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**THE BENEFITS OF EXHIBITING FAMILY-SUPPORTIVE
SUPERVISOR BEHAVIORS: AN INVESTIGATION OF THE EFFECTS
OF REDUCING SUPERVISORS' WORK-FAMILY CONFLICT**

JIANG JACKY

SINGAPORE MANAGEMENT UNIVERSITY

2020

**The Benefits of Exhibiting Family-Supportive Supervisor Behaviors: An
Investigation of the Effects of Reducing Supervisors' Work-Family Conflict**

JIANG Jacky

Submitted to Lee Kong Chian School of Business in partial fulfillment of the
requirements for the Degree of Doctor of Business Administration

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2020

Declaration

I hereby declare that this dissertation is my original work
and it has been written by me in its entirety.

I have duly acknowledged all the sources of information
which have been used in this dissertation.

This dissertation has also not been submitted for any degree
in any university previously.



JIANG Jacky

20 April 2020

The Benefits of Exhibiting Family-Supportive Supervisor Behaviors: An Investigation of the Effects of Reducing Supervisors' Work-Family Conflict

JIANG Jacky

Abstract

The benefits of family-supportive supervisor behavior (FSSB) for subordinates' work and family outcomes have been the focus of previous studies, but little research has examined the positive impact of FSSB on supervisors' family outcomes. To address this research gap and contribute to the leader and family literature, the negative relationship between FSSB and work-to-family conflict (WFC) is examined in this study, focusing on the mediating role of personal skill development. In addition, I propose that emotional exhaustion moderates the main effect of FSSB on personal skill development and the indirect effect of FSSB on WFC via personal skill development. A three-wave field study was conducted at a bank in China to obtain dyadic data on supervisors and subordinates. Regression and bootstrapping analyses were conducted to test the proposed model and hypotheses. Most of the hypotheses were supported by the data. Personal skill development was found to mediate the relationship between FSSB and WFC, and emotional exhaustion alleviated the main effect of FSSB on personal skill development but not its indirect effect on WFC via personal skill development. The theoretical and practical implications are discussed.

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Chapter 1 Introduction

Since Thomas and Ganster (1995) first introduced the work-family concept 25 years ago, an increasing amount of literature has been aimed at informing supervisors and managers about family-supportive supervisor behavior, which can help subordinates handle work-family issues. Hammer, Kossek, Yragui, Bodner, and Hanson (2009) defined FSSB as the behaviors of supervisors that support those of their subordinates, and identified the four dimensions of emotional support, instrumental support, role modeling behavior, and creative work-family management. A recent review providing recommendations for FSSB research and practice suggested that there is extensive evidence of the significant impact of FSSB on employees' work life, family life, and health (Crain & Stevens, 2018). For example, based on the trickle-down model, Kwan (2014) found that the FSSB of upper-level managers enhanced middle-level managers' work-family leadership perspective and their FSSB, and ultimately reduced their work-to-family conflict. Research has also indicated that FSSB is positively related to work-to-family enrichment and positive work-to-family spillover (Breugh & Frye, 2008; Hammer et al., 2009; Muse & Pichler, 2011). In terms of work outcomes, employees' job attitudes, behaviors, states, and resources are positively influenced by their perceptions of FSSB (Crain & Stevens, 2018). The benefits include physical and psychological health, such as improved sleep quantity and quality (Crain et al., 2014) and reduced pressure (e.g., Hammer, Kossek, Bodner, & Crain, 2013; Thompson & Prottas, 2006).

However, most research has only examined the extent to which subordinates gain from FSSB. A recent review paper identified a lack of research into the benefits for supervisors who engage in FSSB (Crain & Stevens, 2018), which is

an omission that should be addressed. Evidence of such benefits can encourage supervisors to exhibit FSSB and further develop their leadership, which in turn will benefit both the subordinates and the organization. Thus, one aim of this study is to address the impact of FSSB on individuals and organizations by examining the relationship between FSSB and supervisors' WFC.

“Work-to-family conflict” refers to the phenomenon of work roles interfering with home roles in terms of time, strain, and behavior-based conflict (Greenhaus & Beutell, 1985). FSSB has been theoretically and empirically found to be related to reduced WFC among subordinates (Hammer et al., 2009) and the nature of this linkage has been identified (e.g. Kwan, 2014), but little is known about whether FSSB is beneficial to the providers. In particular, it is unclear whether they experience decreased WFC, and if so, what the mechanism is for such beneficial effects. Thus, by examining how and when FSSB benefits supervisors, practical implications can be obtained and the full advantage of engaging in FSSB can be realized.

By investigating the mediating mechanism, theoretical implications can be derived, specifically by examining the mediating role of personal skill development. This is defined as the learning of skills and capabilities such as active listening, empowerment, empathy, and effective communications (Lankau & Scandura, 2002), and as a key construct that links demonstrated behavior and benefits to actors, has been identified as a potential mediator. For example, there is strong evidence that mentoring is positively related to the mentors' personal learning, including their personal skill development (Hirschfeld, Thomas, & Lankau, 2006; Hu, Wang, Kwan, & Yi, forthcoming; Liu, Liu, Kwan, & Mao, 2009; Mao, Kwan, Chiu, & Zhang, 2016). The literature on the work-family

interface has also identified learning as a key mediator associated with family outcome variables (e.g., Kwan, Mao, & Zhang, 2010). Hence, another aim of this study is to examine whether personal skill development mediates the relationship between FSSB and supervisors' WFC. I suggest that displaying FSSB enhances the personal skill development of supervisors, which in turn decreases WFC.

Simulation theory and the work-home resources model help explain this mediating effect. Simulation theory suggests that the actions, emotions, and sensations of others are understood because people have "shared circuits" (Keyzers & Gazzola, 2006); that is, an understanding of other people's feelings is obtained when these feelings are observed and simulated through affective processes. Similarly, an understanding of other people's actions is obtained when those actions are observed and simulated through motor processes. I argue that empathy plays an important role in the ability of supervisors to understand and handle subordinates' family issues by providing appropriate FSSB. Through empathy, supervisors can gain knowledge about the causes and consequences of WFC, thus helping them to avoid similar situations when dealing with their own family issues, and enabling them to apply such knowledge and experience if WFC does occur. In addition, according to the work-home resources model, work resources increase personal resources such as skills, knowledge, and experience, which in turn improve the quality of family life (ten Brummelhuis & Bakker, 2012). Thus, I propose that personal skill development mediates the negative relationship between FSSB and WFC.

I also suggest that FSSB does not influence actors to the same degree. To investigate the boundary conditions of the effects of FSSB, emotional exhaustion is proposed as a moderator, which reflects the feeling of being emotionally

overextended, or the depletion of emotional resources (Maslach, 1998). This typically occurs when personal resources are not adequate to meet the demands of interpersonal interactions. Emotional resources are required in various situations, such as communicating with others or finishing a task. Emotional exhaustion represents a lack of personal resources (Halbesleben, 2006; Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014; Lam, Huang, & Janssen 2010), which undermines individual job performance (Karasek, 1979; Kim, Choi, & Vandenberghe, 2018; Parker & Sprigg, 1999; Shu, Wei, & Peng, 2019; Taris, 2006). When individuals experience a high degree of emotional exhaustion, they feel physically and emotionally depleted, which negatively influences their work and family outcomes. Empathy and learning take a great deal of effort and energy. When individuals lack personal resources, they are less likely to focus outward on others. Hence, the learning process may slow down, negating the positive effects of engaging in FSSB. Thus, whether emotional exhaustion moderates the main effect of FSSB on personal skill development and the mediating effect of personal skill development on the relationship between FSSB and WFC are also examined.

In summary, this study makes three main contributions. First, it contributes to the literature on both FSSB and the work-family interface by constructing and empirically testing a model that links supervisors' behavior and WFC in a field setting. The study is therefore a response to the recommendation that the FSSB outcomes of supervisors are investigated further (Crain & Stevens, 2018), and through identifying the benefits it can inform practitioners about facilitating and developing FSSB in organizations. Second, examining the mediating role of personal skill development explores why and how FSSB leads to reduced WFC,

and also highlights the role of personal skill development, as identified in the relevant literature. Third, by considering the moderating role of emotional exhaustion, the model contributes to the literature by providing details of when FSSB influences supervisors' personal learning and WFC. This also provides practical implications by demonstrating when the positive effect of FSSB is leveraged. Figure 1 represents the model.

Chapter 2 Literature Review

2.1 Previous research of FSSB

A review of discussions concerning supervisors or managers with a work-family balance is necessary for understanding the concept of FSSB. A supervisor or manager who recognizes this balance is defined by Thomas and Ganster (1995) as “one who empathizes with the employee’s desire to seek balance between work and family responsibilities” (p. 7), and who protects employees’ rights by “accommodating an employee’s flexible schedule, being tolerant of short personal phone calls after school, granting a time trade so that new elder-care arrangements can be monitored, allowing one to bring a child to work on a snow day, or even offering a kind word when the babysitter quits” (p. 7). This definition emphasizes the willingness to help subordinates seek a work-family balance and advise them about it. Responsibility is also stressed by Clark (2001), who defined a work-family supportive supervisor as someone who supports employees who have significant family responsibilities. This definition reflects the awareness that employees face increasing responsibilities in terms of their families, and that organizations should ensure they have the capabilities to relieve the pressure and responsibilities they face at work.

The definition of supervisors or managers who consider work-family balance has since been developed to include the facilitation of their subordinates' ability to balance work and family through supportive attitudes and behaviors. Hammer, Kossek, Zimmerman, and Daniels (2007) asserted that work-family supportive managers should recognize "the dual agenda of working families housed within organizations" (p. 182). Kossek, Pichler, Bodner, and Hammer (2011) explained supervisor work-family support as the "perceptions that one's supervisor cares about an individual's work-family well-being, demonstrated by supervisory helping behaviors to resolve WFCs (Hammer et al., 2009) or attitudes such as empathy with one's desire for work-family balance" (Thomas & Ganster, 1995) (p. 292).

The concept of FSSB was developed by Hammer et al. (2009) to identify and examine the behaviors that supervisors or managers should engage in to support the work-family balance. FSSB is measured using the four dimensions of emotional support, instrumental support, role modeling behavior, and creative work-family management (Hammer et al., 2009). Emotional support refers to the perceptions that one's feelings are recognized and that emotional resources are available when needed. Instrumental support refers to the effort supervisors make to meet employees' work-family needs through daily management transactions, such as scheduling flexible time. "Role modeling behavior" refers to supervisors' behaviors when addressing work-family issues, from which subordinates can learn. Creative work-family management occurs when managers attempt to improve employee efficiency by restructuring work arrangements. These four dimensions have been empirically examined and are strongly correlated with each other, with correlation coefficients ranging from 0.62 to 0.74. This means

there is a high likelihood of their co-occurrence. As they have similar effects on outcomes such as job satisfaction and WFC, FSSB can be regarded as a reflective second-order factor construct (Hammer et al., 2009).

Conceptually, FSSB is similar to constructs associated with support, such as general supervisor support and family-supportive organization perceptions (FSOP). FSSB and general supervisor support involve similar behaviors. However, FSSB focuses on family issues, such as helping employees deal with WFC, while general supervisor support is not limited to this; it can include work assistance such as promotion and career development. FSSB has been found to be closely connected to WFC, positive family-to-work spillover, job satisfaction, and reduced turnover intentions, and thus extends the impact of general supervisor support (Hammer et al., 2009). In addition, FSSB and family-supportive organization perceptions are different constructs. FSOP measures employees' perceptions of the care and resources provided to help them manage their work-family balance. The FSOP scale does not include any items related to FSSB, but they may influence each other and overlap, as their weighted correlation is 0.32 ($p < 0.05$) (Kossek et al., 2011). Thus, distinguishing perceptions of supervisor support and those of organizational support is difficult, because perceived supervisor support may induce perceptions of organizational support (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002), while a family-supportive culture is likely to be accompanied by like-minded behavior in supervisors (Mills, Matthews, Henning, & Woo, 2014). FSSB has been conceptualized as an antecedent of FSOP in some studies (e.g., Hill, Matthews, & Walsh, 2016), while others have regarded FSOP as a predictor of FSSB (e.g., Mills et al., 2014). The lack of extensive research in this area means

that it is still a controversial issue, but FSSB is a different concept from general supervisor support and FSOP.

Predictors of FSSB

A review of the empirical literature into the predictors and outcomes of FSSB is necessary to fully understand its effects. The few studies of the predictors of FSSB mainly focus on the four areas of the characteristics of supervisors and employees, family-related benefits, organizational culture, and supervisor behavior. Similarities in terms of gender, race, and in the employee-supervisor dyadic are characteristics of supervisors and employees that can predict FSSB. According to social identity theory, people often form groups according to similarities and social status (Tajfel & Turner, 1985). Foley, Linnehan, Greenhaus, and Weer (2006) revealed that similarity of either gender or race promotes supervisor family support, and the greater these similarities between supervisors and subordinates, the more likely it is that supervisors will provide family support. Basuil, Manegold, and Casper (2016) tested how supervisor-subordinate similarity in family-related demographics affects subordinates' perceptions of family-supportive supervision, and subsequently how these perceptions influence employees' affective commitment. The targets were subordinates who required family support at work. In total, 227 employees were selected to complete a survey focusing on how similarity in follower and leader family-related demographics influenced perceived family-supportive supervision. The shared reality theory suggests that people are likely to build up and maintain mutual trust or shared communality in relationships with those who have similar experiences. Thus, subordinates who are similar to their supervisors are likely to perceive family-supportive supervision. The results were consistent

with the hypothesis that female subordinates obtain less family-supportive supervision from male than from female supervisors. Similarly, the parent subordinates obtained more family-supportive supervision from parent than nonparent supervisors. Thus, similarities of gender, family situation, and values strengthens the relationship between supervisors and subordinates, thereby facilitating FSSB.

The above findings about the effects of similarity of gender, race, and family situation are reasonable and credible but are contradicted by those of other researchers. For example, Hopkins (2002) observed that much of the research on supervisor support and interactions with troubled workers has focused on Caucasian male workers and supervisors; few studies have considered whether and how gender and race differences affect the help supervisors provide to subordinates with family problems. Hopkins recruited 429 employees in the manufacturing industry who had cross-gender and cross-race supervisor-subordinate relationships, and from the completed questionnaires it was found that cross-gender supervisor-subordinate relationships promoted FSSB. Male employees reporting to female supervisors received more formal supervisor intervention than male workers reporting to male supervisors, and female employees perceived more informal work-family support from male than from female supervisors.

Gender difference also affects those in work-linked marriages. Recent research has focused on dual career marriages, and some researchers have considered work-related marriages when exploring whether gender influences employees' turnover intentions in predominantly male occupations. Role theory and conservation of resources (COR) theory both suggest that women tend to

have work-related marriages and to quit their jobs, and their relationships are mediated by variables such as FSSB, job control, and psychological distress. To verify this hypothesis, Huffman and Olson (2017) investigated the work-related marriages of 309 men and women and found that gender was associated with FSSB: women were less likely to perceive FSSB than men, and FSSB mediated the relationship between gender and turnover intentions. These findings may be due to the following factors: (1) women may consider childcare and housework more than men; and (2) supervisors may have different perceptions of male and female subordinates, thus treating them differently through various mechanisms.

In terms of family-related benefits and organizational culture, the study of Matthews, Mills, Trout, and English (2014) indicated that individuals who work for organizations that offer family-supportive benefits and employees with dependent care responsibilities perceive more FSSB. In addition, the organizational culture can influence supervisors' family-supportive behaviors; that is, supervisors in organizations with stronger family-supportive perceptions are more likely to provide FSSB. Mills et al. (2014) found that FSOP is an important predictor of FSSB, which in turn promotes follower self-efficacy, affective organizational commitment, and assessment of supervisor work. In addition, both follower self-efficacy and affective commitment independently mediate the relationship between FSSB and self-rating performance. The results also indicated that work-family policies are critical for all organizational members, regardless of their familial status.

Supervisor behavior is also significantly related to FSSB. Leader-member exchange (LMX) has been found to be positively related to FSSB (Morganson, Major & Litano, 2017). In addition, Pan (2018) used a moderated mediation

model based on role identity theory and social exchange theory to examine how supervisor workaholism and perceptions of subordinates' WFC affect family-supportive behavior, and thus subordinates' organizational citizenship behavior (OCB) toward supervisors and their withdrawal behavior at work. The participants were employees working in the hospitality industry in Macau. A total of 200 questionnaire packages were distributed and 173 valid responses returned. The results showed that supervisor workaholism was positively related to FSSB, and FSSB was positively related to subordinates' OCB toward their supervisor and negatively related to their withdrawal behavior at work. The mediating effect of supervisor workaholism on subordinates' OCB toward supervisors and their withdrawal behavior at work was only significant when the supervisors had greater perceptions of subordinates' WFC.

Outcomes of FSSB

Researchers have identified various outcomes of FSSB, including those related to work-family balance, jobs, and health. By developing and validating a multidimensional measure of FSSB, Hammer et al. (2009) found that FSSB was positively related to positive work-family spillover and job satisfaction, and negatively related to WFC and turnover intentions. The results of a quasi-experimental field study demonstrated that perceptions of FSSB were positively associated with job satisfaction and physical health and negatively associated with turnover intentions (Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011). In terms of physical health, one study indicated that the predictors WFC and FSSB jointly influenced employees' sleep quantity and quality (Crain et al., 2014). Drawing on COR theory, Crain et al. (2014) used a sample of 623 information technology employees to explore the associations among WFC,

FSSB, and sleep quality and quantity. They conducted validated wrist actigraphy methods to measure objective sleep quality and quantity data over seven days, and survey methods to collect data on self-rating WFC, FSSB, and sleep quality and quantity.

Numerous related concepts have been addressed in the literature. Supervisor family support has been found to be positively associated with task performance (Bagger & Li, 2014; Matthews et al., 2014; Rofcanin, Las Heras, & Bakker, 2017), drawing on the theories of social exchange, broaden-and-build, COR, and social information processing, and by considering LMX quality, social exchange with supervisors and work engagement as mediators, and family friendly benefits and organizational culture as moderators. Models related to work-to-family enrichment (WFE) (Jiang, 2016; Meng, 2015; Qing & Zhou, 2017; Shu, 2016; Zhang & Sun, 2019) have been explained using COR theory, WFE theory, and the resource-gain-development perspective. Further, WFE, LMX, skills resources, perspectives resources, bidirectional WFE, positive emotion and perceived boundary control are regarded as mediators, and perceived individual boundary control, family identity salience, bidirectional work-family enrichment and work-family centrality are regarded as moderators. Employee attitudes (Jiang, 2016) have been explored using COR theory, WFE, and LMX as mediators, and perceived individual boundary control as the moderator. Work engagement (Jiang, 2016; Jin, 2019; Qing, 2017; Qing & Zhou, 2017; Rofcanin et al., 2017) has been examined using COR theory, by taking a resource-gain-development and a bidirectional work-family enrichment perspective, and with social information processing theory, WFE, LMX, bidirectional work-family enrichment, and work engagement as mediators, and applying perceived individual boundary control

and family supportive organizational culture as moderators. Job satisfaction (Jiang, 2016; Nie & Xie, 2018; Shu, 2016) has been researched using COR theory, WFE, and LMX, with WFC and job satisfaction as mediators, and perceived individual boundary control as the moderator. Work performance (Qiu, 2016) has been addressed using the theories of social exchange and demand-supply fit, with employees' job satisfaction as the mediator and WFC and FWC as the moderators. Presenteeism (Su, 2017) has been examined using loyalty to a supervisor as the mediator and FSOP as the moderator. Employee helping behaviors (Wang, Liu, & Liu, 2018) have been investigated by applying self-congruence theory, with family-like exchange relationships as the mediators and traditionality as the moderator. Organizational citizenship behavior (Aryee, Chu, Kim, & Ryu, 2013; Bagger & Li, 2014) has been addressed using the theories of cognitive consistency and social exchange, with organization-based self-esteem, control over work time, LMX quality, and social exchange with supervisor as mediators and family friendly benefits as the moderator. The motivation to work (Bosch, Heras, Russo, Rofcanin, & Grau, 2018) has been explored using social exchange theory, with prosocial motivation as the mediator and gender inequality as the moderator. Subjective well-being (Matthews et al., 2014; Yragui, Demsky, Hammer, Van Dyck, & Neradilek, 2017) has been examined through the theories of broaden-and-build and COR with work engagement, healthcare employees' resources and physical symptoms as the mediators and FSSB as the moderator. Perceived organizational support (Kossek et al., 2011), perceived work-family organizational support (Kossek et al., 2011), and work-family balance (Greenhaus, Ziegert, & Allen, 2012; Shu, 2016) have been examined using the COR theory with family interference with work and WFE as mediators, and

family-supportive organizational environments and supportive spouses as moderators. Finally, the use of family-friendly employment practices and the negative association of work interference with family life and turnover intentions (Nie & Xie, 2018) have been examined using COR theory, with WFC and job satisfaction as the mediators.

Researchers focusing on the work-family relationship have recently considered the mechanism through which supervisor behavior affects employees' abilities to cope with work-family relationships. In addition, most studies of the impact of supervisor behavior on work-family relationships have focused on the negative side of the relationship (e.g., WFC), without considering the impact of supervisor behavior on WFE. However, in a recent study the effect of FSSB on WFE was assessed by examining the mediating roles of positive emotion and perceived boundary control and the moderating role of work-family centrality (Zhang & Sun, 2019). This study is based on COR theory (Hobfoll, 1989), which suggests that individuals protect existing resources and attempt to acquire new resources. The results of a survey of 362 employees indicated that FSSB can facilitate WFE, and positive emotion and perceived boundary control can partially mediate FSSB and WEE. In addition, work-family centrality negatively moderated the relationship between FSSB and WFE: the higher the employee's work-family centrality, the weaker the positive effect of FSSB on WFE.

FSSB has also been found to have a significant impact on work and family outcomes. Nie and Xie (2018) observed that the multiple mediating mechanism through which FSSB influences WFC and job satisfaction has not been identified. Thus, based on COR theory, they explored the multiple mediating effects of WFC and job satisfaction on FSSB and turnover intentions. COR theory holds that

individuals will typically first secure the resources they value. When employees cannot simultaneously meet the needs and requirements of work and family, WFC occurs. They then reduce their resource investment in some areas to protect the resources they have. However, FSSB can be regarded as a valuable social support resource that alleviates the effect of resource loss on WFC. The results of a survey of 413 employees revealed that FSSB has a significant negative influence on the interference of work in family life, but no significant negative predictive effect on the interference of family in work life. In addition, job satisfaction and the interference of work in family life have significant multiple mediating effects on the mechanism by which FSSB affects turnover intentions (Nie & Xie, 2018).

The effects of FSSB on WFE are identified in both directions of work-family enrichment. Meng (2015) suggested that most researchers focus on WFE rather than family-to-work enrichment (FWE), and that the mediating and moderating mechanisms of both directions of WFE have been neglected. Meng (2015) selected a sample of employees from 72 enterprises in several cities including Beijing, Tianjin, and Shenzhen for an empirical study of the relationship between FSSB and employees' WFE in both directions, and identified skill and perspective resources as mediators and family identity salience as the moderator. The hypothesis development was based on the work-family enrichment theory. The results from 776 valid questionnaires revealed that FSSB has a significant influence on both directions of employees' WFE, in terms of work-to-family development, work-to-family affect, work-to-family social capital, family-to-work development, family-to-work affect, and family-to-work efficiency. The findings indicated that skill and perspective resources partially

mediated the relationship between FSSB and both directions of enrichment, and the salience of family identity moderated the effect of FSSB on WFE but not on FWE. Other studies have demonstrated that the effect of FSSB on WFE improves work outcomes. For example, Qing and Zhou (2017) took the resource-gain-development perspective when testing the relationship between FSSB and work engagement and the mediated effect of bidirectional work-family enrichment. The study was conducted over 5 months and data were collected through a 2-wave survey of 268 full-time employees in China. The results showed that FSSB directly, positively, and significantly predicted work engagement over time when the perceived general supervisor support of employees and perceived organizational support were controlled. Bidirectional work-family enrichment was also found to fully mediate the association between FSSB and work engagement. However, generalizing the findings of such empirical research in a non-Western context is problematic because cultural characteristics can influence the way individuals deal with work-family issues.

In a study based on COR theory, the effects of employees' perceived FSSB and support from family and friends on work-family balance and employees' life and job satisfaction were explored (Shu, 2016), and the results indicated that WFE mediated the relationship between FSSB and job satisfaction. That is, the more FSSB employees perceived, the more likely they were to experience WFE, which then enhances job satisfaction. In total, 213 employees from Shanghai participated in this survey. The data were collected through a questionnaire and analyzed using descriptive statistics, reliability and correlation analysis, factor analysis, and structural equation modeling (SEM).

