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Applying Leadership Theory to the Work-Family Interface: Examining the Interactive Effects of Family Supportive Supervisor Behaviors and Leader-Member Exchange Quality

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**APPLYING LEADERSHIP THEORY TO THE WORK-FAMILY INTERFACE:
EXAMINING THE INTERACTIVE EFFECTS OF FAMILY SUPPORTIVE
SUPERVISOR BEHAVIORS AND LEADER-MEMBER EXCHANGE QUALITY**

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ABSTRACT

APPLYING LEADERSHIP THEORY TO THE WORK-FAMILY INTERFACE: EXAMINING THE INTERACTIVE EFFECTS OF FAMILY SUPPORTIVE SUPERVISOR BEHAVIORS AND LEADER-MEMBER EXCHANGE QUALITY

Heather M. Bolen
Old Dominion University, 2014
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Extant work-family research has traditionally looked at the role of the supervisor in diminishing work-family conflict using a supervisor support framework. The current study draws from recent trends that look past perceptions of support and contend that leadership can be used as a lens through which work-family outcomes can be understood (e.g., Major & Cleveland, 2007). Specifically, the current study contends that exploring leader-subordinate relationship quality (i.e., leader-member exchange) and specific behaviors that leaders engage in to be supportive of subordinates' work-family needs (i.e., family supportive supervisor behaviors) is the next step in examining the role of one's leader in impacting work-family outcomes. A contingency framework of how family supportive supervisor behaviors and leader-member exchange leadership approaches work together to optimize work-family outcomes was proposed. Using the path-goal (House, 1971) and substitutes for leadership (Kerr & Jermier, 1978) contingency theories, it was hypothesized that leader-member exchange quality would moderate the relationship between family supportive supervisor behaviors and work-family outcomes. Three hundred twenty-nine working adults recruited from Amazon's Mechanical Turk responded to three surveys separated by approximately one month on which demographic questions as well as the variables of interest were assessed. Overall, the model developed to test the study hypotheses was not supported. However, a post hoc

exploratory model demonstrating that family supportive supervisor behaviors mediate the relationship between leader-member exchange and both work interference with family and work-family balance satisfaction was supported. The implications of these findings are discussed as well as directions for future research.

This dissertation is dedicated to my husband. Thank you for your never ending love and support.

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CHAPTER I

INTRODUCTION

Much is known about the antecedents and consequences of work-family conflict, yet there is limited knowledge and guidance on how to effectively manage this conflict (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005). This gap in the literature has been noted by researchers in investigating and calling for more research that addresses what can be done to diminish work-family conflict (e.g., Lauzun, Morganson, Major, & Green, 2010; Major & Bolen, 2013; Major & Cleveland, 2007). Typically, the management of conflict is placed upon the individual (Major & Germano, 2006). However, the leader's and organization's role in an individual's experience of work-family conflict has been well documented (e.g., Ford, Heinen, & Langkamer, 2007; Kossek, Pichler, Bodner, & Hammer, 2011). Specifically, work-family research has demonstrated that the leader can impact subordinates' work-family experience through engaging in family supportive supervisor behaviors and development of a high-quality leader-member exchange relationship (Bernas & Major, 2000; Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011; Hammer, Kossek, Yragui, Bodner, & Hanson, 2009; Major, Fletcher, Davis, & Germano, 2008). Thus, one aim of the current study is to build upon extant research by demonstrating specific behaviors that assist the leader in being an agent in managing an employee's work-family conflict (i.e., when work and family roles are incompatible; Greenhaus & Beutell, 1985). Further, it adds to the literature by examining how leaders can impact subordinate work-family balance satisfaction (i.e. an overall level of contentment in the handling of work and family roles; Valcour, 2007). In doing so, the current study responds to a call in the literature to further explore the antecedents of

work-family balance satisfaction and position the construct in the wider work-family literature (Valcour, 2007).

The primary goal of the current study is to position work-family outcomes in the leadership literature. The central research question is: How do family supportive leader behavior and leader-follower relationship quality interact to predict employees' work-family outcomes? To address this question, I use extant leadership contingency theories and propose a contingency approach to understanding the impact of leadership on work-family outcomes. Extant leadership theory provides a framework for moving past perceptions of supervisor support to richer leadership constructs that capture the overall quality of the leader-subordinate relationship and the specific leader behaviors that support followers' work-family needs. Thus, this research addresses calls in the literature to better apply industrial-organizational psychology, in particular leadership theory and research, to further work-family research and to generate research findings more likely to have an impact on employees' work-family experiences (Major & Cleveland, 2007; Major & Lauzun, 2010; Major & Morganson, 2011a).

The subsequent sections discuss the work-family constructs involved in the current study and review the literature on leadership as it relates to the work-family interface. Further, specific hypotheses pertaining to leadership's role in impacting work-family outcomes are presented.

The Work-Family Interface

This section describes the specific work-family outcomes of interest in the current study. Following the current section will be a discussion on how leadership impacts these outcomes.

Work-family conflict. Rooted in role theory, interrole conflict occurs when participation in one role hinders or conflicts with fulfilling the expectations associated with another role (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). Work-family conflict is a specific form of interrole conflict that occurs when the demands of the work domain and the demands of the family domain are incompatible in some way (Greenhaus & Beutell, 1985). Work-family conflict is a bi-directional construct where work domain demands can interfere with family life and family domain demands can interfere with work life (Netemeyer, Boles, & McMurrin, 1996). The construct has been further broken down into time-based, strain-based, and behavior-based conflict. Research has suggested that work interference with family is more prevalent than family interference with work (Frone, Yardley, & Markel, 1997). Further, work-interference with family is more likely to be influenced by factors from the work domain, including relationships with others at work (Amstad, Meier, Fasel, Elfering, & Semmer, 2011; Anderson, Coffey, & Byerly, 2002; Byron, 2005). Therefore, the current study focuses on work interference with family.

The antecedents and outcomes of work-family conflict have been consistently documented. Meta-analytic evidence shows that conflict is related to increased work and family stress, turnover intentions, substance abuse, decreased satisfaction in all life domains, organizational commitment, and performance (Allen, Herst, Bruck, & Sutton, 2000; Amstad et al., 2011; Kossek & Ozeki, 1998). Research on coping with or managing work-family conflict is limited in comparison to research documenting its antecedents and outcomes (Eby et al., 2005).

The changing nature of work, including the rise in dual-earner couples and women in the workforce, continues to bring the need to understand work-family issues to the forefront. The Family and Work Institute's National Study of the Changing Workforce reports that in the US, 71% of women with children under the age of 18 work at least on a part-time basis, and 80% of employees are in a dual-earner household (Galinsky, Aumann, & Bond, 2008). Further, Kossek and Ruderman (2012) contend that the amount of working caregivers is continuously increasing due to a combination of trends, such as the economic recession, the aging population, and an increase in special needs children and young adults. Lastly, emergent technologies have made it increasingly difficult to adequately balance work and non-work lives as work can be performed anytime and anywhere. Further, given the outcomes of conflict discussed above, it is clear that both from an individual perspective as well as from an organizational perspective, we should care about decreasing work-family conflict. Specifically, there are costs to the individual and costs to the employer when conflict is high. In line with Kossek, Baltes and Matthews' (2011) contention that there continues to be research-practice gap in the work-family literature, it is imperative to understand what can practically be done to reduce conflict.

Work-family balance satisfaction. Work-family scholars have called for research that not only focuses on the negative side of the work-family interface, but the positive side as well (e.g., Aryee, Srinivas, & Tan, 2005; Barnett, 1998; Grzywacz & Marks, 2000). In addressing this call, the construct of work-family balance satisfaction has emerged (Valcour, 2007). Work-family balance satisfaction is "an overall level of contentment resulting from an assessment of how successfully one is handling the sum of

demands emanating from work and family roles” (Valcour, p. 1513). This construct consists of a cognitive component and an affective component. The cognitive component refers to the appraisal of the extent to which one is successful at meeting multiple role demands, whereas the affective component refers to the emotional state resulting from the appraisal.

This construct is distinct from work-family conflict and not considered to be inversely related or on the opposite end of the same continuum. The work-family balance satisfaction construct is also argued to be conceptually different from other positive work-family constructs such as work-family balance (Greenhaus, Collins, & Shaw, 2003), as it refers to the appraisal and affective reaction to an unspecified level of balance rather than the level of balance itself. Further, work-family balance satisfaction is distinct from other work-family constructs such as conflict, enrichment, and facilitation, which describe a cross-domain transfer process where experiences in one role impact, either positively or negatively, experiences in the other. Instead, it taps contentment with the overall experience of managing both work and family roles (Valcour, 2007). Thus, the inclusion of satisfaction with work-family balance in work-family research is unique to the understanding of the work-family interface.

In general, research on the antecedents and outcomes of satisfaction with work-family balance has been limited. Indeed, Valcour (2007) has called for research that places this construct in the larger work-family nomological net. Initial research examining the antecedents of satisfaction with work-family balance has found that work characteristics of control over work time and work complexity are positively related, and work hours are negatively related to work-family balance satisfaction (Valcour, 2007).

Further, in a study of German office workers, social support at work was positively related to satisfaction with work-family balance (Beham & Drobnič, 2010).

Supervisor Support

In general, the workplace psychology literature has long recognized support as an instrument for buffering stressors and strains (Cohen & Wills, 1985; Viswesvaran, Sanchez, & Fisher, 1999). Specific to work-family issues, the impact of support from the work domain on diminished work-family conflict has been consistently demonstrated (e.g., Ford et al., 2007; Kossek, Pichler, et al., 2011; Michel, Mitchelson, Pichler, & Cullen, 2010).

Reviews on formal work-family policies have indicated that the mere existence of such policies is not sufficient for diminishing work-family conflict (i.e., Allen, 2001). Further, research has demonstrated that employees' needs in terms of managing work-family conflict are highly idiosyncratic (Lauzun et al., 2010). Thus, a one size fits all approach to managing conflict may not be appropriate. Informal sources of support may be more tailored to meeting the differing needs of employees for managing conflict. Indeed, research has suggested that informal means of organizational work-life support (e.g., supervisor support) are more effective in explaining employee outcomes, such as work-family conflict, than formal means of support (e.g., availability of work-family benefits; Anderson et al., 2002; Behson, 2005; Thompson & Prottas, 2005). Further, the supervisor plays an integral role in enacting formal sources of support, and they are given the decision latitude as to how to implement both formal and informal support in meeting subordinate work-family needs (Hammer, Kossek, Zimmerman, & Daniels, 2007). Thus, there is already precedent for research that investigates the leader's (i.e., the supervisor's)

role in managing conflict and balance. The next step is to fully integrate the leadership literature into this discussion.

Understanding Work-Family Outcomes through Leadership

Leadership has long been used to understand a myriad of subordinate outcomes. While there are many definitions of leadership, most definitions contend that it is “a process whereby intentional influence is exerted over other people to guide, structure, and facilitate activities and relationships in a group or organization”(Yukl, 2010). Different leadership theories (e.g., trait, behavior, power-influence, relationship based theories, and many others) have emerged over the last century explaining the mechanisms through which leaders impact subordinate performance. For instance, trait theories of leadership posit that there are certain attributes that effective leaders possess. Behavior based theories emerged in the 1950s as an answer to frustration with trait approaches (Yukl, 2010). Behavior based theories seek to describe what effective leaders actually do. Power and influence approaches are concerned with the different types of power used by leaders and how power impacts the behaviors of followers (Yukl, 2010). Relationship approaches (e.g., leader-member exchange) focus on the relationship between the leader and the follower as the mechanism for influence (Dansereau, Graen, & Haga, 1975; Graen & Uhl-Bien, 1995).

Only recently have researchers turned to the leadership literature to understand work-family outcomes (Major & Cleveland, 2007; Major & Lauzun, 2010; Major & Morganson, 2011a, 2011b). Major and colleagues make the argument that industrial-organizational psychology’s long history with and understanding of leadership is an apt tool to further the work-family literature. Specifically, they contend that leader-member

exchange theory provides an ideal framework for understanding how leaders influence work-family outcomes and for utilizing leadership as a tool to optimize work-family outcomes. Leader-member exchange theory is differentiated from other average leadership style theories in that it specifies a unique relationship between the leader and *each* follower (Dansereau et al., 1975). The theory posits that the quality of the leader-member relationship is the mechanism through which follower outcomes are impacted.

