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Work-Family Conflict and Counterproductive Behavior of Employees in Workplaces in China: Polynomial Regression and Response Surface Analysis*

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Abstract

This study investigates the complex mechanism of work-family conflict affecting counterproductive behavior of employees based on resource conservation theory and 417 valid samples by using polynomial regression and response surface analysis. Counterproductive work behavior refers to any intentional behavior of an individual that has potential harm to the legitimate interests of the organization or its stakeholders. Results show that first, work-to-family conflict (WFC) and family-to-work conflict (FWC) had four matching types. Compared with “high WFC-low FWC,” “low WFC-high FWC” and “low WFC-low FWC” matching conditions, the employee self-control resource depletion and counterproductive work behavior (CWB) are at their highest under “high WFC-high FWC” congruence matching condition. Second, the joint effect of WFC and FWC has a U-shaped relationship with counterproductive behavior. Compared with the “high WFC-low FWC” match state, the level of CWB in the “low WFC-high FWC” match state is higher. Third, the depletion of self-control resources played a mediating role in the effect of WFC on counterproductive behavior. Fourth, emotional intelligence moderated the relationship between the congruence of WFC and FWC and self-control resource depletion. Emotional intelligence was higher, and the positive relationship between the congruence of WFC and FWC and self-control resource depletion was weaker.

Keywords: WFC, Counterproductive Behavior, Self-Control Resource Depletion, Response Surface Analysis

JEL Classification Code: L22, M12, C83

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1. Introduction

CWB is a destructive behavior that harms organizations or people in the workplace (Barling et al., 2009). Behaviors of CWB include destroying company property, calling in sick when not ill, insulting another employee, and stealing from employers. In 2019, employees of the Sehanba in Chengde, Hebei, allowed tourists to tour the mountain during the closure for profit, seriously damaging the company’s image. In 2020, a core employee of the operation and maintenance department of the Micro Alliance “deleted valuable data and ran away”, which reduced the market value of the enterprise by nearly HK \$1 billion. CWB arises from a combination of factors. CWB has received considerable attention from organizational managers and related scholars in recent years. Stress from inter-role conflict is a significant reason for CWB (Spector & Fox, 2003). When employees are unable to manage the increased workload of their different roles,

they will feel more stress and seek ways to restore balance in their lives, thereby increasing their tendency to use CWB to reduce stress. With the upgrading of economic structure, many enterprises have begun to develop telecommuting and other more flexible working practices through information technology and digital platforms. Thus, the work boundary extends to the family. Concurrently, family structures change along with individual values, which increases work-family conflict (WFC) and employees' stress. Thus, this study examines the relationship between WFC and CWB and verifies the mechanisms of such behaviors to provide management implications for reducing CWB.

WFC is a form of inter-role conflict in which the demands of work and family roles are somewhat incompatible, making it difficult to participate in one role because of participation in the other role. WFC occurs when work demands prevent one to satisfy their family needs, such as long work hours, travel, and so on, thus disturbing family relations. Contrarily, FWC occurs when family responsibilities degrade work performance (Netemeyer et al., 1996), thus interrupting work. The imbalance between work and family roles can reduce work performance and organizational citizenship behavior (Nohe et al., 2014). WFC and FWC should be positively associated with job burnout, job tension, and job role ambiguity (Goff et al., 2010). Although most research has focused only on WFC, some studies showed that FWC also significantly impacts employees. In addition, a dynamic link exists between WFC and FWC. Therefore, this study considers WFC and FWC to explore the effect of their congruent or incongruent states on the dependent variable. We discuss how WFCs influence the psychology and behavior of employees through polynomial regression and response surface analysis.