Greenhaus et al. (2012) found a positive relationship between work-family

balance and family-supportive supervision, including behaviors such as emotional support, instrumental support, role modeling, and “creative” work-family actions. This positive relationship was fully mediated by the interference of work in family life and partially mediated by the interference of family in work life. The positive relationship between family-supportive supervision and balance was found to be strengthened by family-supportive organizational environments and supportive spouses by taking an enhancement perspective, based on data from a survey of 170 business professionals from a private university in the United States.

Other researchers have investigated the influence of FSSB on employees’ subjective well-being. Matthews et al. (2014) used two studies of independent samples to examine the degree to which work engagement mediated the association between FSSB and employees’ subjective well-being. Study 1 focused on the mediating role of work engagement and made use of broaden-and-build and COR theories. This process controls perceived organizational support and managerial effectiveness. Study 2 used multigroup SEM to verify the findings of Study 1 and examine how the mediated model varied, depending on the contextualizing variables of dependent care responsibilities and the availability of family-friendly benefits. The findings showed that FSSB positively impacted both work engagement and subjective well-being for two types of respondents with different contextual settings.

Yragui et al. (2017) revealed that FSSB can be a trainable resource that improves employee productivity and well-being in workplaces with high levels of aggression. Their study was based on a sample of 417 healthcare employees in two psychiatric hospitals and the hypotheses were tested with moderated

multiple regression analysis. The main purpose was to identify the relationship between workplace aggression and health, well-being, and job consequences, and to explore the role of FSSB as a boundary condition in these relationships. The study drew on COR theory to show that workplace aggression depleted the resources of healthcare employees, thus affecting their well-being, and that FSSB can make up for the loss of resources. These results are consistent with the hypothesis that psychiatric care providers' perceptions of FSSB play a moderating role in the relationships between patient-initiated physical aggression and physical symptoms, exhaustion, and cynicism. In addition, FSSB was found to moderate the relationships between coworker-initiated psychological aggression, physical symptoms, and turnover intentions. Thus, FSSB can alleviate the adverse effect of patient physical aggression on healthcare employees' health and well-being. FSSB also mitigates the adverse effect of coworker psychological aggression on health and work consequences.

The influence of FSSB on the domains of family and work has been extensively demonstrated in the literature. In terms of work outcomes, benefits in addition to higher job satisfaction and lower turnover intentions include improved work performance (Qiu, 2016), employee engagement (Jiang, 2016; Qing, 2017; Rofcanin et al., 2017), employee attitudes (Jiang, 2016), presenteeism (Su, 2017), employee helping behaviors (Wang et al., 2018), organizational citizenship behavior (Aryee et al., 2013; Bagger & Li, 2014), and the motivation to work (Bosch et al., 2018).

The number of research papers on FSSB in China has increased significantly since 2014, with researchers from Central China Normal University such as Hongyu Ma and Hai Jiang making major contributions. Under the guidance of

Professor Hongyu Ma, several students have contributed research on FSSB from different perspectives. For example, based on COR theory, Jiang (2016) explored the effect of FSSB on employees' attitudes and work engagement from the perspective of work-family balance. WFE was used as a mediator and perceived individual boundary control as a moderator. The researcher conducted an intervention study that included experiential training and WeChat behavior monitoring to explore strategies and methods for the continuous improvement of employees' work attitudes and engagement. The results of a survey of 358 employees revealed a process of gaining resources including FSSB, WFE, and job satisfaction moderated by perceived individual boundary control. The positive relationship between FSSB and job satisfaction mediated by WFE was stronger for employees with a high than a low degree of perceived individual boundaries.

In Study 2 of the dissertation Jiang investigated 340 supermarket workers in China twice, with a time lag of six months, and found that FSSB improved LMX and subsequently promoted employees' work engagement, which further improved the LMX relationship, eventually leading supervisors to offer more FSSB to employees. Thus, a resource acquisition spiral was found between FSSB and employees' work engagement. Jin (2019) verified the effect of FSSB on employees' work engagement through LMX when considering perceived boundary control as a moderator.

Jiang (2016) also applied a quasi-experimental field study to explore the influence of an experiential training and self-monitoring intervention designed to enhance the FSSB of supervisors. The results indicated a positive effect of training on employee work attitudes (turnover intentions and affective

commitment) and work engagement. WFC moderated the positive relationship between training and employee work engagement. The mediating effect of employees' perceptions of FSSB on the relationship between training and work engagement was more prominent for employees with high than low WFC.

Job satisfaction is not only a work outcome of FSSB, but also plays a mediating role in its effect, which improves employee work performance. Qiu (2016) argued that most research has been conducted in a Western context and has mainly explored the effect of FSSB on work-family balance, but its mediating effect on work performance remains under-investigated. The author conducted three survey studies of samples of Chinese employees to analyze the mediating effect of work satisfaction on the relationship between FSSB and employees' work performance, and hypothesized the moderating effect of employees' WFC and FWC based on the theories of social exchange and demand-supply fit. Study 1 was a longitudinal study involving 99 employees from several companies. The results of the regression analysis revealed that FSSB significantly predicted employee work performance. The sample in Study 2 consisted of 313 employees from a domestic chain supermarket. The results replicated the findings of Study 1 and indicated that employee job satisfaction fully mediated the relationship between FSSB and their work performance. Study 3 proposed a moderated mediation model, and the results indicated that FWC rather than WFC moderated the positive relationship between FSSB and work satisfaction.

The relationships between POFS and a family-supportive supervisor on employee work behaviors were examined in another study, which found that FSSB promoted work performance (Aryee et al., 2013). Organization-based self-esteem and control over work time were used as mediators, according to the

cognitive consistency theory. The authors showed that although a favorable work environment had previously been found to decrease deviant behaviors and promote contextual performance, it remained unclear whether informal family supportive behaviors affected these behaviors. Considerable research into informal family-specific supports has been based on organizational support theory, but few studies have examined socioemotional needs as mediators when exploring the effect of informal family-specific support on employee behavior. The results of SEM analysis of data from 230 employed parents and their supervisors in twelve organizations in South Korea revealed that POFS and family-supportive supervisors were indirectly associated with contextual performance via control over time. FSSB was found to be indirectly associated with contextual performance and work withdrawal via organization-based self-esteem, and control over work time indirectly associated with contextual performance and work withdrawal via such self-esteem. These findings suggest that promoting FSSB is a desirable managerial strategy in organizations.

FSSB has been found to be positively related to work engagement in various cultural contexts. Rofcanin et al. (2017) addressed the lack of research into the flexible work policies that affect employee attitudes and behaviors, and revealed the effects of flexible work policies by focusing on FSSB. Based on social information processing theory, Rofcanin et al. (2017) proposed that FSSB as perceived by subordinates increases their work performance through work engagement. They examined the family supportive organizational culture as a contextual construct and moderator. Based on matched supervisor-subordinate data collected from 654 subordinates and 134 supervisors from a financial credit company in Mexico, they showed that FSSB influenced the subordinates' work

performance via their work engagement, and the positive relationship between their ratings of FSSB and their work engagement was moderated by the family supportive organizational culture.

In addition, FSSB has been empirically shown to have a direct impact on employee engagement in a Chinese context (Qing, 2017). The performance of Chinese enterprises has continuously improved over the past 30 years, but traditional management methods are now less effective in motivating employees' work engagement. Qing (2017) suggested that FSSB is an important management strategy for promoting this engagement with work. A review of the relevant literature revealed specific gaps. First, the main focus of research is on the impact of work factors on employees' work engagement, while the role of family factors has been ignored. Second, research into the internal mechanism of the effect of FSSB and the related boundary conditions is relatively scarce. Third, cross-cultural research in the FSSB field is lacking. Fourth, the research typically focuses on the effect of FSSB at the individual level and the process and effect of the implementation of FSSB by managers in team situations has not been explored. Thus, Qing (2017) discussed the direct impact, mediating mechanisms, and boundary conditions of FSSB on employee engagement in China through three empirical studies, and examined the impact of FSSB differences on team engagement by taking the perspectives of resource-gain-development and bidirectional work-family enrichment. Data on 277 employees from various enterprises in China were collected using a two-stage survey research design at an interval of three months. The results supported Qing's hypotheses and explained the effects of FSSB and their mediating and moderating mechanisms.

Employee attendance is important as it reflects positive work attitudes and

effective performance. Su (2017) investigated the influence of FSSB on Chinese employees' presenteeism, the mediating role of loyalty to a supervisor, and the moderating role of FSOP, using a questionnaire method and drawing on social exchange theory. Su conducted two studies, separately investigating 327 employees from real estate companies and 292 from other industries. The results revealed that FSSB can improve employees' presenteeism through increased loyalty to their supervisors. FSOP moderated the effect of FSSB on employees' loyalty to their supervisors, as when more family supportive resources were provided by organizations, the relationship between FSSB and loyalty became weaker.

FSSB has a positive effect on employee helping behavior. Social exchange theory is often used to explain the effect of FSSB. However, it cannot explain how traditional Chinese culture significantly affects Chinese people's understanding of reciprocal relationships (Zhu & Long, 2017). The idea of a family-like exchange relationship provides a better explanation. From this perspective, FSSB reflects supervisors' concerns for employees' work and family affairs. This care has a rich emotional element that encourages a more feminine approach in Chinese employees, resulting in a family-like exchange relationship, which in turn stimulates employees' positive attitudes and behavior. The formation and development of a family-like exchange relationship are analyzed for three classic types of enterprises. Wang et al. (2018) explored the relationship between FSSB and employee helping behavior, the mediating role of family-like exchange relationships, and the moderating role of traditionality, based on self-congruence theory within the Chinese cultural context. They found FSSB to be positively associated with employee helping behavior, and that the relationship

is fully mediated by family-like exchange relationships. In addition, traditionality strengthened the links between FSSB and family-like exchange relationships and the mediating effect of these relationships. Thus, the mediating effect of family-like exchange relationships was greater for more traditional employees.

As mentioned earlier, there has been a lack of cross-cultural FSSB research, and most research has been limited to exploring workplace factors. Bosch et al. (2018) found that the relationship between FSSB and individuals' motivation at work has not been previously investigated, and thus examined this relationship with the moderating effect of gender inequality. Based on social exchange theory, the investigation included 2,046 employees from four nations (Brazil, Kenya, the Netherlands, and the Philippines), and national levels of gender inequality, as measured by the United Nations Gender Inequality Index (GII), were used to test whether differences in male and female social achievements moderate the association between FSSB and employees' work motivation. The results revealed that FSSB was positively associated with prosocial and extrinsic motivations, and that the GII alleviated the relationship between FSSB and prosocial motivation.

FSSB can be a valuable resource for employees, helping them fulfill their family responsibilities and thus easing WFC and improving how the family functions (Zhou, 2017). Improvements in family relations also encourage employees' spouses to provide them with more support, thus improving their work performance. Various studies have shown that FSSB significantly influences employees' family life, but few have considered its effects on other family members, such as spouses. Zhou (2017) discussed the influence of FSSB on the level of work support spouses gave to employees by focusing on dual-earner couples. The model of thriving through relation support and the resource-

gain-development perspective provided the basis for the study, and by drawing on the concept of spillover-crossover effects, the author suggested that when spouses perceive the support provided by supervisors to employees, they are likely to have positive thoughts, emotions, and attitudes about the organization, thereby encouraging the employees to better serve it. Zhou (2017) conducted two studies, first using a sample of 252 female employees and their spouses. FSSB was found to be positively related to spouses' work support, and WFE mediated this relationship. The results also indicated that the family support provided by supervisors can be regarded as a resource that flows from the work domain to the family domain and back again. Study 2 explored the boundary conditions of the FSSB effect on spouses' work support. Data from 301 male employees and their spouses indicated that marital closeness moderated the positive relationship between FSSB and work support from spouses through WFE. In particular, the closer the marital relationship, the more likely that the spouse is influenced by FSSB and thus provides work support.

The effect of FSSB can trickle down from leaders to middle-level managers to employees. The behavior of leaders has been shown to flow to lower organizational levels (e.g., Mayer et al., 2009). To assess this trickle-down effect, Kwan (2014) investigated the effect of supervisors' FSSB on employees' WFC by examining how and when the FSSB of department heads flowed down to employee level, thus reducing their WFC. The study was based on social learning and boundary theories. An analysis of data from 272 employees and managers in China showed that the relationship between the FSSB of department heads and middle-level managers was mediated by the managers' work-family leadership perspective. Identification with the leader increased the effect of department

heads' FSSB on the work-family leadership perspective of middle-level managers, and the indirect effect of the FSSB of department heads on that of middle-level managers via the work-family leadership perspective. The relationship between middle-level managers' FSSB and followers' WFC was mediated by employees' control at work. A work-home segmentation preference moderated the relationship between control at work and WFC, and the indirect effect of middle-level managers' FSSB on employees' WFC via control at work.

Researchers (e.g., Sang, 2017) have explored the impact of FSSB at the organizational level in addition to that of individuals, although the impact of FSSB on personal work and family has been explored from various perspectives, its impact on teams and organizations remains understudied. In addition, the concept of FSSB was first proposed in the West, and most relevant research has been conducted in a Western context. Only in recent years has FSSB research in China emerged. Thus, examining whether the findings in the Western context can be generalized to the Chinese context is of value. Based on a case study of a Chinese Internet company, Sang (2017) found that FSSB can affect team effectiveness and improve team performance and satisfaction. An analysis of textual data revealed five dimensions of FSSB in the Chinese management context: emotional care, instrumental support, modeling behavior, creative management, and caring atmosphere, among which emotional care, instrumental support and caring atmosphere were dominant. In addition, FSSB was found to improve team effectiveness, in terms of both performance and satisfaction. Sang (2017) also found that FSSB had a positive effect on team effectiveness through identification, support, cooperation, communication, and cohesion within teams. Finally, the dimensions of FSSB influences team effectiveness in different ways;

for example, emotional care and modeling behavior affected team effectiveness mainly through team identity, while instrumental support behavior mainly influenced team effectiveness through team support.

Fu (2017) studied the impact of FSSB at the organizational level from the organizational climate perspective. Unlike Sang (2017), Fu compared two cases, and suggested that there was evidence of the positive effect of supervisor behaviors on organizational climate and that FSSB is an important form of supportive and supervisory behavior. Fu (2017) selected two Chinese enterprises in the education and training industries for the comparative study, to explore the relationship between FSSB and organizational atmosphere, and the mechanism through which employees' perception is a mediator. A double case study can effectively reproduce a specific situation and help researchers discover hidden complex relationships, and it is more accurate, authentic, and stable than a single case study. The author also used CQR research methods to encode and analyze the interview data, thus improving the validity of the analysis. The results showed that FSSB affected employees' sense of being supported by the supervisor, the organization, and the organizational family, and their perceptions of this support are magnified at the organizational level through social interaction, thus influencing the dimensions of the organizational atmosphere. A dynamic relationship and a virtuous circle are created when supervisors discover the positive effects that FSSB has on organizational atmosphere, which makes them more willing to regularly do so.

In summary, FSSB influences work and family outcomes and greatly improves employees' life satisfaction, work enthusiasm, and work efficiency. The benefits are not limited to individuals and are widely recognized at the

organizational level. However, the benefits of FSSB for receivers rather than for providers have been the main focus of research. Thus, the aim of this study is to explore the effects of FSSB on supervisors, and particularly in reducing their WFC via personal skill development.

2.2 Previous research of personal skill development

Lankau and Scandura (2002) defined personal learning as the acquired knowledge or skills contributing to personal growth and development regarding the interpersonal abilities of empathy, communications, authenticity, empowerment, self-reflection, and self-disclosure. Personal learning involves personal identity, values, strengths, weaknesses, development needs, reactions, and behaviors (Higgins & Kram, 2001; Kram, 1996). Thus, it is a process through which individuals gain an understanding of themselves and experience personal growth in terms of their behavior, attitudes, and abilities through social interactions.

Personal learning plays an important role in career success, as employees with high levels of personal learning can actively and easily obtain resources from others in various situations (Lankau & Scandura, 2007). In addition, as careers are often protean (Hall, 1996) and boundaryless (Arthur & Rousseau, 1996) in the current work climate, individuals often feel they must constantly improve their personal skills and abilities to work on different tasks in various positions, contexts, and organizations (Arthur, Khapova, & Wilderom, 2005). Thus, employees who are adept at personal learning currently have career advantages, because they can better address the challenges arising in the workplace by applying a coherent body of knowledge to new positions, settings, and organizations (Guberman & Greenfield, 1991).

The two dimensions of personal learning are relational job learning and personal skill development. “Relational job learning” refers to the understanding of specific work contexts and how work is related to that of others (Lankau & Scandura, 2002). “Personal skill development” refers to the learning of skills and capabilities such as communications, empowerment, and empathy. Individuals are encouraged to perceive and manage their emotions, motivations, and behaviors and those of others in social activities through two-way communication, active listening, and problem solving (Lankau & Scandura, 2002).

The focus of this study is on personal skill development rather than relational job learning, because of its spillover effect to the family domain (Kwan et al., 2010; Hu et al., forthcoming). For example, the skills that mentors or supervisors teach subordinates for dealing with failure and frustration can be applied when family members suffer from similar problems. By mentoring subordinates, mentors learn to view issues from diverse views and enhance their interpersonal communication skills, although their subordinates may vary regarding age, gender, and background (Kwan et al., 2010). They can then perceive the cause of a problem and the support required. The skills and perspectives learned and developed in the workplace can help individuals handle family issues (Schultheiss, 2006). Thus, the main focus of the present study is whether personal skill development mediates the association between FSSB and WFC.

Predictors of personal skill development

Lankau and Scandura (2002) examined the antecedents and outcomes of learning in the context of the mentoring relationship and explored how members

of organizations learn, whatever their age, organizational tenure, or career stage. The authors chose healthcare as an appropriate setting for studying personal learning demands and outcomes, because healthcare organizations at that time were experiencing many challenges. A questionnaire was distributed to 2,100 employees in an organization through interdepartmental mail and 440 completed questionnaires were returned, with over 75% filled out by women. The results indicated that for those with mentors, role modeling was significantly associated with personal skill development. Mentoring schema theory suggests that protégés learn from mentors by observing and imitating the mentors' behavior (Ragins & Verbos, 2007). The subordinates thus gradually form their own schemas to communicate with others and solve problems. The effect of this learning process is more prominent when the role models are experienced, attractive, and knowledgeable (Lankau & Scandura, 2002). Outstanding leaders are therefore often regarded as valuable resources that employees can draw on to develop their skills through role modeling (Scandura, 1992).

Individuals may also consider that role models can help them learn how to interact with others and deal with work-related problems (Kram, 1985). By observing the communication and problem-solving methods of role models, individuals can apply them to similar contexts, thus improving their skill development. Such skills can also be transferred and applied from the work to the family domain. For example, role models are more likely to manage work-family issues skillfully in the workplace, and employees can then imitate them and transfer these skills to the family context. Supervisory mentoring and personal skill development are linked through a similar mechanism. Supervisory mentoring can promote knowledge acquisition and skill transformation thus

helping subordinates to gain and display skills in various contexts, which enhances their skill development (Pan, Sun, & Chow, 2011). Tang, Kwan, Zhang, and Zhu (2016) tested a model of the relationship between servant leadership and WFC via personal learning. The results indicated that servant leadership was positively related to personal learning but personal learning did not significantly affect WFC. The same mechanism can be found with supervisory mentoring, as supervisors transfer new skills to subordinates through role modeling (Pan et al., 2011). Recent mentoring research results have also indicated that mentorship quality is positively associated with mentors' personal skill development (Hu et al., forthcoming).

Outcomes of personal skill development

Personal skill development can occur in both work and family domains. Empirical studies demonstrate that personal skill development improves job performance (Lankau & Scandura, 2002; Gouillart & Kelly, 1995), job satisfaction (Lankau & Scandura, 2002; Gouillart & Kelly, 1995), and employee creativity (Zhan, Yang, Luan, & An, 2018), and facilitates work-to-family positive spillover (WFPS) (Hu et al., forthcoming; Tang et al., 2016). Personal skill development can be a mediator between role modeling and job satisfaction (Lankau & Scandura, 2002), as having a role model may bring greater job satisfaction, which leads to skill development. Personal skill development promotes employees' problem-solving abilities (Gouillart & Kelly, 1995), which makes them more capable and confident in their work. The skills and abilities acquired enhance their competence, which in turn improves their job performance and job satisfaction.

Personal skill development has been shown to be positively related to

creativity. For example, based on the theories of creative process engagement and personal learning, Zhan et al. (2018) investigated 457 workers using a two-wave survey method to explore the relationship between proactive personalities and employee creativity. The positive effect of proactive personalities on employee creativity has been empirically demonstrated, but its mechanism has rarely been analyzed. Thus, it was unclear how proactive personalities influence employee creativity, and the mediating mechanisms and paths between the two required further investigation. Zhan et al. (2018) selected work engagement and personal learning as mediators, and found that these factors partially mediated the positive relationship between proactive personalities and employee creativity. Personal learning theory holds that employees' perceptions and management of their emotions, motivations, and behaviors and those of others in social activities lead to more opportunities to acquire the resources to develop new ideas, thus improving their competence and work performance. These findings can encourage enterprises to select employees with proactive personalities, and indicate that employees should develop their personal skills.

Personal skill development can also be positively associated with emotional outcomes (Kleinman, Siegel, & Eckstein 2001). Employees who develop good communication skills may be more active at work and more confident in seeking help and receiving feedback. Through this process, efficiency is improved, and thus also job performance. Personal skill development therefore influences behavior and attitudes, and improves employees' job performance and satisfaction (Lankau & Scandura, 2002).

Although personal skill development is derived from the work context and has mainly been used in analyses of work outcomes, some studies have examined

how it can be transferred to the family context. Personal skill development is regarded as an important resource for enriching employees' family domain. As indicated earlier, personal skill development improves problem-solving abilities and interpersonal skills, which leads to more efficiency in work, thus decreasing employees' time-based WFC (Greenhaus & Singh, 2007). Stress is reduced if individuals can cope with the pressure of work and evaluate themselves positively in their roles. These skills can also be applied in the family domain by attenuating negative spillover and switching roles to meet family role expectations (Greenhaus & Powell, 2006). In addition, in the context of role modeling, mentors apply active learning, empathy, and other interpersonal skills to communicate with others. The mentors can then apply these skills to family members at home (Greenhaus & Singh, 2007). To summarize, the skills and perspectives gained in the workplace can enable employees to deal with work-family issues, thus reducing WFC.

Personal skill development can also facilitate WFE. From their literature review, Kwan et al. (2010) concluded that the connections between mentoring and WFE remained unexplored. The authors therefore examined whether role modeling influences personal skill development, and whether personal learning mediates the association between perceived role modeling and WFE. According to work-family enrichment theory (Greenhaus & Powell, 2006), employees can personally learn from role models, which enriches their family life. The results from a two-wave field survey of 173 protégés in China revealed that role modeling was positively related to WFE, and personal skill development rather than relational job learning mediated the relationship between role modeling and WFE (Kwan et al., 2010). These results indicate that the ability to read emotions

learned in the workplace can be applied to communication with family members. Empathy promotes a harmonious family environment, thus decreasing family conflict.

The relationships between OCB, personal skill development and WFE have also been examined, with personal skill development as the mediator (Kwan & Mao, 2011). The notion of scarcity suggests that engaging in OCB costs employees extra time and energy, which may cause WFC. However, the expansion approach suggests that a cross-role relationship can yield positive outcomes. The lack of research examining OCB from the expansion perspective or the impact of OCB on work-to-family outcomes prompted Kwan and Mao (2011) to explore whether OCB positively predicts WFE, and whether personal skill development mediates this relationship. Surveys were distributed to 385 supervisors and their subordinates at a private construction material manufacturing company in Hangzhou. The results were consistent with the hypothesis that personal skill development fully mediates the positive relationship between OCB and WFE.

2.3 Previous research of WFC

According to role theory, individuals often find it difficult to fulfill the requirements and expectations of multiple roles with limited resources such as time, energy, and effort (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). This assumption is also supported by the scarcity approach, which holds that heavy work demands often lead to a resource drain, causing WFC (Greenhaus & Beutell, 1985). WFC is a type of inter-role conflict in which work roles and family roles are mutually incompatible, such that work can negatively impact family (Greenhaus & Beutell, 1985), because employees who are involved in several

domains in various roles must satisfy these domains simultaneously. When the pressures caused by one domain or role conflict with another, inter-role conflict arises (Kahn et al., 1964). In addition, spending too much extra time and energy on role requirements and expectations can be detrimental to the realization of another role, causing inter-role conflict (Marks, 1977).