With a focus on leader behavior, Hammer and colleagues have also contributed to the understanding of leadership's impact on work-family outcomes (Hammer et al., 2011; Hammer et al., 2009; Hammer et al., 2007). Specifically, they have identified specific behaviors that the leader can engage in to show their support for followers' work-family needs. While Hammer and colleagues root their discussion of family supportive supervisor behaviors in workplace social support theory, I contend that it is also appropriately positioned in behavior-based approaches to effective leadership.

The current study seeks to integrate the literature on leader-member exchange relationships and family supportive supervisor behaviors to understand how these two leadership approaches work together to result in the most optimal work-family outcomes. The following sections describe leader-member exchange theory and family supportive supervisor behaviors in detail. Further, the impact of high leader-member exchange and family supportive supervisor behaviors on work-family outcomes and the rationale behind the conceptual model (see Figure 1) are discussed.

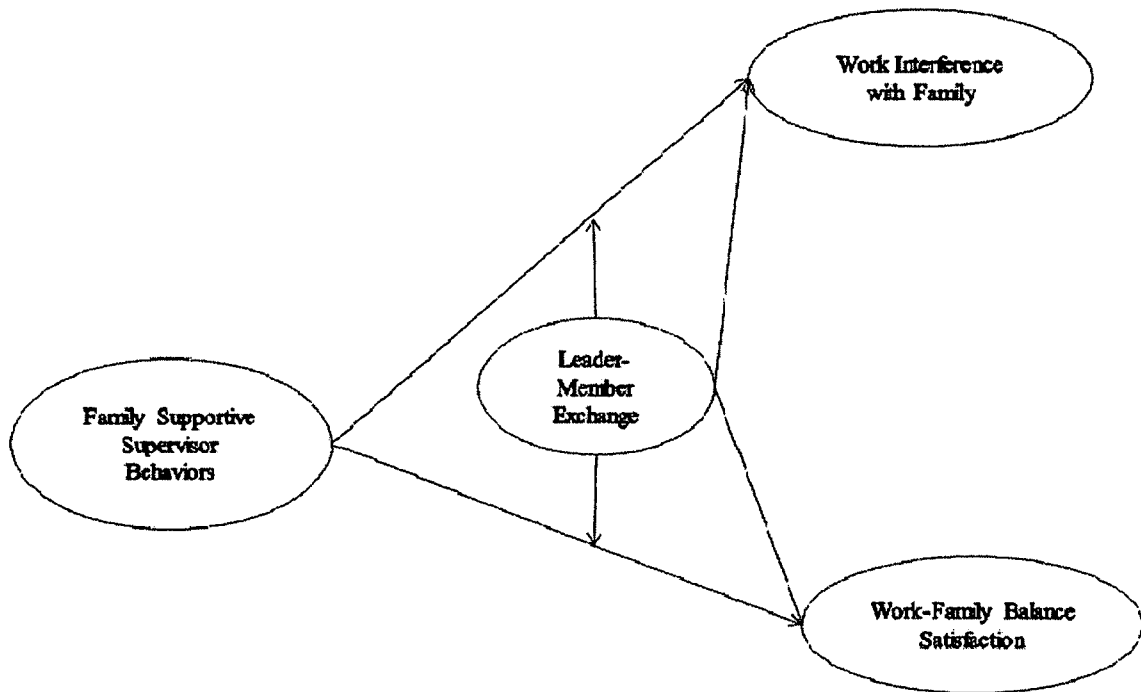


Figure 1. Conceptual model of leadership's impact on work-family outcomes.

Family supportive supervisor behaviors. With the goal of defining what it means to be a supervisor who “interprets, uses, and defines family supportive organizational formal and informal supports” (p. 181), Hammer et al. (2007) developed the family supportive supervisor behavior (FSSB) construct. Through an extensive survey of the extant literature, Hammer et al. (2007) identified four dimensions they deemed necessary to include in the FSSB construct: emotional support, instrumental support, role modeling behaviors, and behaviors related to the dual agenda of restructuring work in a way that is mutually beneficial for the employee and the organization. Following their review of the literature, Hammer et al. (2007) conducted several focus groups to further define the dimensionality of the construct. The emergent themes from these focus groups were: commuting needs, sensitivity to employees' work-family needs, scheduling flexibility, and respect toward employees. In moving forward with Hammer et al.'s.

(2007) findings pertaining to the dimensionality of the FSSB construct, Hammer et al. (2009) created and validated a measure to assess the construct. Hammer et al. (2009) demonstrate that FSSBs are comprised of instrumental support, emotional support, role modeling and creative work-family management. Emotional support refers to perceptions that the employee is being cared for and that their feelings are considered. A supervisor might demonstrate emotional support by showing concern and asking employees about their personal life commitments. Instrumental support pertains to assistance with the day-to-day management of work-family issues, including reactively assisting with subordinate needs for scheduling flexibility and making changes in how and where work is done. Role modeling behaviors consist of the supervisor's demonstration or provision of behavioral examples of effective integration of work and family roles for their subordinates. Lastly, creative work-family management is proactive, strategic and innovative in nature. It includes supervisor-initiated efforts to re-structure work in an effort to be sensitive to subordinates' work-family needs.

Conservation of resources (Hobfoll, 1989) and the demand-control-support models have been used as a rationale for the expectation that FSSBs be will related to diminished work-family conflict. Specifically, Hammer et al. (2011) state that an increase in support leads to follower perceptions of greater control over the performance of work and family responsibilities due to an increase of work-family specific resources afforded to the follower by the leader. Initial research on FSSBs has demonstrated a negative relationship with work interference with family (Hammer et al., 2009). Therefore, I hypothesize that subordinate perceptions of supervisors' FSSBs will be related to diminished work interference with family.

Although previous research has not attempted to demonstrate a relationship between FSSBs and satisfaction with work-family balance, there is initial evidence to support the existence of this relationship. Specifically, Beham and Drobnic (2010) found that social support at work was related to work-family balance satisfaction. Further, control over work time and work complexity were positively related to work-family balance satisfaction (Valcour, 2007). Following Hammer et al.'s argument that FSSBs will lead to follower perceptions of greater control over work and family responsibilities, it is expected that FSSBs will be positively related to satisfaction with work-family balance. Thus it is hypothesized that:

Hypothesis 1: Family supportive supervisor behaviors will be related to a) diminished work interference with family and b) increased work-family balance satisfaction.

Leader-member exchange. Leader-member exchange (LMX) is a construct from leadership theory that captures the quality of the relationship between a supervisor and a subordinate (Gerstner & Day, 1997). LMX is rooted in social exchange theory (Blau, 1964) and role theory (Kahn et al., 1964), positing that leader-member relationships are created for the opportunity to gain mutual influence and benefit in that relationship, which includes negotiating latitude of work roles (i.e., the ability to create a role at work that best suits one's needs). Graen and Scandura (1987) have identified three phases of the role development process: role-taking, role-making, and role-routinization. In the initial role-taking period, the leader evaluates the extent to which sent roles are accepted or rejected by the member. This allows the leader to evaluate the talents, skills, and motivation of the follower. The extent to which the leader is satisfied with the efforts of

the member impacts the type of LMX relationship that develops. The role-making phase evolves from the role-taking phase. Now, the follower is not simply taking the roles that the leader gives them; the individual is also negotiating aspects of the current role that will enable him or her to better perform the given role. It is during this phase that the exchange of resources begins. In the role-routinization phase, the role of the follower and the expected behaviors of the leader are well established.

Throughout the role development process, the quality of the LMX relationship is developed. A high-quality LMX relationship is one in which mutual affect, contribution, loyalty, and professional respect exist between a leader and a subordinate (Liden & Maslyn, 1998). In a high-quality LMX relationship, the supervisor provides more support, resources, autonomy, and communication than in a low LMX relationship (Gerstner & Day, 1997; Kacmar, Witt, Zivnuska, & Gully, 2003; Wayne, Shore, & Liden, 1997). A low quality relationship is more purely economic in nature and based on the employment contract (Blau, 1964). Therefore, there is little expectation pertaining to the quality of the relationship and feelings of reciprocal obligation.

From a work-family perspective, a supervisor would engage in a high quality LMX relationship by showing that the employee is valued by assisting the subordinate with managing work-family conflict, with the expectation that the employee is productive and instrumentally supportive of the supervisor. In line with this, the subordinate is productive and instrumentally supportive of the supervisor with the expectation that the supervisor is a resource for work-family conflict management.

Major and Lauzun (2010) cite several reasons why LMX theory is ideal for understanding the supervisor's role in assisting the subordinate with managing work-

family conflict. First, LMX theory is an apt tool for optimal work-family outcomes because it focuses on the supervisor-subordinate relationship rather than general managerial behaviors (Major & Lauzun, 2010). In other words, instead of recommending general behaviors that the leader should engage in to be effective across the board, LMX theory contends that the building of a high-quality relationship with one's subordinates leads to positive outcomes. Further, the building of this relationship is not solely the responsibility of the supervisor; the subordinate also plays a part. Moreover, establishing high-quality LMX is contingent upon the development of relationship skills that are essential in the management of people and the balancing of work and family life (Murphy & Zagorski, 2005).

Second, LMX theory's social exchange focus is ideally suited for optimizing work-family outcomes as it articulates what supervisors actually do to support subordinates (Major & Lauzun, 2010). Both supervisors and subordinates engage in the exchange of needed resources. Essentially, because there is trust and respect in the relationship, supervisors support subordinates by affording them the resources that are needed, including resources for managing work and family roles, trusting that the subordinate will exchange resources needed by the supervisor (e.g., instrumental support and productivity). Conservation of resources theory (COR; Hobfoll, 1989) has been repeatedly used to explain how support from the supervisor can lend itself to better work-family role management for subordinates (e.g., Grandey & Cropanzano, 1999; Hoobler, Hu, & Wilson, 2010; Kossek, Pichler, et al., 2011; Lapierre & Allen, 2006; Lauzun, Major, & Jones, 2012). The theory contends that individuals attempt to maximize resource gain to maximize functioning, well-being, and health. Conversely, individuals

seek to minimize resource loss to minimize stressful conditions such as psychological distress, negative health outcomes, and diminished functioning. In line with conservation of resources theory, these resources that the supervisor exchanges with the subordinate assist with optimal functioning and positive outcomes.

Third, LMX is an ideal theory to apply to the management of subordinate work-family needs as it describes how work roles are negotiated (Major & Lauzun, 2010). Specifically, the role making phase identified by Graen and Scandura (1987) allows the follower the opportunity to craft a role that optimizes work-family outcomes (e.g., diminished work-interference with family). Preliminary research has demonstrated a relationship between high LMX and decreased work-family conflict (Bernas & Major, 2000; Golden, 2006; Lapierre & Allen, 2006; Major et al., 2008).

Previous research has not attempted to demonstrate a relationship between LMX and satisfaction with work-family balance. However, there is initial evidence to suggest that this is a viable relationship. As discussed previously, initial work-family balance satisfaction research has demonstrated its relationship with work characteristics (Valcour, 2007). Specifically, control over work time and work complexity are positively related, and work hours are negatively related to work-family balance satisfaction. Further, LMX is related to the successful negotiation of customized job content, termed task idiosyncratic deals, which is then related to positive perceptions of work complexity and control (Hornung, Rousseau, Glaser, Angerer, & Weigl, 2010). As discussed above, part of a high LMX relationship is the ability to negotiate work roles; the development of a high LMX relationship will afford the subordinate the negotiating latitude necessary to create a level of work-family balance that he or she finds satisfactory.

Hypothesis 2: Leader-member exchange will be related to a) diminished work interference with family and b) increased work-family balance satisfaction.

I contend that the effect of a leader engaging in FSSBs will likely be dependent upon the nature of the relationship quality. If the leader is engaging in supportive behaviors *and* the relationship that exists between the leader and subordinate is of high quality, FSSBs are expected to be related to more positive work-family outcomes than if the relationship is not high in quality. Therefore, I am proposing that the impact of FSSBs on work interference with family and work-family balance satisfaction is contingent upon LMX quality.

Applying leadership contingency theories. Contingency theories of leadership posit that leadership effectiveness is contingent upon situational moderators. Further, the idea that there are characteristics that moderate the relationship between leadership and follower criterion variables has long been a part of many leadership approaches (cf., Evans, 1970; Fiedler, 1967; House, 1971; Kerr & Jermier, 1978). Both the path-goal and substitutes for leadership theories of leadership suggest that there are variables that moderate the effectiveness of leader behaviors. While neither of these theories has been previously applied to the understanding of work-family outcomes, I posit that both of these theories can be extended to explain the interactive effects of LMX and FSSB.

