Making Amends through Contributions! The Mechanism of Family-Work Conflict from an Identity Maintenance Perspective

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Abstract

Work-family conflict is a prominent research topic in the field of organizational management. This study examines the positive effects of work-family conflict on employees' work behaviors based on identity maintenance theory. Findings from experimental studies (Studies 1 and 2) and an experience sampling method study (Study 3) support the theoretical hypothesis: work-family conflict leads employees to perceive a loss in work performance, thereby motivating them to increase work effort and reduce family involvement. Compared to female employees, male employees exhibit stronger positive indirect effects of work-family conflict on increased work effort and reduced family involvement through perceived work performance loss. The findings challenge the mainstream assumption that "work-family conflict is always detrimental" and provide important insights for organizations in addressing employees' work-family conflict issues, helping them to leverage advantages while avoiding disadvantages in practice.

Full Text

Making Up for Lost Ground: The Identity Maintenance Mechanism of Family-Work Conflict

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Abstract

Family-work conflict is a prominent research topic in organizational management. Drawing on identity maintenance theory, this study examines the positive effects of family-work conflict on employee work behaviors. Through experimental studies (Studies 1 and 2) and an experience sampling study (Study 3), our theoretical hypotheses were supported: Family-work conflict leads employees to perceive a loss in work performance, thereby motivating them to increase work effort and reduce family investment. Compared to female employees, the positive indirect effects of family-work conflict on work effort and reduced family investment through perceived work performance loss are stronger for male employees. The findings challenge the mainstream assumption that "family-work conflict is always harmful" and provide important insights for organizations in addressing employee family-work conflict, helping them to maximize benefits and minimize harms in practice.

Keywords: family-work conflict, identity maintenance theory, perceived work performance loss, work effort, reduced family investment

Classification Codes: B849 C93

1. Introduction

In contemporary society, family and work represent the two most important domains in most adults' daily lives. Family-work conflict reflects the relationship between an individual's family and work roles, referring to a state in which meeting family demands prevents work demands from being fully satisfied (Greenhaus & Beutell, 1985). With population aging and the implementation of the "three-child policy," family pressures have gradually increased. Simultaneously, the proliferation of mobile communication technology has deepened the permeability between family and work domains, making it increasingly common for employees to experience family interference at work (Perrigino et al., 2018). Consequently, family-work conflict has become a hot topic in academic research.

How family-work conflict influences employee work behavior has long concerned researchers. Existing studies have primarily examined the relationship between family-work conflict and employee work behavior from the perspectives of role theory and resource theory, positing that family-work conflict represents role conflict and resource conflict between family and work domains, which leads to negative work behaviors (ten Brummelhuis & Bakker, 2012), including increased turnover (Rubenstein et al., 2020), deviant behavior (Botsford Morgan et al., 2018), and interpersonal aggression (Courtright et al., 2016). Although these perspectives reveal the negative effects of family-work conflict on employee work behavior, scholars have recently noted that viewing family-work conflict as simply harmful fails to fully capture its relationship with employee work behavior,

calling for a challenge to the mainstream assumption that "family-work conflict is always harmful" (Wilson et al., 2018). Meanwhile, some studies have indirectly demonstrated that family-work conflict may lead employees to exhibit positive work behaviors. For example, Ladge and Little (2019) theoretically proposed that when working parents feel they have failed to meet work expectations due to childcare responsibilities, they will concentrate their energy on work and strive to demonstrate a positive work image. Dahm et al. (2019) found through interview research that workplace elites who temporarily leave their careers for childbirth voluntarily arrange time to handle work matters, striving to ensure work is not delayed. Thus, even when experiencing family-work conflict, employees may demonstrate positive work behaviors as a coping mechanism. Therefore, exploring the positive effects of family-work conflict on employee work behavior may not only expand researchers' theoretical understanding of the relationship between family-work conflict and work behavior, challenging the mainstream assumption that "family-work conflict is always harmful," but also help organizations maximize benefits and minimize harms when addressing employee family-work conflict in practice.

This study draws upon identity maintenance theory and related research on family-work conflict to examine the positive effects of family-work conflict on employee work behavior. According to identity maintenance theory, when individuals face conflicts between different identities, they perceive the threatened identity as being under attack. To maintain the threatened identity, individuals adjust the importance they attach to these identities and reallocate resources (Greenbaum et al., 2022; Kreiner et al., 2006). Therefore, we propose that family-work conflict may cause employees to feel they are performing poorly at work, prompting them to take action to maintain their work identity. On the one hand, employees may increase work effort to improve performance; on the other hand, they may reduce family investment to mitigate the negative impact of family on work.