WFC is a bi-directional concept that suggests that work roles and family roles can interfere with each other and cause conflict (WFC and FWC) (Greenhaus & Beutell, 1985). Considerable empirical evidence indicates that WFC and FWC are distinct constructs and represent different mechanisms (e.g., Mesmer-Magnus & Viswesvaran, 2005). The focus of this study is on the WFC mechanism rather than the FWC mechanism, because FSSB involves behavior at work.

WFC represents inter-role conflict in the family domain brought about by the work domain and has the three dimensions of time-, strain-, and behavior-based conflict (Greenhaus & Beutell, 1985). Time-based WFC occurs when family obligations are not fulfilled due to lack of time, while strain-based WFC results from the strain created by the work role spilling over into the family role. Behavior-based WFC is caused by maladaptive work behaviors that make it difficult to fulfill family role requirements and expectations. All three dimensions are examined in this study, although time-based conflict and strain-based conflict are the most frequently studied, while behavior-based conflict is particularly difficult to measure and less likely to occur (Powell & Greenhaus, 2010).

The focus of this study is on WFC rather than work-family positive spillover or WFE, because work-family positive spillover assumes that the resources acquired in one domain can be transferred to another, thus improving the quality

of life in the other domain (Hanson, 2006; Wayne, 2009). WFE and work-family positive spillover are different constructs, as WFE implies that the resources provided at work not only can be transferred to the family domain but can also facilitate role performance in another domain (Greenhaus & Powell, 2006; Wayne, 2009). Thus, positive spillover does not necessarily result in enrichment, and multiple roles can enhance the accumulation of resources and benefit individuals in various ways (Greenhaus & Powell, 2006). Despite these effects, WFC still occurs and is particularly prevalent in dual-earner couples (Hammer et al., 2007), so this problem deserves more attention.

Predictors of WFC

A recent meta-analytic review provides evidence that work role stressors including job stressors, role conflict, role ambiguity, role overload, and time demands, and a lack of social support at work including organizational, supervisor, and coworker support are the main predictors of work-to-family conflict (Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011). Work role stressors derive from the workplace (Greenhaus & Beutell, 1985), while social support can be described as an interpersonal transaction (i.e., interaction) that includes emotional support (such as esteem, affect, trust, concern, and understanding), appraisal support (affirmation, two-way communications, social comparison), informational support (advice, comments, directions, data), and instrumental support (assistance, money, labor, time, and environmental adjustment) (House, 1981).

The relationship between work role stressors and WFC can be explained more explicitly through role theory. Work role stressors have been found to be positively related to WFC and social support negatively related to WFC (Carlson

& Perrewé, 1999; Michel et al., 2011). As indicated, employees with multiple roles are required to meet different expectations, which drain their time, energy, and effort (Kahn et al., 1964). When individuals lack the resources to fulfill these requirements and expectations, pressure mounts and inter-role conflict occurs. Therefore, it is logical that social support can help decrease WFC. Social support can provide individuals with the resources to perform different roles, thereby decreasing inter-role conflict (House, 1981).

A study examining mothers' job characteristics provides a detailed examination of the predictors of WFC. Nomaguchi and Fetto (2019) obtained data on 774 working mothers from the National Institute of Child Health and the Human Development Study of Early Child Care and Youth Development and examined the relationship between stages of childrearing and WFC. Fixed effects models were used to examine variations in the mothers' job characteristics when their children were 6 months old, 15 months old, third graders, and fifth graders. The longitudinal data revealed that the job demands and resources of mothers determined their WFC (Nomaguchi, & Fetto, 2019), which supports the previous discussion of work role stressors and social support. When mothers allocate time and energy to taking care of their children, they play multiple roles and require more resources in their daily lives. The difficulty of balancing family issues and work responsibilities, and the inability to obtain adequate social support, increase WFC. In addition, Nomaguchi and Fetto (2019) reported that parents with young children experience are likely to suffer from conflict in communities with fewer resources. Resources provided by the work environment also influence WFC, and thus leader support is negatively related to WFC (Young, 2019). This finding illustrates why policies and the provision of social support

are required to help employees deal with inter-role conflict and WFC.

Empirical evidence suggests that demographic, occupational, and family characteristics are predictors of WFC (Christensen, 2013; Eckart & Ziomek-Daigle, 2019; Greenhaus & Powell, 2006). Eckart and Ziomek-Daigle (2019) investigated the relationship between the WFC of female counselors and their demographic, occupational, and family characteristics. The study assessed this WFC in two directions—work interfering with family and family interfering with work. They explored the relationship of female counselors' WFC with their race, age, education, and annual household income, with the time spent on work, state licensing, the number of practice settings, years of experience, workplace flexibility, and workplace autonomy, and with marital status, children care, elder care, time spent on household chores, and child support. In total, 2,000 members of one state counseling organization and 2,362 members of another received questionnaires, but only 354 completed and submitted the survey. The results revealed significant relationships between WFC and race, age, education, and annual household income. The female counselors' workplace flexibility was associated with lower interference of work in family life but not with lower interference of family life in work. Long working hours were positively associated with WFC. The family characteristics of the counselors affected how work interfered with family life but not family life with work. This is a surprising finding, because many studies have indicated that family issues such as childcare occupy mothers' time and energy, thus causing interference with work.

In terms of support, French, Dumani, Allen, and Shockley (2018) argued that although social support is related to WFC, there is little research that tests how different types and sources of social support and contextual factors affect

this relationship. To provide a more comprehensive explanation, the authors conducted a meta-analysis based on 1,021 effect sizes and 46 countries. Drawing on social support theory, French et al. (2018) assumed that social support measures are not interchangeable and compared different support types, sources, and national contexts. The findings revealed that broader sources of support were more likely to affect WFC than specific support. In addition, from the utility view of social support theory, culture and economic country contexts can moderate the associations between work/family support and work interfering with family life, suggesting that if the value of social support is recognized it will be more effective. Moreover, the results reveal that Organizational support was found to be the most important support resource.

Ferri, Pedrini, and Riva (2018) addressed the lack of research into the effect of different kinds of support on WFC, and tested whether and how available supports from family and organizations reduced employees' WFC. They recruited 2,051 employees from 6 large firms in Italy to participate in their study, and used hierarchical regression analysis to show that workplace instrumental support has mixed effects on WFC. As this type of support increases the influence of work on family life it does not significantly reduce WFC, but it may alleviate the pressure that family responsibilities exert on work. The authors suggested that the effect of support on WFC should be examined in both directions in the family and work relationship, in terms of how one can interfere with the other.

To determine how the turnover rate of amateur soccer referees in South Korea could be reduced and to develop more effective managerial strategies, Hong, Jeong, and Downward (2019) examined the relationship between perceived organizational support, internal motivation, and WFC among 260

amateur soccer referees. in. The hypotheses were tested using SEM, and a survey was used to collect data. The results showed that perceived organizational support positively predicted internal motivation, and internal motivation reduced WFC while fully mediating the relationship between perceived organizational support and WFC.

Extensive empirical research has confirmed how different types of support can reduce WFC. For example, data from 2,183 employees from Australia, New Zealand, China, and Hong Kong, collected using a two-wave longitudinal design with a 12-month time lag, revealed that supervisor and family support can effectively reduce WFC (Drummond et al., 2017). In another study exploring the impact of support on role stress, work-family conflict, and turnover intent among private prison staff, management and supervisor support was found to be negatively related to WFC (Lambert, Hogan, Keena, Williamson, & Kim, 2017). This study involved a survey of 160 staff employees at a private prison in the United States. The data were analyzed by ordinary least squares regression.

Outcomes of WFC

WFC can have a huge impact on employees' work life, family life, and health. It can negatively affect job satisfaction (Pan & Yeh, 2019; Pleck, Staines, & Lang, 1980; Zhao, Zhang, Kraimer, & Yang, 2019), employee performance (Hoobler, Wayne, & Lemmon, 2009; Karakas & Tezcan, 2019), organizational commitment (Allen, Herst, Bruck, & Sutton, 2000; Qureshi, Lambert, & Frank, 2019), OCB (Yu, Wang, & Huang, 2018), and team performance (Bruening & Dixon, 2007), and can increase turnover intentions (Allen et al., 2000; Li, Li, Wang, Wang, & Newton, 2019; Pan & Yeh, 2019), and displays of negative emotions (Judge, Ilies, & Scott, 2006).

Work-family research has proved that there is a crossover effect between two persons. However, how and when this crossover process takes place is still unclear. The effect of supervisors' WFC on their subordinates is underestimated, so Pan and Yeh (2019) explored the nature of the relationship between supervisors' and subordinates' WFC by drawing on COR theory, and also examined other unfavorable consequences subordinates may suffer due to their supervisors. Data were collected from 180 supervisor-subordinate dyads at five hotels, and the results showed that supervisors' WFC affected that of the subordinates through crossover effects, and resulted in lower job satisfaction and higher turnover intentions.

The negative effect of WFC on job satisfaction is also attested by Zhao et al. (2019), who examined whether a threat to the family role mediates the relationship between WFC and job satisfaction, and whether role segmentation enactment and gender role orientation moderate the relationship between WFC and job satisfaction. Their article includes two studies and was based on the source attribution perspective of WFC, boundary management, and gender role orientation. In Study 1, a scenario-based experiment demonstrated that threat to the family role mediated the relationship between WFC and job satisfaction. In Study 2, the authors invited 216 Chinese managers and their spouses to complete questionnaires. The results showed that the negative effect of WFC on job satisfaction only occurred for people with high levels of work and home role segmentation. The negative moderating effect of role segmentation enactment on the relationship between WFC and job satisfaction was also found to be greater for male managers with nontraditional rather than traditional gender role orientations.

Karakas and Tezcan (2019) examined the influence of WFC on employees' work performance with a sample of hotel employees, and investigated the relationships among WFC, FWC, work stress, and occupational performance. The authors sent questionnaires to the employees of three-, four-, and five-star hotels in the Eastern Black Sea region. The study revealed the impact of FWC on employee performance and of both WFC and FWC on work stress. In addition, work stress was found to fully mediate the relationship between WFC and employee performance, but not that between FWC and employee performance (Karakas & Tezcan, 2019).

Organizational commitment is also influenced by WFC. Policing is recognized as a stressful occupation due to its high demands and special working environment, which greatly increase the possibility of WFC. The spillover effect of WFC on police officers and their organizational commitment was addressed by Qureshi et al. (2019), who examined the association between four dimensions of WFC (time-based, strain-based, behavior-based, and family-based WFC) and the continuance and affective dimensions of organizational commitment. Survey data were collected from a sample of police officers in India, as previous research was mainly conducted in Western countries and it was unclear whether the findings could be generalized to non-Western contexts. Only 2 out of the 8 hypotheses were supported: time-based WFC was found to reduce continuance commitment, which may be due to the Indian cultural context, and strain-based WFC to reduce affective commitment. Before India's independence, the police were often those who helped the British to implement colonialism and rule the Indian people, so their public image is associated with violence and suppression. This impression is hard to erase, although many new programs have been

launched to improve the image of the police. This value conflict may lead to reduced continuance commitment for police officers (Qureshi et al., 2019).

The study of Yu et al. (2018) focused on the association between WFC and OCB, the mediating effect of job satisfaction, and the moderating effect of decision-making authority. They drew on COR theory, social exchange theory, and the job demand-control model and tested their hypotheses using a three-wave data collection method with a sample of 324 employees in 102 teams. Job satisfaction was found to mediate the relationship between the interference of work with the family (WIF) and OCB. The employees' decision-making authority moderated the direct effect of WIF on OCB, and the association was stronger when this authority was greater. Decision-making authority also moderated the indirect effect of WIF on OCB through job satisfaction, and thus the negative association between WIF and job satisfaction was weaker when the employees had greater decision-making authority. The results suggest that although a high level of decision-making authority may bring about negative outcomes, employees should be granted more authority to make decisions.

Li et al. (2019) confirmed that family-related factors influence employees' turnover intentions by drawing on COR theory to examine the associations among family embeddedness, work-family conflict, family-work conflict, and turnover intentions. The authors recruited 175 employees from a Chinese construction organization to complete an online survey. The results confirmed their preliminary hypotheses that family embeddedness is negatively related to both WFC and FWC, and that FWC partially mediates the relationship between family embeddedness and turnover intentions. Pan and Yeh (2019) also provided evidence that WFC leads to higher turnover intentions and lower job satisfaction.

WFC can also negatively influence employees' family lives. Considerable research has empirically demonstrated that WFC is positively related to the undermining of family life (e.g., Wu, Kwan, Liu, & Resick, 2012) and child problem behavior (e.g., Lee, Kim, & Kibong, 2018) and negatively to marital satisfaction (Allen et al., 2000), family satisfaction (Allen et al., 2000; Liu, Kwan, Lee, & Hui, 2013; Kalliath, Kalliath, & Chan, 2017), life satisfaction (Allen et al., 2000; Lee, 2019), work-family balance (Carlson, Grzywacz, & Zivnuska, 2009; Taşdelen-Karçkay & Bakalim, 2017), spouse commitment (Day & Chamberlain, 2006), family-related social behaviors (Ilies, Schwind, Wagner, Johnson, DeRue, & Ilgen, 2007), child health (Ohu, Spitzmueller, Zhang, Thomas, Osezua, & Yu, 2018; Dinh, Cooklin, Leach, Westrupp, Nicholson, & Strazdins, 2017), and the quality of relationships with other family members (Bruening & Dixon, 2007).

Child problem behavior and child health can result from WFC, but the negative effect of adults' WFC on children's growth and health is still unknown. Lee et al. (2018) examined the influence of parents' WFC on "warm parenting" and the internalization and externalization of problem behaviors by their early school-aged children. They investigated 558 dual-earner parents and their first graders, based on the eighth-wave Panel Study of Korea Children (PSKC) data. The results revealed a significant relationship between both fathers' and mothers' WFC and their warm parenting approaches. The WFC of fathers had a positive main effect on children's internalizing of problem behaviors. However, the warm parenting of fathers was not significantly associated with their children's problem behaviors. The mothers' WFC had no direct effect on these behaviors, but their warm parenting approach had a mediating effect on the relationship between their

WFC and their children's internalizing and externalizing of problems. Their approach also mediated the relationship between fathers' WFC and their children's externalizing of problem behaviors.

Parental WFC is also associated with child health problems. Ohu et al. (2018) explained how, why, and when parental WFC is related to child health problems by testing the stressor-self-regulatory resources-crossover framework. Two studies were conducted, and in Study 1 data were collected from parent-child pairs from low-income families to explore whether parental self-regulatory resources have an effect on the relationship between work-family conflict and child health problems. In Study 2, data were collected from parents and their children (enrolled at private schools) to explore whether job autonomy and job demands alter the association between parental self-regulatory resources and child health. The findings revealed that self-regulatory resources were only influential when job demands were high or when job autonomy was low.

Huong et al. (2018) designed a longitudinal study to examine whether changes in parents' WFC influence their children's mental health. The study included 2,496 Australian families and 7,652 observations from children aged 4-5 to 12-13, and used longitudinal random-effect structural equation models to examine children's mental health and parents' WFC across four adjacent pairs of biennial data waves. The results showed that the children's mental health worsened when their parents experienced more WFC, and when WFC was reduced, their mental health improved. Thus, a harmonious family environment is likely to be important for children's growth and health.

WFC reduces marital, family, and life satisfaction, and the quality of relationships with other family members. Kalliath et al. (2017) found that WFC

had a direct negative effect on employees' family satisfaction, thus influencing their well-being. The research involved a comparative study of Western and non-Western employees, and the results from the two groups supported the hypotheses. In addition, data from 328 female cabin crew members who worked for Jeju Air revealed that workaholism positively predicted WFC and FWC, which in turn had a negative effect on life satisfaction (Lee, 2019).

WFC can lead to many health issues among employees, including mental health problems (Carvalho, Chambel, Neto, & Lopes, 2018; Minnotte & Yucel, 2018; Yu & Li, 2019), physical health problems (Minnotte, & Yucel, 2018), poor sleep quality (Aazami, Mozafari, Shamsuddin, & Akmal, 2016; Cheng, Lin, Chang, Lin, Lee, & Chen, 2019; Eshak, 2019), unhealthy eating (Shukri, Jones, & Conner, 2018), and emotional exhaustion (Galletta et al., 2019; Yustina & Valerina, 2018). These problems may lead to other work- or family-related issues.

There is evidence that WFC is closely related to mental health. Yu and Li (2019) designed a cross-sectional survey and investigated 986 miners from 5 coal mines in Shanxi province to explore the relationship between WFC and mental health. They also tested whether psychological capital moderated the relationship between WFC and mental health, and found that WFC was positively related to symptoms of anxiety and depression, and psychological capital played a moderating role in this relationship. Thus, the importance of psychological capital in improving employees' mental health was demonstrated.

These findings have been supported in studies focusing on the U.S. Minnotte and Yucel (2018) examined WFC, job insecurity, and health outcomes among U.S. workers. The authors noted that although many studies have illustrated the effect of WFC, FWC, and job insecurity on employees' health, the

joint effect of these factors has rarely been examined. They tested whether job insecurity moderated the relationship between WFC and FWC, self-reported physical health, and mental health, based on the stress process model. Data were collected from the 2008 National Study of the Changing Workforce. The findings were that WFC directly affected the employees' mental and physical health, and that the relationship was stronger among employees with job insecurity. They found no evidence that gender influenced the relationship between WFC and employee health (Carvalho et al., 2018; Minnotte & Yucel, 2018).

Both work and family life require individuals to invest time. Thus, time may be an important factor influencing the quality of work and family life. However, few studies have addressed this. Eshak (2019) investigated whether WFC and FWC reduce sleep quantity and quality, and selected sleep disorders that are significantly related to both work and family as outcomes. Most studies are focused on Western and Asian employees rather than those in the Middle East or Africa, so the authors investigated 1,021 Egyptians aged 18-59 using a cross-sectional method. They found that both WFC and FWC were related to reduced sleep quantity, and high levels of WFC were related to sleep disorders. The employees with high WFC levels often woke up too early and were unable to fall asleep again, or were still tired after the usual amount of sleep.

Similar results have also been found for nurses in hospitals, who typically have numerous job demands and many responsibilities. Shift work can also affect their sleep quality. The little-known effect of WFC on the sleep quality and health status of hospital nurses on rotating schedules was addressed by Cheng et al. (2019), who examined the relationships among WFC, sleep quality, and the self-perceived health status of hospital nurses, and tested whether sleep quality

mediated the relationship between WFC and poor health. They applied the work-family conflict scale, the Chinese Pittsburgh Sleep Quality Index, and the Chinese Health Questionnaire, with a cross-sectional questionnaire survey design. A total of 700 questionnaires were distributed to hospital nurses at a teaching medical center in northern Taiwan, and 575 valid questionnaires were obtained. Nurses who reported being in good health had lower WFC than those in poor health, suggesting that WFC is negatively related to health status. In addition, the mediating role of sleep quality was supported by the data.

Aazami et al. (2016) also found a negative relationship between four dimensions of WFC (the interference of strain and time-based work with family life, and of family life with work) and sleep disturbance. The study was conducted using a multiple-stage simple random sampling method with a cross-sectional design. The participants were 325 married women working in public services in Malaysia. The results showed that their sleep quality worsened if their level of work-family conflict was high, but working women of various ages suffered from sleep disturbance, in response to different WFC dimensions. Sleep disturbance was mainly caused by a high level of time-based and strain-based work-interference with family life for women 20 to 30 years old, by the strain-based interference of the family on work for women 30 to 40 years old, and by the strain-based interference of work on family life and the time-based interference of family life on work for those over 40.

WFC can also affect employees' eating habits. Studies have shown that WFC leads to poor eating habits, but little research has been conducted into the underlying mechanism. Shukri et al. (2018) explored the relationships among WFC, eating style, and unhealthy eating and tested the moderating role of body

mass index. The authors invited 586 Malaysian adults to complete a questionnaire, in which they were asked about their emotional or external eating (eating outside the home) and food intake, and found that WFC, emotional eating, and external eating were positively associated with unhealthy food consumption. Emotional eating moderated the impact of FWC on eating, thus strengthening the positive relationship. However, the results did not support body mass index as a moderator.

WFC is common among nurses, due to their particular working arrangements and timetables. Thus, many researchers have explored the underlying mechanism and how to alleviate its negative effects. For example, Galletta et al. (2019) investigated the effect of WFC on emotional exhaustion and the moderating effect of collective affective commitment as a personal resource on the association. A questionnaire was distributed to 647 nurses in 66 work units of 4 Italian hospitals, and hierarchical linear modeling was conducted to test the cross-level associations between the key variables. As hypothesized, the findings revealed that collective affective commitment may work as a personal resource in the positive association between WFC and emotional exhaustion. High affective commitment may therefore alleviate the negative effect of WFC on nurses' emotional exhaustion.

2.4 Previous research of emotional exhaustion

Emotional exhaustion was first studied by Maslach (1982), and is one part of Maslach and Jackson's three-component conceptualization of burnout, along with depersonalization and diminished personal accomplishment (Lee & Ashforth, 1990; Pines & Aronson, 1988). As the first stage of burnout, an understanding of emotional exhaustion may provide effective methods for

addressing it before it worsens (Boles et al., 1997). Emotional exhaustion is a feeling caused by both physical fatigue and emotional depletion, and typically occurs when the demands of interpersonal interactions exceed the available individual resources (Maslach, 1998). COR theory explicitly addresses the cause of emotional exhaustion. Inadequate resources for dealing with work problems and the threat of resource loss can lead to a gradual depletion of physical and emotional strength (Hobfoll, 1988). Similarly, prolonged emotional exhaustion can occur when it seems impossible to obtain enough resources to meet work demands; the triggers include heavy workloads, role ambiguity, role conflict, and stressful events (Hobfoll, 1989; Lee & Ashforth, 1996). In addition, individual performance can be negatively affected by emotional exhaustion (Karasek, 1979). To protect their resources, employees who are vulnerable to emotional exhaustion are likely to be selective in their work behavior and to create effective strategies for investing their energy (Hobfoll, 1989, 2001). For some people, Positive social interactions, such as sharing emotions, may help heal and replenish emotional resources in some individuals (Ragins & Verbos, 2007).

Predictors of emotional exhaustion

The predictors of emotional exhaustion have been extensively examined empirically. High levels of job demands (Hyde & Westerlund, 2008; Koon & Pun, 2018; Magnusson, Theorell, Oxenstierna, Hyde, & Westerlund, 2008; Seidler et al., 2014), job stress (You, 2019), job-related factors (Leake, 1994), role conflict (Shyman, 2010), work overload (Karatepe, 2013), a reduced sense of efficacy (Shyman, 2010), perceived understaffing (Dietzel & Coursey, 1998), challenging consumer behavior (Dietzel & Coursey, 1998), surface acting (Zhang, Zhou, Zhan, Liu, & Zhang, 2018), customer incivility (Alola, Olugbade, Avci, &

Öztüren, 2019), emotional distress (Kawada, 2015), emotional dissonance (Kenworthy, Fay, Frame, & Petree, 2014; Oh, 2016), and the work-home interface (Galletta et al., 2019; Hertzberg et al., 2015; Yustina & Valerina, 2018) have been found to increase emotional exhaustion. Social support (Li, Han, Wang, Sun, & Cheng, 2018), organizational support (Edmondson, Matthews, & Ward, 2019), workplace social support (Dietzel & Coursey, 1998), supervisor support (Shyman, 2010), colleague support (Hertzberg et al., 2015), job satisfaction (Dietzel & Coursey, 1998), work schedule flexibility (Dhaini et al., 2018), and perceived manager ability (Dhaini et al., 2018) have been found to diminish emotional exhaustion.

Dietzel and Coursey (1998) revised the model of staff burnout developed by Yoe, Gordon, Burchard, Hasazi, and Dietzel (1996), and investigated the relationships between emotional exhaustion and demographic and job characteristic variables. They collected data from 94 nonresidential psychosocial rehabilitation staff from 12 community agencies in Maryland using a self-reported questionnaire survey. Perceived understaffing and challenging consumer behavior were found to be positively associated with emotional exhaustion, whereas staff age, workplace social support, and job satisfaction were negatively associated.

The effects of challenging consumer behavior and social support have been specifically examined. For example, based on COR theory and social exchange theory, Zhang et al. (2018) tested how surface acting influenced employees' sabotage of customers through the mediating role of emotional exhaustion, and whether coworker exchange (CWX) and LMX further explained the relationship. The results of a study of 540 clinical nurses showed that emotional exhaustion

mediated the positive association between surface acting and employees' sabotage of customers. CWX was found to weaken the positive relationship between surface acting and emotional exhaustion, whereas LMX weakened the positive relationship between emotional exhaustion and employees' sabotage of customers.