Individuals' self-control behaviors, such as emotion regulation, distraction control, and habit-breaking, can consume their self-control resources (Baumeister, 2002). The conservation of resources (COR) theory is a stress theory that revolves around individuals' motivation to protect the available resources and acquire new resources (Hobfoll, 2001). Fundamentally, individuals only conserve and acquire the resources they value. Individuals will generate negative emotions when their resources are not available for them to cope with future tasks (Mulki et al., 2006). Therefore, when WFC occurs, employees must regulate their negative emotions, which can deplete their self-control resources. In addition, employees tend to increase their resources or resolve their negative emotions in other ways, which leads to counterproductive work behaviors (Bazzy & Woehr, 2017). From the perspective of COR theory, this study reveals the psychological mechanisms underlying the role of WFC in CWB. We also extend the study of self-controlled resource depletion to the field of organizational behavior.

Emotional intelligence is a set of skills that enable individuals to recognize and manage emotions (Mayer et al., 2008). When different individuals lose self-control resources, the extent of resource loss and the subsequent effect on individual behavior are different due to their distinct characteristics (Li et al., 2020). Individuals with high emotional intelligence have a stronger ability to regulate emotions, which can reduce the negative effects of negative emotions and reduce the loss of self-control resources. Some studies explained that the differences in employee behavior result from the perspective of emotional intelligence and explored the relationship between emotional intelligence and job satisfaction, job burnout, and job performance (Shi et al., 2015; Gong et al., 2019). Based on previous studies, this study introduces self-control resource depletion as a mediating variable and explores the influence of emotional intelligence on employees' organizational citizenship behavior from the perspective of the influence of emotional intelligence on individual self-control ability, thus developing research ideas of emotional intelligence.

Based on COR theory, this study discusses the relationship between the congruence or the incongruence of WFC and FWC, and CWB. The congruence of FWC and WFC refers to that the level of FWC and WFC are both high or both low within the same observation time ("low WFC-low FWC", "high WFC-high FWC"). The incongruence of FWC and WFC refers to the level of FWC and WFC being opposite within the same observation time ("high WFC-low FWC", "low WFC-high FWC"). This study introduces self-control resource depletion as a mediating variable and examines the process of WFC affecting counterproductive behavior. In addition, we consider the influence of individual emotional intelligence on this process. This study also verifies the adaptive regulatory role of individual characteristics in organizational situations.

2. Literature Review and Hypotheses

2.1. Work-Family Conflict and Counterproductive Work Behavior

WFC is a particular type of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respects (Major et al., 2002). WFC would cause a series of negative consequences (Zhang et al., 2020; Judge et al., 2006). If no effective ways exist to cope with WFC, employees' job satisfaction would be reduced, which might affect their passion for work (Houliort et al., 2017). Although most research has focused only on WFC, some studies showed that FWC also significantly impacts employees. Therefore, this study focuses on WFC and FWC and explores the relationship between four types of WFC matching conditions ("high WFC-high FWC,"

“low WFC-low FWC,” “high WFC-low FWC,” and “low WFC-high FWC”) and CWB.

As an extra-role behavior of employees, it is not related to job responsibilities and is influenced by individual psychological processes. COR theory states that individuals tend to protect limited resources or acquire new resources in other ways, such as CWBs. Therefore, if employees are faced with a high level of FWC, their own resources will suffer from double depletion and generate negative emotions, thus increasing CWB (Amstad et al., 2011). When the two-way conflict match is not congruent, work demands take up more of the employee’s resources, the individual has difficulty balancing family, and pressure from family causes work dissatisfaction, thereby leading to CWB. When WFC decreases and FWC increases and the two are matched again, employees will not experience substantial stress due to difficulties in meeting the excessive demands of either work or family; thus, the level of CWB decreases, and the negative effects of conflict are weakened. As the level of FWC increases further, family demands take up most of the employee’s resources, and the employee’s energy is insufficient; resultantly, the individual tends to exert minimal efforts to conserve and protect resources at work, which leads to difficulties in completing work tasks, high work stress, and CWBs.