Furthermore, employee gender may serve as an important boundary condition in the process through which family-work conflict influences identity maintenance. Identity maintenance theory posits that individuals possess multiple identities, each with varying importance. When conflicts occur between identities, how individuals perceive identity threat and engage in identity maintenance depends on the relative importance of these identities. Specifically, when the threatened identity is more important, individuals experience stronger identity threat and more intense identity maintenance motivation; conversely, when the threatened identity is less important, perceived threat and maintenance motivation are relatively weaker (Burke, 1991; Greenbaum et al., 2022). Therefore, when conflict arises between family and work, employees' prioritization of family versus work identity becomes a crucial factor determining the identity maintenance process, and employee gender can reflect their relative importance rankings of work and family identities. Evolutionary psychology research indicates that different neural systems and brain structures in men and women lead men to focus more on the work domain and women on the family domain (Buss & Shackelford, 1997;

Fischer-Shofty et al., 2013; Sjöberg et al., 2006; Yue et al., 2017; Luo et al., 2011). Meanwhile, social psychology research suggests that individuals typically conform to socially prescribed gender roles—the notion that "men work outside, women care inside"—and eventually internalize these roles as part of their self-concept (Eagly et al., 1995; Leung, 2003). Integrating these perspectives, this study hypothesizes that when facing family-work conflict, male employees—who value work identity more—are more likely than female employees—who value family identity more—to perceive work performance loss and, consequently, to work harder and reduce family investment to maintain their work identity (see Figure 1 [Figure 1: see original paper]).

1.1 Identity Maintenance Theory and Family-Work Conflict

Identity maintenance theory posits that identity conflict arises when individuals over-invest in one identity at the expense of another, leading them to feel that the sacrificed identity is underperforming and experiencing identity threat. To eliminate this sense of threat, individuals typically adjust the importance they attach to identities, including increasing emphasis on and investment in the sacrificed identity while decreasing emphasis on and investment in the over-invested identity (Greenbaum et al., 2022; Kreiner et al., 2006). In employees' lives, family and work are two extremely important domains. Due to limited personal resources, over-investment in one domain leads to insufficient resource investment in the other (Edwards & Rothbard, 2000), thereby creating conflict between family and work (Greenhaus & Beutell, 1985). Drawing on identity maintenance theory and family-work conflict research, we propose that family-work conflict represents a situation in which employees over-invest in their family identity at the expense of their work identity. This situation may not only reduce employees' task performance (Nohe et al., 2014) but also lead supervisors to hold negative performance evaluations of employees experiencing family-work conflict (Carlson et al., 2008). Consequently, family-work conflict causes employees to believe they are performing poorly at work, which may prompt them to adjust the importance and resource allocation they devote to family and work identities—for example, by increasing emphasis on and investment in their work identity and working harder, or by decreasing emphasis on and investment in their family identity and allocating fewer resources to personal household matters.

1.2 Family-Work Conflict and Perceived Work Performance Loss

According to identity maintenance theory, family-work conflict leads employees to feel that their work identity is threatened. This identity threat manifests as perceived role shortcomings or deficits (Greenbaum et al., 2022; Ladge & Little, 2019). This study operationalizes this work identity threat as perceived work performance loss—the extent to which employees believe they have lost their reputation as valuable organizational members. This concept captures employees' beliefs about whether deficiencies or deficits exist in their work identity (Ng

& Yam, 2019). Integrating identity maintenance theory with the definition of family-work conflict, we can see that higher levels of family-work conflict indicate deeper difficulty for employees in meeting work identity-related demands due to family interference (Greenhaus & Beutell, 1985). This necessarily affects employees' self-perceptions of their work identity (Wang et al., 2010), leading to negative work-related self-concepts (Li et al., 2021; Wang et al., 2010; Wang et al., 2022) and feelings of insufficient contribution to the organization (Amstad et al., 2011), ultimately causing employees to perceive a loss in their work performance. Based on the above, we propose the following hypothesis:

Hypothesis 1: Family-work conflict has a positive effect on perceived work performance loss.

1.3 Perceived Work Performance Loss and Employees' Identity Maintenance Behaviors

Identity maintenance theory suggests that when individuals experience identity threat due to identity conflict, they typically maintain their identity by altering the importance they attach to identities and their resource investments, thereby eliminating the sense of threat (Greenbaum et al., 2022; Kreiner et al., 2006). Based on this theory, we propose that when employees perceive work performance loss, they may change the importance they attach to work and family identities and increase resource investment in their work identity while decreasing investment in their family identity, in order to improve work performance and maintain the threatened work identity (Greenbaum et al., 2022; Kreiner et al., 2006; Ladge & Little, 2019). Specifically, employees' perceived work performance loss will increase their work effort—the amount of resources (e.g., time, energy) they invest in their work (Yeo & Neal, 2004)—to maintain their work identity. Simultaneously, when employees perceive work performance loss, they will also reduce family investment, that is, consider decreasing family time (Aarntzen et al., 2019) and reducing resource investment in their family identity, thereby avoiding encroachment on limited personal resources and ensuring sufficient resources are available for work identity investment. Some studies indirectly support these arguments. For example, Amstad et al. (2011) found that conflict between employees' family and work domains not only affects behavior in each domain but also creates cross-domain influences. Greenbaum et al. (2022) discovered that employees who perceive themselves as inadequate parents not only increase investment in their family identity by spending more time with their children but also decrease investment and output in their work identity. Therefore, based on the above reasoning and the content of Hypothesis 1, we propose the following hypotheses:

Hypothesis 2: Family-work conflict indirectly and positively affects work effort through perceived work performance loss.

Hypothesis 3: Family-work conflict indirectly and positively affects reduced family investment through perceived work performance loss.

1.4 The Moderating Role of Gender

Identity maintenance theory states that individuals possess multiple identities, each with different levels of importance. When conflicts arise between identities, if the threatened identity is more important, individuals experience stronger identity threat and more intense identity maintenance motivation; conversely, if the threatened identity is less important, identity threat and maintenance motivation are relatively weaker (Burke, 1991; Greenbaum et al., 2022). Therefore, when conflict occurs between family and work, employees' prioritization of family versus work identity becomes a crucial boundary condition determining the identity maintenance process, and employee gender can reflect their relative importance rankings of work and family identities.