Studies also indicate that customer incivility increases emotional exhaustion. Organizational policies often require employees to please customers that demonstrate uncivil behavior. Customer incivility is thus a consistent antecedent of the negative outcomes of employees. To explore this negative effect, Alola et al. (2019) investigated 328 customer-contact employees in 4- and 5-star hotels in Nigeria to examine the effects of customer incivility on emotional exhaustion, turnover intentions, and job satisfaction. They found that customer incivility increased emotional exhaustion, partially mediated the relationship between customer incivility and turnover intentions, and fully mediated the relationship between customer incivility and job satisfaction.

Social support (Li et al., 2018), organizational support (Edmondson et al., 2019), workplace social support (Dietzel & Coursey, 1998), supervisor support (Shyman, 2010), and colleague support (Hertzberg et al., 2015) have all been shown to prevent the occurrence of emotional exhaustion, and it can be particularly reduced through organizational support (Edmondson et al., 2019). On the basis of a sample of 262 university students in China (mean age 19.25 years), Li et al. (2018) investigated the mediating effect of self-esteem on the associations between social support and academic achievement as well as between social support and emotional exhaustion. Self-esteem was found to fully mediate both relationships. Students with higher social support typically had

higher self-esteem, which improved their academic achievement and reduced their emotional exhaustion.

The work-home interface has been shown to be an important predictor of emotional exhaustion. Hertzberg et al. (2015) examined changes in work-home interface stress over 5 years in a study conducted over 15 years. The results revealed that continued work-home interface stress and reduced support from colleagues were independent predictors of emotional exhaustion. Support from colleagues played a more important role for men than for women. Based on the results of a mail survey of 151 auditors from 10 CPA firms in Indonesia, the interference of work in family life was found to have significant effects on emotional exhaustion (Yustina & Valerina, 2018). In addition, the results of a study testing the relationship between WFC and emotional exhaustion across time revealed a spiral process: WFC predicted emotional exhaustion, while emotional exhaustion increased WFC (Rubio, Osca, Recio, Urien, & Peiró, 2015).

In addition, emotional distress and emotional dissonance can predict emotional exhaustion. Kawada (2015) measured three dimensions of burnout (emotional exhaustion, depersonalization, and reduced personal accomplishment) in resident doctors and found that they were predicted by different factors. Emotional distress was the strongest predictor of emotional exhaustion, as measured by the 12-item version of the General Health Questionnaire (GHQ-12), with adjusted odds of 6.97. In another meta-analysis, the relationship between emotional dissonance and burnout was examined based on 57 independent samples collected from 16,165 employees, which included self-reported measures of emotional dissonance and emotional exhaustion (Kenworthy et al., 2014). The results showed that emotional dissonance can be one of many job

stressors that lead to emotional exhaustion. In addition, data collected through a questionnaire from 627 social welfare civil servants indicated that emotional dissonance mediated the relationship between client-related social stressors and emotional exhaustion (Oh, 2016).

Job stressors such as high demands in jobs, work overload, and stress have been found to be the main predictors of emotional exhaustion. A study based on a sample of hospital nurses revealed that levels of emotional exhaustion were related to various personal demographic, AIDS-specific, and job-related factors, among which six job-related factors (such as eight-hour shifts, changing shifts, and job tension) accounted for about 46% of the variation in emotional exhaustion (Leake, 1994). A systematic review found that job demands enhance emotional exhaustion (Seidler et al., 2014). Koon and Pun (2018) also found that high job demands lead to emotional exhaustion. Their study was based on affective events theory and the job demand-control model, and they analyzed the mediating role of emotional exhaustion and the association between job demands and instigated workplace incivility. The results revealed that high job demands led to emotional exhaustion, which in turn reduced job satisfaction and led to workplace incivility. To generalize these findings, Magnusson et al. (2008) studied the relationships between work demands, control, support, conflicts, downsizing, and emotional exhaustion among males and females based on a representative sample of the work population in Sweden. The 1,511 men and 1,493 women had experienced no physical exhaustion at the baseline and had not recently gone on sick leave. A high level of work demands was found to be a significant predictor of emotional exhaustion. Gender differences were significant: downsizing and lack of support from leaders were antecedents for

males, while lack of support from fellow workers and poor decision-making authority were independent predictors for females.

Karatepe (2013) found that employees with heavy workloads were emotionally exhausted, while You (2019) used data on 204 employees in Korean firms and found that job stress positively influenced emotional exhaustion and that supervisor humor had a moderating role. In particular, the affiliative humor of supervisors negatively moderated the relationship between job stress and emotional exhaustion, while their aggressive humor was a positive moderator. In addition, role conflict, emotional demand, sense of efficacy, and supervisor support were found to be antecedents of emotional exhaustion in a preliminary study of special education paraeducators. The results were based on data from 100 paraeducators in schools, who were recruited to self-report their level of emotional exhaustion and other job variables (Shyman, 2010).

In contrast, work schedule flexibility and perceived nurse manager ability have been found to be negatively related to self-reported emotional exhaustion (Dhaini et al., 2018). As emotional exhaustion is known to be common among healthcare workers, Dhaini et al. (2018) evaluated variances in the work schedule flexibility of Swiss acute care hospital units, and investigated the relationship between work schedule flexibility and self-rating emotional exhaustion among registered nurses. Data were collected from 1833 registered nurses in 23 hospitals in Switzerland. The results suggested that work schedule flexibility and perceived nurse manager ability improved the healthcare workers' emotional health.

Moderating effect of emotional exhaustion

Although emotional exhaustion can be regarded as a dependent variable that

reflects the physical and psychological states of individuals, researchers have also viewed it as the level of energy and resources provided to employees for dealing with various issues (Halbesleben, 2006; Halbesleben et al., 2014). Emotional exhaustion can thus be a moderator when examining various outcomes. For example, employees' emotional exhaustion has been found to be more negatively related to positive emotional displays in a less positive service climate when managers' emotional exhaustion is high (Lam et al., 2010). Emotional regulation theory, which addresses the association between emotional cues and responses by shedding light on the mediating effect of emotions and the moderating effect of methods to regulate emotions (Gross, 1998a, 1998b), offers insights into this process. This theory suggests that negative emotions arise when individuals are in stressful situations and must evaluate external cues (Gross, 1998a). Corresponding behaviors are thus produced in response. When individuals take appropriate and effective measures, the loss of emotional resources can be reduced. In contrast, when managers experience high emotional exhaustion and fail to regulate their emotions, they find it difficult to provide employees with the emotional resources needed to complete tasks.

Several studies have revealed that when individuals experience high levels of emotional exhaustion, their job performance suffers. Dealing with the emotional consequences of heavy work demands and chronic strain takes up time and energy, which makes it difficult to respond effectively to job demands, resulting in a vicious circle that affects performance (Karasek, 1979; Parker & Sprigg, 1999; Taris, 2006). The COR theory (Hobfoll, 1989) again provides a reasonable explanation: a resource deficit situation impairs employees' motivation and willingness to allocate extra resources, resulting in unsatisfying

job outcomes. For example, the moderating role of emotional exhaustion in the association between customer orientation and adaptive selling behavior has been investigated, and salespeople's adaptive selling behaviors were found to be substantially weakened when they suffered from high emotional exhaustion (Shu et al., 2019). In addition, Kim et al. (2018) considered employees' emotional exhaustion to be an indicator of whether they could engage in self-regulation, and empirically demonstrated that subordinate learning goal orientation and emotional exhaustion weakened the association between goal-focused leadership and task performance via LMX. Emotional exhaustion has also been found to moderate the association between proactive personality and individual performance both independently and jointly with perceived safety climate (Baba, Tourigny, Wang, & Liu, 2009). Thus, the moderating effect of emotional exhaustion has been investigated to some extent, but it deserves further exploration given that it has a significant effect on individual performance.

Outcomes of emotional exhaustion

Emotional exhaustion is common in various sectors, and particularly in the service industries. Many researchers and organizations have recognized its negative effects, which include reduced work efficiency, work satisfaction, and family satisfaction. The mechanism and negative impact of emotional exhaustion has been addressed from various perspectives. Emotional exhaustion has been found to be positively related to turnover intentions (Cropanzano, Rupp, & Byrne, 2003; Dishop, Green, Torres, & Aarons, 2019; Noh, Jang, & Choi, 2019; Wright & Cropanzano, 1998) and WFC (Rubio et al., 2015; Tang et al., 2016) and negatively related to job performance (Cropanzano et al., 2003; Edmondson et al., 2019; Wright & Cropanzano, 1998; Yustina & Valerina, 2018), job

satisfaction (Koon & Pun, 2018; Yustina & Valerina, 2018), OCB (Cropanzano et al., 2003), work attitudes (Dishop et al., 2019), employee proactive behavior (Wu et al., 2018), and employee engagement (Menon & Priyadarshini, 2018).

Healthcare workers such as clinicians and nurses have recently been a focus of research, as their work environments often cause high levels of emotional exhaustion. Numerous studies have been conducted to investigate the underlying mechanism and thus develop effective managerial strategies. For example, Dishop et al. (2019) applied social exchange theory to examine how emotional exhaustion influenced the work attitudes and turnover of mental healthcare providers, and how the functional psychological climate played a moderating role. Data were collected from 311 mental healthcare providers from 49 community mental health programs and were analyzed using multilevel SEM. The results showed that emotional exhaustion was negatively related to work attitudes, and the relationship was moderated by a functional climate characterized by high levels of cooperation, growth and advancement opportunities, and role clarity. The relationship between emotional exhaustion and work attitudes was weaker among providers who worked in programs with better-functioning psychological climates. Poor work attitudes also significantly predicted higher clinician turnover.

Emotional exhaustion also plays a role in the relationship between organizational justice and turnover intentions. Noh et al. (2019) explored the effect of organizational justice on turnover intentions via emotional exhaustion and the moderating effects of job characteristics (i.e., job satisfaction and job commitment) and social support (i.e., supervisor and colleague support) in the information technology departments of firms in South Korea. A total of 579

programmers, systems analysts, and system operators participated in the survey. The results revealed that procedural justice, interaction justice, and distribution justice had negative influences on emotional exhaustion, and emotional exhaustion was positively related to turnover intentions. Job satisfaction and colleague support significantly moderated the association between emotional exhaustion and turnover intentions.

Tang et al. (2016) explored how servant leadership impacts employees' WFC and WFPS, and whether emotional exhaustion and personal learning mediate these relationships. Servant leadership sheds light on fulfilling subordinates' needs to grow and develop their full potential regarding job effectiveness, community stewardship, and leadership skills with the core theme, "going beyond one's self-interest" (Tang et al., 2016). Time-lagged data collected in China revealed a negative relationship between employee perceptions of servant leadership and WFC, and a positive relationship between these perceptions and WFPS (Tang et al., 2016). Reduced emotional exhaustion was also found to mediate the associations between servant leadership and both WFC and WFPS, while increased personal learning only mediated the association between servant leadership and WFPS. In addition, empirical studies using three models revealed a spiral process, or reciprocal relationship, in which WFC predicted emotional exhaustion, and vice versa (Rubio et al., 2015).

Poor job performance and low job satisfaction have been associated with the development of emotional exhaustion. Drawing on the COR model, Wright and Cropanzano (1998) undertook a 1-year longitudinal research of 52 social welfare employees, and found that emotional exhaustion was associated with poor performance and subsequent turnover. Edmondson et al. (2019) found that

emotional exhaustion increased the likelihood of a retail salesperson's engagement in service sabotage, but perceived organizational support alleviated the negative effect of emotional exhaustion on service sabotage. Emotional exhaustion can also predict lower job satisfaction (Koon & Pun, 2018; Yustina & Valerina, 2018), and Yustina and Valerina (2018) examined whether the WFC of auditors can affect employees' performance and whether emotional exhaustion and job satisfaction mediated the effect. A total of 151 auditors at 10 Indonesian CPA firms participated in an online questionnaire. The results showed that emotional exhaustion and job satisfaction fully mediated the WFC and job performance relationship.

In addition to work attitudes (Dishop et al., 2019), employee proactive behavior (Wu et al., 2018) and employee engagement (Menon & Priyadarshini, 2018) are significantly influenced by emotional exhaustion. For example, Cropanzano et al. (2003) applied social exchange theory and suggested that emotional exhaustion can impact job performance, citizenship behavior, and turnover intentions. They found that organizational commitment mediated the association between emotional exhaustion and work outcomes, and that emotional exhaustion had an effect on these criteria independent of those of age, gender, and ethnicity. Wu et al. (2018) collected dyadic data on 234 supervisor-subordinate relationships in China and examined the relationship between the targets' perceptions of workplace negative gossip and proactive behavior. They focused on the mediating effect of emotional exhaustion and the moderating effect of traditionality, and found that emotional exhaustion mediated the association between workplace negative gossip and proactive behavior. Traditionality also strengthened both the association between workplace negative

gossip and emotional exhaustion and the indirect relationship between workplace negative gossip and proactive behavior through emotional exhaustion, because traditionality makes individuals more sensitive to negative gossip.

2.5 Summary

In sum, numerous previous research revealed that supervisor support is helpful for decreasing employees' WFC (Allen, 2001; Behson, 2005; Erdwins, Buffardi, Casper, & O'Brien, 2001; Frone et al., 1997; Frye & Breugh, 2004; Kossek, Pichler, Bodner, & Hammer 2011; Lambert et al., 2017; Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011; Rudolph et al., 2014). Supervisor support is one important type of social support (e.g. Frone, Yardley, & Markel, 1997; Lambert, Hogan, Keena, Williamson, & Kim, 2017; Rudolph, Michel, Harari, & Stout, 2014). The meta-analysis conducted by Michel et al. (2011) suggested that there are more than thirty studies that supported the negative relationship between supervisor support and WFC. The two major theories to explain the relationship between supervisor support and employees' WFC are role theory (Allen, 2011; Michel et al., 2011; Rudolph et al., 2014) and the conservation of resources theory-COR theory (Lee, Kim, Park, & Yun, 2013; Talukder, 2019). Role theory suggests that an individual has multiple roles in work and family domains, and thus, facing multiple demands and expectations (Kahn et al., 1964). Work demands lead individuals to consume resources. When employees devote resources at work and thus, they do not have enough resources to handle family issues, causing WFC. The basic proposition of conservation of resources (COR) theory is that people tend to protect their present resources and obtain new resources (Hobfoll, 1989). Supervisor support can help individuals acquire emotional and instrumental resources to handle work and daily life. Thus,

individuals can keep their personal resources and use them to handle family issues. Some other research used cultural theory (Rudolph et al., 2014), social exchange theory (Talukder, 2019), and gender role theory (Rudolph et al., 2014) to explain the model.

As for the mediating mechanism for the association between supervisor support and WFC, Allen (2001) and Kossek et al. (2011) found that supervisor support help reduce employees' WFC through family-supportive organizational perception (FSOP). Erdwins et al. (2001) hypothesized the mediating effect of job self-efficacy on the association between supervisor support and WFC but failed to find a significant effect. As for the moderating mechanism, gender, dependants, and nationality (Drummond et al., 2016) and whether immigrants or non-immigrants (Rudolph et al., 2014) have been examined as moderators for the relationship between supervisor support and WFC. The results show that gender, nationality and whether immigrants or not are significant moderators while the presence of dependants is not.

Although there have been fruitful studies linking supervisor support and WFC, supervisor support is a broad concept and does not specifically related to family issues. Research has compared the influences of different types of supervisor support on WFC. Based on a meta-analysis, Kossek et al. (2011) concluded that work-family specific constructs of supervisor support are more highly associated with employees' WFC than general supervisor support.

As a work-family specific construct of supervisor support, Hammer et al. (2009) developed the measurement of FSSB and found a negative relationship between perceptions of FSSB and followers' WFC. Crain et al. (2014) also found support for such a negative association but have not considered the mediating or

moderating effects. To the best of my knowledge, only two studies have examined the mediator and/or moderator of the relationship between FSSB and WFC. The first study (Kwan, 2014) applied the control perspective and boundary theory to explain why and when perceptions of FSSB result in reduced followers' WFC in a Chinese setting. Using the control perspective (Thomas & Ganster, 1995), Kwan (2014) found that perceived control mediates the negative relationship between FSSB and WFC. On the basis of boundary theory (Ashforth et al., 2000), the study indicated that work-home segmentation preferences moderate the relationship between perceived control and WFC, and the indirect effect of FSSB on WFC via perceived control. The second study (Straub, Beham, & Fayad, 2018) applied the fit perspective to indicate the mediating role of perceptions of schedule fit in the relationship between FSSB and WFC using data on employees in Lebanon, a nation known for poor national and corporate work-family support.

However, no study has investigated the effect of FSSB on WFC from the perspective of supervisors. This is important because supervisors who manage to reduce their own work-family conflict would further function as a role model for their subordinates (Crain et al., 2014). As a result, in this study I investigate the negative relationship between FSSB and supervisors' WFC, and propose personal skill development as a mediator and emotional exhaustion as a moderator of such relationship. This approach is novel and contributes to the literature above and beyond past findings. I will explain the details in the next chapter.

Chapter 3 Theories and hypotheses

This section provides discussions of simulation theory, the work-home resources model, and COR theory in detail, which are applied in this study. Each is first introduced and the related literature is then examined. Simulation theory addresses the process of how supervisors attempt to understand the feelings and situations of their subordinates, in which empathy plays a very important role. Only when supervisors empathize with their subordinates can they identify what kind of support is required and what solution is effective. During these processes, the supervisors can also develop personal skills such as active listening, empathy, and communication. The work-home resources model explains how personal skill development helps supervisors reduce their WFC. The skills learned in the workplace can reduce time-based WFC by improving work efficiency, stress-based by developing harmonious relationships with colleagues and family members, and behavior-based by adjusting their behaviors rapidly to meet the requirements of family roles. The role of moderator emotional exhaustion is considered in COR theory. When personal resources are depleted, the process of learning from FSSB can be reduced, thus in turn reducing personal skill development and the effect of FSSB on supervisor WFC.

Simulation theory was first proposed in a study exploring whether chimpanzees have a theory of mind (Short, 2015). People can understand each other and predict each other's behavior, which appears obvious, but the underlying mechanism is poorly understood. By assessing whether chimpanzees can predict or explain the actions of others, based on beliefs or quasi-beliefs, this ability in humans can be revealed. This is known as the theory of mind ability. The two competing theories aimed at explaining this are simulation theory and

theory theory. Simulation theory suggests that people understand others and predict their behavior by simulating them, while theory theory posits that this understanding is achieved through theoretical knowledge, such as desires and beliefs.

Simulation theory is grounded in the study of mirror neurons as proposed by Gallese and Goldman (1998). They discovered a new class of neurons in the premotor cortex of the macaque monkey, referred to as mirror neurons, which can help explain how people understand and predict the behavior of others. Mirror neurons in macaques facilitate the learning of new motor skills by imitation. The study suggests that simulation theory rather than theory theory can explain the activity of mirror neurons. However, neither simulation theory nor theory theory can explain specific systematic errors that may occur. For example, when I see that you are in the hospital, I can predict that you are sick. I see that you are pale and unhappy so I understand and predict your behavior through this logic. However, you may simply be visiting a friend in the hospital or you may need urgent help from your mother, who is coincidentally a doctor. Such interpretations and predictions may thus be based on beliefs and desires that we think logical and reasonable. A wife may believe that her husband is loyal to her for various reasons, while in reality he may have betrayed her for many years. Thus, both simulation and theory theories do not account for us making mistakes.

The experimental data reveal the following problems in systematic errors in the theory of mind. First, we are too optimistic or cynical about what people do, so we sometimes have higher expectations about others, or we may be pessimistic about their behavior. Second, “suspicious congruency” can occur, which involves an incorrect view about how our minds work. Saxe (2005) used this notion to

correct theory theory. Third, the behavior of children aged around five has been found to be unpredictable. Scholars have different opinions about which notion can help explain the systematic error. Saxe (2005) suggested that simulation theory cannot account for systematic errors in certain conditions. His opinion has become the mainstream, but other scholars have argued that both theories are valid. However, Tim (2015) countered Saxe's arguments, proposing that we understand others by putting ourselves in their position, which is referred to as simulation theory. Tim (2015) provided clear logic and effective experiments to address all of the above circumstances. In this study, I support simulation theory and its effects.

Empathy is closely related to simulation theory, and was first defined by Paul Maclean in 1967 (Marsh, 2018) as the ability to identify with the feelings and needs of another person. Maclean emphasized the importance of empathy, showing that it is the basis of caring for others. His definition requires people to experience the feelings of others first hand. Accordingly, studies about empathy with pain were then conducted. Research has demonstrated that experiencing or observing others' pain facilitates the process of empathizing. Thus, simulating others' pain is a form of empathy. Empirical studies indicate that empathy promotes prosocial motivations and behaviors (e.g., Decety, Bartal, Uzefovsky, & Knafo-Noam, 2016), but how this process occurs is still little understood, so how negative input can generate positive behaviors requires further explanation (Marsh, 2018).

The effect on empathy of experiencing and observing the pain of others has been extensively studied for many years, particularly in the field of nursing and other healthcare contexts. Empathy is a basic requirement when taking care of

patients. To improve therapeutic relationships and care quality, nurses often participate in various training programs. However, as the improving effect of empathy has become more widely recognized, contemporary healthcare is still regarded as lacking empathy. A systematic review revealed that immersive and experiential simulation-based interventions are effective forms of empathy education for undergraduate nursing students (Levett-Jones, Cant, & Lapkin, 2019). Simulation methods include role-playing, manikin-based scenarios, and 3D e-simulations and point-of-view simulations, in which the participants wear hemiparesis suits. The data were collected from a 3-stage systematic study of 6 electronic databases, from which 1,176 articles were obtained, although only 23 studies were finally reviewed after a selection process. Of these, nine studies indicated practical improvements in empathy. Immersive and experimental simulations focusing on vulnerable patient groups, and that provide opportunities for guided reflection, were found to be the most effective in improving empathy.

A team of educators at Transitions Life Care invited employees in a hospice and a palliative care setting to simulate end-of-life disease symptoms, to test whether experiencing others' suffering can enhance empathy and whether it could help develop more appropriate therapeutic responses (Addison & Morley, 2019). The aim was to help healthcare workers perceive that they have the ability to empathize, which can then change their behavior toward patients and families. This resulted in 98% of the employees responding that the experimental experience had greatly improved their empathy levels and helped them to offer more to the patients. Thus, symptom burden simulation had a positive effect on improving empathy and demonstrating empathic behavior. Conducting experiments in hospitals or related contexts can also be effective, and a study

involving a group of nursing students playing the roles of patients demonstrated that such simulation can be useful (ter Beest, van Bommel, & Adriaansen, 2018). The change in perspective of both nurses and patients can help the nurses understand the emotions and feelings of patients, thus improving their ability for empathy. Many similar studies have explored the effect of empathic training based on simulation experiments (e.g. Outlaw, & Rushing, 2018; Shao, Sun, Huang, Li, Huang, & Li, 2018). Most participants were nursing students, and most felt that these activities helped them better empathize with patients. Empathy in the medical domain has been discussed at length, but it is also an important and necessary skill for supervisors and managers. By simulating the situations of subordinates, supervisors' ability to empathize can also be improved. Thus, they can develop their FSSB and learn from it.

FSSB can be understood from another perspective: the relationship between empathy and prosocial behavior. According to Decety et al. (2016), empathy is a driver of prosocial behavior, which is defined as a voluntary or beneficial behavior toward an individual or a group (Silke, Brady, Boylan, & Dolan, 2018). They suggest that empathy not only reflects an ability to perceive and feel others' emotions, but also contains a motivation to care for others' well-being. Thus, when people are motivated to act through empathic responses, they will demonstrate prosocial behaviors, and empathic responses are closely related to simulation in this process.

Many researchers test the relationship between empathy and prosocial behaviors with children and adolescent participants (e.g. Guevara, Cabrera, Gonzalez, & Devis, 2015; Mestre, Carlo, Samper, Malonda, & Mestre, 2019), as this period in life is when prosocial development primarily occurs (Silke et al.,

2018). For example, Bandstra, Chambers, McGrath, and Moore (2011) studied 120 children (60 boys and 60 girls) between 18 and 36 months old. They examined how the children responded to simulations of an adult's pain and sadness. The study was conducted in a laboratory, and the children were brought into a separate room to play with the same female researcher, while an unfamiliar adult expressed pain or sadness nearby. The process was recorded using hidden cameras. The children were found to be sensitive to both the sadness and pain of other people, but they demonstrated more concern about and prosocial responses to sadness than pain.