The path-goal theory of leadership (House, 1971) uses expectancy theory (Vroom, 1964) as a motivational framework to describe how the effect of leader behaviors on follower performance and satisfaction is contingent upon situational factors (i.e., task and environment characteristics, and subordinate characteristics). House and Mitchell's (1974) extension of the original path-goal theory makes a proposition that:

Leader behavior is acceptable and satisfying to subordinates to the extent that the subordinates see such behavior as either an immediate source of satisfaction or instrumental to future satisfaction (p. 84).

In applying this to the understanding of work-family outcomes, this proposition can be rephrased to: FSSBs are acceptable and satisfying (i.e., effective for attaining optimal work-family outcomes) to followers to the extent that followers value such behavior and perceive the behavior to be instrumental to diminishing work-family conflict and increasing work-family balance satisfaction. High-quality LMX relationships will increase the likelihood that FSSBs are acceptable and satisfying to followers.

Emerging from early work on the path-goal theory, Kerr and Jermier's (1978) substitute for leadership theory states that there are situational characteristics (subordinate, task, and organizational) that can substitute for or neutralize the effect of both supportive and instrumental leadership. For instance, follower experience and ability is posited to act as a substitute for supportive leadership, and indifference toward rewards acts as a neutralizer to both supportive and instrumental leadership. Neutralizers are environmental variables that eliminate the effect of the leader's behavior on the criterion variable. However, neutralizers do not have an effect of their own on the outcome. Conversely, substitutes reduce the impact of leader behaviors on outcomes by replacing the effect of the behavior with an effect of their own. Substitutes for leadership theory will be used later in breaking down the potential nature of the LMX-FSSB interaction.

Using the path-goal framework, I hypothesize that under conditions of high-quality LMX, followers will value their leader's FSSBs. Due to the expectation of support and liking in the relationship, the follower will find satisfaction in the FSSBs and

will perceive them to be instrumental in meeting their work-family needs. Therefore, I hypothesize:

Hypothesis 3: Leader-member exchange will moderate the relationship between family supportive supervisor behaviors and a) work interference with family and b) work-family balance satisfaction; such that when there is high leader-member exchange, family supportive supervisor behaviors will have a greater negative effect on work interference with family and a greater positive effect on work-family balance satisfaction.

While the impact of a high-quality LMX relationship on the FSSB-work interference with family relationship is expected to be straightforward, the nature of the moderation when LMX is low is expected to be more complicated. I contend that there are a few possible ways in which the FSSB to work-family outcome relationship will be impacted for subordinates perceiving a low quality relationship with their leader. Specifically, there is potential for neutral, cross-over, and attenuated effects. The specific nature of these effects will be described shortly. In a meta-analytic examination of moderators used in studies testing the tenants of path-goal and substitutes for leadership theories, Podsakoff, MacKenzie, Ahearne, and Bommer (1995) found that 12% of the moderators had an attenuated effect, 9% had a neutral effect, and 48% were classified as either attenuated or neutral. Further, 6% had a cross-over effect, 18% had a non-significant effect at either level of the moderator, and 7% were classified as either cross-over or non-significant. Thus, there is precedent in the literature for conflicting findings regarding the impact of moderators on leader behaviors. The identification of the type of

effect that LMX has on FSSB is important as each effect has differing implications for leadership practice. Therefore, each of these will be discussed in turn.

Neutral effect. First, there is the potential for a neutral effect (see Figure 2). In other words, having a low quality LMX relationship will neutralize the FSSB-work interference with family relationship. Using path-goal's expectancy rationale, due to the purely economic nature of the leader-member relationship, under conditions of low LMX quality, followers will not place value on leaders' engagement in FSSB nor will they perceive FSSBs to be instrumental in managing work-family needs. Further, leadership substitutes theory (Kerr & Jermier, 1978) would suggest that the existence of a low quality LMX relationship will act as a neutralizer, such that FSSBs no longer have a significant effect on both work interference with family and work-family balance satisfaction. Therefore, when the subordinate perceives a low quality relationship with his or her leader, the leader engaging in family supportive supervisor behaviors will not have an effect on work interference with family or work-family balance satisfaction. If this pattern of effect is found, it would suggest that the leader has nothing to lose in terms of negatively impacting the subordinate from engaging in FSSBs. They will either improve work-family outcomes or they will have no effect on them at all. However, the time and resources of the leader are of importance here. The existence of such an effect would suggest that it may not be worth the leader's effort to engage in FSSBs if there is a low LMX relationship.

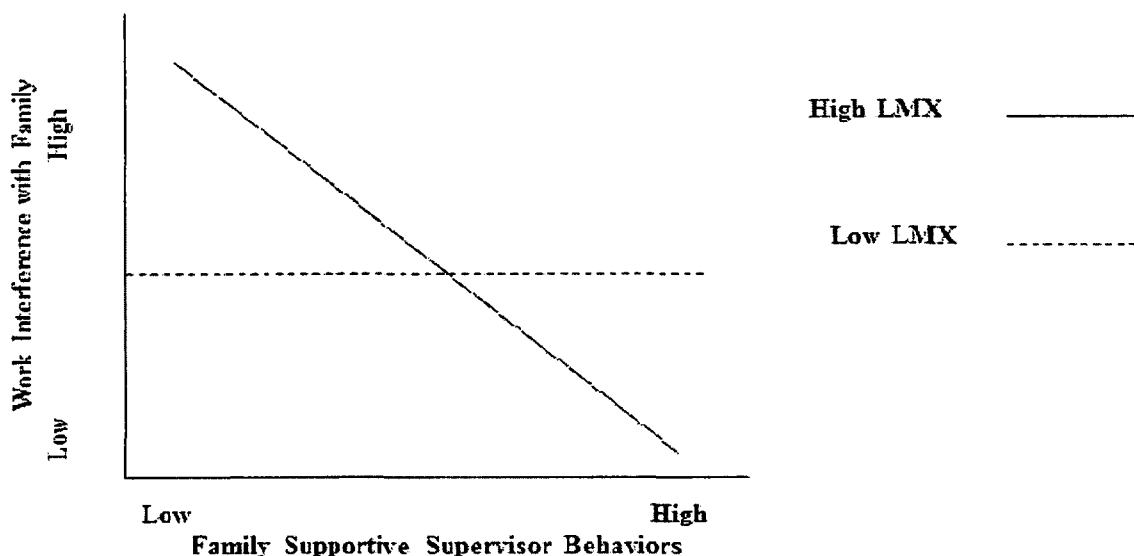


Figure 2¹. Neutral effect of low leader-member exchange on the work-family conflict-family supportive supervisor behaviors relationship.

Cross-over effect. Second, a cross-over effect may occur (see Figure 3).

Specifically, having a low quality LMX relationship will change the direction of the FSSB-work-family outcome relationship. As discussed previously, when there is a low quality LMX relationship, there is no expectation of an exchange of resources. In other words, the maximum expectation that exists between the leader and the member is that each one fulfills their employment contract obligations and nothing more. Thus, not only will the follower not perceive leader FSSBs to be instrumental in optimizing work-family

¹ Figures 2, 3, & 4 apply to the work-family balance satisfaction outcome as well.

However, the expected relationship is in the opposite direction of the figure depicted due to the positive relationship expected between family supportive supervisor behaviors and work-family balance satisfaction.

outcomes when they perceive a low quality relationship with their leader, he or she will perceive the leader engaging in FSSBs as inauthentic. Authentic leadership theories emphasize a consistency in leader's actions, words, and values and have demonstrated a negative impact of leader inauthenticity on follower well-being (Avolio & Gardner, 2005; Gardner, Cogliser, Davis, & Dickens, 2011). Engaging in FSSBs when low quality LMX exists will be perceived as inconsistent behavior by the follower. Thus, FSSBs will lead to an increase in work interference with family and a decrease in work-family balance satisfaction. A significant cross-over effect as depicted below has important practical implications. Specifically, such an effect would suggest that FSSBs are beneficial in the context of high LMX, but are harmful when LMX is low.

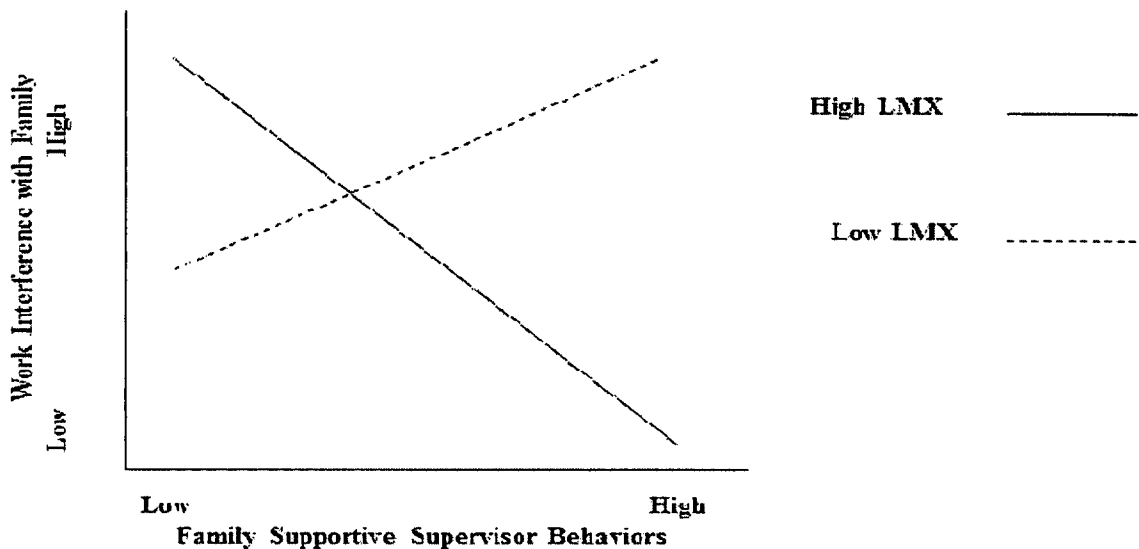


Figure 3. Cross-over effect of low leader-member exchange on the work-family conflict-family supportive supervisor behaviors relationship.

Attenuated effect. Lastly, low LMX may lead to an attenuated effect (see Figure 4). Having a low quality LMX relationship will decrease the magnitude of the effect of

FSSB on work-family outcomes. FSSB will diminish work interference with family to a lesser extent than if LMX were high. Similarly, FSSB will increase work-family balance satisfaction to a lesser extent than if LMX were high. Using substitutes for leadership theory, LMX acts as a substitute for FSSBs. Specifically it lessens the impact of FSSBs on work-family outcomes by exhibiting its own effect on the outcomes. Implications for practice for an attenuated effect would be that engaging in FSSBs is beneficial for follower work-family outcomes regardless of the LMX relationship.

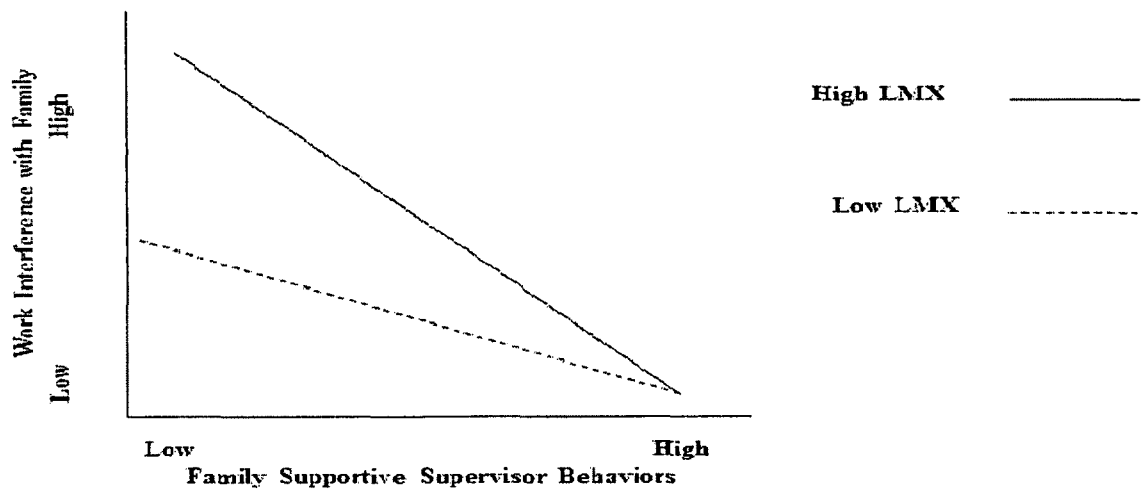


Figure 4. Attenuated effect of low leader-member exchange on the work-family conflict-family supportive supervisor behaviors relationship.