2.2. Work-Family Conflict and Self-Control Resource Depletion

Self-control resources determine the level of self-control and influence the ability of behavior control. Based on the resource depletion model, self-control is regulated by unified resources. Individuals’ self-control behaviors, such as emotion regulation and avoiding temptation, can consume their self-control resources. Diminished resources might make people less effective at self-control behaviors, such as proactive self-regulation and avoiding temptation. Within a certain period, the temporary impairment of self-control ability will reduce certain behaviors that require self-control (Baumeister, 2002). Based on COR theory, individuals only tend to protect available resources and acquire new resources. When resources are depleted, individuals tend to protect limited resources or acquire new resources in other ways.

The essence of WFC is the failure to allocate resources appropriately. When the total amount of resources is determined, the resources occupied by one role increase, and the resources occupied by another role decrease accordingly (Shui et al., 2020). The conflict between different roles causes resource depletion. When WFC and FWC are high, the individual must deal with the two conflicts simultaneously. At this time, the individual has a very high level of resource loss, thus leading to an extremely high pressure, which generates negative emotions. To reduce the influence of

negative emotions and resist the negative behavior impulse brought by negative emotions, individuals will regulate their emotions on purpose. If no appropriate means exist to relieve emotions at this time, their self-control resources will be constantly consumed. Therefore, when WFC is “high WFC-high FWC” congruence, employees will be in a state of high self-control resource depletion. Contrarily, in the case of “low WFC-low FWC” congruence, employees have the lowest level of self-control resource depletion. When the conflict matching is inconsistent, the resources are only lost in one direction and thus the level of depletion is low. Thus, we propose the following hypotheses:

H1: Compared to the “high WFC -low FWC,” “low WFC-high FWC,” and “low WFC-low FWC” matches, in the “high WFC -high FWC” match condition, employees have the highest level of self-control resource depletion; when the matches of the WFC and FWC are not congruent, the joint effect of them is U-shaped in relation to CWB.

2.3. Mediating Effect of Self-Control Resource Depletion

People’s self-control resources would deplete by self-control, such as emotion regulation and distraction control. Moreover, the depletion of self-control resources results in reducing their subsequent self-control. A relationship exists between self-control and transgressive behavior (Tangney et al., 2010). People with poor self-control showed more impulse control problems, and they are easier to engage in CWB than people with high self-control. If employees’ WFCs are extremely serious, their self-control resources will be heavily depleted. On the one hand, this can lead to a decrease in individual self-control and may even lead to CWB. On the other hand, based on COR theory, when resources are heavily depleted, individuals tend to do something to protect limited resources. Therefore, when WFC depletes employees’ self-control resources, employees will tend to increase their resources or resolve their negative emotions in other ways, which leads to more CWBs. Thus, we propose the following hypotheses:

H2: Self-control resource depletion plays a mediating role in the effect of WFC on CWB.

2.4. Moderating Effect of Emotional Intelligence

Emotional intelligence is the ability to identify and regulate one’s own emotions, to recognize the emotions of other people and feel empathy toward them, and to use these abilities to communicate effectively and build healthy, productive relationships with others. People with high emotional intelligence are usually successful in most things

they do. They are characterized by having the ability to self-generate positive emotions (Miao et al., 2020). However, people with low emotional intelligence cannot control and harness their emotions well. They must channel negative emotions into positive results like solving problems or managing interpersonal conflicts. This process will reduce their self-control resources. Emotional influences on behavior are also moderated by individual characteristics (Kang & Furnham, 2016). Thus, individual characteristics moderate the effect of self-control resource depletion on employee work behavior (Dogra & Dani, 2019). Emotional intelligence is an important kind of individual characteristic. Generally, people with high emotional intelligence have a remarkable ability to control their emotions. Therefore, they can prevent, to some extent, the depletion of their self-control resources due to negative emotions caused by WFC's. This process reduces their tendency to engage in CWB. Contrastingly, if the employee's emotional intelligence level is not high, the negative emotions caused by WFC will be magnified, thus significantly increasing the employee's self-control resource depletion. Moreover, they may tend to increase their resources or resolve their negative emotions through CWBs. Thus, we propose the following hypotheses:

H3: Emotional intelligence moderates the relationship between work-family conflict and self-control resource depletion. When emotional intelligence increases, the positive relationship between work-family conflict and self-control resource depletion weakens.