The relationships among empathic concern, perspective taking, prosocial moral reasoning, and prosocial behaviors were examined in a study with 417 adolescents from public schools in Spain as participants. The students were monitored for three successive years. Both empathic concern and prosocial moral reasoning were found to mediate the relationship between perspective taking and prosocial behaviors (Mestre, Carlo, Samper, Malonda, & Mestre, 2019). Here, "perspective taking" refers to the understanding of thoughts, feelings and social situations of others, which is the basis of empathic concern. Thus, simulation is a necessary process for producing empathic responses. The formation of empathy and prosocial behavior has also been explored through a simulation process, in which ones' own mental state is used to understand those of others (Majdandžić, Amashafer, Hummer, Windischberger, & Lamm, 2016). These studies help explain how simulation and empathy facilitate prosocial behavior, and thus can further our understanding of why supervisors are willing to demonstrate FSSB after they empathize with their subordinates.

The work-home resources model first proposed by ten Brummelhuis and

Bakker (2012) is also applied in this thesis. Negative influences, such as role conflict and health problems, have been identified in employees with dual roles, but more recent studies have identified that occupying dual roles can benefit employees, resulting in skill enhancement and better job performance (ten Brummelhuis & Bakker, 2012). To further explain the relationship between work and family, ten Brummelhuis and Bakker (2012) proposed the work-home resources model, in which work-home resources and enrichment are viewed as processes. The model addresses the following questions. (a) What are the underlying mechanisms behind work-family conflict and enrichment? (b) Is work-family enrichment or conflict more likely or less likely under certain macro contexts and among people with certain personal characteristics? (c) How do work-family underlying mechanisms develop over time? (p. 2).

The work-home resources model is based on seven assumptions and two processes from COR theory—a loss spiral and a gain spiral (Hobfoll, 2002). Stress increases and then depletes resources, while resources generate new resources, and thus resources are accumulated. Hobfoll (2002) categorized resources as contextual and personal. Contextual resources are those in social contexts, such as at home and in the workplace, whereas personal resources are those of individuals, such as personalities and traits. Another important construct is contextual demands, which require extra sustained physical or psychological effort to be exerted. Work-home conflict can be defined as the process in which contextual demands in the work or home domains deplete personal resources, thus negatively affecting the other domain. Work-home enrichment is the process by which contextual resources in one domain facilitate the development of personal resources and bring positive outcomes to the other domain. The

following four propositions can address the first question concerning the nature of the causal processes behind work-family conflict and enrichment. Contextual work demands undermine family life through reduced personal resources (WFC); contextual work resources enrich family life through acquired personal resources (work-to-family enrichment); contextual family demands undermine work life through reduced personal resources (FWC); and contextual family resources enrich work life through acquired personal resources (family-to-work enrichment) (p. 5). The current study explores the effect of FSSB on supervisors' WFC through personal skill development, and aims to identify whether the process of FSSB facilitates their development of personal skills such as empathy, thus encouraging positive family outcomes, or whether this process depletes personal, such as emotional, resources and thus decreases positive family outcomes.

Key and macro resources may help to explain the main factors influencing WFC and WFE in the second question (ten Brummelhuis & Bakker, 2012). "Key resources" refers to individual characteristics, while "macro resources" refers to individuals' social contexts. Those who own more key resources are able to deal with stressful situations and generate new resources. For example, optimistic people may be more active in solving problems, rather than becoming immersed in negative emotions (ten Brummelhuis, & Bakker, 2012). Those who hold more macro resources are more likely to cope with stressful situations successfully. For example, wealth and social networks can enable those with more resources to mitigate their work or home demands, thus reducing WFC and simultaneously increasing WFE (ten Brummelhuis, & Bakker, 2012). Personalities and traits are important predictors of leader development and general leadership (Blair, Palmieri, & Paz-Aparicio, 2018), and those with more key resources are more

likely to obtain macro resources by exploiting their characters, so leaders can be viewed as role models who demonstrate that key resources and macro resources are conditional factors in reducing WFC and increasing WFE.

Resources can also be volatile or structural (ten Brummelhuis & Bakker, 2012). Volatile resources are those that can only be used to achieve one purpose at a time, and may quickly disappear, like a type of mood. Social support such as affect and advice and energies such as those directed to attention are volatile resources, while conditions such as marriage and employment, and constructive resources such as skills and knowledge, are structural resources. WFC and WFE can be short-term or long-term. If stressors cannot be addressed in a short time, there may be a loss spiral, in which personal resources are depleted due to high contextual demands. The conditions may also get worse in the long term because fewer resources are accumulated that can deal with chronic demands. Conversely, a gain spiral may emerge if stable structural resources are accumulated. Structural contextual resources may encourage employees to obtain more resources and opportunities through personal resources, which can provide employees with more stable structural resources in the long term. Personal resources are proposed to be a type of key construct by ten Brummelhuis and Bakker (2012), which can help us understand the occurrence of short or long-term WFC and WFE. Volatile demands and resources can deplete or produce volatile personal resources, while chronic demands and structural resources may have a long-term effect on structural personal resources, leading to either a loss or a gain spiral. All of these effects may result in short- or long-term outcomes in the other domain. Providing FSSB is a long-term process that requires continuous effort. However, this may bring gains when leaders exploit their personal resources and generate new

resources from this process.

The few studies that have applied the work-home resources model regard WFC and WFE as processes. Most only examine short-term resource use, and only one involves both short-term and longitudinal surveys. Very few studies have applied the work-home resources model as a framework to explain the work-home interface. However, numerous studies have examined bidirectional WFC and WFE, the impact on both employees and leaders, the mediating effect of personal resources, the moderating effect of key resources, and the predictors of job or family resources.

Bakker, Du, and Derks (2018) investigated the effect of major life events on weekly resource use, work engagement, and job performance based on the work-home resources model. Data from 185 people and 443 events supported the hypotheses that on a weekly basis, contemplation would undermine the effective use of personal resources whereas psychological detachment from major life events would encourage the effective use. In addition, the key resource of work role centrality strengthened the two-way interaction effects.

Kang and Peng (2019) explored the pros and cons of servant leadership on supervisors based on the work-home resources model. They used an empirical sampling method to investigate the 5-day diaries of 76 executives. The data were analyzed using the multi-layer linear model. The results indicated that supervisors' servant leadership behavior generated positive emotions, thus improving the work-family relationship, although this was also affected by resource depletion. Positive emotion is thus an important personal resource. Organizational support is also a moderator of servant leadership and the work-family relationship, strengthening the positive association of servant leadership

with WFC through positive emotions, and alleviating the negative association of servant leadership with WFE through ego depletion. Servant leadership is thus more likely to produce positive outcomes when supervisors perceive more organizational support.

The work-home resources model has also been used in the study of long-term WFC and WFE. Du et al. (2018) investigated how day-level family issues and family-work spillover (affect and cognition) influence employees' job resources and development. They collected and analyzed 366 daily surveys from 108 Chinese working parents, and found morning job resources to be positively related to afternoon energy when the previous day's family problems were fewer, but not significantly when there were more problems. In addition, daily rumination alleviated the association between morning job resources and afternoon energy. The moderating effect of the previous day's problems was mediated by daily rumination.

The work-home resources model has also been applied to identifying the effect of homesickness on the association between job resources and performance (Du, Derks, Bakker, & Lu, 2018), with resources such as emotional stability and openness as the main moderators. This study involved both a short-term survey and longitudinal investigation. In Study 1 migrant manufacturing workers' homesickness was initially measured, and their performance was assessed three months later. In Study 2, military trainees were selected as the sample and were asked to keep a daily diary. Homesickness was measured at the between-person level in the first study and at the within-person level in the second study. Both studies supported the hypotheses that emotional stability and openness can attenuate the negative moderated effect of homesickness on the association

between job resources and performance.

The effects of customer participation on WFF has been examined using the work-home resources model (Loi, Xu, Chow, & Chan, forthcoming). Two-wave survey data from hotel service employees revealed that customer participation increased employee WFE via enhanced cognitive and relational job crafting, and organization-based self-esteem strengthened the relationship between customer participation and relational crafting and the indirect effect of customer participation on WFE via relational crafting.

To summarize, demands and resources, both key and macro, are contextual and thus have different levels of importance. I propose that the skills gained by exhibiting FSSB in the workplace can reduce contextual work demands, thus minimizing the loss of resources and subsequently reducing WFC. A gain spiral can occur with FSSB, personal skill development, and supervisors' WFC and this will form a virtuous cycle that can direct supervisors to provide family-related support.

The COR theory was proposed by Hobfoll in 1989, in response to other models that he regarded as too phenomenological or ambiguous, such as stimulus definitions of stress and event-perception viewpoints. Hobfoll (1989) believed that a new model was required to assess stress and its influences, and he argued that this could provide a clearer direction for future research because it could be directly tested and was comprehensive and parsimonious. The basic principle of COR theory is that people strive to obtain, retain, and protect resources, and that when individuals are put into stressful situations, they may potentially or actually lose resources. However, more details of the key concepts of COR theory are required to fully understand it.

The definition of stress is derived from this model. Stress emerges if individuals perceive the threat of losing resources, if they actually lose resources, or if they lack the resources to generate new resources (Hobfoll, 1989). They must then change their life patterns to handle the stress. The COR model suggests that people strive to minimize the net loss of resources when facing stressful situations, and at other times they strive to gain new resources in case of future loss. Thus, a type of resource investment occurs. However, if individuals have inadequate resources they are likely to further lose them. Loss is therefore useful in understanding stress theory. Loss such as the death of a family member or unemployment undoubtedly causes stress. However, other changes and challenges do not necessarily lead to stress. The COR theory model suggests that changes can bring about new resources that can help individuals resist stress. Promotion, for example, can be an excellent opportunity for employees to obtain rather than lose resources. Thus, the occurrence of stress is not due to changes and challenges themselves but whether they lead to evidenced loss.

Four types of resources have been identified as closely related to stress and eustress (beneficial stress). First, object resources have intrinsic value or may lead to other gains. Second, conditions can be viewed as resources as they provide more information about the influencing factors of individual stress and eustress. Third, personal characteristics are key resources that can facilitate stress resistance. Fourth, time, money, and knowledge are conducive to obtaining other resources. In addition, social support is related to losses and gains of resources.

The COR model suggests that individuals can replace lost resources (Hobfoll, 1989), which is the most direct and common way to minimize loss. For example, to compensate for the loss of a friendship, new friends can be made.

However, such behavior may itself be stressful because individuals must expend other resources to achieve it. In addition, success cannot be guaranteed because making friendships is high risk. For example, an impulsive marriage may result in a divorce soon after, and more than a relationship can be lost. This leads to the concept of a loss spiral, which can develop when individuals have inadequate resources to offset the net loss of resources. The situation can then worsen due to the lack of choice.

In addition to resource replacement, appraisal can help resist stress (Hobfoll, 1989). First, appraisal can shift the focus of attention to gains rather than losses. Challenges can also become opportunities, depending on how they are viewed. Second, what has been lost can be devalued. For example, devaluing the importance of a final examination can help decrease the pressure students feel. However, these types of transformation are often difficult because what people value stems from their deep cognitions, such as their beliefs and self-esteem, which are more stable.

COR theory also suggests that people can be motivated to invest resources, thus enriching their resource pool and avoiding future losses. For example, efforts to develop good relationships with colleagues may bring positive outcomes such as a harmonious working environment, which can then enable social support provision when needed. However, this kind of investment may not meet individuals' expectations, i.e., not provide a good return. If it is then perceived as a loss, it is likely to lead to other negative outcomes.

To summarize, stress, resources, and loss are key concepts in COR theory. An individual has limited resources, and many events cause losses. When facing losses, individuals strive to retain resources and offset any net loss. To avoid

future loss, they often invest to gain new resources, but this may also bring loss. Reevaluation may help minimize losses to some extent, but the effect is limited. The key is to gain as many resources as possible. The main argument from the resource depletion perspective is that it is difficult to maintain effort and persistence when lacking emotional resources. Emotional exhaustion may then impede the learning processes required for FSSB because time and effort are directed elsewhere. Thus, less will be learned from FSSB, and its effect on personal skill development will be reduced.

In COR theory (Hobfoll, 1989), exhaustion is regarded as a type of loss of resource. A loss may lead to future losses because individuals may allocate additional resources to offset the present loss. Rogala et al. (2016) proposed that exhaustion can trigger a spiraling loss of personal resources where self-efficacy decreases, and may lead to other negative outcomes, such as disengagement. The effects of emotional exhaustion on job performance and volunteer turnover were examined in a related study, and the results were consistent with COR theory (Wright & Cropanzao, 1998). When individuals face high job demands, they may feel stressed, and to reduce their stress, they may invest more resources in improving their efficiency, or they may exhibit withdrawal behaviors if they lack resources. Minimizing the loss of resources can then lead to poor performance.

Resource depletion not only contributes to poor job performance, but also hinders proactive behavior (Wu, Kwan, Wu, & Ma, 2018). The relationship between perceptions of workplace negative gossip and employee proactive behavior has been found to be mediated by emotional exhaustion (Wu et al., 2018), which can be explained by COR theory. Negative gossip can produce negative emotions, and thus individuals may allocate more time and energy to

dealing with them, which reduces the resources available to engage in proactive behavior.

High levels of emotional exhaustion can affect the adaptive behavior of employees (Shu et al., 2019), and a loss of resources can decrease the willingness of salespeople to provide services, thus indirectly preventing them from improving their selling skills. If customers sense salespeople's negative emotions they may give negative feedback, and over the long term, salespeople may find adaptive behavior difficult.

The innovation of employees is influenced by stressors and resources. Based on COR theory, Peng, Zhang, Xu, Matthews, and Jex (2019) explored the relationship between challenge and hindrance stressors and employees' innovation. Data were collected from 217 employees and 49 supervisors. They found that challenge stressors were positively related and hindrance stressors negatively related to employees' innovative performance. Learning goal orientation moderated both relationships, while job autonomy only moderated the effect of hindrance stressors. The authors suggested that reducing hindrance stressors and increasing job autonomy may help improve employees' innovation, and resources are central to both approaches. Stressors deplete employees' resources so that they have no energy left for devising new ideas. Increasing job autonomy not only reduces employees' stress but also enables them to gain and accumulate resources more flexibly.

Simulation theory suggests that through empathy the feelings and actions of others can be understood (Keysers & Gazzola, 2006). Supervisors can therefore better understand their subordinates through observation and simulation, and by viewing situations from their perspectives the supervisors can provide the

emotional and instrumental support the subordinates need. When the supervisors know what has triggered WFC in their subordinates, they can effectively show the subordinates how to manage it and generally develop creative work-family management approaches.

These management experiences at work help the supervisors to know how to manage their own family issues. For example, the supervisors learn how to acquire child care services as they need to assist their colleagues to deal with work-family issues. When the supervisors need to ask for child care services, they know how to obtain these services in advance. Hence, they can work overtime when their family demands are fulfilled, thereby reducing time-based WFC. Another example is about strain and behaviors. The supervisors need to support emotional support to their followers who suffer from work-family negative spillover and thus learn how to view the work-family interface from diverse perspectives. When the supervisors experience similar work-family negative spillover, they can apply different perspectives and understand how and why such negative spillover occurs. Hence, they understand the importance of adjusting their emotions and behaviors after going back home, thus decreasing strain-based and behavioral-based WFC.

Hypothesis 1. FSSB is negatively related to WFC.

Personal skills can be developed through two-way communication, active listening, and problem solving (Lankau & Scandura, 2002). FSSB with empathy can enable supervisors to communicate effectively with their subordinates and to provide support, thus enhancing their interpersonal skills and problem-solving abilities, and they can derive precise and direct estimates of their subordinates' future actions by sharing their emotions and motivations. As they gain experience

of dealing with their subordinates' WFC, their ability to predict others' emotions and actions and to solve related problems will increase. The supervisors can also learn about the causes and consequences of WFC through sharing, thus accumulating the experience required to support their subordinates, and indirectly learning skills and strategies for dealing with family issues. Hence, I propose the following hypothesis:

Hypothesis 2. FSSB is positively related to personal skill development.

The work-home resources model suggests that work resources increase personal resources, which can then be utilized to enhance home outcomes (ten Brummelhuis & Bakker, 2012). Thus, personal skill development is an important resource, and abilities and skills such as active listening, empowerment, and empathy can be utilized when interacting with subordinates in the family domain. WFC may also decrease because personal skill development can reduce work-related demands (Greenhaus & Singh, 2007).

As mentioned, WFC has the three dimensions of time-, strain-, and behavior-based conflict (Greenhaus & Beutell, 1985). The lack of time can be addressed by supervisors with high levels of personal skills who can communicate with their subordinates effectively and solve problems efficiently, as fulfilling work requirements helps to alleviate time-based WFC.

Strain can be addressed through personal skill development, as individuals can establish and better maintain relationships with colleagues and family members. This can improve self-efficacy and provide opportunities for emotional support. As these positive outcomes can attenuate job stress, less stress is brought home, and strain-based WFC will decrease.

The skills and knowledge learned at work can be applied in the family

domain to also reduce behavior-based WFC. Personal skill development can help individuals understand the emotions of their family members and perceive their needs, so that they can quickly adjust their behaviors when necessary. The skills required to predict others' future behavior through empathy may also be generally useful in ensuring that relationships with family members are harmonious. Thus, the work-home resources model (ten Brummelhuis & Bakker, 2012) suggests that personal skill development can attenuate WFC, and as there is evidence that personal skill development enriches family life (Hu et al., forthcoming; Mao et al., 2016), I propose the following hypothesis:

Hypothesis 3. Personal skill development is negatively related to WFC.

The previous discussion suggests that FSSB can indirectly reduce supervisors' WFC. Displaying FSSB requires supervisors to have high levels of empathy and this process enhances their empathy. When supervisors observe and simulate their subordinates' feelings and actions about family issues, they know how to communicate with them and can help them deal with WFC. The related skills and knowledge they accumulate thus enable them to adjust their behavior to avoid WFC or to deal with their own WFC. Kwan et al. (2010) found that personal learning can be considered an important mediator of the effects of work experience on work-family outcomes. Therefore, personal skill development can mediate the relationship between FSSB and WFC, as supervisors develop their interpersonal skills, problem-solving abilities, and family-related knowledge by displaying FSSB, thereby enhancing their personal skill development, which in turn alleviates WFC. Hence, I propose the following hypothesis:

Hypothesis 4. Personal skill development mediates the relationship between FSSB and WFC.

Emotional exhaustion is caused by both physical fatigue and emotional depletion. It often occurs when demands for interpersonal interaction exceed the resources available (Maslach, 1998). In other words, when people feel that they do not have enough emotional resources to deal with their work, emotional exhaustion occurs. Emotional exhaustion has been regarded as an important predictor of job performance and well-being (e.g., Liu, Kwan, & Zhang, 2020). However, the moderating role of emotional exhaustion in work-family interface processes has been overlooked. Conventional research has shed light on the effects of gender and cultural values in the work-family interface processes (Powell & Greenhaus, 2010; Yang, Chen, Choi, & Zou, 2000). Although such approach is promising, exploring a new moderator in work-family research can enrich the work-family literature by extending emotional exhaustion as a key variable for understanding the boundary condition of FSSB effects.

Simulation theory suggests that people can feel and understand the emotions and actions of others through observation and simulation (Keysers & Gazzola, 2006). That is, emotions can be transferred through sharing experience. However, family supportive supervisors often experience negative emotions because they need to help followers handle family issues and because they have various job responsibilities (Hambrick, Finkelstein, & Mooney, 2005). For example, a subordinate may share his or her anxiety and distress that he or she cannot allocate time and energy to manage family issues, which distracts attention and influences work efficiency. When listening to the subordinate's sharing, the supervisor simulates how the subordinate feels and can then provide effective suggestions and support.

However, such intensive job responsibilities may not be fulfilled over the

long term. The resource depletion perspective holds that it is difficult for people to maintain effort and persistence when their emotional resources are insufficient (Troughakos et al., 2015). I thus propose that emotional exhaustion may depress the learning processes for the exhibition of FSSB. People need to spend time and effort on learning, which involves multiple processes, including observation, evaluation, and role modeling (Bandura, 1977). When individuals spend little effort on these processes, their learning will slow down. The COR theory suggests that when people lack personal resources, they are likely to conserve their resources by exerting less effort in daily life (Hobfoll, 1989, 2001). I argue that supervisors with a high degree of emotional exhaustion spend little effort on engaging in FSSB, and they thus learn less from FSSB. That is, these supervisors cannot persist in learning from their FSSB. Conversely, learning is accelerated when supervisors devote substantial attention in the learning processes. Such attention directs supervisors to learn more from the provision of FSSB. That is, supervisors with a low degree of emotional exhaustion can acquire more benefits, such as learning personal skills, from engaging in FSSB than those with a high degree of emotional exhaustion. Hence, I propose the following hypothesis:

Hypothesis 5. Emotional exhaustion moderates the relationship between FSSB and personal skill development, such that when the level of emotional exhaustion is high, the relationship between FSSB and personal skill development is weaker.

The previous arguments reveal an integrated model in which personal skill development mediates the negative relationship between FSSB and WFC, and emotional exhaustion moderates the relationship between FSSB and personal skill development. The COR theory suggests that individuals need personal

resources to handle daily life, and they thus tend to conserve these resources (Hobfoll, 1989, 2001). Social learning theory proposes that learning involves a series of processes, and thus, persistence is necessary to carry out these learning processes (Bandura, 1977). Considering these two theories and the notion that personal skill development is negatively associated with WFC, it is reasonable to argue that emotional exhaustion also moderates the magnitude of the mediation of personal skill development in the relationship between FSSB and WFC, which suggests a moderated mediation model. Moderated mediation refers to a mediating effect that varies according to the degree of a moderator (Edwards & Lambert, 2007). Along this line, my proposed model shows that when supervisors suffer from high levels of emotional exhaustion, the spillover effect of FSSB from work to family through personal skill development will be reduced. More specifically, supervisors with a high degree of emotional exhaustion benefit less from FSSB because they learn fewer personal skills, and thus the indirect effect of FSSB on WFC will be weaker. However, when supervisors who have a low degree of emotional exhaustion respond to their learning from FSSB more persistently and positively, the indirect impact of FSSB on WFC will be stronger. Hence, I propose:

Hypothesis 6. Emotional exhaustion moderates the mediating effect of personal skill development, such that when the level of emotional exhaustion is high, the mediating effect is weaker.

Insert Figure 1 about here

Chapter 4 Methods

4.1 Sample and Procedures

The data were collected from supervisor-subordinate dyads from a bank in Henan province, China. My focus is on China because, first, China is a fast-developing country with a high level of direct foreign investment, and thus Chinese human resource management has become a global issue (Liu et al., 2012). Second, the body of literature on FSSB is increasing, and the positive and negative outcomes of FSSB for supervisors are a focus of attention (Crain & Stevens, 2018). According to a recent review of around 60 publications on FSSB, only 4 used data from China (i.e., Lv, 2016; Pan, 2018; Qing & Zhou, 2017; Wang, Walumbwa, Wang, & Aryee, 2013) and 3 of the 4 concerned employees. Thus, the Chinese context can help generalize theories developed in the West. Third, work-family issues dominate the lives of most Chinese people, and thus are important in Chinese human resource management (Liu et al., 2012). Balancing work and family in Chinese organizations has captured the attention of many scholars (Cooke, 2009; Xiao & Cooke, 2012).

Henan is a populous province, with 109.6 million inhabitants at the end of 2018 (The National Economic and Social Development of Henan Province, 2019), and its workforce has a tradition of loyalty to supervisors, so the roles of leaders are important (Wang, Lu, & Liu, 2015). The traditional values of the Henan people (Liu et al., 2012) also mean that the work-family balance is important.

In terms of industry sector, service industries are rapidly developing and becoming more important (Liu, Kwan, Wu, & Zheng, 2018), and banks are typical service industries. Bank employees can often face problems concerning

families and emotional labor (Liu et al., 2018), and thus often experience WFC. Therefore, reducing WFC is important for bank employees. Support from managers in banks can enrich family life and improve family quality (Liao, Yang, Wang, & Kwan, 2016), so their leadership is also important.

The data were collected with the help of the human resources department of the bank's central office, who provided a list of branches and the principals of each branch. I contacted each principal and briefly explained my purpose. I targeted 259 supervisors and 969 frontline employees in the survey. Participation was voluntary, and all of the respondents were promised anonymity. The questionnaires were coded before being distributed. With the help of the administrative staff, I collected the survey data during work hours.