Research Question: What is the nature of the interaction (i.e., pattern) between LMX and FSSB in predicting work interference with family and work-family balance satisfaction?

CHAPTER II

METHOD

Participants and Procedure

The final sample was comprised of 315 working adults. Participants were an average of 33 years old ($SD = 9.80$) and worked an average of 42.44 hours per week ($SD = 6.28$). Participants indicated that they spent an average of 15.16 ($SD = 8.73$) hours a week on household duties. The sample was split fairly evenly between males and females (59.4% male & 40.6% female). On average, participants worked at their current organization for 5.49 years ($SD = 4.73$) and under their current supervisor for 3.48 years ($SD = 2.93$). The majority of the sample held a Bachelor's degree (52.1%), was married (49.2%), and was Caucasian (82.9%). Most participants reported their hierarchical level with their current organization to be at the Individual Contributor level (67.6%) and that they made between \$20,000 and \$40,000 a year (38.4%). Frequency breakdowns for nominal demographic variables can be seen in Table 1. Lastly, participants reported working in a wide variety of industries as indicated by US Department of Labor job codes (see Table 2).

An a priori power analysis was done to assess the number of participants needed to test the hypothesized model. It is difficult to determine the appropriate sample size for a structural equation model due to the power analysis' dependency on factors such as the size of the model, the distribution and reliability of variables, the interrelationships among variables, and missing data (Muthén & Muthén, 2002). However, the equations provided by Kim (2005) were used to calculate 80% power to obtain acceptable fit indices for 3 indices; CFI, RMSEA, Steiger's γ . Timo Gnams' website

(timo.gnambs.at/en/scripts/powerforsem) was used to create the SPSS syntax needed to calculate appropriate sample size. Power analysis showed that sample sizes of 269, 98, and 69 would be required for CFI, Steiger's γ , and RMSEA, respectively. This was determined by following the conventions specifying acceptable values for fit as .95 for CFI and Steiger's γ , and .05 for RMSEA (Hu & Bentler, 1999). Thus, a minimum sample size of 269 was sought out for this study, which was attained.

The current study employed a self-report survey design. Surveys were distributed at three points in time separated by one month. The first survey consisted of demographic questions to enable identification of an appropriate sample for the current project. The second and third surveys contained the measures assessing the variables used for hypothesis testing. This allowed for temporal separation of the predictor and criterion variables for two reasons. First, common method bias is a concern in cross-sectional self-report studies. Separating the collection of predictor and criterion variables in time is a recommended method for attending to this concern (P. M. Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Second, this approach can be used to demonstrate temporal precedence of the predictor variables. As demonstrating that the predictors precede the criterion in time is a requirement of causality (Shadish, Cook, & Campbell, 2002), such an approach will provide at least limited support for causal inference.

Participants were recruited through Amazon's Mechanical Turk (MTurk). MTurk is a crowdsourcing site used for the recruitment and compensation of participants for human subject's research. Recent research has explored the utility of using MTurk for quality data collection and has concluded that it is an acceptable source for obtaining high-quality data inexpensively and quickly (e.g., Buhrmester, Kwang, & Gosling, 2011;

Paolacci, Chandler, & Ipeirotis, 2010). Further, research has shown that the MTurk population is more representative of the U.S population than traditional undergraduate subject pools and other internet samples (Paolacci et al., 2010). Researchers have also discussed the ethicality of paying participants small amounts for task completion and have found that many participants do not complete tasks on MTurk for the compensation, but rather for enjoyment (i.e., internal motivation; Buhrmester et al., 2011).

Once the research project was posted on MTurk, members of the MTurk community had the option to voluntarily participate in the project. The first survey that was posted was the qualification survey. Participants were paid \$0.25 to answer demographic questions, allowing the researchers to identify those meeting criteria for inclusion in the study. 2,026 MTurk workers responded to this survey.

Participants were invited to take Survey 1 if they indicated on the qualification survey that they a) worked at least 30 hours a week, b) had a direct supervisor that they report to, c) had been at their current job for at least 6 months, d) categorized their job as white collar as opposed to blue collar, and e) included their MTurk Worker ID in the survey. MTurk Worker IDs were used to anonymously link participants across all of the study's surveys. These selection criteria resulted in sending out 875 invitations to participate in the research project.

The MTurk bonus function was used to send out invitations to Survey 1. This function facilitates communication with MTurk participants while maintaining participant anonymity. Participants were paid \$2 to complete Survey 1. Of the 875 individuals that were sent Survey 1 invitations, 502 responded. This resulted in a response rate of 57%. Prior to inviting participants to take Survey 2, the data were cleaned. Specifically,

participants that a) did not provide their MTurk Worker ID, or b) did not pass “attention checks” imbedded in the first survey, were not invited to continue participation in the project. Attention checks refer to items embedded in the survey that flag participants who may not be carefully reading the items as they respond. Two items were used; 1) an item stating “Please mark neutral from the options to the right” and 2) “Please type ‘Continue’ into the box below”. Participants that did not mark “neutral” and did not type “Continue” were excluded from further participation. This resulted in the invitation of 473 participants to take Survey 2.

Participants were paid \$3 to complete survey 2. Of the 473 participants that were sent Survey 2 invitations, 339 responded. This resulted in a response rate of 72%. Survey 2 data were cleaned to exclude participants that a) did not include their MTurk Worker ID, which meant that they could not be matched to a survey 1 data, or b) did not pass the attention checks. This resulted in the inclusion of 329 participants in the survey 2 sample.

Once data from the qualification survey, Survey 1, and Survey 2 were merged together, a final round of data cleaning was conducted to identify the final sample. First, Survey 1 demographics were analyzed. Although all participants invited to participate in Survey 1 indicated that they worked at least 30 hours per week in the qualification survey, seven indicated that they worked fewer than 30 hours per week on Survey 1. These individuals were removed from further analyses. Due to the nature of the constructs of interest in the current study, nine participants were also excluded from further analysis because they indicated that they had worked with their current supervisor for less than 6 months.

Table 1

Frequency Table of Demographics

Variable	<i>N</i>	%
Gender		
Male	187	59.4
Female	128	40.6
Race		
Caucasian	261	82.9
Asian	21	6.7
Hispanic	15	4.8
African-American	12	3.8
Native American	1	0.3
Other	4	1.3
Not Reported	1	0.3
Education		
High School	21	6.7
Some College	46	14.6
Associates	24	7.6
Bachelors	164	52.1
Masters	46	14.5
Doctorate	13	4.1
Other	1	0.3
Marital Status		
Single	114	36.2
Married	155	49.2
Cohabiting	46	14.6
Level		
Individual Contributor	213	67.6
Manager	81	25.7
Director	7	2.2
VP	3	1.0
Other	11	3.5
Income		
< 20,000	16	5.1
20-40,000	121	38.4
40-60,000	90	28.6
60-80,000	52	16.5
80-100,000	23	7.3
>100,000	13	4.1

Table 2

Frequency Table of Industries

Variable	<i>N</i>	%
Computer and Mathematical	54	17.1
Education, Training, and Library	38	12.1
Office and Administrative Support	36	11.4
Business and Financial Operations	34	10.8
Art, Design, Entertainment, Sports, and Media	20	6.3
Sales Related	20	6.3
Architecture & Engineering	17	5.4
Healthcare Support	17	5.4
Life, Physical, and Social Science	15	4.8
Healthcare Practitioners and Technical	12	3.8
Legal	11	3.5
Management	11	3.5
Transportation and Materials Moving	8	2.5
Community and Social Service	8	2.5
Construction and Extraction	3	1.0
Farming, Fishing, and Forestry	3	1.0
Food Preparation and Serving Related	2	0.6
Military Specific	2	0.6
Production	2	0.6
Installation, Maintenance, and Repair	1	0.3
Protective Service	1	0.3

Measures

All measures have been previously validated and have demonstrated strong psychometric properties.

Demographics. Participants were asked to report on a number of demographic questions for descriptive purposes and for the identification of potential control variables. The full list of questions can be seen in Appendix A.

Leader-member exchange. LMX was measured using the LMX-MDM developed and validated by Liden and Maslyn (1998; see Appendix B) . This 12-item,

multidimensional measure captures the LMX components of affect, loyalty, contribution, and professional respect. Items such as “ I respect my supervisor’s knowledge and competence on the job” and “My supervisor would come to my defense if I were ‘attacked’ by others” were rated by subordinates on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Alpha reliability was .93.

Family supportive supervisor behaviors. FSSBs were measured using the 14-item instrument developed and validated by Hammer et al. (2009; see Appendix C). Example items are: “My supervisor is willing to listen to my problems in juggling work and nonwork life;” “My supervisor is a good role model for work and nonwork balance;” “I can depend on my supervisor to help me with scheduling conflicts if I need it;” “My supervisor thinks about how the work in my department can be organized to jointly benefit employees and the company” for emotional support, role modeling, instrumental support, and creative work-family management, respectively. Items were rated on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Alpha reliability was .95.

Work interference with family. Work interference with family was measured using the 5 items representing work interference with family from the 10-item work-family conflict scale developed by Netemeyer, Boles, and McMurrian (1996; see Appendix D). Responses were reported on a 7-point Likert-type scale ranging from 1 (*disagree*) to 7 (*agree*) on items such as “The demands of my work interfere with my home and family life.” Alpha reliability was .92.

Work-family balance satisfaction. Work-family balance satisfaction was measured using the 5-item instrument created by Valcour (2007; see Appendix E). Participants were asked to report their satisfaction on a scale ranging from 1 (*very*

dissatisfied) to 5 (*very satisfied*) on items such as, “your ability to balance the needs of your job with those of your personal or family life.” Alpha reliability was .95.

CHAPTER III

RESULTS

Data were inspected and for univariate and multivariate outliers. No cases were identified as extreme univariate outliers (i.e., values 3 interquartile ranges past the inner fence in a box plot). Further, using the collective information of Cooks D, Mahalanobis Distance, and the Externally Studentized Residual to assess, influence, leverage, and discrepancy, respectively, no participants were identified as problematic multivariate outliers. Histograms were used to assess univariate normality. Although, several of the scales appeared to be slightly positively skewed when looking at histograms, skewness and kurtosis statistics were within the ± 1 guidelines. Thus, no efforts were taken to transform the data to address univariate non-normality. Next, scale means, standard deviations, and intercorrelations were calculated (see Table 3).

The correlations presented in Table 3 provide preliminary support for Hypotheses 1 and 2. Specifically, FSSBs and LMX assessed in Survey 1 were significantly related to the work-family outcomes assessed in Survey 2 and in the expected direction.

Prior to assessing the structural model that tests the hypothesized relationships; confirmatory factor analyses (CFA) were conducted using Mplus7 to assess the fit of measurement model. The expected factor structure was one where the four factors representing the four subscales of LMX and FSSB served as indicators of the second order LMX and FSSB factors, respectively; and each item measuring WIF and work-family balance satisfaction served as indicators of WIF and work-family balance satisfaction, respectively (see Figure 5). The expected factor structure was tested against a 1-factor structure, where all items were allowed to load onto one latent factor, and a 3-

factor structure, where LMX and FSSB loaded on one factor and WIF and work-family balance satisfaction loaded onto factors two and three, respectively.

Table 4 shows the model fit statistics for each model. Global fit measures of chi-square and root-mean-square error of approximation (RMSEA) were assessed. The model chi-square is an indicator of model misfit. Specifically, it tests the difference between the values in the sample covariance matrix and the reproduced implied covariance matrix. Therefore, a good fitting model should have a non-significant chi-square. However, the model chi-square is sensitive to sample size, such that it is typically significant for large sample size. RMSEA is an assessment of loading misspecification. Values of less than .05 are considered good model fit and values less than .08 are considered acceptable. The standardized root-mean-square residual (SRMR) is an indicator of variance misspecification and should be less than .08, and comparative fit index (CFI) assesses loading misspecification and should be greater than .95. While a plethora of model fit indices could be used, simulation studies have demonstrated that the proposed fit indices are recommend for interpreting model fit (Bentler, 1990; Cheung & Rensvold, 2001; Meade, Johnson, & Braddy, 2008). Further, as each index provides different information regarding fit or misfit, it is widely recommended that multiple fit indices be used to judge the fit of a model.