H4: The mediating role of self-control resource depletion in the relationship between work-family conflict and CWB is moderated by emotional intelligence.

3. Research Method

3.1. Sample and Procedure

The data were obtained by distributing questionnaires online and offline. The data collection was mainly conducted from September to November 2020. The online questionnaire was made by the QR code and generated the filling link, and distributed through the questionnaire platform, social platform, and enterprise employee working group. The investigators, with the assistance of the department head, invited the employees to fill in the offline questionnaires on the spot. To ensure the participants' enthusiasm for answering, the feedback was obtained in exchange for a fee. Online, the respondents were offered cash-filled red envelopes ranging from 5 to 10 yuan through the Questionnaire Star platform, and offline, they were offered WeChat Red Packet or small gifts. In this study, 600 questionnaires were sent out to employees in enterprises in Beijing, Shandong, Shanghai, and other places.

A total of 528 questionnaires with a recovery rate of 88.0% were obtained. In total, 417 effective questionnaires with complete data were collected, which translated to a response rate of 79.0%. These 417 employees were non-managerial level employees with similar job positions across the different enterprises in the study sample. (193 men and 224 women, i.e., 46.3% and 53.6%, respectively). Among them, there were 65 people with a junior college degree or below, accounting for 15.5%; 326 people with a bachelor's degree, accounting for 78.2%; 26 people with a master's degree, accounting for 6.3%. There are 8 people under 25 years old, accounting for 1.9%; 299 people between 25 and 35 years old, accounting for 71.6%; 83 people between 36 and 45 years old, accounting for 19.9%; and 27 people over 46 years old, accounting for 6.6%.

3.2. Measures

In this study, the maturity scale was used to rate the items using the 5-point Likert scale: 1 strongly disagree, and 5 strongly agree. Items were rated on the 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Work-family conflict: It was divided into work-to-family conflict (WFC) and family-to-work conflict (FWC) (Netemeyer et al., 1996). WFC was measured with 5 items (e.g., "My work needs conflict with family life"). The Cronbach's α for this scale was 0.84. FWC was measured with 5 items (e.g., "My family or partner needs conflict with work-related activities"). The Cronbach's α for this scale was 0.88. The average of all 10 items showed high reliability (Cronbach's $\alpha = 0.89$).

Self-control resource depletion: The 5-item scale used in the literature (Johnson et al., 2014) was used to measure self-control resource depletion. For example, "I feel my willpower has disappeared", "I can't concentrate now". The average of all 5 items showed high reliability (Cronbach's $\alpha = 0.95$).

Emotional intelligence: The scale developed by Law et al. (2002) was adopted to measure emotional intelligence, which includes 16 items. One example is "I can control my emotions well". The average of all 16 items showed high reliability (Cronbach's $\alpha = 0.94$).

Counterproductive work behavior (CWB): The scale developed by Dalal et al. (2009) was adopted to measure the CWB, which includes 5 items. An example item is "I didn't work as hard as I could." The average of all 5 items showed high reliability (Cronbach's $\alpha = 0.92$).

4. Results

4.1. Descriptive Statistics and Correlations

Table 1 shows the results of the variable correlation analysis. WFC and FWC are positively associated with

Table 1: Means, Standard Deviations, and Correlations Among the Studied Variables

Variables	1	2	3	4	5
1. WFC	0.81				
2. FWC	0.699**	0.767			
3. EI	-0.187*	-0.216**	0.657		
4. CRD	0.613**	0.605**	-0.361**	0.766	
5. CWB	0.492**	0.573**	-0.318**	0.653**	0.777

Note: * p -value < 0.05; ** p -value < 0.001. WFC: Work-family conflict; FWC: Family-work conflict; EI: Emotional Intelligence; CRD: self-control resource depletion; OCB: Organizational Citizenship Behavior.