I used a three-wave research design with one-month intervals. This method is more effective than a cross-sectional research design, which cannot develop strong causal attributions (Bono & McNamara, 2011; Mathieu & Taylor, 2006). As common raters of the questionnaire may produce common method bias from the underlying high correlation of items and systematic error variance (Conway & Lance, 2010; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff, MacKenzie, & Podsakoff, 2012), I collected data from supervisors and employees.

A one-month interval was chosen for the study, because personal skill development is used as a mediator, and previous time-lagged studies have indicated a wide disparity in the data collection time intervals, ranging from one (Tang et al., 2016) to nine months (Kwan et al., 2010). Tang et al. (2016) revealed that perceptions of servant leadership are related to personal learning and thus the work-family interface, so I chose one-month intervals as my focus is on leader

behaviors, while Kwan et al. (2010) addressed the effects of mentoring on personal learning. This interval gives enough time for learning to occur and responses to become apparent.

I collected data on employees' perceptions of their direct supervisors' FSSB at time one (T1) and time two (T2), I asked the supervisors to rate their emotional exhaustion and personal skill development in the workplace. At time three (T3), I asked the supervisors to report their WFC.

In T1, I sent questionnaires to 969 employees and received 726 that were usable, resulting in a response rate of 74.92%. In T2, I obtained 259 responses from supervisors. In T3, I obtained 200 usable questionnaires from the supervisors from T2, giving a response rate of 77.22%. After matching, the final sample for my study consisted of 200 supervisors and 726 subordinates.

As Table 1 shows, of the 200 supervisors, 2.50% were female and 97.50% male. In terms of education background, 0.5% possessed high school diplomas or below, 2.50% had associate degrees, and 97.00% possessed bachelor's degrees. The average age was 32.42 ($SD = 3.80$), and the average number of children was 1.05 ($SD = 0.66$).

As Table 2 shows, of the 726 subordinates, 24.4% were female and 75.6% male. In terms of education, 6.5% received high school education or below, 32.4% had associate degrees, 60.7% possessed Bachelor's degrees and 0.4% had Master's degrees. The average age of the subordinates was 29.09 years ($SD = 3.80$), and the average tenure in the organization was 1.84 years ($SD = .99$).

Insert Table 1 and Table 2 about here

4.2 Measures

The questionnaires were administered in Chinese, and all of the key scales were originally developed in English. I applied the back-translation process to meet the five criteria for equivalence and obtained a good translation quality. The five key points were as follows: 1) use simple sentences; 2) avoid the repetition of nouns by using pronouns; 3) avoid metaphors and colloquialisms; 4) avoid using the passive tense in English; and 5) avoid hypothetical phrasing and the subjunctive mood (Brislin, 1970, 1986; Werner & Campbell, 1970). Brislin (1970) suggested a seven-step procedure for fully translating from English to another language: 1) obtain a translatable form in English; 2) ensure the translators are competent and familiar with the second language, particularly the content in the source language material; 3) give the translators practice time to translate, and secure at least two translators for a bilingual translation from the source to the target, and for translation back from the target to the source; 4) find errors that may lead to differences in meaning from the original target and/or the back-translated versions through examination by several raters, and then consider repeating step three; 5) pretest and revise the target versions; 6) demonstrate translation adequacy and ensure similar responses from the English versions, the translation, and the bilingual version; 7) obtain equivalence according to the criteria and the verdict, to minimize the meaning error standard, and conduct a simple pretest. The scales of my study were originally from the English version. Based on the seven-step process of the back-translation, I translated the scales from English to Chinese. I then asked a PhD candidate and a professor from the management field to back-translate the Chinese scale to the English version. Except for the demographic variables, the responses ranged from 1, “strongly

disagree” to 5, “strongly agree.”

The four constructs were FSSB, emotional exhaustion, personal skill development, and WFC. A construct represents latent, unobservable, or hidden variables (Raykov & Marcoulides, 2011), which then require observable manifestations that typically reflect specific aspects of the constructs. The indicators are manifestations of the constructs, which can be divided into formative indicators or formative measurements (see Figure 2 B) and reflective indicators or reflective measurements (see Figure 2 A). The measurement models describe “the direction, sign and form of these relationships and explaining why and under what conditions these relationships occur” (Edwards, 2011, p.370). According to Edwards (2011), formative and reflective measurements differ (see Table 3) and most researchers suggest using reflective indicators (e.g., Law & Jiang, 2012, 2014; Liang & Farh, 2012). All of the measures I used were reflective indicators. The indicators formed a unidimensional construct (see Figures 2 A and 2 B) and a multidimensional construct (see Figure 2 C), based on theory and a specification of relations (Law, Wong, & Mobley, 1998).

Reliability reflects the accuracy or dependability of measurement, and confirms whether the measurement of items provides interpretable statements and clearly demonstrates the intended phenomenon (Cronbach, 1951). I used Cronbach’s alpha (α) to reflect reliability. According to Cronbach (1951), α is the coefficient of equivalence that gives the mean of all split-half coefficients and an estimate from a set of items. I reported all Cronbach’s alphas to demonstrate an appropriate index of equivalence.

Insert Table 3 and Figure 2 about here

All items are shown in the appendix. The key points for each measure are as follows.

FSSB. A 14-item scale was developed by Hammer et al. (2009) based on social support theory, and was conceptualized as a multidimensional superordinate construct with the four subordinate dimensions of emotional support, instrumental support, role modeling behaviors, and creative work-family management. The measure was later applied by Kwan (2014) in a Chinese setting to measure FSSB. A sample item for emotional support is “My manager/supervisor is willing to listen to my problems when juggling work and nonwork life.” A sample item measuring instrument support is “I can rely on my supervisor to make sure my work responsibilities are handled when I have unanticipated nonwork demands.” A sample item for role model is “My supervisor is a good role model for work and nonwork balance,” and for creative work-family management, “My supervisor thinks about how the work in my department can be organized to jointly benefit employees and the company.” Instead of ratings by supervisors, I selected ratings from subordinates, which can fully explain how supervisors fully offer supportive behavior rather than simply thinking that their behavior is supportive. FSSB is a reflective multidimensional construct with reflective indicators (see Figure 2 C).

To evaluate whether the construct is consistent with the indicators or the hypothesis testing in construct relations, fit indexes through confirmatory factor analysis (CFA) are required. In the following, fit indexes 1 to 4 are used in the measures of FSSB, while indexes 5 to 7 are reported in the factor model fit. (1) A chi-square statistic with a single degree of freedom or $\chi^2(1)$ is a univariate Lagrange multiplier, suggesting that “the greater the value of a modification

index, the better the predicted improvement in overall fit if that path were added to the model” (Kline, 2011, p. 41). $\Delta\chi^2(df)$ is based on the $\chi^2(df)$ to reflect the significant change. (2) Root mean square error of approximation (RMSEA) is measured by the badness-of-fit index where a value of zero indicates the best fit (Kline, 2011). Although an RMSEA of less than .05 has been suggested to correspond to a good fit, McDonald and Ho (2002) concluded that an RMSEA of less than .08 corresponds to an acceptable fit. Most researchers use .80 where the “unity for perfect fit regard these (comparative fit index, etc.) as acceptable if they were greater than .90” (McDonald & Ho, 2002). (3) The comparative fit index (CFI) is used to test goodness-of-fit and is “an incremental fit index that measures the relative improvement in the fit of the researcher’s model over that of a baseline model, typically the independence model” (Kline, 2011, p. 208), with values ranging from 0 to 1.0, where 1.0 indicates the best fit (Kline, 2011). (4) The Tucker-Lewis index (TLI) is a non-normed fit index, based on mean squares in components of analysis of variance (ANOVA) with values ranging from 0 to 1.0, where 1.0 indicates the best fit (Mulaik, 2009). (5) Chi-square (χ^2) represents the noncentral distribution and is commonly used to test distribution (Kline, 2011). The value of χ^2 for a just-identified model generally equals 0, and when $\chi^2 = 0$, the model perfectly fits the data (Kline, 2011). The smaller χ^2 is, the more the causal path of the overall model is adapted to the actual situation (Wu, 2009). (6) Degrees of freedom (df) represent “the number of dimensions in which data are free from a model or curve with free parameters fit to the data as a result of constraints on some of the parameters of the model or curve” (Mulaik, 2009, p.333). This also reflects the difference between the number of observations (p) and the number of estimated parameters (q), i.e., $df = p - q$ (Kline, 2011). (7) The

standardized root mean square residual (SRMR) is a statistic associated with the correlation residuals (Kline, 2011). The SRMR is regarded as sensitive to mis-specified factor covariances in CFA, while the CFA appears to be most sensitive to mis-specified factor loading for the examination of measurement models (Kline, 2011). The acceptable fit is based on the combination threshold $CFI \geq .95$ and $SRMR \leq .08$. Researchers have advised that the SRMR should be less than 0.5 (Wu, 2009).

Hammer et al. (2009) used the results from multilevel confirmatory factor analyses to conceptualize FSSB as a multidimensional construct. In this study, I averaged subordinates' rating perceptions of FSSB with four dimensions to form an overall composite measure. FSSB is a higher-level construct combining its dimensions and represents leaders' overall behavior in supporting their subordinates, and these behaviors typically co-occur (Kwan, 2014). I ran a second-order analysis and correlation analyses to confirm that the data supports the theoretical pattern. I obtained a good model fit, with $\chi^2(55) = 107.04$, $CFI = .98$, $TLI = .96$, and $RMSEA = .07$. These four dimensions were strongly correlated, ranging from .79 to .87. Moreover, each dimension was significantly related to personal skill development, ranging from .21 to .26, and with WFC, ranging from .31 to .36. The aggregation of FSSB was consistent with other leadership research in China, in which servant leadership (Zhang, Kwan, Everett, & Jian, 2012) and empowering leadership (Zhang & Bartol, 2010) have been regarded as a single composite factor. The Cronbach's alpha for this scale was .95.

Emotional exhaustion. I used a five-item scale originally developed by Schaufeli, Leiter, Maslach, and Jackson (1996) and later applied by Wu, Yim, Kwan, and Zhang (2012) in a Chinese setting to measure emotional exhaustion.

A sample item is “I feel burned out from my work.” Emotional exhaustion is a reflective unidimensional construct because the construct is made up of reflective indicators (see Figure 2 A) and the five items of emotional exhaustion were selected on a theoretical basis to develop a unidimensional construct. The Cronbach’s alpha for this scale was .94.

Personal skill development. I used a six-item scale originally developed by Lankau and Scandura (2002) and later adapted by Kwan et al. (2010) in the Chinese context to measure personal skill development. The acquisition of new skills and abilities to build better relationships in the workplace is emphasized in personal skill development, such as effective communication skill, problem-solving ability, and a good relationship with colleagues. A sample item is “I have developed new ideas about how to perform my job in the workplace.” Personal skill development is also a unidimensional construct for which reflective indicators form the construct (see Figure 2 A) in one dimension. The Cronbach’s alpha for this scale was .82.

WFC. I used a nine-item scale developed by Carlson, Kacmar, and Williams (2000) and later applied by Tang et al. (2016) in a Chinese setting to measure WFC. The emphasis of the study is on conflict due to work interfering with family life, rather than the opposite. Conceptually, Greenhaus and Beutell (1985) divided work-family conflict into three forms: 1) time-based conflict, in which time devoted to work role makes it difficult to take part in family role; 2) strain-based conflict, in which strain experienced in work role interferes with participation in family role; and 3) behavior-based conflict, in which specific behaviors required in work role are incompatible with those in family role. Based on three studies of five samples, Carlson et al. (2000) developed and validated a

multidimensional measure of WFC with six dimensions, including three forms of work-family conflict (time, strain, and behavior) and two directions of conflict between work and family (WFC and FWC). A sample item for time-based WFC is “I have to miss family activities due to the amount of time I must spend on work responsibilities.” A sample item measuring strain-based WFC is “When I get home from work, I am often too frazzled to participate in home activities/responsibilities.” A sample item measuring behavior-based WFC is “The problem-solving behaviors I use in my job are not effective in resolving problems at home.” From a theoretical perspective, the construct of WFC can be divided into three dimensions, which consist of reflective indicators, and thus WFC is a reflective multidimensional construct. The Cronbach’s alpha for this scale was .96.

Control variables. Following previous research (Lapierre et al., 2018; Yi, Kwan, Hu, & Chen, 2017), I controlled for four demographic variables in the supervisors: age, gender, education, and number of children, all of which are likely to be associated with FSSB, emotional exhaustion, or WFC. Gender was dummy coded as 0 = male and 1 = female. The four categories of education were (1) high school diploma or below, (2) associate’s degree, (3) bachelor’s degree, and (4) master’s degree or above. Bono and McNamara (2011) suggested that three conditions are required to put variables into the control: first, the variable is correlated with the dependent variable based on a clear theoretical tie or empirical research; second, the variable is correlated with the hypothesized independent variables; and third, the control variable is not the central variable in the study, either hypothesized or as a mediator.

Chapter 5 Results

5.1 Attrition Analysis

The data from supervisors collected through two waves may cause a potential attrition effect within subject, so I applied the recommendations of Goodman and Blum (1996) to examine systematic differences in responses. Attrition analysis is necessary for a time-lagged research design because participants may be lost in the second round, resulting in a biased sample or in less generalizability. Subject attrition can lead to a violation of the assumption of random sampling, which may affect the research results. Four steps are proposed for assessing the attrition effects: step one is to use multiple logistic regression and assess the presence of non-random sampling; step two is to use t-tests to assess the effects of non-random sampling on means; step three is to use the normal approximation of the chi-square distribution to assess the effects of non-random sampling on variances, reflecting the change; and step four is to test the effects of non-random sampling on the relationships among variables, using an underlying correlation matrix (Goodman & Blum, 1996).

I conducted the attrition analysis step by step along with multiple logistic regression using the two survey time slots as the dependent variables and the supervisors' age, gender, education, number of children, emotional exhaustion, and personal skill development as the independent variables. The logistic regression coefficients of these variables were nonsignificant except for the coefficient of gender ($p < .05$). That is, at the level of the key studied variables (i.e., emotional exhaustion and personal skill development), the respondents did not systematically drop out of the study. In terms of gender, male respondents were more likely to remain in the study than female respondents (Values of -2

log likelihood = 159.21, $p < .05$). The female supervisor sample was very small, which may lead to this finding, and thus makes the result unreliable.

5.2 Confirmatory Factor Analyses

To examine the distinctiveness of the variables, I conducted a confirmatory factor analysis (CFA) with Mplus 7.4. I used a common method to reduce the number of items by parceling indicators, given the small sample size (Little, Cunningham, Shahar & Widaman, 2002). Confirmatory factor analysis (CFA) is a primary statistical analysis technique and is theory driven (Schreiber, Nora, Stage, Barlow, & King, 2006). This technique represents half of the basic rationale behind analyzing covariance structures in a structural equation model, with the other half represented by the analysis of structural models. Confirmatory factor analysis (CFA) can minimize the difference between the observed and unobserved variables, and is conducted to ensure the factor loadings and error variance estimates for calculating reliability (Knowlton, 1998).

I used the parceling technique to account for the small sample size. According to the results of the exploratory factor analysis, I combined the highest factor loading items with the lowest by taking their average until I obtained three to five aggregate items for each form. Little et al. (2002) described parceling as an aggregate-level indicator comprising the sum (or average) of two or more items, responses, or behaviors, and is used in multivariate methods to measure psychometrics, specifically with latent-variable analysis techniques. As the sample size was relatively small, I used a parcel to define a construct for fewer parameters and overall model fit. Item-level and parceled data differ. First, parceled data have fewer estimated parameters both locally in defining a variable and globally in representing a whole model. Second, parceled data have less

likelihood that residuals are correlated or dual loadings emerge, as fewer indicators are examined and the unique variances are smaller. Third, using parceled data reduces sampling error (Maccallum, Widaman, Preacher, & Hong, 2001). Parceling can be applied to effectively decrease the number of indicators to an optimal, just-identified level. Parcels can be built using four techniques: random assignment, an item-to-construct balance, a priori questionnaire construction, and approaches to multidimensionality. In this study, I used an item-to-construct balance and approaches to multidimensionality. An item-to-construct balance is based on loadings, in which the highest and lowest loaded items are combined and then the next highest with the next lowest, and so on, to achieve a reasonable balance. Approaches to multidimensionality are based on internal consistency; for example, WFC is a nine-item construct with three dimensions and the first parcel reflects time-based conflict and is the average of the first three items, the second parcel reflects strain-based conflict, and the third reflects behavior-based conflict. FSSB is also a multidimensional construct and so I applied this method to parcel it. Thus, I explicitly retained the multidimensional nature of the constructs and fully identified the relations among items.

As shown in Table 4, the proposed four-factor model fitted the data with an acceptable range ($\chi^2 = 113.03$, $df = 57$, CFI = .98, TLI = .97, RMSEA = .07, and SRMR = .04). In Table 4, the values of χ^2 are 113.03, 326.60, 837.82, and 1,598.09, respectively, and the χ^2 of the four-factor model indicates an “exact fit” (Kline, 2011, p. 1991); The degrees of freedom of each model range from 67 to 75; CFI and TLI are more than .95; RMSEA is less than .80, and SRMR is less than .05. All of the fit indexes show a good fit. Convergent validity and

discriminant validity were used to examine the relations of different constructs. “Convergent validity” refers to “a set of variables to measure the same construct if their intercorrelations are at least moderate in magnitude” (Kline, 2011, pp. 71–72). “Discriminant validity” refers to “a set of variables presumed to measure different constructs if their intercorrelations are not too high” (Kline, 2011, p. 72). These two types of validation were used to explained the four constructs. A multitrait-multimethod matrix and a structural equation model are useful methods (e.g., Law et al., 1998), and all of the factor loadings were significant, thus supporting convergent validity. To examine the discriminant validity, I compared the proposed model with other alternative models. The one-factor, two-factor, and three-factor models yielded unacceptable fit indices (see Table 4). These results support the discriminant validity of the key variables.

Insert Table 4 about here

5.3 Descriptive Statistics

Table 5 presents the means, standard deviations, and correlations among the variables. The correlation coefficient values in Table 5 show that the correlation coefficients between FSSB and personal skill development, and the correlation between FSSB and WFC were significantly positive. The reported coefficients are .25 ($p < .01$) and -.35 ($p < .01$), respectively. The correlation coefficient between personal skill development and WFC was significantly negative at -.17 ($p < .05$). These results provide preliminary support for the hypotheses.

Insert Table 5 about here

5.4 Test of Hypotheses

I conducted regression analysis and bootstrapping analyses to test the hypotheses. Hypothesis 1 predicted that FSSB would be negatively related to WFC. As shown in Table 6, exhibiting FSSB had a significant, negative effect on WFC ($\beta = -1.69.$, $p < .01$, Model 6), thereby supporting Hypothesis 1.

Hypothesis 2 predicted that FSSB would be positively related to personal skill development. As shown in Table 6, exhibiting FSSB had a significant, positive effect on personal skill development ($\beta = .39$, $p < .01$, Model 2), thereby supporting Hypothesis 2.

Hypothesis 3 predicted that personal skill development would be negatively related to WFC. Table 6 indicates that personal skill development had a significant, negative effect on WFC ($\beta = -.36$, $p < .05$, Model 7). Therefore, Hypothesis 3 was supported.

Insert Table 6 about here

Hypothesis 4 was tested by mediation. In psychology research, Baron and Kenny (1986) defined mediation as the $X \rightarrow M \rightarrow Y$ relation, while the indirect effect emerged in sociology (Alwin & Hauser, 1975). Questions about the relations between cause and effect suggest mediation, which means that an independent variable impacts a dependent variable indirectly via at least one intervening variable, or mediator (Preacher & Hayes, 2008). Four approaches for testing mediation have been proposed. First, the most common method is the causal steps of mediation proposed by Baron and Kenny (1986), based on structural equation modeling (SEM) or ordinary least square (OLS) regression,

to meet the several criteria. However, a significant total effect of X on Y is not compulsory for a mediator to exist (Collins, Graham, & Flaherty, 1998; Shrout & Bolger, 2002). The causal steps to test mediation are not suitable when the sample is large (Preacher & Hayes, 2004; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Second, the product-of-coefficients approach is a model involving multiple mediators, which derives the standard error of the total indirect effect using the multivariate delta method. Third, the Sobel test (Sobel, 1986), or the product-of-coefficients approach, uses various formulas to estimate the standard error (MacKinnon et al., 2002; Preacher & Hayes, 2004), to ensure it has a negligible effect on the test outcomes. Finally, in bootstrapping the original sample size is retained, and the items from the original sample are replaced by ordered numbers to generate a sampling distribution of the product over two regression coefficients (Edwards & Lambert, 2007; Hayes, 2009). To compute the product, coefficient estimates from each bootstrap sample are based on the desired confidence interval, for example to locate 2.5 and 97.5 percentile values required to obtain a 95% confidence interval. “Confidence intervals constructed in this manner should be adjusted for any difference between the products estimated from the bootstrap samples, yielding a bias-corrected confidence interval” (Edwards & Lambert, 2007, p.11). A minimum of 1,000 bootstrap samples is recommended to accurately locate the upper and lower bounds of the 95% confidence interval (Edwards & Lambert, 2007; Hayes, 2009).

Hypothesis 4 proposed that personal skill development mediates the relationship between FSSB and WFC. I conducted the bootstrapping analyses recommended by Hayes (2009). The results indicated that the indirect effect of FSSB and WFC via personal skill development was significant. The 95%

confidence interval based on 5,000 bootstrap samples of indirect effect was [-.55, -.13], excluding zero. Thus, Hypothesis 4 was supported. Besides, 26.95% of the total effect of FSSB on WFC was explained by mediating effect and 73.05% of the total effect of FSSB on WFC was explained by the direct effect (Alwin & Hauser, 1975).

Hypothesis 5 was tested through moderation. “Moderation occurs when the effect of an independent variables on a dependent variable varies according to the level of a third variable, termed a moderator variable, which interacts with the independent variable” (Edwards & Lambert, 2007, p.1). When a moderator is applied to different levels, the main effect of an independent variable on a dependent variable will change accordingly (Baron & Kenny, 1986). The relationship will become stronger or weaker based on the levels of the moderator. The moderator in the study is a continuous variable, so the distributions of Z typically use one standard deviation above and below its mean. Simple slopes reflect simple effects, including the indirect and total effects with confidence intervals from bootstrapping. I also plotted simple paths and simple effects for the selected values of Z (Edwards & Lambert, 2007).

Hypothesis 5 proposed that emotional exhaustion moderates the positive relationship between FSSB and personal skill development, such that the relationship is stronger when the degree of emotional exhaustion is low rather than high. As Table 3 reveals, the interaction between FSSB and emotional exhaustion was negatively related to personal skill development ($\beta = -.24, p < .05$, Model 4). I constructed the interaction plots according to Dawson (2014). Figure 3 shows that FSSB is positively related to personal skill development when the degree of emotional exhaustion is low ($-1 SD; \beta = .65; p < .01$), but does not

relate to personal skill development when the degree of emotional exhaustion is high (+1 *SD*; $\beta = .16$; *n.s.*). Thus, Hypothesis 5 was supported.

Insert Table 7 and Figure 3 about here

Hypothesis 6 proposed a moderated mediation model. Muller, Judd, and Yzerbyt (2005) defined moderated mediation as the mediating process that is responsible for producing the effect of the treatment on the outcome, which depends on the value of a moderator variable. Analytical models of moderated mediation involve the two steps of the mediating effect test and the moderating effect on the mediating process. Edwards and Lambert (2007) suggested that “moderated mediation is that a mediating effect is thought to be moderated by some variable” (Edwards & Lambert, 2007, p.1). Edwards and Lambert (2007) identified three methods of combining moderation and mediation: first by analyzing the moderation and mediation separately and interpreting them jointly; second by divide the moderator into subgroups, such as men and women, and based on the subgroup analyzing the mediation; and third, testing mediation through the causal steps procedure and testing moderation both before and after controlling for the mediator variable. They also recommended that based on ordinary least squares regression and path analysis, the regression equations are integrated to represent the relationships and the integrations are derived by substituting the regression equation for the mediator in the equation for the outcome variable. Thus, I followed Edwards and Lambert’s (2007) procedure of moderated mediation to test the hypothesis.

I applied the moderated path analysis method to test Hypothesis 6, according

to the study of Edwards and Lambert (2007). The results shown in Table 6 indicate that the indirect effect of FSSB on WFC through personal skill development was not moderated by emotional exhaustion ($\Delta\beta = -.04, n.s.$), rejecting Hypothesis 6. In addition, Table 7 indicates that emotional exhaustion moderated the relationship between FSSB and personal skill development (i.e., the first-stage effect; $\Delta\gamma = -.49, p < .05$), providing further support for Hypothesis 5.