Men and women, influenced by evolutionary processes and social norms, have gradually developed different foci on work and family domains. Throughout evolution, men primarily engaged in high-risk foraging activities, while women focused more on offspring care. These differences have led men and women to develop distinct neural systems and brain structures, making women more sensitive to family and infant-related information, while men pay greater attention to social environmental information (Buss & Shackelford, 1997; Sjöberg et al., 2006; Luo et al., 2011). Additionally, the same hormones may have opposite effects on men and women; for instance, oxytocin enhances men's accuracy in identifying competitive relationships while promoting women's recognition of kinship relationships (Fischer-Shofty et al., 2013; Yue et al., 2017). Social norms also influence how men and women prioritize work and family identities, shaping the internalization of gender roles (Eagly et al., 1995; Leung, 2003). Under traditional norms, men are expected to bear more responsibility for breadwinning through work, while women are expected to take on more family caregiving responsibilities. Consequently, research shows that female employees emphasize moral obligations toward family and caregiving, whereas male employees focus more on work and earning obligations (Brandth & Kvande, 2017; Cinamon & Rich, 2002; Cooper, 2000). Based on these arguments, we speculate that when facing family-work conflict, male employees—who value work identity more—are more likely than female employees—who value family identity more—to perceive work performance loss. Integrating the above reasoning, we propose the following hypothesis:

Hypothesis 4: Gender moderates the relationship between family-work conflict and perceived work performance loss, such that the positive effect of family-work conflict on perceived work performance loss is stronger for male employees than for female employees.

Furthermore, based on Hypotheses 2, 3, and 4, we propose the following moderated mediation hypotheses:

Hypothesis 5: Gender moderates the positive indirect effect of family-work conflict on work effort through perceived work performance loss, such that this indirect effect is stronger for male employees than for female employees.

Hypothesis 6: Gender moderates the positive indirect effect of family-work conflict on reduced family investment through perceived work performance loss, such that this indirect effect is stronger for male employees than for female employees.

1.5 Research Overview

This study employs a multi-study design with diverse samples to test the theoretical model. Studies 1 and 2 use full-time employees as experimental subjects, employing recall and scenario experiments to examine the causal relationship between family-work conflict and perceived work performance loss, thereby ensuring internal validity. Study 3 uses enterprise employees as a survey sample, testing the overall theoretical model through questionnaire surveys to extend the external validity of this research.

2. Study 1: Recall Experiment

2.1 Sample

Study 1 was a preregistered recall experiment (PreregisterID: 202401.00079) that recruited full-time employees through the Credamo platform. Recall experiments require participants to directly recall a real family-work conflict experience, a method with advantages such as high authenticity and ease of imagination for participants (Chen et al., 2021). Based on an effect size of Cohen's $d = 0.4$ and desired power of 0.8, we used G*Power 3.1.9.7 to calculate a planned sample size of 200 participants. We ultimately obtained 200 valid questionnaires (effective response rate = 86.58%). The sample consisted of 71 males (35.50%) and 129 females (64.50%); 145 were married (72.50%); 132 had minor children (66.00%); 67 were general staff (33.50%), 47 were junior managers (23.50%), 62 were middle managers (31.00%), and 24 were senior managers (12.00%). The average age was 31.98 years ($SD = 7.34$), and average tenure was 8.53 years ($SD = 6.45$).

2.2 Experimental Design and Procedure

Study 1 employed a single-factor between-subjects design (family-work conflict vs. no family-work conflict). Using Credamo's randomization block function, participants were randomly assigned to the family-work conflict group ($N = 100$) or the no family-work conflict group ($N = 100$). The experimental and control groups showed no significant differences in demographic characteristics ($p > 0.05$). At the start of the experiment, participants were asked to recall an experience from the past two weeks and describe it in detail. In the experimental group (family-work conflict group), participants were instructed to recall an experience in which family demands interfered with work, making it difficult to fulfill work responsibilities. In the control group (no family-work conflict group), participants were instructed to recall an experience in which family demands did not interfere with work and they were able to fulfill work responsibilities. The

experimental materials were adapted from previous work-family conflict recall experiments (Cheng et al., 2021) and family-work conflict measurement scales (Netemeyer et al., 1996).

After completing the recall task, participants wrote down the recalled scenario content and then completed measures of perceived work performance loss, manipulation check items, and demographic information.

2.3 Measures

All scales used in this study were established measures from previous research and were translated into Chinese using the standard translation-back-translation procedure (Brislin, 1980). All variables were measured using a 5-point Likert scale (1 = "strongly disagree," 5 = "strongly agree").

Perceived Work Performance Loss. Adapted from Ng and Yam's (2019) perceived creative performance gains scale, which contains three items. We reverse-coded the original scale's gain-related wording into loss descriptions to capture employees' perceptions that family-work conflict detracts from their status as valuable organizational members (Ng & Yam, 2019). A sample item is "My work performance has lost points."[1] Participants responded based on their immediate feelings. The Cronbach's α for this scale in our study was 0.89.