Chi-square difference tests were conducted next. Table 5 shows that the expected factor structure fit the data significantly better than the 1- and 3-factor models. The standardized factor loadings for the measurement model can be seen in Table 6.

Table 3

Means, Standard Deviations, and Intercorrelations

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	33.25	9.80	-													
2. Gender	0.41	0.49	.01	-												
3. Work Hours	42.44	6.28	.10	-.08	-											
4. House Hours	15.16	8.73	.12*	.08	.06	-										
5. Org Tenure	5.49	4.73	.58**	-.06	.08	.08	-									
6. Sup Tenure	3.48	2.93	.37**	.01	.15**	.11	.58**	-								
7. FSSB ^a	3.51	0.83	-.05	-.05	-.08	-.10	-.01	.01	(.95)							
8. FSSB ^b	3.54	0.82	-.04	-.04	-.10	-.10	-.04	-.01	.77**	(.95)						
9. LMX ^a	3.82	0.77	-.01	-.02	.00	-.05	.01	.03	.77**	.66**	(.93)					
10. LMX ^b	3.82	0.76	.01	-.07	.02	-.11*	.01	.02	.71**	.82**	.83**	(.93)				
11. WIF ^a	3.02	1.58	.07	.03	.35**	.03	.13*	.12*	-.38**	-.33**	-.26**	-.24**	(.96)			
12. WIF ^b	3.00	1.52	.10	-.01	.27**	.08	.10	.12*	-.39**	-.34**	-.27**	-.26**	.81**	(.92)		
13. WFBSat ^a	3.67	0.93	.00	-.06	-.25**	-.01	.00	.00	.39**	.34**	.28**	.25**	-.75**	-.65**	(.94)	
14. WFBSat ^b	3.71	0.90	.00	.02	-.23**	-.02	.01	.04	.43**	.46**	.34**	.36**	-.61**	-.65**	.76**	(.95)

Note. $N = 315$; ^aResponses collected in Survey 1; ^bResponses collected in Survey 2; Values in parentheses are alpha reliabilities; Org Tenure = Organizational Tenure; Sup Tenure = Supervisor Tenure; FSSB = Family Supportive Supervisor Behaviors; LMX = Leader Member Exchange; WIF = Work Interference with Family; WFBSat = Work-Family Balance Satisfaction; House Hours = Hours spent working on household duties; Gender is coded Male = 0 & Female = 1; * $p < .05$; ** $p < .01$.

Table 4

Measurement Model Fit Comparisons

Fit Statistic	Expected Model	3-Factor Model	1-Factor Model
RMSEA	[0.06, 0.07]	[0.11, 0.12]	[0.17, 0.18]
CFI	0.94	0.77	0.49
SRMR	0.05	0.07	0.15
χ^2	$\chi^2 (580) = 1,246.49, p < .01$	$\chi^2 (591) = 3,130.26, p < .01$	$\chi^2 (594) = 6,155.19, p < .01$

Table 5

Chi-Square Difference Tests

Models	χ^2 Difference
Expected vs 3-Factor	$\chi^2 (11) = 1,161.95, p < .01$
Expected vs 1-Factor	$\chi^2 (14) = 4,186.64, p < .01$

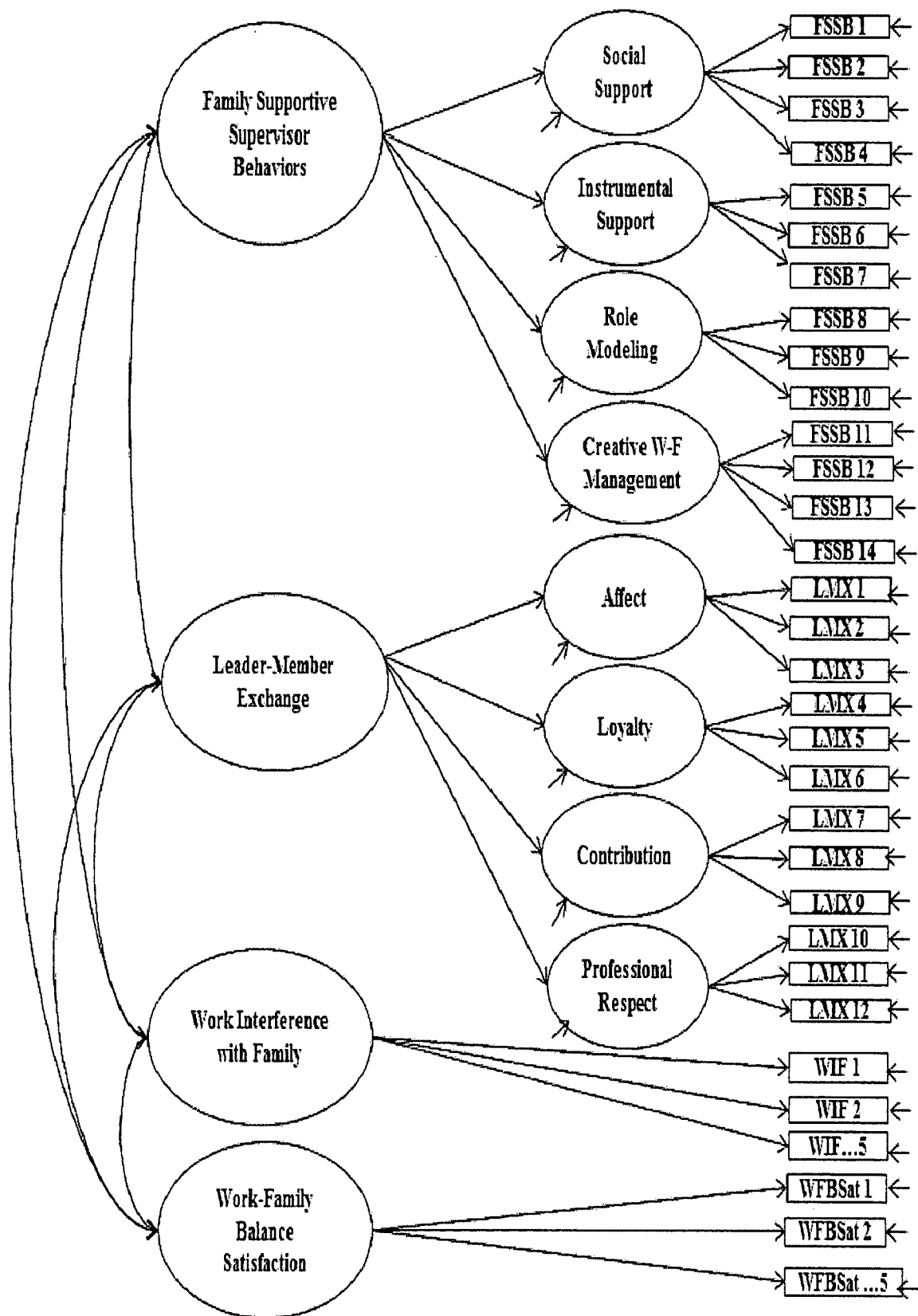


Figure 5. Measurement model.

Table 6

Factor Loadings for Expected Measurement Model

Factor	β
Family Supportive Supervisor Behaviors	
<i>Social Support</i>	0.87
FSSB_1	0.85
FSSB_2	0.83
FSSB_3	0.88
FSSB_4	0.87
<i>Instrumental Support</i>	0.95
FSSB_5	0.75
FSSB_6	0.79
FSSB_7	0.86
<i>Role Modeling</i>	0.76
FSSB_8	0.91
FSSB_9	0.95
FSSB_10	0.88
<i>Creative Work-Family Management</i>	0.90
FSSB_11	0.82
FSSB_12	0.70
FSSB_13	0.83
FSSB_14	0.86
Leader-Member Exchange	
<i>Affect</i>	0.91
LMX_1	0.90
LMX_2	0.90
LMX_3	0.88
<i>Loyalty</i>	0.85
LMX_4	0.84
LMX_5	0.91
LMX_6	0.84
<i>Contribution</i>	0.78
LMX_7	0.55
LMX_8	0.71
LMX_9	0.87
<i>Professional Respect</i>	0.77
LMX_10	0.90
LMX_11	0.95
LMX_12	0.88
Work Interference with Family	
WIF_1	0.94
WIF_2	0.95
WIF_3	0.92
WIF_4	0.89
WIF_5	0.79
Work-Family Balance Satisfaction	
WFBSAT_1	0.90
WFBSAT_2	0.89
WFBSAT_3	0.92
WFBSAT_4	0.91
WFBSAT_5	0.85

Note. All factor loadings are significant at $p < .01$.

Hypothesis Testing

The structural model (see Figure 6) was tested using structural equation modeling (SEM) with maximum likelihood estimation, and bootstrapping at 1,000 iterations in MPlus7. Maximum likelihood estimation is the best approach for attaining accurate parameter estimates unless there are extreme assumption violations (Schumacker & Lomax, 2004). Most researchers must deal with relatively small samples from non-normal populations and maximum likelihood estimation is based on the assumption of multivariate normality and large-sample theory (Micceri, 1989). Bootstrapping is an approach that resamples from the parent data set, creating an empirically established sampling distribution. It provides bootstrapped standard errors of the model parameter estimates and is a recommended solution to the practical issues inherent in maximum likelihood estimation (Nevitt & Hancock, 2001).

Work-family outcomes measured on Survey 1 as well as average hours worked per week were included as control variables in the model. While not truly longitudinal, including work-family outcomes measured on both Survey 1 and Survey 2 provides some confidence in the causal nature of the relationships explored. Average hours worked per week was included as a control as correlational results show it is significantly related to WIF and work-family balance satisfaction.

Little, Bovaird, and Widaman's (2006) orthogonally latent variable interaction approach was used to model the latent variable interactions (i.e., moderation) in the model. In this approach, orthogonally product indicators are created to serve as indicators of the latent interaction construct. This is done by calculating product variables where each indicator of the predictor variable is multiplied by each indicator of the

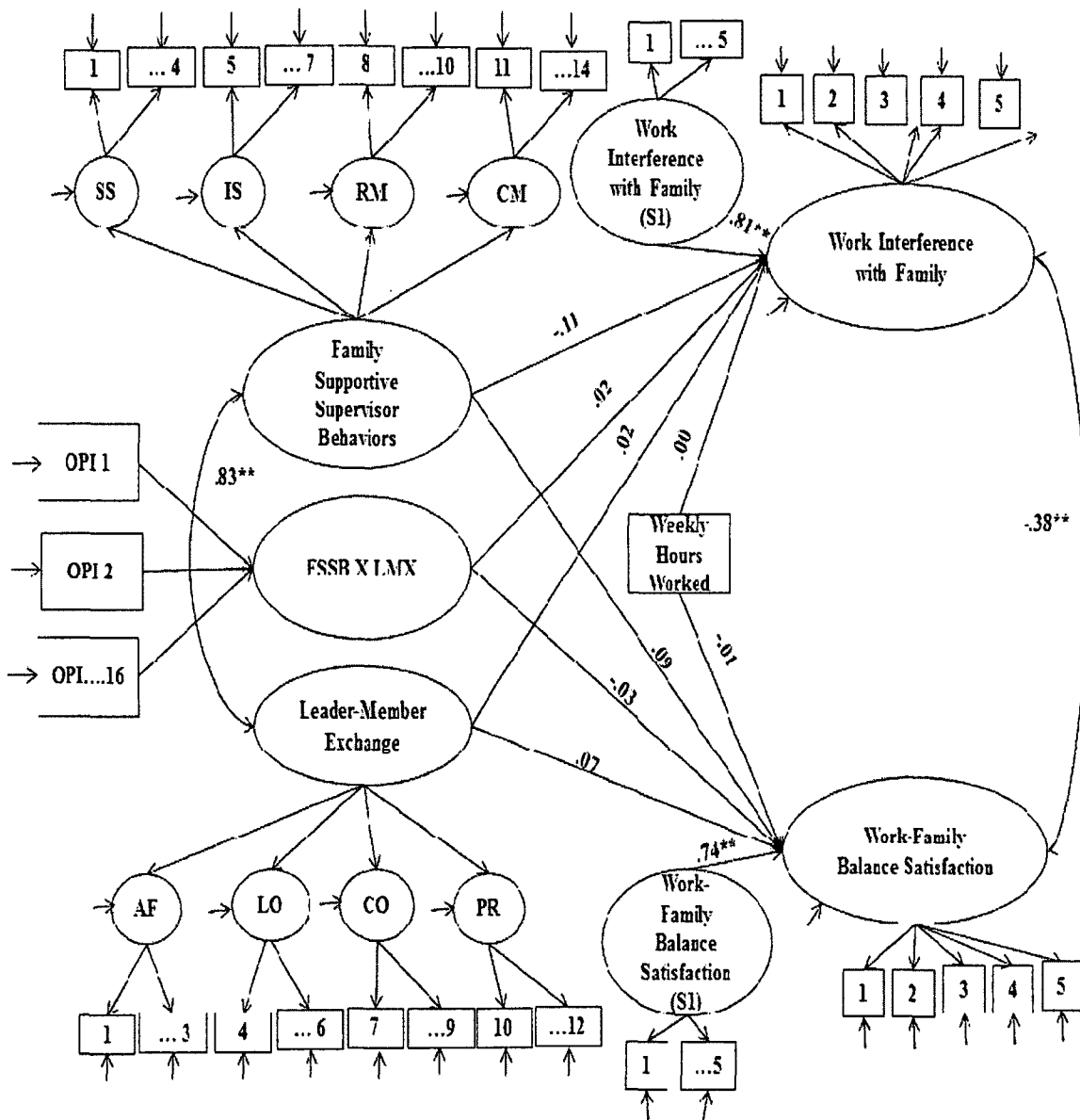


Figure 6. SEM model. OPI = Orthogonalized Product Indicator; SS = Social Support; IS = Instrumental Support; RM = Role Modeling; CM= Creative Work-Family Management; AF = Affect; LO = Loyalty; CO = Contribution; PR = Professional Respect; S1 = Survey 1; ** $p < .01$.