To further explore the difference of WFC dimensions, I tested the effects on three dimensions of WFC and found that the results were not significantly different from the original model when time-based WFC or strain-based WFC were an outcome variable. However, the model was not supported when behavioral-based WFC was an outcome variable because personal skill development did not have main effects on behavioral-based WFC. In particular, personal skill development was significantly related to time-based WFC ($r = -.31, p < .01$) or strain-based WFC ($r = -.31, p < .01$) but not behavioral-based WFC ($r = .12, n.s.$). These inconsistent findings may be caused by the fact that time-based WFC and strain-based WFC are the most frequently studied WFC dimensions, whereas behavioral-based WFC is not measured well and thus dropped in some contexts (Powell & Greenhaus, 2010).

Chapter 6 Discussion

This section begins with a summary of the findings, followed by a discussion of the theoretical contribution and the practical implications. The limitations and directions for future research are then described.

6.1 Summary of the findings

Many articles regarding the antecedents and outcomes of FSSB have emerged over the last 25 years, and most are based on the perspectives of subordinates. Thus, we know more about the benefits of FSSB for the work and family outcomes of subordinates than for supervisors. This study is aimed at understanding the influence of FSSB on supervisors' work and family lives. A model based on simulation theory, the work-home resources model, and COR theory was examined to illustrate how supervisors' FSSB can reduce WFC through the development of personal skills.

The data analysis revealed that hypothesis 2, which proposed that FSSB is positively related to personal skill development, was supported. The study responds to the review of Crain and Stevens (2018), who called for more consideration of the benefits for supervisors who engage in FSSB. The current research has largely explored why and how followers can benefit from FSSB, but the influence on supervisors of these behaviors is under-explored. However, researchers have acknowledged that considering how supervisors can benefit from their behaviors can produce positive outcomes in both companies and supervisors and subordinates, as supervisors may be motivated to develop their FSSB (Crain & Stevens, 2018). Simulation theory informs the hypotheses about why supervisors can develop their personal skills. Simulation theory suggests that the actions, emotions, and sensations of others can be understood through shared circuits (Keysers & Gazzola, 2006). Individuals can empathize with others through observing and simulating their behaviors and emotions. Supervisors are required to empathize with their subordinates when exhibiting FSSB, so they can help subordinates deal with work and family issues through their behaviors. Thus, supervisors enhance their listening skills, empathy, and other interpersonal skills,

thus enhancing their personal skill development.

Hypothesis 3 proposed that personal skill development is negatively related to WFC, and was also supported. Most studies have focused on the outcomes in employee and job-related domains. My findings provide further evidence that personal development skills benefit both subordinates and supervisors in work and family domains. The work-home resources model is used to explain the independent variables of time-, strain-, and behavior-based WFC. Acquired personal skills can reduce resource depletion when dealing with work and family issues, thus reducing supervisors' WFC. In addition, with more relevant knowledge and experience, supervisors can better adjust their behaviors to meet family requirements, which also helps to reduce WFC.

The results indicate that the indirect effect of FSSB and WFC via personal skill development is significant, as personal skill development mediates the relationship between FSSB and WFC. This suggests that work experience and skills spill over from the work domain to the family domain, and thus, work experience is beneficial to family relationships.

I also found that emotional exhaustion moderates the positive relationship between FSSB and personal skill development, such that the relationship is stronger when supervisors' emotional exhaustion is low rather than high. The result, as expected, is that resource depletion will slow down the process of learning from exhibiting FSSB. The learning process itself requires attention, energy, and time, and when individuals suffer from emotional exhaustion, it is difficult for them to maintain effort and persistence.

Surprisingly, the moderated mediation model proposed by hypothesis 6 was not supported. My findings indicate that emotional exhaustion does not moderate

the indirect effect of FSSB on supervisors' WFC through enhanced personal skill development. Other mediators related to personal learning that are excluded from the study are likely to be moderated by emotional exhaustion. Future research should examine other mediators that capture the modeling process from FSSB to supervisors' WFC. For example, positive affect, which represents a leader's positive emotion and directs the leader to perform well in the family domain (Greenhaus & Powell, 2006), may be a mediator linking FSSB and WFC. The exhibition of FSSB encourages leaders to have positive affect, which can spill over to the family domain. Warm and other-focused behavior is expected in the home. Positive affect leads individuals to turn their attention outward and care for their family members, which in turn decreases WFC.

6.2 Theoretical contributions

This study makes a unique contribution to the FSSB and work-home interface literature, by developing a conceptual model that links supervisors' family supportive behaviors and their WFC. The model incorporates constructs from simulation theory, the work-home resources model, and COR theory. These are applied to develop the hypotheses for FSSB, personal skill development, WFC, and emotional exhaustion. The proposed model provides a fine-grained new perspective for understanding the positive role of FSSB in the skill development of supervisors and the negative role of FSSB in WFC. The model also involves both mediating and moderating mechanisms, which help explain why and when FSSB affects WFC. This approach is consistent with the work-family literature, which suggests that the work-family nexus should be proposed and tested in its entirety, thus revealing the complexities of the relationship between work and family life (Liu et al., 2013). In addition, my study involves

both work and family domains and thus explores the interface between work and family. Chinese people typically integrate work and family issues (Au & Kwan, 2009), and scholars have long acknowledged the importance of investigating the work-family interface in this context (Yang et al., 2000). Balancing work and family is a key issue for Chinese organizations, as it enables them to retain capable employees and attract talented candidates (Cooke & Xiao, 2014).

This study makes six main contributions, which can be summarized as follows: (1) understanding the effects of FSSB from the perspectives of supervisors; (2) regarding supervisors' FSSB in a positive light from the supervisor perspective; (3) identifying the mediating effect of personal skill development on the relationship between FSSB and WFC; (4) revealing the effect of FSSB on supervisors' WFC; (5) identifying the moderating effect of emotional exhaustion on the relationship between FSSB and personal skill development and the indirect effect of FSSB on WFC via personal skill development; and (6) assessing the generalized effect of FSSB in a Chinese setting. Simulation theory and the work-home resources model also provide new perspectives on the effects of FSSB.

The effects of the behavior of supervisors and mentors on their own work and family lives have been previously explored. For example, Mao et al. (2016) examined the impact of mentoring on mentors' work-family interface and found that mentors' WFC is reduced when the quality of mentorship is good. Kang and Peng (2019) also found that supervisors' servant leadership behavior can generate positive emotions, thus enhancing work-family relationships. Many researchers have suggested that the effect of specific behavior on supervisors should be considered. For example, studying the influence of leadership behavior on

leaders can be insightful (Foulk, Lanaj, Tu, Erez, & Archambeau, 2018; Lanaj, Johnson, & Lee, 2016; Qin, Huang, Johnson, Hu, & Ju, 2018). In particular, demonstrations of abusive supervision have been found to result in reduced need fulfillment and relaxation for those involved (Foulk et al., 2018). Daily transformational behaviors can also result in enhanced positive affect and reduced negative affect via increased daily need fulfillment. Extraversion can moderate the relationship between daily need fulfillment and positive affect, and neuroticism can moderate the relationship between daily need fulfillment and negative affect (Lanaj et al., 2016). Abusive supervision behavior can increase work engagement via the recovery level in the short term (one day), but has a negative association over one week and beyond. Empathic concern and job demands moderate these relationships (Qin et al., 2018).

However, few studies focus on the impact of FSSB on supervisors. By shifting the concern away from employees' outcomes, the results of this study can encourage researchers to further identify the moderating and mediating mechanisms regarding the beneficial or detrimental effects of FSSB on supervisors.

Time is a major concern when attempting to provide family support. Spending extra time helping subordinates deal with work-family issues increases supervisors' work demands, which in turn causes WFC. Leaders can also experience stress at work, such as Tesla CEO Elon Musk, who has spoken about how he needs medication to help him sleep. Resource depletion and potential loss spirals illustrate how FSSB requires supervisors to exert effort, time, and energy into fulfilling their work responsibilities, and consequently have less to direct toward the family domain. Thus, WFC is likely to occur because these

supervisors cannot meet their family requirements without having sufficient resources. However, the results indicate that supervisors can benefit from the processes of FSSB, as the model shifts the assumed outcome from negative to positive. Studies have indicated that leaders and mentors can learn from their behavior (e.g., Mao et al., 2016; Hu et al., forthcoming), and my findings provide further evidence that FSSB can help actors learn personal skills and enhance the quality of their family life. Drawing on simulation theory, I hypothesized that providing family support does not necessarily cause WFC, because the actors can learn from the process and develop their empathy and problem-solving abilities. I found that FSSB can facilitate supervisors' personal skill development, which can then reduce WFC. The results of this study provide a new framework for FSSB research, and can encourage further studies to address the effect of FSSB on supervisors' family outcomes from both positive and negative sides.

Personal skill development was also found to mediate the relationship between FSSB and WFC. Greenhaus and Powell (2006) suggested in their conceptual paper that the skills and perspectives learned in the work domain can be transferred to the family domain. The study provides further empirical evidence to support this argument. FSSB encourages supervisors to learn and apply enhanced personal skills across time, relationships, domains, and settings. Thus, these skills should be considered to help supervisors deal with WFC. The study contributes to the literature on FSSB, personal learning, and the work-family interface by revealing that personal skill development is a key intervening variable between FSSB and supervisors' WFC. Moreover, the findings of this study can encourage researchers to address family outcomes by focusing on the mediating role of personal skill development, which can help individuals balance

work and family, and thus enrich family life.

The behavior of supervisors, as key members of organizations, can influence the overall productivity of companies. Research has indicated that conflict between work and family for CEOs negatively influences firm performance via reduced decision-making comprehensiveness (Reina, Peterson, & Zhang, 2017). Supervisors' WFC should therefore be reduced through the development of positive leadership behavior. Chinese people place much importance on family obligations and family relationships (Au & Kwan, 2009), and many empirical studies have confirmed that FWC influences the work performance (e.g. Karakas & Tezcan, 2019) and health outcomes (e.g. Eshak, 2019; Minnotte & Yucel, 2018) of individuals. Thus, WFC leads to FWC and vice versa, and the relationships are reciprocal. In summary, helping supervisors reduce WFC is necessary for both supervisors and firms. My model provides a new perspective by indicating that enhancing supervisors' personal skills can lead to new resources gains and thus reduce WFC. The results may encourage more diverse approaches toward the issue of WFC.

The findings support the moderating role of emotional exhaustion in explaining the boundary conditions of the processes of learning. Emotional exhaustion was found to attenuate the positive relationship between FSSB and personal skill development, which may explain the slowing of supervisors' learning processes. The focus is the positive side of FSSB, but obstacles to the beneficial effect should also be considered. Mentors and/or supervisors may not always experience positive outcomes (e.g., Eby, McManus, Simon, & Russell, 2000; Qin et al., 2018; Simon & Eby, 2003; Yi et al., 2017), and as Yi et al. (2017) found, negative mentoring experiences can lead mentors to suffer from emotional

exhaustion and WFC. Revenge has also been found to increase the detrimental effect of negative mentoring experiences in terms of emotional exhaustion, and their indirect effect on WFC via enhanced emotional exhaustion. The study further identifies a moderator on the positive effect of FSSB, as individuals with a high level of emotional resources are likely to acquire benefits from demonstrating FSSB. This finding is consistent with other studies that suggest emotional regulation is important for employees' work and family life (Grandey, 2000; Gross, 1998). This study can stimulate future research into the moderating effect of emotional exhaustion and test its moderating role in the impact of leader behaviors.

The findings from Western contexts, in which the concept of FSSB was derived, were also generalized to the Chinese context. The concept was first proposed in 2009 by Hammer et al., who aimed to identify and examine the behaviors that work-family supportive supervisors or managers should engage in. These behaviors are important for Chinese people because they emphasize taking care of their family and their work and family lives are integrated (Au & Kwan, 2009; Kwan, Lau, & Au, 2012; Yang et al., 2000; Liu et al., 2012). FSSB can thus also be applied in the Chinese context. The findings demonstrate that FSSB can help address the critical work and family issues of Chinese employees. The theories or models developed by Western scholars (e.g., the work-home resources model) are demonstrated to be applicable to Chinese employees and organizations, which can stimulate future research to apply them to Chinese organizations.

Finally, various theories were applied to support the hypotheses. Simulation theory was first proposed to demonstrate how people understand the actions,

sensations, and emotions of others in the psychological domain. In this study, simulation theory explains the process of how supervisors understand their subordinates' behaviors, states, and needs so they can provide appropriate family support. Simulation theory can be applied to explain other phenomena in management and provide solutions. For example, research has indicated that middle-level managers simulate the FSSB of their heads of department (Kwan, 2014). I suggest that simulation theory could help to develop the hypotheses and elaborate how and why such role modeling occurs.

In addition, many studies have used work-family enrichment theory to demonstrate how family life can benefit from work experiences (e.g., Kwan et al., 2010). However, few have examined how the negative effect of work experiences can be reduced through gaining new resources, which in turn influences WFC. This omission may be due to the lack of a theoretical model to explain this phenomenon. The work-home resources model provides another novel perspective that can enhance our understanding of how work experiences help alleviate WFC (ten Brummelhuis & Bakker, 2012). My findings can encourage future research into exploring the work-family interface of members of Chinese organizations by applying the work-home resources model.

6.3 Practical implications

The theoretical model and empirical findings have important practical implications for organizations and managers. Organizations increasingly consider employee work-life balance (Hammer et al., 2009), and particularly Chinese organizations, as their employees typically integrate work and family life (Chen et al., 2000; Kwan et al., 2012) and family is a key domain for Chinese people (Liu et al., 2013). WFC has been found to be negatively related to job

performance (Hoobler et al., 2009; Karakas & Tezcan, 2019), job satisfaction (Pan & Yeh, 2019; Pleck et al., 1980; Zhao et al., 2019), family satisfaction (Allen et al., 2000; Liu et al., 2013; Kalliath et al., 2017), and work-family balance (Carlson et al., 2009; Taşdelen-Karçkay & Bakalım, 2017). Organizations and managers should obviously help their workforce address work-family issues, and supervisors are important as their supportive behaviors can improve employees' work performance (Bagger & Li, 2014; Matthews et al., 2014; Rofcanin et al., 2017), job satisfaction (Jiang, 2016; Nie & Xie, 2018; Shu, 2016), and work-family balance (Greenhaus et al., 2012; Shu, 2016). Thus, FSSB can be regarded as a facilitator of firm effectiveness and employee well-being (Hammer et al., 2009).

My findings suggest four methods by which organizations and executives can reduce supervisors' WFC. The first is to consider FSSB as an important component of selecting and training supervisors. Organizations can consider hiring leaders with FSSB potential and provide relevant training to their serving leaders. They can assess in job interviews whether candidates are willing to provide their subordinates with emotional support, instrumental support, and creative work-family management. For example, by proposing a specific scenario they can assess how the candidate would deal with those work-family issues. In addition, organizations can ask subordinates to rate their supervisors' FSSB, and select suitable candidates for promotion based on the responses. Supervisors working in organizations can be provided with FSSB training programs, in which the trainers can emphasize the importance of FSSB and teach supervisors how to promote it. Thus, a work-family culture can be formed so that supervisors are more willing to provide family support and can manage more

efficiently (Thompson, Beauvais, & Lyness, 1999).

Second, empathy can be considered an important ability when recruiting supervisors, and tests could be devised to assess it. For example, a scenario in which subordinates suffer WFC could be developed, and the interviewers can rate the responses. Supervisors with high levels of empathy are likely to learn from FSSB because they are likely to fully grasp the issues and provide appropriate solutions. Thus, following simulation theory, organizations can provide training programs to enhance supervisors' empathy, enabling them to learn from their behaviors and develop their personal skills. Training topics can include specific scenarios related to the importance of empathy, how to communicate with subordinates who have WFC, and how to address their issues with empathy.

Third, the findings indicate that personal skill development is a key predictor of WFC. Thus, an effective method of reducing WFC is to increase personal skill development. The research has provided evidence that perceptions of mentoring and servant leadership can encourage personal skill development (Kwan et al., 2010; Lankau & Scandura, 2002; Tang et al., 2016). Hence, organizations should not only establish and maintain high-quality mentoring programs but also encourage servant leadership.

Finally, organizations should pay attention to supervisors' emotional exhaustion because it reduces the positive effect of FSSB on personal skill development. My results show that the personal skill development gained from FSSB will be reduced when supervisors experience high levels of emotional exhaustion. Thus, if supervisors find it difficult to direct their emotional resources to helping their subordinates, the learning processes will slow down. Reducing

emotional exhaustion is therefore essential, as otherwise the quality of the supervisors' own work and family life may decrease. Training may be useful for identifying supervisors' own emotional states and dispelling emotional exhaustion. In addition, organizations should provide support for family supportive supervisors in case they risk emotional exhaustion. The research has indicated that negative mentoring experiences increase emotional exhaustion (Yi et al., 2017) and that perceptions of servant leadership reduce it (Tang et al., 2016). Hence, it is essential for organizations and managers to discourage negative mentoring experiences and encourage servant leadership.

6.4 Limitations and future research directions

Although this study makes theoretical contributions and has practical implications, several limitations should be noted. First, there may be inflated correlations caused by common method bias from using self-reporting measurements and the survey method (Podsakoff et al., 2003; Podsakoff et al., 2012). However, I surveyed both supervisors and subordinates to attenuate this bias, as recommended by past research (Podsakoff et al., 2003). Although personal skill development and WFC were rated by the same source, I collected data at different time points, which can help reduce the possibility of common method bias. In addition, the findings of Evans (1985) and Siemsen, Roth, and Oliveira (2010) revealed that the presence of moderating effects is not inflated by common method variance. Hence, the significant findings of moderating effects in my study should not be influenced by common method bias.

Spector (2006) also indicated that common method variance does not necessarily impact results, because the method or self-rating can produce common method bias. I assert that common method bias should not be a problem

in this study. As recommended in previous research (Conway & Lance, 2010), I checked the measurement of the studied variables and could not identify any overlaps between the measure of personal skill development and that of WFC. This result alleviates the concern of common method variance in my findings. In addition, whether supervisors develop their personal skills and whether emotional exhaustion affects them are subjective, so these factors cannot be easily measured by colleagues or family members. Many studies of the work-family interface have regarded self-reporting as an appropriate assessment method (e.g. Liao et al., 2016; Liu et al., 2013; Tang et al., 2016; Wu et al., 2012). However, in future research supervisor-rating and peer-rating methods can be applied to measure the extent to which supervisors' WFC is reduced, particularly by including their close family members such as spouses and children in the surveys.

Second, my findings cannot confirm the causal relationships among FSSB, emotional exhaustion, and WFC, although I developed the hypotheses based on extant theories. The research has indicated that a time-lagged research design is more effective than a cross-sectional research design for testing causal relationships, but a time-lagged research design still cannot confirm causality (Law, Wong, Yan, & Huang, 2016). Personal skill development may facilitate FSSB. To explore this possibility, we tested the indirect effect of personal skill development and WFC via FSSB. The 95% confidence interval based on 5,000 bootstrap samples of indirect effect was [-.55, .13], including zero. Thus, Hypothesis 4 was further supported. Nevertheless, future research could use experiments and longitudinal surveys to test my proposed hypotheses and confirm the causal relationships.

The third limitation of this study is the one-month interval between FSSB and the emergence of personal skill development, and between personal skill development and WFC. The interval may be too long, as it may introduce other possible influencing factors that reduce supervisors' WFC. For example, organizations may have implemented policies or provided work or family support for supervisors during the data collection period. These issues are not related to supervisors' own supportive behaviors but may reduce their WFC. Therefore, future research can consider other predictors that may influence the results. In addition, learning from FSSB requires time, as does transferring the learned skills to address supervisors' own WFC. Thus, the interval of one month is reasonable to capture supervisors' personal skill development and their reduced WFC, but in future research a diary research design can be considered to measure the variables, to explore the short-term benefit or cost of FSSB.

The fourth limitation concerns generalizability. Concerns about the lack of generalizability of Chinese data to Western settings have been voiced, particularly when data are collected in provinces with traditional cultures and values (Liu et al., 2010; Liu et al., 2013; Wu et al., 2018; Wu, Lyu, Kwan, & Zhai, 2019). People from Henan province are known to be highly traditional and to value family life greatly. Thus, supervisors in Henan province are sensitive to learning from the experience of helping subordinates address work-family issues. These supervisors therefore have a relatively low degree of WFC. These findings can imply that the effect of FSSB on supervisors' WFC through personal skill development in my sample is stronger than it would be from respondents in the West. However, the theories and measurements I used in this study to examine the hypotheses were developed in a Western context. Therefore, the model

developed in this study could also be applied to the Western context. However, examining the model with different samples in future research would be of benefit. For example, researchers can recruit people from regions with strong and weak traditional values to identify whether cultural factors influence the outcomes.

The fifth limitation concerns the organization, which raises the issue of generalizing my findings across industries. All of the participants were from a single bank in Henan province. Although this approach can help control the influence of organizational characteristics, I acknowledge that the findings may not be generalizable to other types of industries. For example, service industries typically provide managers with the freedom to exhibit FSSB, but managers of manufacturing firms may have less freedom. Thus, the beneficial effects of FSSB in my sample will be more significant than those from samples in manufacturing firms. Bank employees usually have fixed work hours and locations, particularly supervisors. Hence, the variance of their time-based WFC will be lower than that of respondents from other industries. Future research may consider work characteristics to examine whether locations, time schedules, and other organizational factors influence the results, and testing my model across different industries and organizations is necessary.

Sixth, supervisors may have high levels of personal skill development that are not due to FSSB but that stem from channels such as past work experience and other leadership behaviors. Thus, future research can consider controlling such factors at the first time point.

Finally, the results indicate that emotional exhaustion does not moderate the indirect effect of FSSB on supervisors' WFC through personal skill development.

I suggest that there are other potential mediators between FSSB and WFC, such as positive affect and the work-home leadership perspective, and other factors such as learning orientation and work characteristics (e.g., work-family culture) may moderate the effect of FSSB on WFC. Future research can consider other potential mediators and moderators when testing the effects of FSSB on personal skill development and WFC.

The findings identify several interesting directions for future research. First, my study reveals the importance of FSSB on reducing supervisors' WFC. However, little is known about how and why this process occurs. Simulation theory only provides one possible explanation: that supervisors can observe and simulate the emotions and behaviors of others and thus understand their subordinates and provide appropriate help. This is a common ability, but individuals have different degrees of simulation. Training can be an effective method of facilitating simulation. Future research can consider designing a high-quality training program to develop simulation that includes videos and case studies can be considered. Simulation can also be utilized in different situations. Supervisors can gain personal skills through FSSB and transfer them to the family domain, but many other types of situations can be examined. Other potential mediators can also be examined. FSSB may lead actors to develop a sense of meaningfulness, which can enrich family life, and by balancing work and family life work performance can be improved.

Second, although emotional exhaustion was found to moderate the relationship between FSSB and personal skill development, other potential moderators may be involved. The data did not support the moderated mediation model, although I developed the hypotheses based on theories and theoretical

models. Future studies could attempt to identify other moderators, such as supervisors' mindfulness (Kudesia, 2019). This can also strengthen the relationship because the actors can focus better on their work, and thus are likely to learn. Such learning can spill over from work to home. Moreover, personality traits such as emotional stability, openness to experience, and proactive personality (Judge, Heller, & Mount, 2002; McCrae & Costa, 1987) may lead individuals to exhibit FSSB or strengthen the beneficial effects of FSSB. These personality traits are highly born and not strongly influenced by external environments. Future research should control these personality traits to rule out the alternative explanations for the effects of FSSB and emotional exhaustion on personal skill development and WFC.

Third, the learned behaviors may not only occur in the work and family domains. Social supportive behaviors can be learned through helping subordinates and then similar helping behaviors may be exhibited in the community domain. For example, supervisors may apply active listening to comfort their subordinates, or identify that flexible work arrangements such as allowing subordinates to pick up their children before getting off work helps reduce WFC. When supervisors recognize effective solutions, they are more likely to demonstrate helping behavior to members of their communities, and consequently gain specific feedback through their community members' responses. Thus, the family support provided may be more effective for subordinates. In the long term, the supervisors can deal with these issues more skillfully, and thus increase their work efficiency. Therefore, future research can consider examining the effects of FSSB on the quality of life in a community.