Manipulation Check. To reduce potential interference from manipulation checks on participants' responses to dependent variables (Hauser & Schwarz, 2015; Wei et al., 2022) and ensure experimental validity, we placed manipulation check items after the perceived work performance loss scale, following recommendations from previous work-family conflict experiments and related experimental research (Greenhaus & Powell, 2003; Wei et al., 2022). Because the duration of our manipulation was relatively long, placing the manipulation check after the dependent variable was appropriate (Wei et al., 2022), and other work-family conflict experiments have used the same placement order (e.g., Greenhaus & Powell, 2003). The family-work conflict manipulation check item was adapted from Zhang et al.'s (2019) work-family conflict manipulation check, with the revised item being "In the recalled scenario, my family matters interfered with my work-related activities." Participants responded based on their feelings about the recalled scenario.

2.4 Results

2.4.1 Manipulation Check Manipulation check results showed that the family-work conflict score in the experimental group ($M = 4.23$, $SD = 0.65$) was higher than in the control group ($M = 1.75$, $SD = 1.05$). Because Levene's test indicated unequal variances between the experimental and control groups, we used a t-test that does not assume equal variances, following previous research (Tost et al., 2013). Results showed $t(165.20) = 20.12$, $p < 0.001$, Cohen's $d = 2.84$. Therefore, the manipulation of family-work conflict was successful.

2.4.2 Hypothesis Testing Descriptive statistics and correlation analysis results are presented in Table 1 . Study 1 used SPSS 23 to conduct linear regression analysis, with results shown in Table 2 .

Table 1 . Means, Standard Deviations, and Correlations Among Variables in Study 1

Variable	M	SD	1	2	3
1. Family-work conflict manipulation	0.50	0.50	-		
2. Gender	0.36	0.48	0.68***	-	
3. Perceived work performance loss	2.52	0.89	0.15*	0.27*	-

Note: $N = 200$. *Family-work conflict manipulation: 0 = control group, 1 = experimental group. Gender: 0 = female, 1 = male.* $p < 0.05$, $p < 0.01$, $p < 0.001$.

Table 2 . Regression Analysis Results for Study 1

Variable	Model 1	Model 2
Intercept	2.52***(0.06)	2.51***(0.06)
Family-work conflict manipulation	1.54***(0.12)	1.54***(0.12)
Gender	0.27*(0.13)	0.26*(0.12)
Family-work conflict manipulation × Gender	-	0.62*(0.25)
R^2	0.02*	-

Note: $N = 200$. *Family-work conflict manipulation: 0 = control group, 1 = experimental group. Gender: 0 = female, 1 = male. Coefficients are unstandardized, with standard errors in parentheses.* $p < 0.05$, $p < 0.01$, $p < 0.001$.

Hypothesis 1 predicted that family-work conflict would have a positive effect on perceived work performance loss. As shown in Model 1 of Table 2, family-work conflict significantly and positively affected perceived work performance loss ($b = 1.54$, $SE = 0.12$, $p < 0.001$). Hypothesis 1 was supported.

Hypothesis 4 predicted that gender would moderate the relationship between family-work conflict and perceived work performance loss, such that the positive effect would be stronger for male employees than for female employees. As shown in Model 2 of Table 2, the interaction term between family-work conflict manipulation and gender significantly affected perceived work performance loss ($b = 0.62$, $SE = 0.25$, $p = 0.012$). Simple slope analysis revealed that when employees were male, the effect of family-work conflict manipulation on perceived work performance loss was stronger ($b = 1.94$, $SE = 0.20$, $p < 0.001$); when employees were female, the effect was weaker ($b = 1.32$, $SE = 0.15$, $p < 0.001$). The difference between these slopes was significant ($b = 0.62$,

$SE = 0.25$, $p = 0.011$). The moderating effect is illustrated in Figure 2 [Figure 2: see original paper]. Hypothesis 4 was supported.

Figure 2 [Figure 2: see original paper]. Gender Moderating the Relationship Between Family-Work Conflict and Perceived Work Performance Loss in Study 1

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[1] This study conducted content validity and criterion-related validity analyses for perceived work performance loss, as well as content validity analyses for work effort intention, work effort, and reduced family investment measures. Results showed that all scales demonstrated high content validity, and the perceived work performance loss scale showed good criterion-related validity (detailed validity analysis results are available from the authors).

3. Study 2: Scenario Experiment

3.1 Sample

Study 2 was a scenario experiment with participants from the functional departments of a bank credit card center in southern China. Based on an effect size of Cohen's $d = 0.4$ and desired power of 0.8, we used G*Power 3.1.9.7 to calculate a planned sample size of 200 participants. Study 2 ultimately recruited 280 participants, and after screening out samples whose descriptions did not match the scenario, we obtained 232 valid questionnaires (effective response rate = 82.86%). The sample consisted of 89 males (38.36%) and 143 females (61.64%); 149 were married (64.22%); 117 had minor children (50.43%); 151 were general staff (65.09%), 52 were junior managers (22.41%), 25 were middle managers (10.78%), and 4 were senior managers (1.72%). The average age was 32.53 years ($SD = 4.65$), and average tenure was 9.06 years ($SD = 7.21$).