moderator variable. Next, each of these product variables is regressed onto the set of indicators for the main effect constructs. This removes any main effect information from the product indicators, thereby addressing concerns of redundancy in the indicators. The residuals for each of these regressions is then saved and used as the orthogonalized indicator of the latent interaction construct in the SEM model. This is an ideal approach in comparison to other available approaches as it a) is less technically demanding b) can be done in any of the available SEM software platforms, c) provides estimates comparable to the other approaches, d) does not impact the main effect parameter estimates with the inclusion of the latent interaction construct in the model, and e) does not harm model fit with the inclusion of the latent interaction construct (Little, Card, Bovaird, Preacher, & Crandall, 2007). Evidence from a Monte Carlo simulation demonstrated that this approach is comparable to traditional constrained approaches that require nonlinear constraints to be included in the model to account for the relationship between product indicators and main-effect indicators (Little et al., 2006).

Given the 14-item FSSB measure and the 12-item LMX measure, there are 14 indicators of the latent predictor variable and 12 indicators of the latent moderator variable, resulting in 168 orthogonalized product indicators of the latent interaction construct. Further, in order to model the latent sub-factors of LMX and FSSB that are modeled in the measurement model as part of the latent interaction term, these 168 orthogonal product indicators would be observed variables relating to 16 latent interaction variables that then relate to the higher order latent interaction term used to predict the outcomes. As this is an extremely burdensome and power inhibiting number of indicators, sub-scale scores were used to minimize the number of indicators included

in the latent interaction. Thus, the scale scores for each of the four sub-scales of FSSBs and the four subscales of LMX served as indicators of FSSB and LMX, respectively, for the creation of the orthogonalized product indicators. Thus, the amount of indicators of the latent interaction construct was reduced to 16. Subscale scores were only used in the creation of the orthogonalized product indicators of the latent interaction variable. All indicators of FSSB and LMX were used for their latent factors to retain the maximum amount of information on the main effect variables.

Schumacker and Lomax (2004) discuss three criteria necessary to judge both the statistical significance and practical meaning of a theoretical model. First, the global fit measures of chi-square and RMSEA should be assessed. As mentioned above in the testing of the measurement model, the model chi-square is an indicator of model misfit and RMSEA is an assessment of loading misspecification. A good fitting model should have a non-significant chi-square, and RMSEA values of less than .05 are considered good model fit and values less than .08 are considered acceptable. The fit indices of comparative fit index (CFI) and standardized root-mean-square residual (SRMR) were assessed along with the aforementioned model chi-square and RMSEA. The SRMR is an indicator of variance misspecification and should be less than .08, and CFI assesses loading misspecification and should be greater than .95. Model fit in the hypothesized model was lower than desired, $\chi^2(1,870) = 6,705.01, p < .001$, CFI = .77, SRMR = .06, and RMSEA = [.09, .09]. MPlus7 does not provide modification indices for models that have been bootstrapped. Therefore, the model was run without bootstrapping to assess potential paths that should be included or excluded to improve model fit. None of the

proposed modifications were theoretically meaningful; therefore, no modifications were made.

Second, Schumaker and Lomax (2004) suggest that the statistical significance of the individual paths should be assessed. Results demonstrated that the Survey 1 work-family outcomes used as controls were the only significant predictors in the model. That is, after controlling for the effect of WIF measured at Survey 1 on WIF measured at Survey 2, FSSB, LMX, nor their interaction significantly predicted WIF. Similarly, after controlling for the effect of work-family balance satisfaction measured at Survey 1 on work-family balance satisfaction measured at Survey 2, FSSB, LMX, nor their interaction significantly predicted work-family balance satisfaction. FSSB did not significantly predict WIF ($\beta = -0.11, p = .16$) or work-family balance satisfaction ($\beta = 0.09, p = .32$). LMX did not significantly predict WIF ($\beta = 0.02, p = .77$) or work-family balance satisfaction ($\beta = 0.07, p = .44$). Further, the interaction between LMX and FSSB did not significantly predict WIF ($\beta = 0.02, p = .59$) or work-family balance satisfaction ($\beta = -0.03, p = .53$). Therefore, Hypotheses 1, 2 and 3 were not supported. Since Hypothesis 3 was not supported, the research question regarding the nature of the interaction between FSSB and LMX was not explored.

The model was also tested excluding the Survey 1 outcomes as control variables (see Figure 7). In this model, FSSB significantly predicted both WIF ($\beta = -.59, p < .001$) and work-family balance satisfaction ($\beta = .52, p < .001$). However, the fit of this model was still lower than desired, $\chi^2(1,256) = 4,316.19, p < .001$, CFI = .82, SRMR = .05, and RMSEA = [.09, .09].

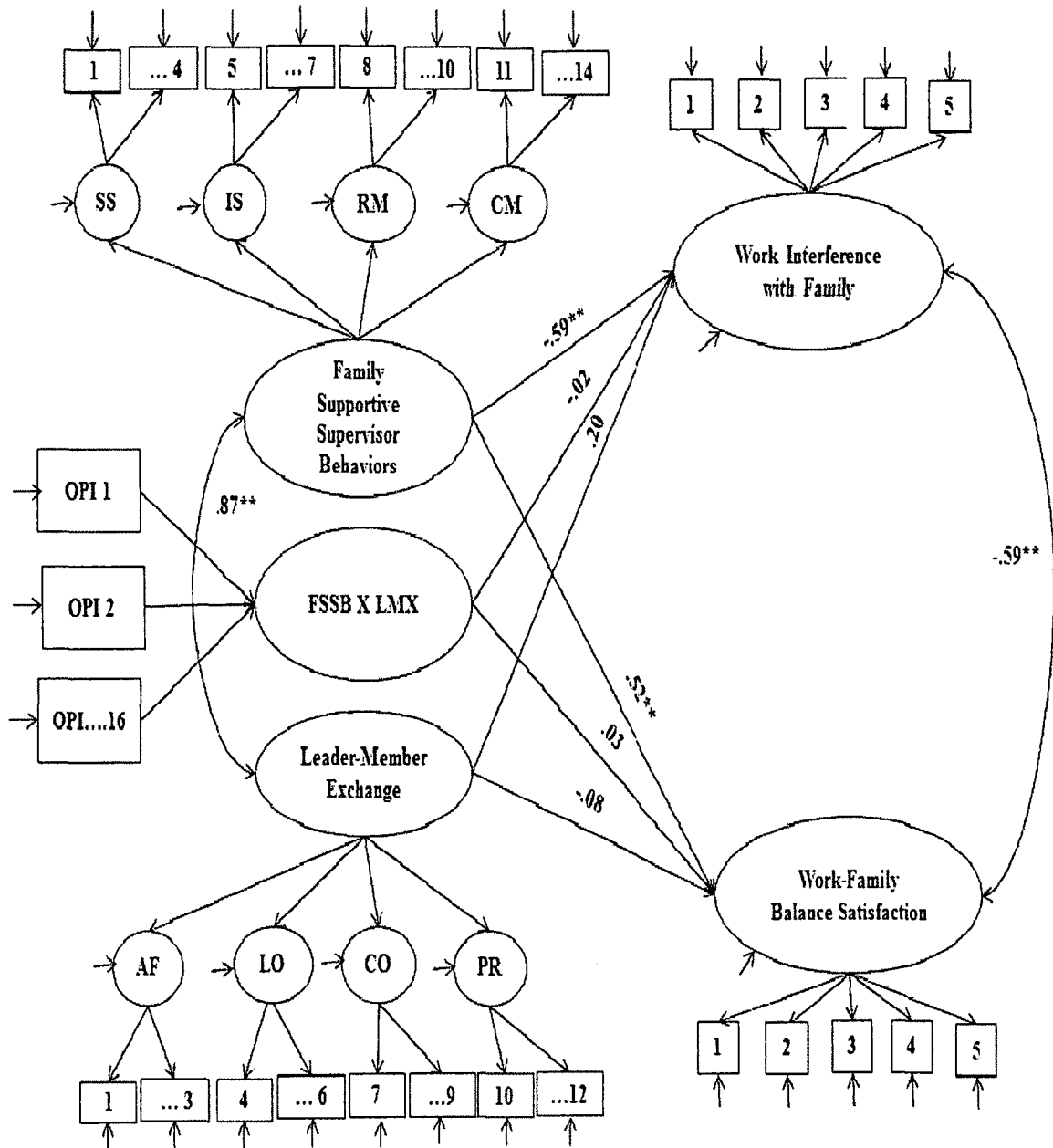


Figure 7. SEM model excluding control variables. OPI = Orthogonalized Product Indicator; SS = Social Support; IS = Instrumental Support; RM = Role Modeling; CM = Creative Work-Family Management; AF = Affect; LO = Loyalty; CO = Contribution; PR = Professional Respect; ** $p < .01$.

Exploratory Analyses

As the hypothesized moderation between FSSB and LMX was not supported, additional analyses were conducted to explore the relationship between these two leadership constructs in their prediction of work-family outcomes. A model where FSSB mediates the relationship between LMX and work-family outcomes was tested. Such a model suggests that the influence of a high-quality exchange relationship on work-family outcomes occurs through the supervisor engaging in family supportive behaviors.

The measures used to test this model were the same as those used to test the hypothesized model. However, it should be noted that for this model, FSSB assessed on Survey 2 was used as FSSB is now being treated as an endogenous variable in the mediation model. The exploratory model was tested in MPlus7 using Maximum Likelihood estimation bootstrapped at 1,000 iterations. The mediation model (see Figure 8) demonstrated acceptable model fit ($\chi^2(580) = 1,194.25, p < .001$, CFI = .94, SRMR = .05, & RMSEA = [.05, .06]) and a significant indirect effect of LMX on both WIF ($\beta = -0.22, p < .001$) and work-family balance satisfaction ($\beta = 0.36, p < .001$) through FSSB. Bootstrapped 95% confidence intervals for the indirect effect of LMX on WIF and work-family balance satisfaction were [-0.40, -0.04] and [0.20, 0.58], respectively.

In order to be consistent with the testing of the hypothesized model, the mediation model was also tested with the inclusion of Survey 1 work-family outcomes as controls in predicting their respective Survey 2 outcomes (see Figure 9; $\chi^2(1014) = 1,916.89, p < .001$, CFI = .94, SRMR = .07, & RMSEA = [.05, .06]). Results demonstrated that even with the inclusion of these controls, there was a significant indirect effect of LMX on work-family balance satisfaction ($\beta = 0.20, p < .01$). Bootstrapped 95% confidence

interval for the indirect effect of LMX on work-family balance satisfaction was [0.09, 0.34].