Fourth, this study focuses on supervisors' WFC, but the work-home

resources model provides another possibility of how WFE can be facilitated. Gaining personal skills through FSSB can also be regarded as a process of resource accumulation. Supervisors not only learn interpersonal skills but also consider the different perspectives of their subordinates, which can be utilized to enhance work and home outcomes. For example, when they learn of their subordinates' problems, they may better understand the essence of WFC and their own family members' feelings. They can also understand the core of appreciating individual differences and recognizing different needs, thus facilitating the relationships among their family members. Therefore, future research can examine whether WFE occurs as an outcome variable of demonstrating FSSB. Other positive work-family interface outcomes such as work-family positive spillover and work-family balance may also occur, which also require future examination.

Fifth, this study takes the perspective of work-home leadership. Although my purpose is to address supervisors' WFC through FSSB, this perspective can also be applied to other leadership and family supportive behaviors, such as servant leadership. According to Greenleaf (1977), servant leadership emphasizes the responsibility of fulfilling employees' needs to grow, develop, and succeed. The research has indicated that servant leadership can facilitate employees' WFE through organizational identification (Zhang et al., 2012). Perceptions of servant leadership have been found to promote the quality of LMX, which in turn facilitates WFE and work-family balance (Wang et al., 2017). In servant leadership, employees' personal lives are considered, and that supervisors are willing to help employees with work-family issues. Future studies can examine whether and how servant leadership helps supervisors reduce WFC via

organizational identification and the fulfillment of meaningfulness.

In addition, other types of leadership that can help reduce supervisors' WFC need further examination. Authentic leadership, for example, is "a pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development" (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008, p. 94). Authentic leadership has four dimensions: (1) self-awareness, or the extent to which people understand themselves and realize the influence they have on others; (2) relational transparency, or authentic disclosure to others through sharing real feelings and feedback without stress; (3) balanced processing, or an objective attitude toward information exchange and feedback; and (4) an internalized moral perspective, or strongly supported moral standards and inner beliefs that guide decision-making and action.

Many studies have demonstrated the positive impact of authentic leadership on followers, such as facilitating basic need satisfaction (Leroy, Anseel, Gardner, & Sels, 2015), empowerment, identification with a supervisor, job performance, job satisfaction, organizational commitment, and reduced burnout (Gardner, Cogliser, Davis, & Dickens, 2011). The results from a sample of Chinese respondents revealed that perceptions of authentic leadership were positively associated with interactional justice, task performance, creativity, and OCB (Li, Yu, Yang, Qi, & Fu, 2014). I suggest that authentic leadership may prompt the facilitation of WFE and work-family balance via positive affect and personal learning (Lyu, Wang, Le, & Kwan, 2019; Zhou, Yang, Kwan, & Chiu, 2019).

Empowering leadership is another example. This is defined as “the process of implementing conditions that enable sharing power with an employee by delineating the significance of the employee’s job, providing greater decision-making autonomy, expressing confidence in the employee’s capabilities, and removing hindrances to performance” (Zhang & Bartol, 2010, p. 109). The findings of meta-analytic research has provided evidence that empowering leadership is positively related to various benefits for subordinates, such as psychological empowerment, task performance, OCB, and creativity (Lee, Wills, & Tian, 2018). The results of a survey study have also indicated that perceptions of empowering leadership interact with trust and uncertainty avoidance to predict followers’ creativity, such that the relationship between empowering leadership and creativity is most positive when the followers have high levels of trust and uncertainty avoidance (Zhang & Zhou, 2014). Creative self-efficacy mediates the effect of this three-way interaction on creativity (Zhang & Zhou, 2014). Recent research at team level has demonstrated that empowering leadership as perceived by team members is positively related to team creativity via team learning (Zhang & Kwan, 2019).

Empowering leadership may involve saving energy at work by delegating tasks to subordinates, thus freeing up time and energy that can be used to improve home life. Other supportive behaviors may be valuable to employees. For example, employees may learn from the behaviors of group members in mutual aid groups, which can help deal with work-family issues. OCB may also be a possible learning source (Kwan & Mao, 2011). Future studies can identify other possible supportive behaviors that may help reduce WFC.

The third example is ethical leadership, defined as “the demonstration of

normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making” (Brown, Treviño, & Harrison, 2005, p. 120). Considerable evidence has been provided that perceptions of ethical leadership enhance subordinates’ task performance and OCB at work (Liu et al., 2013; Mayer et al., 2009), at home and in the family satisfaction of spouses (Liao et al., 2015), and in employee- and supervisor-rated family and life satisfaction (Zhang & Tu, 2018). The results of a survey of a sample of respondents in Macau demonstrated that those who perceive ethical leadership are likely to have high levels of trust and belief in organizational justice (Xu, Loi, & Ngo, 2016). The results of data using Chinese samples revealed that ethical leadership was positively associated with group ethical voice via ethical culture and group ethical voice efficacy (Huang & Paterson, 2017). Group ethical voice is also positively related to ethical performance (Huang & Paterson, 2017). Researchers have also found that perceptions of ethical leadership in the United States facilitate subordinates’ performance and OCB and reduce production deviance via enhanced LMX (Thiel, Hardy, Peterson, Welsh, & Bonner, 2018). Such relationships are attenuated by a widened span of control (Thiel et al., 2018). Meta-analyses have revealed the positive effects of ethical leadership on subordinates’ ethical behavior and perceptions of leader interactional fairness (Bedi, Alpaslan, & Green, 2016). The geographical locations of investigated samples also have been found to moderate the impact of ethical leadership on subordinate consequences, as samples from public sector organizations revealed stronger correlations between ethical leadership and subordinate consequences (Bedi et al., 2016). CEO ethical leadership can also

result in corporate social responsibility through enhanced organizational ethical culture, while founder status strengthens and firm size alleviates its influence (Wu, Kwan, Yim, Chiu, & He, 2015).

Ethical leadership has unique characteristics in Chinese contexts. For example, in a cross-cultural qualitative study, themes of ethical and unethical leadership were investigated across six regions, including mainland China, Hong Kong, and Taiwan, by asking managers to provide definitions and examples of ethical leadership (Resick, Martin, Keating, Dickson, Kwan, & Peng, 2011). The findings indicated that managers across different regions identified different themes. Consideration and respect of others were the most important themes in Chinese settings, while accountability was the most important theme in the West (Resick et al., 2011). To examine the measurement equivalence of ethical leadership in China and the U.S., a group of Taiwanese researchers found that the Chinese respondents had a different understanding of ethical leadership from the American respondents (Wang, Chiang, Chou, & Cheng, 2017). The measure of ethical leadership developed from Chinese samples included the six components of moral courage, openness to criticism, incorruptibility, reliability, fairness, and role modeling (Wang et al., 2017). This results in significant effects that differ from those obtained from conventional measurements of ethical leadership developed in the West (Brown et al., 2005).

A recent cross-cultural study indicated that employees who perceive ethical leadership are less likely to morally disengage, and are thus unlikely to make unethical decisions and exhibit deviant behavior (Moore, Mayer, Chiang, Crossley, Karlesky, & Birtch, 2019). Interestingly, the patterns of the moderating role of moral identity are not consistent in Chinese and American samples

(Moore et al., 2019).

Investigating how and when ethical leadership is beneficial for actors in a Chinese setting is important and timely. Exhibiting ethical leadership may fulfill the actors' sense of meaningfulness, which facilitates positive affect. Such positive affect spills over to the home, thereby enriching the quality of family life. However, spending time and effort on ethical leadership may cause WFC, as personal resources (e.g., time) are limited. Hence, demonstrating ethical leadership may be a double-edged sword and should be investigated in both China and the West.

The fourth example is LMX. High-quality LMX can benefit both work and family. At work, LMX is positively associated with team effectiveness (Boies & Howell, 2006), subordinates' job satisfaction (Aryee & Chen, 2006; Schyns & Croon, 2006), organizational commitment, role clarity, job performance (Gerstner & Day, 1997), task performance (Aryee & Chen, 2006), and OCB (Harris, Li, & Kirkman, 2014; Rockstuhl, Dulebohn, Ang, & Shore, 2012). In addition, LMX encourages subordinates' WFE, family performance (Liao et al., 2016), and work-family balance (Lyu et al., 2019). Despite these findings, we know little about how and when LMX influences the family life of leaders, which should be addressed, as supervisors are important for organizational effectiveness and their work-family interface could affect organizational performance (Reina et al., 2017). Thus, future research should investigate the effect of LMX on leaders' family lives, as leaders with a high degree of LMX are likely to learn and have job satisfaction, which helps balance work and family life.

In conclusion, the important issues of FSSB and the work-home interface have been addressed in this study. Exhibiting FSSB was found to be useful for

supervisors, as it can address their own WFC, and personal skill development mediated the relationship between FSSB and WFC. The findings provide strong evidence that emotional exhaustion moderates the relationship between FSSB and personal skill development, such that the relationship is stronger when the degree of emotional exhaustion is low rather than high. Most previous research has focused on how subordinates benefit from supervisors' FSSB, without considering whether it can benefit the supervisors themselves. By recognizing that FSSB has positive and beneficial implications for supervisors, my study provides guidelines for supervisors willing to demonstrate FSSB, thus forming a virtuous circle that can benefit both employees and organizations.

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Table 1 Demographic data for supervisors' respondents

Demographic	N	Percentage of Respondents
Gender		
male	195	97.5%
female	5	2.5%
Education		
high school diploma or below	1	0.5%
associate's degree	5	2.5%
bachelor's degree	194	97.0%
master's degree	0	0
Number of Children		
0	38	19.0%
1	114	57.0%
2 or more than 2	48	24.0%

Notes. The age is biologically number.

Table 2 Demographic data for subordinates' respondents

Demographic	N	Percentage of Respondents
Gender		
male	549	75.6%
female	177	24.4%
Education		
high school diploma or below	47	6.5%
associate's degree	235	32.4%
bachelor's degree	441	60.7%
master's degree	3	0.4%
Tenure		
1	262	36.1%
2	344	47.4%
3	111	15.3%
4 or more than 4	9	1.2%

Notes. The age is biologically number.

Table 3 The differences between reflective and formative measurement

	Reflective measurement	Formative measurement
Dimensionality	A single dimension	Different dimensions or facets of a construct
Internal Consistency	Positively correlated	Not necessarily expected to demonstrate internal consistency
Identification	At least three measures, the uniqueness are independent and a scale is set for the latent variable	Not identified, regardless of the number of the number of measures used.
Measurement Error	Incorporate error for each measure as part of the uniqueness terms	Do not incorporate measurement error for the absence of uniqueness terms
Construct Validity	The correspondence between a construct and its measures is manifested by the magnitudes of the loadings relating the measures to the construct. The magnitudes of these loadings are largely determined by covariances.	Conceptually heterogeneous and undermine the use of parameters linking the construct to its outcomes as evidence for the nomological and criterion-oriented validity of the formative measures.
Causality	Reflective measurement models specify constructs as causes of measures. The construct determines its measures.	Formative measurement models treat measures as causes of constructs. The direction of causality flows from the measures to the construct.

Notes. The key points are concluded from Edwards (2011).

Table 4 Results of Confirmatory Factor Analyses

Model	χ^2	<i>df</i>	$\Delta\chi^2(df)$	RMS EA	CF I	TL I	SR MR
Four-factor model: FSSB、 emotional exhaustion、 personal skill development、 WFC	113. 03	57		0.07	0. 98	0.9 7	0.04
Three-factor model 1: FSSB、 emotional exhaustion + personal skill development、 WFC	298. 65	60	185.62* *(3)	0.14	0. 90	0.8 7	0.11
Three-factor model 2: FSSB、 emotional exhaustion、 personal skill development + WFC	326. 60	60	213.57* *(3)	0.15	0. 89	0.8 6	0.14
Two-factor model: FSSB、 emotional exhaustion + personal skill development + WFC	837. 82	62	724.79* *(5)	0.25	0. 68	0.6 0	0.14
One-factor model: FSSB + emotional exhaustion + personal skill development + WFC	159 8.09	65	1485.0 6** (8)	0.34	0. 37	0.2 4	0.27

Notes. $N = 200$; ** $p < .01$; * $p < .05$. FSSB= family-supportive supervisor behaviors; WFC = Work-to-family conflict. RMSEA: root mean square error of approximation, CFI: comparative fit index, TLI: Tucker-Lewis index. ^a Model was compared with the measurement model.

Table 5 Means, Standard Deviations, and Correlations

Variables	1	2	3	4	5	6	7	8
1. Gender								
2. Age	-.03							
3. Education	-.13	-.23**						
4. Number of children	-.06	.16*	-.21**					
5. FSSB	.05	-.07	-.12	-.30**	(.86)			
6. Emotional exhaustion	-.06	-.06	.06	-.01	.03	(.94)		
7. Personal skill development	.16*	.12	-.16*	-.09	.25**	-.39**	(.82)	
8. WFC	-.07	-.29**	.06	-.07	-.35**	.46**	-.17*	(.96)
<i>Mean</i>	.03	32.42	2.97	1.05	4.48	1.89	4.26	2.70
<i>SD</i>	.16	3.80	.21	.66	.31	1.06	.53	1.39

Notes: $N = 200$; ** $p < .01$; * $p < .05$. Bracketed values on the diagonal are the Cronbach's alpha value of each scale. *FSSB* = family-supportive supervisor behaviors. *WFC* = work-to-family conflict

Table 6 Results of Regression Analysis

	Personal Skill Development				WFC		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Control variables							
Gender	.47*	.47*	.40	.37	-.77	-.78	-.59
Age	.02	.02	.02	.02	-.11**	-.10**	-.10**
Education	-.35	-.24	-.19	-.17	-.18	.33	-.30
Number of children	-.11	-.05	-.04	-.04	-.07	.19	-.11
Independent variable							
FSSB		.39**	.41**	.39**		-1.69**	
Moderator							
Emotional exhaustion			-.19**	-.21**			
Interaction							
FSSB × emotional exhaustion				-.24*			
Mediator							
Personal skill development							-.36*
R^2	.07	.11	.25	.27	.09	.21	.11
ΔR^2		.04	.14	.02		.12	.02
ΔF	3.72**	9.40**	36.22**	4.85**	4.84**	29.72**	3.91*

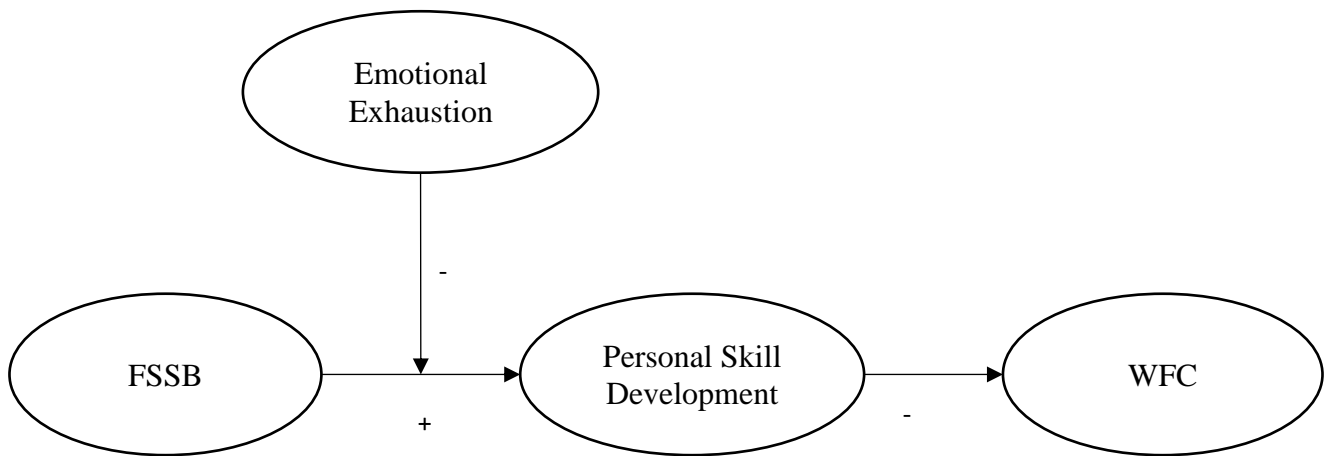
Notes: $N = 200$; ** $p < .01$, * $p < .05$.

Table 7 Results of the moderated path analysis

Moderator variable	FSSB (X) → Personal skill development (M) → WFC (Y)				
	Stage		Effect		
	First	Second	Direct effects	Indirect Effects	Total effects
	P_{MX}	P_{YM}	P_{YX}	$(P_{YM} P_{MX})$	$(P_{YX} + P_{YM} P_{MX})$
Simple paths for low emotional exhaustion (-1 SD)	0.65**	-0.07	2.31**	-0.05	2.26**
Simple paths for high emotional exhaustion (+1 SD)	0.16	-0.52*	0.71	-0.08	0.63
Differences	-0.49*	-0.45	-1.60**	-0.04	-1.63**

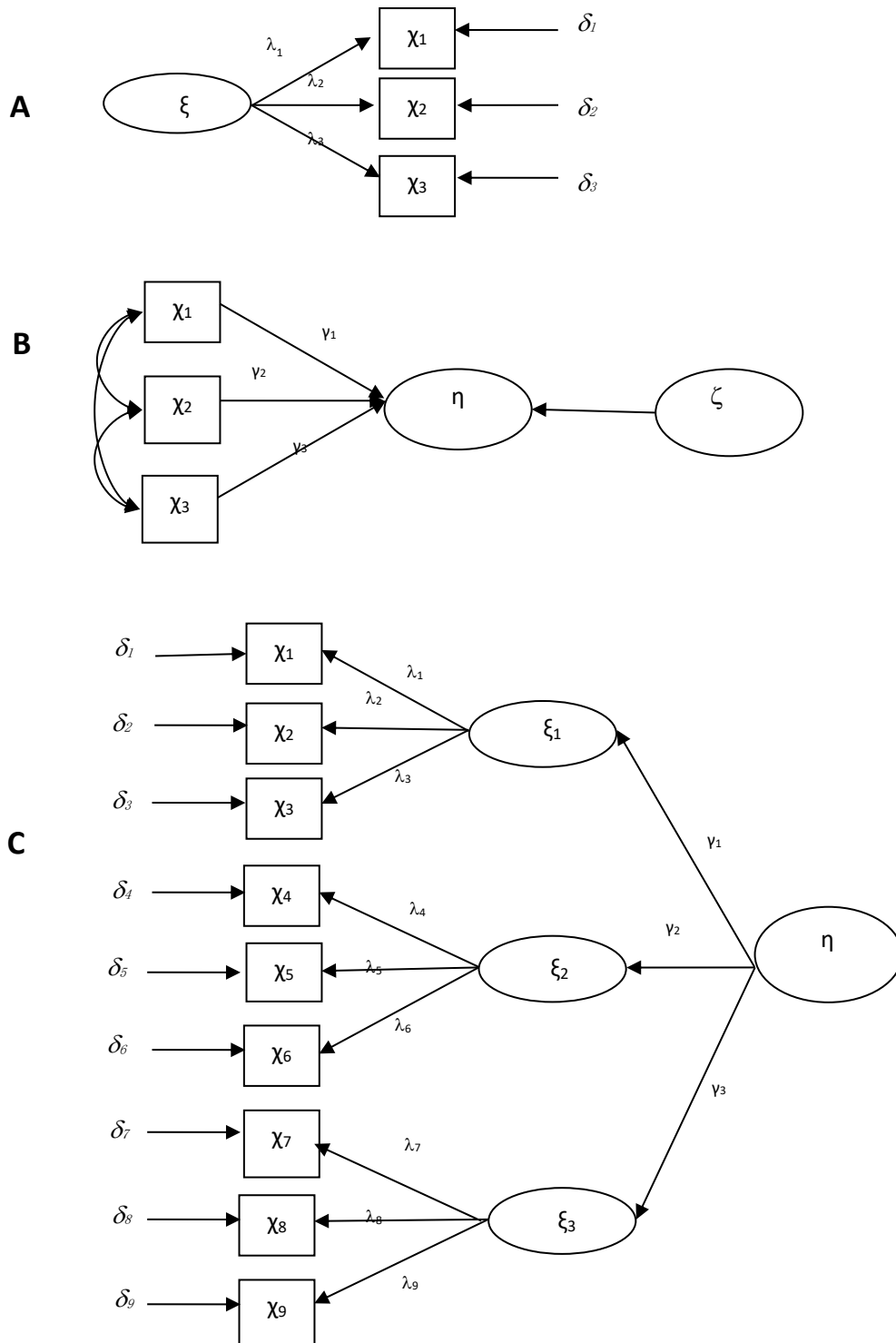
Notes: $N = 200$; ** $p < .01$, * $p < .05$. P_{MX} : path from FSSB to personal skill development; P_{YM} : path from personal skill development to WFC; P_{YX} : path from FSSB to WFC. Low emotional exhaustion refers to one standard deviation below the mean of emotional exhaustion; high emotional exhaustion value refers to one standard deviation above the mean of emotional exhaustion. Tests of differences for the indirect and total effect were based on bias-corrected confidence intervals derived from bootstrap estimates.

Figure 1 The conceptual model



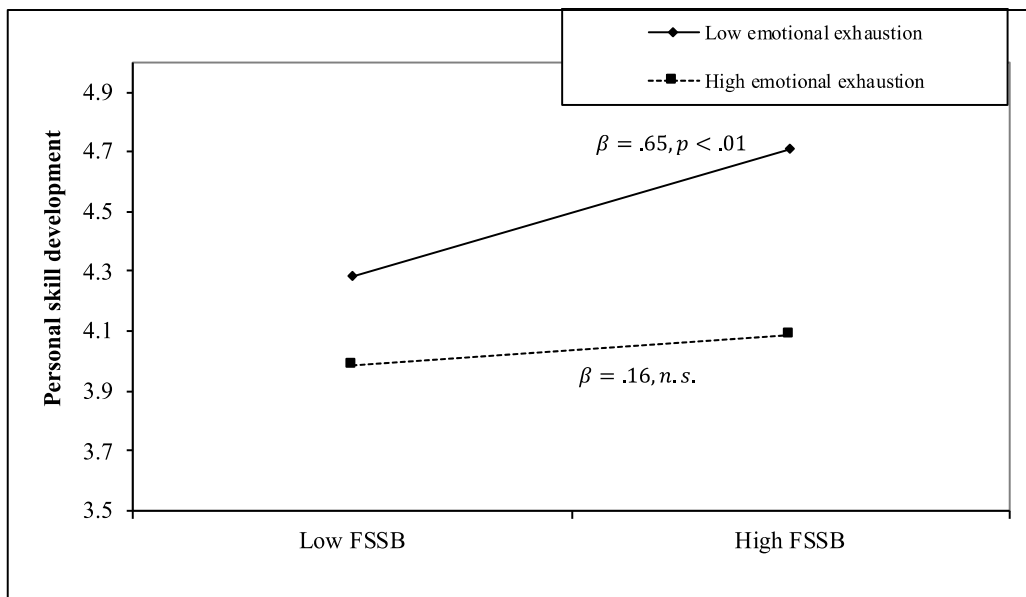
Notes: FSSB = family-supportive supervisor behaviors; WFC = work-to-family conflict.

Figure 2 The relationship of reflective measurement model, formative measurement model and construct



Note: From Edwards (2011) and Liang & Farh (2012).

Figure 3 The moderating effect of emotional exhaustion on the relationship between FSSB and personal skill development



Appendix A

The scales are:

(1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree)

Please indicate the degree to which you agree with each statement.

FSSB (Hammer et al., 2009)

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.
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.
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.
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.

Emotional exhaustion (Schaufeli, Leiter, Maslach, & Jackson, 1996)

1. I feel emotionally drained from my work.
2. I feel burned out from my work.
3. I feel used up at the end of the workday.
4. I feel tired when I get up in the morning and have to face another day on the job.
5. Working all day is really a strain for me.

Personal skill development (Lankau & Scandura, 2002)

1. I have learned how to communicate effectively with others in the workplace.
2. I have improved my listening skills in the workplace.
3. I have developed new ideas about how to perform my job in the workplace.
4. I have become more sensitive to others' feelings and attitudes in the workplace.
5. I have gained new skills in the workplace.
6. I have expanded the way I think about things in the workplace.

WFC (Carlson et al., 2000)

Time-based Work Interference with Family

1. My work keeps me from my family activities more than I would like.
2. The time I must devote to my job keeps me from participating equally in

household responsibilities and activities.

3. I have to miss family activities due to the amount of time I must spend on work responsibilities.

Strain-based Work Interference with Family

1. When I get home from work I am often too frazzled to participate in family activities/ responsibilities.
2. I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.
3. Due to all the pressures at work, sometimes when I come home I am too stressed to do things I enjoy.

Behavior-based Work Interference with Family

1. The problem-solving behaviors I use in my job are not effective in resolving problems at home.
2. Behavior that is effective and necessary for me effective at work would be counterproductive at home.
3. The behaviors I perform that make me effective at work do not help me to be a better parent and spouse.