3.2 Experimental Design and Procedure

Study 2 employed a single-factor between-subjects design, using Wenjuanxing's "scenario randomization" function to randomly assign participants to either a "high family-work conflict" scenario ($N = 120$) or a "low family-work conflict" scenario ($N = 112$). The experimental and control groups showed no significant differences in demographic characteristics ($p > 0.05$). At the start of the experiment, participants read a vignette about an ordinary employee in a workplace setting (see below) and were asked to imagine themselves in the scenario as vividly as possible. After reading, participants recalled and described the scenario content, then completed measures of perceived work performance loss, work effort intention, reduced family investment, manipulation check items, and demographic information. To ensure response quality, we excluded questionnaires whose descriptions were inconsistent with the scenario.

Family-Work Conflict Manipulation. The experimental materials were developed by the researchers based on existing work-family conflict scenario

materials (Greenhaus & Powell, 2003; Zhang et al., 2019). In the experimental group (high family-work conflict), participants read: "It is currently work hours, and you are discussing a very important and urgent work proposal with colleagues. However, at this moment, you receive a message from home asking you to return home to handle an emergency. Therefore, you have to exit the discussion with colleagues and take leave to go home." In the control group (low family-work conflict), participants read: "It is currently after work hours, and you are chatting with colleagues about routine work matters. However, at this moment, you receive a message from home asking you to return home to handle an emergency. Therefore, you have to exit the chat with colleagues and go home first."

3.3 Measures

All scales used in this study were established measures from previous research and were translated into Chinese using the standard translation-back-translation procedure (Brislin, 1980). All variables were measured using a 5-point Likert scale (1 = "strongly disagree," 5 = "strongly agree").

Perceived Work Performance Loss. Same as in Study 1, adapted from Ng and Yam's (2019) perceived creative performance gains scale. Participants responded based on their feelings in the scenario. The Cronbach's α for this scale in our study was 0.90.

Work Effort Intention. Drawing on research on cross-situational scale adaptation (Dineen et al., 2017; Schaubroeck et al., 2021; Lu et al., 2021), we adapted Sun et al.'s (2013) job search effort scale, which contains three items. A sample item is "After experiencing the above scenario, I will invest a lot of time in my work next." Participants responded based on their feelings in the scenario. The Cronbach's α for this scale in our study was 0.94.

Reduced Family Investment. Adapted from Aarntzen et al.'s (2019) work investment reduction scale, containing two items. A sample item is "After experiencing the above scenario, I will think about how to reduce time spent on personal family matters." Participants responded based on their feelings in the scenario. The Cronbach's α for this scale in our study was 0.63.

Manipulation Check. Same as in Study 1, we placed the family-work conflict manipulation check item after the dependent variables. The manipulation check item was adapted from Zhang et al.'s (2019) work-family conflict manipulation check, with the revised item being "In the above scenario, my family matters interfered with my work-related activities." Participants responded based on their feelings in the scenario.

3.4 Results

3.4.1 Manipulation Check Manipulation check results showed that the family-work conflict score in the experimental group ($M = 2.85$, $SD = 1.26$)

was higher than in the control group ($M = 2.25$, $SD = 1.05$). Similar to Study 1, the variances were unequal between the experimental and control groups, so we used a t-test that does not assume equal variances. Results showed $t(227.48) = 3.96$, $p < 0.001$, Cohen's $d = 0.52$. Therefore, the manipulation of family-work conflict was successful.

3.4.2 Hypothesis Testing Descriptive statistics and correlation analysis results are presented in Table 3 . Study 2 used SPSS 23 to conduct linear regression analysis, with results shown in Table 4 .

Table 3 . Means, Standard Deviations, and Correlations Among Variables in Study 2

Note: $N = 232$. Family-work conflict manipulation: 0 = control group, 1 = experimental group. Gender: 0 = female, 1 = male. $p < 0.05$, $p < 0.01$, $p < 0.001$.

Table 4 . Regression Analysis Results for Study 2

Variable	Perceived Work Performance Loss	Work Effort Intention	Reduced Family Investment
Intercept	2.36***(0.07)	3.59***(0.07)	2.73***(0.07)
Family-work conflict manipulation	0.76***(0.14)	0.51***(0.14)	0.34*(0.15)
Gender	0.27*(0.13)	0.08(0.13)	0.16(0.14)
Family-work conflict manipulation × Gender	0.59*(0.28)	-	-
R^2	0.23**(0.07)	0.24***(0.06)	0.02*

Note: $N = 232$. Family-work conflict manipulation: 0 = control group, 1 = experimental group. Gender: 0 = female, 1 = male. Coefficients are unstandardized, with standard errors in parentheses. $p < 0.05$, $p < 0.01$, $p < 0.001$.

Hypothesis 1 predicted that family-work conflict would have a positive effect on perceived work performance loss. As shown in Model 1 of Table 4, family-work conflict manipulation significantly and positively affected perceived work performance loss ($b = 0.76$, $SE = 0.14$, $p < 0.001$). Hypothesis 1 was supported.

Hypothesis 2 predicted that family-work conflict would indirectly and positively affect work effort through perceived work performance loss. To test the significance of the mediation effect, we used the PROCESS 4.1 plugin for bootstrap analysis, with 10,000 random samples to estimate the 95% bias-corrected confidence interval (CI) for the indirect effect. Results showed that the indirect effect of family-work conflict manipulation on work effort intention through perceived work performance loss was significant (indirect effect = 0.18, 95% CI [0.07, 0.32]). Hypothesis 2 was supported.

