable opportunity for independence and freedom in how I do my job.⁸

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

10. My impact on what happens in my department is large.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

11. I have a great deal of control over what happens in my department.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

12. I have a significant influence over what happens in my department.⁹

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

⁸ Items 7, 8, and 9 measure the “Self-determination” component of empowerment

⁹ Items 10, 11, and 12 measure the “Impact” component of empowerment

APPENDIX E: JOB SATISFACTION SURVEY – SATISFACTION WITH LEADER¹⁰

Directions: Rate the following statements based on the amount to which you are satisfied with your leader (to whom you directly reported for six months or more). Please select the one option for each question that comes closest to reflecting your opinion.

1. My leader is quite competent in doing his/her job.

1	2	3	4	5	6
Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much

2. My leader is unfair to me (Reverse scored).

1	2	3	4	5	6
Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much

3. My leader shows too little interest in the feelings of subordinates (Reverse scored).

1	2	3	4	5	6
Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much

4. I like my leader.

1	2	3	4	5	6
Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much

¹⁰ Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes and consequences*. Thousand Oaks, California: Sage Publications, Inc.

APPENDIX F: DEMOGRAPHICS

1. How long have you worked under your current leader?

- 0-5 Months 6-12 Months 13-17 Months 18-24 Months
 2-5 Years 6-10 Years Over 10 years

2. What is your current employment status?

- Part-time (less than 32 hours) Full-time (32 hours or more)

3. Gender

- Male Female Other

4. Age Group

- 17 Years or Younger 18-24 Years 25-34 Years
 34-44 Years 45-54 Years 55-64 Years
 65+ Years

5. Ethnicity

- White Hispanic or Latino Black or African-
American
 Native American or Asian/Pacific Islander Other
American Indian

6. The current year is 2018?

- Yes No

APPENDIX G: QUALITY CONTROL ITEMS

1. For this question please choose Neutral.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

2. For this question please choose Strongly Disagree.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

3. I have worked for the same leader for six months or more.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

4. You should use the answers that I gave in this survey.

Yes

No

APPENDIX H: IRB EXEMPTION DETERMINATION NOTICE

IRB

INSTITUTIONAL REVIEW BOARD

Office of Research Compliance,
010A Sam Ingram Building,
2269 Middle Tennessee Blvd
Murfreesboro, TN 37129
IRBN007 Version 1.3 Revision Date 05.22.2018



IRBN007 – EXEMPTION DETERMINATION NOTICE

Wednesday, October 09, 2019

Principal Investigator **Kara Byler** (Student)
Faculty Advisor Rick Moffett
Co-Investigators NONE
Investigator Email(s) *kll5b@mtmail.mtsu.edu; rick.moffett@mtsu.edu*
Department Psychology

Protocol Title ***The leader and subordinate relationship: Can it really affect performance?***

Protocol ID **20-1027**

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **EXEMPT** review mechanism under 45 CFR 46.101(b)(2) within the research category (2) *Educational Tests* A summary of the IRB action and other particulars in regard to this protocol application is tabulated as shown below:

IRB Action	EXEMPT from further IRB review***	Date	10/4/19
Date of Expiration	12/31/2020		
Sample Size	500 (FIVE HUNDRED)		
Participant Pool	Adults (18 years or older) - Recruited through MTurk		
Exceptions	1. Online informed consent permitted. 2. Approved to use non-standard template for recruitment.		
Mandatory Restrictions	1. Participants must be 18 years or older 2. Informed consent must be obtained from the participants 3. Identifying information must not be collected		
Restrictions	1. All restrictions for exemption apply. 2. Mandatory active informed consent. 3. Participants must be compensated once they consent.		

Approved IRB Templates	IRB Online Informed Consent and Non-MTSU Templates: Abbreviated recruitment script
Funding	NONE
Comments	NONE

***Although this exemption determination allows above defined protocol from further IRB review, such as continuing review, MTSU IRB will continue to give regulatory oversight to ensure compliance.

Summary of Post-approval Requirements:

The investigator(s) indicated in this notification should read and abide by all applicable post-approval conditions (Visit <https://www.mtsu.edu/irb/FAQ/PostApprovalResponsibilities.php> for more information)

- PI must close-out this protocol by submitting a final report before **12/31/2020**; if more time is needed to complete the data collection, the PI must request an extension. NO reminders will be sent. **Failure to close-out (or request extension) may result in penalties** including cancellation of the data collected using this protocol or withholding student diploma.
- IRB approval must be obtained for all types of amendments, such as:
 - Addition/removal of subject population and sample size
 - Change in investigators
 - Changes to the research sites – appropriate permission letter(s) from may be needed if the study will be conducted at a non-MTSU location
 - Alternation to funding
- Modifications to procedures must be clearly described in an addendum request form and the proposed changes must not be incorporated without an approval
- The proposed change must be consistent with the approved protocol and comply with exemption requirements
- Research-related injuries to the participants and other events , such as, deviations & misconduct, must be reported within 48 hours of such events to compliance@mtsu.edu

Post-approval Protocol Amendments:

The current MTSU IRB policies allow the investigators to implement minor and significant amendments that would not result in the cancellation of the protocol’s eligibility for exemption. ***Only THREE procedural amendment requests will be entertained per year. This amendment restriction does not apply to minor changes such as language usage and addition/removal of research personnel.***

Date	Amendment(s)	IRB Comments
NONE	NONE.	NONE

Post-approval IRB Actions:

Date	IRB Action(s)	IRB Comments
10/09/2019	Post-approval prescreening script added.	Email on file

Mandatory Data Storage Requirement: All research-related records (signed consent forms, investigator training and etc.) must be retained by the PI or the faculty advisor (if the PI is a student) at the secure location mentioned in the protocol application. The data must be stored for at least three (3) years after the study is closed. Subsequently, the data may be destroyed in a manner that maintains confidentiality and anonymity of the research subjects. **The IRB reserves the right to modify/update the approval criteria or change/cancel the terms listed in this notice.** Be advised that IRB also reserves the right to inspect or audit your records if needed.

Sincerely,

Institutional Review Board
Middle Tennessee State University

Quick Links:

- Post-approval Responsibilities:
<http://www.mtsu.edu/irb/FAQ/PostApprovalResponsibilities.php>
Expedited Procedures: <http://www.mtsu.edu/irb/FAQ/PostApprovalResponsibilities.php>