Next, the fit of the mediation model was tested against the hypothesized moderation model. Models that are not nested and have differing numbers of latent factors can be compared using the Akaike information criteria (AIC; Schumacker & Lomax, 2004), where the better fitting model is the one with the lower AIC. The AICs in the post hoc mediation model without controls, the post hoc mediation model with controls, the hypothesized moderation model without controls, and the post hoc moderation model with controls were 24,262; 31,174; 35,023; and 43,338, respectively. This suggests that the mediation model excluding Survey 1 outcomes as controls was the best fitting model.

As the post hoc model was exploratory, it was deemed necessary to also test the potential that LMX mediates the relationship between FSSB and the work-family outcomes. While this model fit the data well ($\chi^2(580) = 1,089.90, p < .001, CFI = .95, SRMR = .05, \& RMSEA = .05$), the indirect effects of FSSB on both WIF ($\beta = 0.07, p = .70$) and work-family balance satisfaction ($\beta = 0.14, p = .17$) were not significant. Further, comparing the LMX mediator model's AIC (24,309) to the FSSB mediator model's AIC (24,262), the initial post hoc model demonstrates superior fit.

Overall, the current study found that FSSB and LMX do not interact to predict work-family outcomes. Rather, the effect of LMX on work-family outcomes works through FSSB. The theoretical and practical implications of this effect are discussed in detail in the next section.

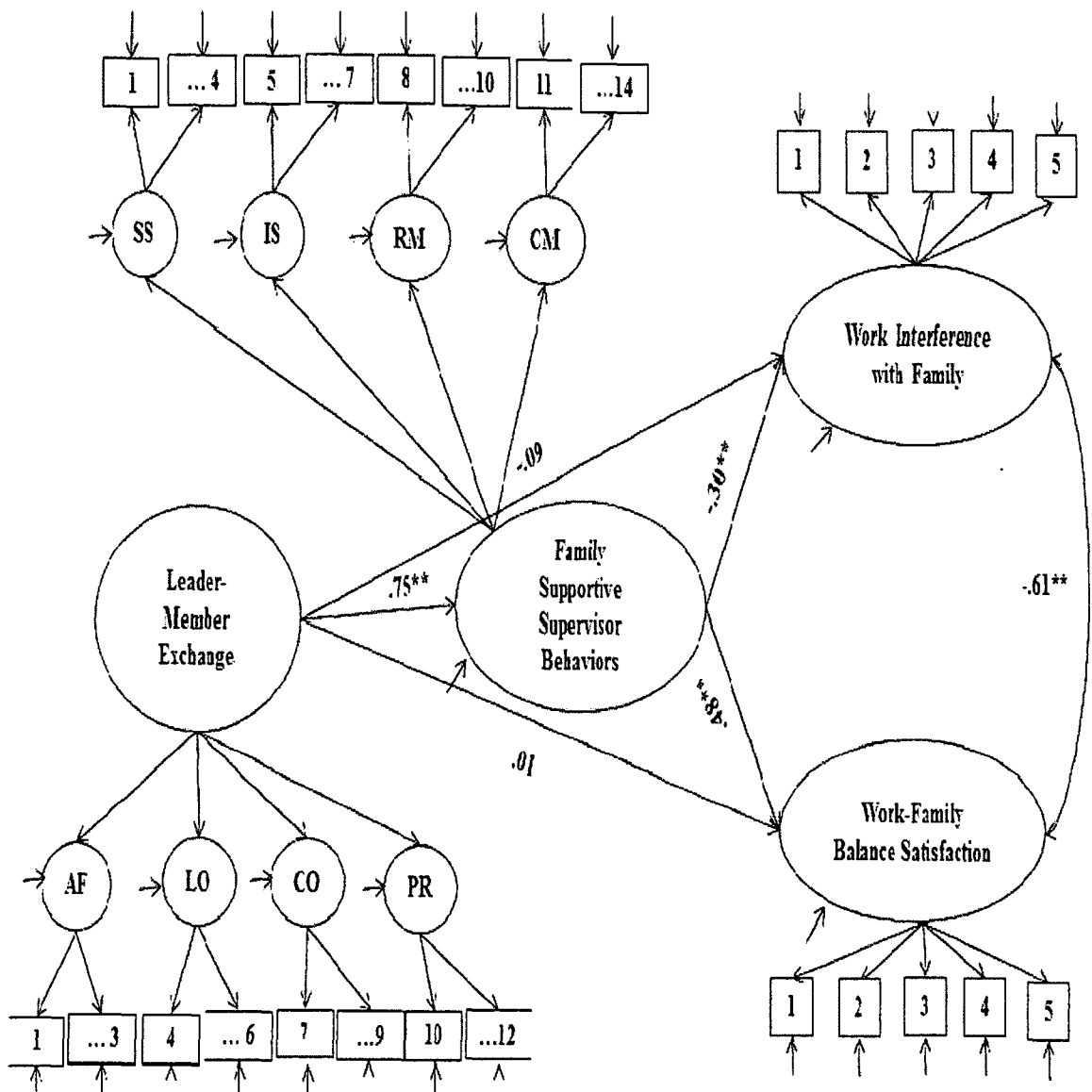


Figure 8. Post hoc mediation model. Values in figure are direct effect estimates.

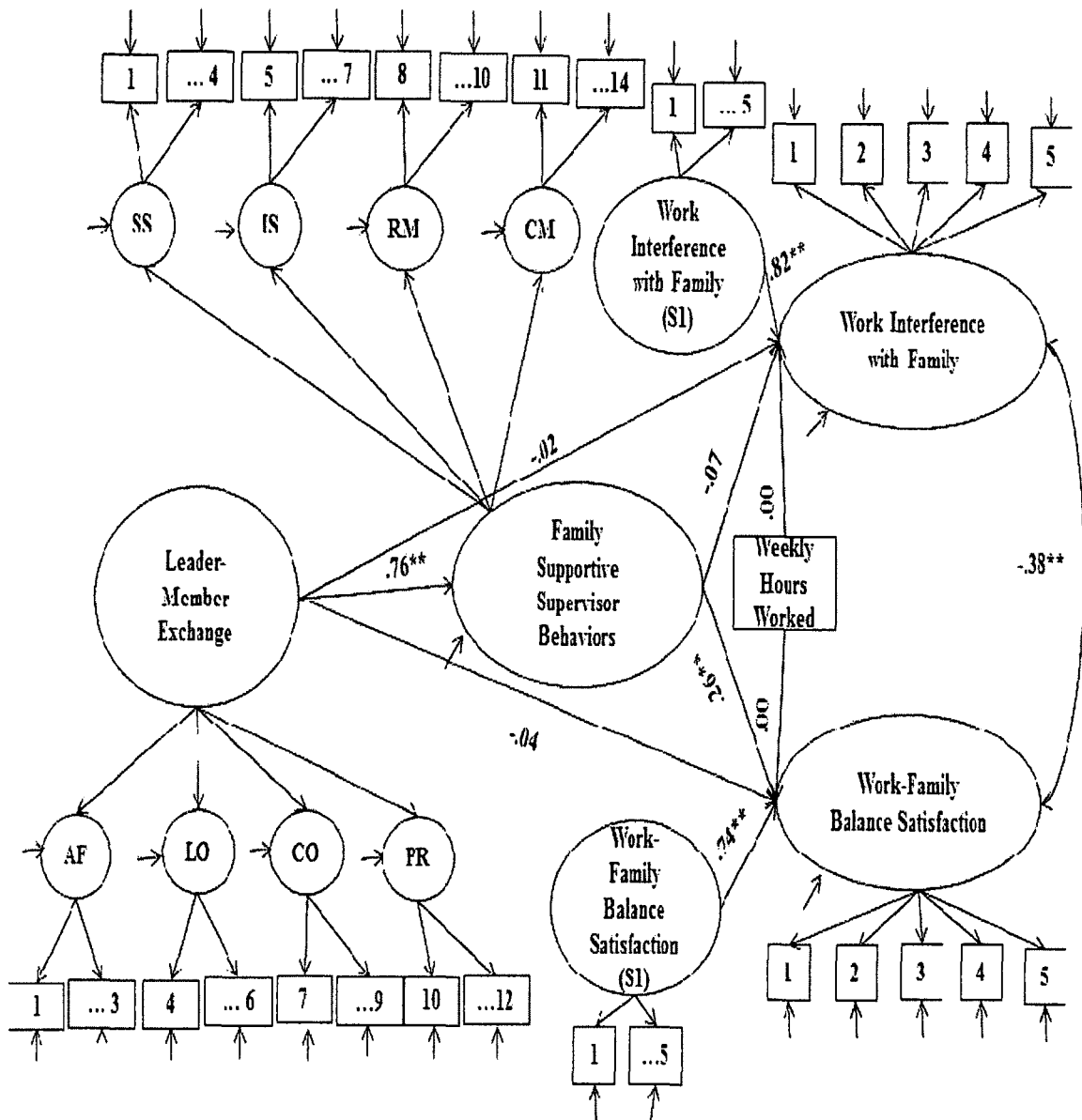


Figure 9. Post hoc mediation model including controls. Values in figure are direct effect estimates.

CHAPTER IV

DISCUSSION

This study examined the relationships between leadership and work-family outcomes. I sought to build on previous research by a) replicating previous findings regarding the role of leadership behaviors and the leader-subordinate relationship on diminishing work-family conflict, b) demonstrating the impact of leadership behaviors and the leader-subordinate relationship work-family balance satisfaction, and c) exploring the way in which the relationship between leader behaviors and the leader-subordinate relationship impacts both work-interference with family and work-family balance satisfaction. Overall, the results failed to support the hypothesized model. However, an alternative model was tested and supported that has important theoretical and practical implications. In the following sections, I discuss the findings pertaining to the study hypotheses as well as the exploratory analyses, discuss the theoretical and practical implications of these findings, note study limitations, and provide suggestions for future research.

Hypothesis 1 posited that family supportive supervisor behaviors would be related to diminished work interference with family and increased work-family balance satisfaction. Results partially supported this hypothesis. Zero-order correlations as well as the test of the model without Survey 1 outcomes as controls demonstrated a significant relationship between family supportive supervisor behaviors and work-family outcomes. However, once those controls were included in the model, the relationship was no longer significant. Similarly, Hypothesis 2 predicted that leader-member exchange would be related to decreased work interference with family and increased work-family balance

satisfaction. Preliminary results in the form of zero-order correlations provided support for this hypothesis. However, Hypothesis 2 failed to be supported in the test of the full hypothesized model.

Hypothesis 3 posited that family supportive supervisor behaviors and leader-member exchange would interact to predict both work interference with family and work-family balance satisfaction. This hypothesis was not supported. Therefore, the research question pertaining to the nature of the interaction was not explored.

Upon failing to find support for the hypothesized model, an alternative model was tested and supported where family supportive supervisor behaviors fully mediate the relationship between leader-member exchange and work-family outcomes. Such a model suggests that family supportive supervisor behaviors are the mechanism through which the relationship between the leader and the subordinate impacts both work interference with family and work-family balance satisfaction. In other words, leaders that have a high-quality exchange relationship with their subordinates are more likely to engage in behaviors that are supportive of work-family management, resulting in subordinates experiencing less work interference with family and more satisfaction with their level of work-family balance.

This model is in line with LMX theory and research. A high-quality LMX relationship is one where the expectation of mutual benefit and exchange of resources is established (Gerstner & Day, 1997). Therefore, due to mutual respect and loyalty, the subordinate is productive and instrumentally supportive of the leader; in turn the leader engages in behaviors that are supportive of the subordinate's work-family needs. Indeed, research has demonstrated that in a high-quality LMX relationship, the supervisor

provides more support, resources, autonomy, and communication than in a low LMX relationship (Gerstner & Day, 1997; Kacmar et al., 2003; Wayne et al., 1997). Thus, the leader engages in family supportive supervisor behaviors as their part of the high-quality exchange relationship, which then results in positive work-family outcomes. In other words, the leader enacts their role in the leader-member relationship through behaviors such as creative work-family management, role modeling positive work-family management, and support. Thus, leaders searching for ways to assist their subordinates that are dissatisfied with their level of work-family balance or are experiencing conflict, should enact their positive relationship by engaging in family supportive behaviors.