Hypothesis 3 predicted that family-work conflict would indirectly and positively affect reduced family investment through perceived work performance loss. Mediation test results showed that the indirect effect of family-work conflict manipulation on reduced family investment through perceived work performance loss was significant (indirect effect = 0.19, 95% CI [0.08, 0.32]). Hypothesis 3 was supported.

Hypothesis 4 predicted that gender would moderate the relationship between family-work conflict and perceived work performance loss, such that the positive effect would be stronger for male employees than for female employees. As shown in Model 2 of Table 4, the interaction term between family-work conflict manipulation and gender significantly affected perceived work performance loss ($b = 0.59$, $SE = 0.28$, $p = 0.039$). Simple slope analysis revealed that when employees were male, the effect of family-work conflict manipulation on perceived work performance loss was stronger ($b = 1.21$, $SE = 0.22$, $p < 0.001$); when employees were female, the effect was weaker ($b = 0.53$, $SE = 0.17$, $p = 0.002$). The difference between these slopes was significant ($b = 0.59$, $SE = 0.28$, $p = 0.037$). The moderating effect is illustrated in Figure 3 [Figure 3: see original paper]. Hypothesis 4 was supported.

Hypotheses 5 and 6 proposed first-stage moderated mediation effects. Following Edwards and Lambert's (2007) method for testing moderated mediation, we used bootstrap analysis (10,000 random samples) to calculate the 95% bias-corrected confidence intervals for the indirect effects of family-work conflict manipulation on work effort intention through perceived work performance loss for male and female employee samples separately. Results showed that when employees were male, the indirect effect was stronger (indirect effect = 0.26, 95% CI [0.11, 0.47]); when employees were female, the indirect effect was weaker (indirect effect = 0.12, 95% CI [0.04, 0.28]). The difference between these indirect effects was significant (difference = 0.14, 95% CI [0.02, 0.32]). Hypothesis 5 was supported. Similarly, we tested Hypothesis 6. Results showed that when employees were male, the indirect effect of family-work conflict manipulation on reduced family investment through perceived work performance loss was stronger (indirect effect = 0.27, 95% CI [0.13, 0.48]); when employees were female, the indirect effect was weaker (indirect effect = 0.13, 95% CI [0.04, 0.28]). The difference between these indirect effects was significant (difference = 0.14, 95% CI [0.02, 0.32]). Hypothesis 6 was supported.

Figure 3 [Figure 3: see original paper]. Gender Moderating the Relation-

ship Between Family-Work Conflict and Perceived Work Performance Loss in Study 2

The results of Studies 1 and 2 provide evidence for the causal relationship between family-work conflict and perceived work performance loss. Although Studies 1 and 2 demonstrate the internal validity of our theoretical model, it is still necessary to extend the external validity through workplace surveys. Therefore, Study 3 will conduct a full-model questionnaire survey to retest the theoretical model.

4. Study 3: Experience Sampling Method Study

4.1 Sample and Procedure

This study used the experience sampling method (ESM) for data collection. Employing a full-cycle approach with different research designs and samples (Chatman & Flynn, 2005) enhances the reliability of research conclusions. Furthermore, family-work conflict reflects a state in which individuals cannot meet work demands due to satisfying family demands. Employees experience different emotions and events daily, which may trigger fluctuations in their family-work conflict levels (Greenhaus & Beutell, 1985; Ilies et al., 2007). Multiple studies have demonstrated that family-work conflict is dynamic (Gabriel et al., 2020; Greenbaum et al., 2022; Ilies et al., 2007; Judge et al., 2006; Nohe et al., 2014; Wang et al., 2010). Therefore, ESM is suitable for examining the dynamic changes in family-work conflict and corresponding responses.

This survey invited telephone collection staff from a bank credit card center in southern China. Following previous ESM research (Liu et al., 2023), we recruited 102 staff members to participate. The survey consisted of two phases: In Phase 1, participants completed demographic information including gender and age. Phase 2 began one week after Phase 1. In Phase 2, participants completed three questionnaires daily for 10 consecutive workdays. The first questionnaire measured participants' current positive and negative affect, previous night's sleep quality, and current family-work conflict. ESM research on family-work conflict has found that it is more likely to occur in the morning, especially right after starting work on weekdays (French et al., 2022; French & Allen, 2020). Our participants' workday started at 8:00 AM, with a 10-minute morning meeting from 8:00 to 8:30 AM. Therefore, we distributed the first questionnaire at 8:30 AM (average response time: 8:51 AM). The second questionnaire measured participants' current perceived work performance loss, distributed at 12:00 PM daily (average response time: 12:24 PM). The third questionnaire measured participants' afternoon work effort and reduced family investment after returning home, distributed at 6:00 PM daily (average response time: 6:34 PM). Following previous ESM studies with three daily surveys (e.g., Calderwood et al., 2021; Gerpott et al., 2022; Sabey et al., 2021), we set a 3-hour window for morning and midday questionnaires. For the evening questionnaire, following Wang et al. (2019) and Pang et al. (2023), we set the deadline at midnight (24:00),

allowing respondents to complete it only within the specified time frame.

This study used electronic questionnaires for online distribution and collection. To ensure anonymity, participants did not need to sign their names, only an anonymous survey code. To improve response rates, we sent reminders to non-respondents one hour after each questionnaire distribution.

Phase 1 yielded 102 questionnaires. Phase 2 collected 2,877 person-occasion responses (response rate = 94.02%), including 967 morning responses (94.80% response rate), 958 midday responses (93.92% response rate), and 952 evening responses (93.33% response rate). If participants completed only one or two surveys on a given day, that day's data contained missing values and could not be used for analysis (Cho & Kim, 2022; Gabriel et al., 2021; Lanaj et al., 2021; Rosen et al., 2016), and were deleted. After deleting 216 person-occasion responses with missing data, we obtained 887 complete daily questionnaires (response rate = 86.96%). Among the 102 participants, all but two completed Phase 2: one participant never completed Phase 2, and one completed only one full day. The remaining 100 participants completed four or more full days of Phase 2. To conduct lagged control analysis, following previous research (Hill et al., 2021; Liao et al., 2018), we matched each day's data with the previous day's data, resulting in 786 matched observations from 100 participants. Among the 100 participants in this survey, 61 were female (61.00%) and 39 were male (39.00%); 52 were unmarried (52.00%) and 48 were married (48.00%); 68 had no children (68.00%), 24 had one child (24.00%), and 8 had two children (8.00%). The average age was 30.17 years (SD = 3.96), average organizational tenure was 5.16 years (SD = 3.39), 35 had junior college education (35.00%), and 65 had bachelor's degrees (65.00%).

4.2 Measures

All scales used in this study were established measures from previous research and were translated into Chinese using the standard translation-back-translation procedure (Brislin, 1980). Unless otherwise specified, variables were measured using a 5-point Likert scale (1 = "strongly disagree," 5 = "strongly agree").

Family-Work Conflict. We used Netemeyer et al.'s (1996) family-work conflict scale to measure employees' daily family-work conflict. This scale has been applied in multiple family-work conflict ESM studies and effectively captures daily fluctuations in individuals' family-work conflict levels (Gabriel et al., 2020; Greenbaum et al., 2022; Nohe et al., 2014). The scale contains five items (e.g., "My family matters interfered with my work-related activities"). Employees responded based on their current actual feelings. The Cronbach's α for this scale in our study was 0.96.

Perceived Work Performance Loss. Same as in Studies 1 and 2, adapted from Ng and Yam's (2019) perceived creative performance gains scale. Employees responded based on their current actual feelings. The Cronbach's α for this scale in our study was 0.97.

Work Effort. Similar to Study 2's work effort intention scale, we adapted Sun et al.'s (2013) effort scale, containing three items. Employees responded based on their actual work situation in the afternoon. The Cronbach's α for this scale in our study was 0.96.

Reduced Family Investment. Same as in Study 2, adapted from Aarntzen et al.'s (2019) work investment reduction scale, measuring the extent to which employees considered reducing time spent on family matters. Employees responded based on their current actual feelings. The Cronbach's α for this scale in our study was 0.96.

Control Variables. We controlled for participants' sleep quality, positive affect, and negative affect. Sleep quality was measured with a single item (Buysse et al., 1989): "How was your sleep quality last night?" rated from 1 = "very poor" to 5 = "very good." Positive and negative affect were measured using Mackinnon et al.'s (1999) short-form scales; Cronbach's α values were 0.83 and 0.96, respectively. To better establish causal ordering and examine day-to-day changes in study variables, following previous recommendations (Beal, 2015; Hill et al., 2021), we controlled for the previous day's level of each variable. Finally, to control for weekly cyclical variations, following existing research (Gabriel et al., 2019), we controlled for the day of the week and corresponding sine and cosine transformations.

4.3 Analytical Strategy

Because Study 3 data have a nested structure, we used multilevel modeling with Mplus 8.3 software. Study variables were divided into two levels: within-person and between-person. Within-person variables included positive affect, negative affect, sleep quality, family-work conflict, perceived work performance loss, work effort, and reduced family investment; the between-person variable was gender. To test whether multilevel modeling was appropriate, we analyzed the proportion of within-person and between-person variance for each variable (Hofmann et al., 2000; Podsakoff et al., 2019). As shown in Table 5 , consistent with previous ESM research (Andel et al., 2022; Hill et al., 2021; Song et al., 2018; Welsh et al., 2022; Liu et al., 2023), within-person variance accounted for 20%-50% of total variance, supporting the use of multilevel modeling.

Before hypothesis testing, following Ohly et al.'s (2010) recommendations, we group-mean centered within-person variables and grand-mean centered between-person variables. Because this study hypothesized that employee gender has a cross-level moderating effect on the identity maintenance process—meaning identity maintenance processes differ between genders—we specified all paths as random effects, following previous research (Lin et al., 2019; Yuan et al., 2018; Dong et al., 2023; Liu et al., 2023). Additionally, because Study 3 data are non-independent, we used Monte Carlo simulation in RStudio to test mediation and moderated mediation effects (Selig & Preacher, 2008).

Table 5 . Within-Person Variance Proportions for Core Variables in Study 3

Within-Person Variable	Within-Person Variance (σ^2)	Between-Person Variance (τ_{00})	Within-Person Variance Proportion ($\sigma^2/(\sigma^2+\tau_{00})$)
Family-work conflict	-	-	32.73%
Perceived work performance loss	-	-	26.51%
Work effort	-	-	47.89%
Reduced family investment	-	-	23.24%

Note: $N = 786$ *person-occasions,* $N = 100$ *persons.*

4.4 Results

4.4.1 Descriptive Statistics and Correlations Table 6 presents the means, standard deviations, and correlations among variables in Study 3.