The findings of the current study have great implications for the implementation of work-family interventions within organizations. Research on training and applied initiatives to diminish work-family conflict is nearly non-existent (Casper, Eby, Bordeaux, Lockwood, & Lambert, 2007). Therefore, there is limited knowledge on how to best impact work-family outcomes through training and intervention. This is problematic as supervisor training to increase support for family is touted as the most needed intervention by work-life experts (Hopkins, 2005). In a rare study on work-family interventions, Hammer et al. (2011) conducted an intervention in which leaders were trained to exhibit family supportive supervisor behaviors, which decreased subordinate work-family conflict. However, Hammer et al.'s intervention study found that individuals experiencing low levels of work-family conflict prior to the intervention had increased levels of conflict after the intervention. Establishing a high-quality leader-member relationship prior to engaging in family supportive behaviors may assist in reconciling these counterintuitive findings. Research has also demonstrated that leader-member

exchange can indeed be trained (Scandura & Graen, 1984) and evaluation of this training showed that the training resulted in increased relationship quality and subordinates perceived their supervisors to be more supportive. Thus, given the current findings and extant research documenting the trainability of both family supportive supervisor behaviors and leader-member exchange, I recommend that *both* relationship skills and family supportive behaviors be trained and that relationship skills be trained *prior* to the implementation of a family supportive supervisor behavior training intervention. Such an approach will allow leaders to first gain the relationship skills as well as the subordinate trust that will then serve as the basis for the effective engagement in family supportive behaviors.

In taking a multi-level perspective to the practical implications of this research, there are recommendations that are evident for the organization, the leader, and the individual. Work-family researchers have noted that the role of managing work-family conflict is not solely an individual responsibility (Major & Bolen, 2013). Managing work-family conflict is likely inclusive of multiple agents, including the supervisor and the employing organization (for reviews see Ayman & Antani, 2007; Ford et al., 2007; Michel et al., 2010).

At the organization level, there are a few things that a company can do to impact work-family outcomes and assist the leader with their role of work-family facilitator for their subordinates. The organization can make training programs available to assist leaders with learning and applying the relationship skills and family supportive behaviors necessary to assist their subordinates with work-family management. In their recommendations for equipping leaders to address subordinate work interference with

family, Major and Lauzun (2010) specifically recommend that organizations train supervisors to develop high leader-member exchange with subordinates with the purpose of diminishing work-family conflict. Further, Major and Lauzun contend that leader interventions are more likely to be effective when they occur in a supportive work-family culture. This contention is based on the findings of Major et al. (2008), which showed that work-family culture was associated with decreased work interference with family indirectly through leader-member exchange. Their findings support the notion that a supportive work-family culture provides a context in which managers can positively impact subordinate work-family outcomes. Thus, the organization should cultivate a culture where the participation in these training programs, as well as the transfer of skills and behaviors learned in training, is supported.

At the work group level, given the current research, there are things that the leader can do to assist employees with work-family conflict. Specifically, the leader can work towards creating a high-quality exchange relationship with *each* subordinate. This will ensure that the leader is then engaging in family supportive supervisor behaviors for the benefit of all subordinates in the work group. Major et al. (2008) found that leader-member exchange was related to coworker support. Therefore, when coworkers have a good relationship with the leader, they are more likely to support one another. Further, the leader can enact their role in the established exchange relationship with each subordinate through engaging in behaviors such as demonstrating effective behaviors for juggling both work and family; asking for suggestions regarding how to make it easier for subordinates to manage work and family roles; and making subordinates feel comfortable talking about work-family needs (i.e., family supportive supervisor behaviors).

Lastly, at the individual level, the current research has implications for the individual as an active agent in managing his or her own work-family needs. The central tenet of leader-member exchange theory is that effective leadership processes exist when the leader and the follower are able to develop an effective partnership where the benefits of this partnership are gained by both parties (Graen & Uhl-Bien, 1991). Thus, the development of a high-quality leader-member relationship is the responsibility of both the leader and the subordinate. The individual plays a role in the creation of a high-quality relationship. This research shows that this high-quality relationship impacts the leader's likelihood of engaging in family supportive behaviors, which impacts the subordinate's experience of work interference with family and work-family balance satisfaction. Therefore, the individual should put a conscious effort towards the facilitation of a high-quality relationship with their leader.

Strengths, Limitations, & Directions for Future Research

There are several strengths of the current study regarding the study design, analytic approach, and the overall contribution of the results to work-family research and practice. The study's contribution to the work-family literature is perhaps its greatest strength, as the integration of leadership theory has implications for research and practice. The current study demonstrated that the use of leadership theory, specifically, the investigation of the interplay between leader-follower relationship quality and leader behaviors provides valuable insight into how leaders can assist subordinates with managing their work-family needs and diminishing conflict between work and family. Future research should continue to use Industrial /Organizational Psychology's in-depth understanding of leadership theory to further work-family research and practice.

Specifically, the integration of leadership theory should not stop with the leadership constructs explored in the current study. For instance, transformational leadership theory may also be applied to understand how leaders impact subordinate work-family outcomes. Transformational leadership is comprised of three types of behaviors: idealized influence, intellectual stimulation, and individualized consideration (Bass, 1985). Individualized consideration behaviors, providing support, encouragement, and coaching to subordinates, may be particularly fruitful for future research. Specifically, leaders can provide support, encouragement, and coaching aimed at assisting followers with managing their work-family needs. This would likely lead to diminished conflict and increased satisfaction with work-family balance.

The temporal separation of predictor and criterion variables is a strength considering the common practice of collecting these variables at a single point in time. Such an approach reduces the concern of common-method bias (P. M. Podsakoff et al., 2003) and provides some confidence in the causality of the model. However, this approach can also be considered a weakness. In reviewing the research design characteristics of work-family research, Casper and colleagues (2007) note the need for longitudinal studies that increase the field's understanding of causal dynamic. Thus, future research should employ longitudinal methods, assessing at least three time points, to provide more concrete evidence regarding the causality of the supported model.

Further, regarding study design, a strength of this study lies in the sampling of working adults from the MTurk population. As research has shown, the MTurk population is more representative of the U.S. population than traditional undergraduate subject pools and other internet samples (Paolacci et al., 2010); this approach allows for

broad generalizability of the study's findings. However, this approach can also be regarded as a weakness. Sampling working adults within a single organization could be a stronger approach as it controls for the impact of organizational culture on work-family outcomes. As discussed above, an organization with a supportive work family culture encourages leaders to be sensitive to subordinate work-family management needs (Thompson, Beauvais, & Lyness, 1999). Research has demonstrated that culture plays a large role in employees' experience of the work-family interface (i.e., decreased work-family conflict; Bragger, Rodriguez-Srednicki, Kutcher, Indovino, & Rosner, 2005; Mauno, Kinnunen, & Piitulainen, 2005; Thompson & Prottas, 2005). Further, Major et al (2008) found that work-family culture influenced leader-member exchange, which was the mechanism through which culture impacted work interference with family. Thus, future research should attempt to replicate the study's findings within a single organization. Further, taking a multi-level approach where the mediation model is tested using several organizations with potentially differing work-family cultures is also a fruitful endeavor for future research. Indeed, researchers have called for the positioning of work-family research in a multi-level framework due to the multiple systems involved in an individual's experience of the work-family interface (Major & Bolen, 2013).

The final strength of the study is its analytic approach. It employed a fully-latent structural equation model. This approach allowed for the estimation of error in both the measurement model and the structural model. Thus, measurement error is accounted for in the estimation of the parameters used to support the existence of relationships between the study variables. Further, this approach allows for testing of multiple dependent variables, multiple independent variables, and the interplay between these variables

simultaneously. In other words, it allows for the testing of theoretical models. The majority of work-family research has not employed analytic techniques that allow for theory testing, leading to criticisms about its atheoretical nature (Casper et al., 2007). Thus, this study in which a theoretical model is tested using appropriate techniques is a welcome contribution to the work-family literature.

CHAPTER V

CONCLUSIONS

The current study sought to examine the relationship between leader behaviors and the leader-subordinate relationship in predicting work-family outcomes. Results suggest that family supportive supervisor behaviors are the mechanism through which the relationship between the leader and the subordinate impacts both work interference with family and work-family balance satisfaction. Overall, the current study provides insight into how leaders can assist subordinates with managing their work-family needs and diminishing conflict between work and family.

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APPENDIX A**DEMOGRAPHIC MEASURES**

1. What is your gender? (*Male, Female*)
 2. What is your direct supervisor's gender (*Male, Female*)
 3. What is your age?
 4. What is your race? (*Caucasian, African-American, Asian, Hispanic, Other*)
 5. What is your direct supervisor's race? (*Caucasian, African-American, Asian, Hispanic, Other*)
 6. What is your education level? (*High school, Associates, Bachelors, Masters, Doctorate, Other*)
 7. What is your marital status? (*Single, Married, Cohabiting*)
 8. In an average week, how much time do you spend on household duties (laundry, paying bills, cooking, etc.)?
 9. What is your job title?
 10. On average, how many hours do you work per week?
 11. How long have you been with your organization?
 12. How long have you worked under your current supervisor?
 13. What label best describes your current level in your organization? (*Individual Contributor, Manager, Director, VP, C-Suite, Other*)
 14. How many children do you have?
 15. How many children under the age of 18 do you have living with you?
-

APPENDIX B**LMX MEASURE**

Please answer the following questions regarding your leader (i.e., immediate supervisor) at work

Affect

1. I like my supervisor very much as a person.
2. My supervisor is the kind of person one would like to have as a friend.
3. My supervisor is a lot of fun to work with.

Loyalty

4. My supervisor defends my work actions to a superior, even without complete knowledge of the issue in question.
5. My supervisor would come to my defense if I were "attacked" by others.
6. My supervisor would defend me to others in the organization if I made an honest mistake.

Contribution

7. I do work for my supervisor that goes beyond what is specified in my job description.
8. I am willing to apply extra efforts, beyond those normally required, to further the interests of my work group.
9. I do not mind working my hardest for my supervisor.

Professional Respect

10. I am impressed with my supervisor's knowledge of his/her job.
11. I respect my supervisor's knowledge of and competence on the job.
12. I admire my supervisor's professional skills.

Note. From Liden & Maslyn (1998). Anchors are 1 (*strongly disagree*) and 5 (*strongly agree*).

APPENDIX C

FAMILY SUPPORTIVE SUPERVISOR BEHAVIORS MEASURE

Emotional Support

1. My supervisor is willing to listen to my problems in juggling work and nonwork life.
2. My supervisor takes the time to learn about my personal needs.
3. My supervisor makes me feel comfortable talking to him or her about my conflicts between work and nonwork.
4. My supervisor and I can talk effectively to solve conflicts between work and nonwork issues.

Instrumental Support

5. I can depend on my supervisor to help me with scheduling conflicts if I need it.
6. I can rely on my supervisor to make sure my work responsibilities are handled when I have unanticipated nonwork demands.
7. My supervisor works effectively with workers to creatively solve conflicts between work and nonwork.

Role modeling

8. My supervisor is a good role model for work and nonwork balance.
9. My supervisor demonstrates effective behaviors in how to juggle work and nonwork balance.
10. My supervisor demonstrates how a person can jointly be successful on and off the job.

Creative work-family management

11. My supervisor thinks about how the work in my department can be organized to jointly benefit employees and the company.
12. My supervisor asks for suggestions to make it easier for employees to balance work and nonwork demands.
13. My supervisor is creative in reallocating job duties to help my department work better as a team.
14. My supervisor is able to manage the department as a whole team to enable everyone's needs to be met.

Note. From Hammer et al. (2009). Anchors are 1 (*strongly disagree*) and 5 (*strongly agree*).

APPENDIX D

WORK INTERFERENCE WITH FAMILY MEASURE

Please indicate the degree to which you agree with the following statements.

1. The demands of my work interfere with my home and family life
2. The amount of time my job takes up makes it difficult to fulfill my family responsibilities
3. Things I want to do at home do not get done because of the demands my job puts on me
4. My job produces strain that makes it difficult to fulfill family duties
5. Due to work-related duties, I have to make changes to my plans for family activities

Note. From Netemeyer et al. (1996). Anchors are 1 (*strongly disagree*) and 7 (*strongly agree*).

APPENDIX E

WORK-FAMILY BALANCE SATISFACTION MEASURE

Please indicate your level of satisfaction with:

1. the way you divide your time between work and personal or family life.
2. the way you divide your attention between work and home.
3. how well your work life and your personal or family life fit together.
4. your ability to balance the needs of your job with those of your personal or family life.
5. the opportunity you have to perform your job well and yet be able to perform home-related duties adequately.

Note. From Valcour (2007). Anchors are 1 (*very dissatisfied*) and 5 (*very satisfied*).

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