Table 6 . Means, Standard Deviations, and Correlations Among Variables in Study 3

Note: Within-person $N = 786$*; between-person* $N = 100$*. Gender: 0 = female, 1 = male. Correlations below the diagonal are within-person; correlations above the diagonal are between-person.* $p < 0.05$, $p < 0.01$, $p < 0.001$.

4.4.2 Confirmatory Factor Analysis To verify the discriminant validity among the four variables of family-work conflict, perceived work performance loss, work effort, and reduced family investment, we conducted multilevel confirmatory factor analysis using Mplus 8.3, following previous research practices (Calderwood et al., 2021; Gabriel et al., 2021; Liao et al., 2021; Methot et al., 2021; Dong et al., 2023). As shown in Table 7 , the hypothesized four-factor model demonstrated good fit indices ($\chi^2/df = 2.10$, $CFI = 0.98$, $TLI = 0.97$, $RMSEA = 0.04$, $SRMR = 0.01$) and was superior to alternative three-factor models, indicating good discriminant validity among the study variables.

Table 7 . Multilevel Confirmatory Factor Analysis Results for Study 3

Model	χ^2/df	CFI	TLI	RMSEA	SRMR	$\Delta\chi^2(\Delta df)$
Hypothesized four-factor model	2.10	0.98	0.97	0.04	0.01	-
Three-factor model (FWC + PWL combined)	-	-	-	-	-	629.72(3)***
Three-factor model (WE + RFI combined)	-	-	-	-	-	582.51(3)***
Three-factor model (FWC + RFI combined)	-	-	-	-	-	540.17(3)***
Three-factor model (FWC + WE combined)	-	-	-	-	-	738.33(3)***

Note: $N = 786$. All $\Delta\chi^2$ are significant at $p < 0.001$. FWC = family-work conflict, PWL = perceived work performance loss, WE = work effort, RFI = reduced family investment.

4.4.3 Hypothesis Testing We analyzed the data using multilevel modeling in Mplus 8.3. Multilevel regression results are presented in Table 8 .

Table 8 . Multilevel Regression Analysis Results for Study 3

Variable	Perceived Work Performance Loss	Work Effort	Reduced Family Investment
Intercept	1.79***(0.08)	4.34***(0.06)	2.82***(0.12)
Sleep quality	0.01(0.04)	0.01(0.06)	0.03(0.04)
Positive affect	0.01(0.03)	0.02(0.04)	0.01(0.03)
Negative affect	0.20*(0.08)	0.02(0.03)	0.01(0.03)
Previous day perceived work performance loss	-0.04(0.07)	-0.08*(0.03)	0.002(0.04)
Previous day work effort	0.09(0.06)	0.12(0.08)	0.07(0.05)
Previous day reduced family investment	0.11(0.10)	0.05(0.10)	0.06(0.08)

Variable	Perceived Work Performance Loss	Work Effort	Reduced Family Investment
Family-work conflict	0.17**(0.05)	0.29**(0.09)	0.05(0.04)
Family-work conflict × Gender	0.26*(0.12)	-	-
Perceived work performance loss	-	0.40*(0.17)	0.14*(0.06)
Pseudo R^2	0.21*(0.10)	-	-

Note: $N = 786$ person-occasions. Gender: 0 = female, 1 = male. Coefficients are unstandardized, with standard errors in parentheses. $p < 0.05$, $p < 0.01$, $p < 0.001$.

Hypothesis 1 predicted that family-work conflict would have a positive effect on perceived work performance loss. As shown in Model 1 of Table 8, after controlling for positive affect, negative affect, sleep quality, and previous day's perceived work performance loss, family-work conflict had a significant positive effect on perceived work performance loss ($b = 0.17$, $SE = 0.05$, $p = 0.001$). Hypothesis 1 was supported.

Hypothesis 2 predicted that family-work conflict would indirectly and positively affect work effort through perceived work performance loss. Monte Carlo simulation results showed that the indirect effect of family-work conflict on work effort through perceived work performance loss was significant (indirect effect = 0.02, 95% CI [0.001, 0.05]). Hypothesis 2 was supported.

Hypothesis 3 predicted that family-work conflict would indirectly and positively affect reduced family investment through perceived work performance loss. Monte Carlo simulation results showed that the indirect effect of family-work conflict on reduced family investment through perceived work performance loss was significant (indirect effect = 0.04, 95% CI [0.002, 0.08]). Hypothesis 3 was supported.

Hypothesis 4 predicted that gender would moderate the relationship between family-work conflict and perceived work performance loss, such that the positive effect would be stronger for male employees than for female employees. As shown in Model 2 of Table 8, the "family-work conflict × gender" interaction term

significantly and positively affected perceived work performance loss ($b = 0.26$, $SE = 0.12$, $p = 0.034$). Simple slope analysis revealed that when employees were male, family-work conflict significantly affected perceived work performance loss ($b = 0.36$, $SE = 0.10$, $p < 0.001$); when employees were female, the effect was not significant ($b = 0.10$, $SE = 0.07$, $p = 0.13$). The difference between these slopes was significant ($b = 0.26$, $SE = 0.12$, $p = 0.034$). The simple moderating effect is illustrated in Figure 4 [Figure 4: see original paper]. Hypothesis 4 was supported.

Hypothesis 5 pred

Note: Figure translations are in progress. See original paper for figures.