Table 2: Confirmatory Factor Analysis Results ($n = 417$)

Model	Factors	χ^2	df	χ^2/df	RMSEA	IFI	TLI	CFI
One-factor	WFC + FWC + EI + SRD + CWB	1967.843	347	5.671	0.106	0.667	0.635	0.665
Two-factor	WFC + FWC + EI + SRD; CWB	1882.398	346	5.440	0.103	0.685	0.653	0.683
Three-factor	WFC + FWC + EI; SRD; CWB	1698.296	344	4.937	0.097	0.722	0.693	0.720
Four-factor	WFC + FWC; EI; SRD; CWB	839.135	341	2.461	0.059	0.898	0.886	0.897
Five-factor	WFC; FWC; EI; SRD; CWB	760.734	337	2.257	0.055	0.913	0.902	0.913
Six-factor	Five-factor + CMV	789.133	337	2.342	0.057	0.907	0.895	0.907

CWB ($r = 0.492, p < 0.01; r = 0.573, p < 0.01$). WFC and FWC are positively associated with self-control resource depletion ($r = 0.613, p < 0.01; r = 0.605, p < 0.01$). Self-control resource depletion is positively associated with CWB ($r = 0.653, p < 0.01$). The variable had content validity.

4.2. Confirmatory Factor Analysis

Amos 22.0 structural equation was used to test the construct discriminant validity, and the fitting degree of the five models was compared. As shown in Table 2, the fitting degree of the five-factor model is better than that of the other four models ($\chi^2 = 760.734, df = 337, \chi^2/df = 2.257, p < 0.001, RMSEA = 0.055, CFI = 0.913, TLI = 0.902, IFI = 0.913$), which preliminarily indicates that these five latent variables have certain discriminative validity.

Harman Single-factor test method was used to test the common method bias among variables. The maximum factor explained 20.88% of the total variation, which was less than 50%, indicating that the common method bias of data was within the acceptable range. The reflexive loads of the five variables were assigned to the same common latent factor (CMV) (Podsakoff et al., 2003; Allen et al., 2020), and the structural equation model (Cheung & Rensvold, 2002) was constructed and compared with the five-factor model, and the fitting index of the five-factor model was higher than that of the six-factor model, and: $\Delta IFI = -0.006, \Delta CFI =$

-0.006 , and $\Delta RMSEA = 0.002$, the changes of indexes were all less than 0.020. Based on the above judgment, the effect of common method bias was not significant in this study.

4.3. Hypothesis Testing

The analysis method of polynomial regression and response surface analysis was used to test the hypothesis (Jiang et al., 2021a, 2021b; Jiang et al., 2022). The regression model is as follows:

$$OCB = b_0 + b_1WFC + b_2FWC + b_3WFC^2 + b_4WFC \times FWC + b_5FWC^2 + \varepsilon \quad (1)$$

$$CWB = b_0 + b_1WFC + b_2FWC + b_3WFC^2 + b_4WFC \times FWC + b_5FWC^2 + \varepsilon \quad (2)$$

The results in Table 3 show that the slope of the surface along the line of congruence (WFC = FWC) is significantly larger than 0 (CRD-Slope1 = 0.542, $p < 0.001$ CWB-Slope1 = 0.428, $p < 0.001$). This indicates that compared with the “low WFC-low FWC” match for WFC, in the “high WFC-high FWC” match condition, employees have a higher level of self-control resource depletion and CWB. Thus, H1 is supported. The regression results of Model 3 show that WFC and FWC are positively associated with CWB ($b_1 = 0.129,$

$p < 0.01$; $b_2 = 0.353, p < 0.001$). Combined with the response surface results, the level of self-control resource depletion in the back corner is higher than that in the left corner, the right corner, and the front corner. Thus, H1 is supported. Curvature is a quantity describing the degree of curvature of the surface, that is, the degree to which the surface of the response surface deviates from the plane, which also reflects the significance of the polynomial term. And the curvature is obtained by calculation. The curvature of the surface along the line of congruence (WFC = FWC) is significantly larger than 0 (Curvature¹ = 0.156, $p < 0.05$; Curvature² = 0.120, $p < 0.05$). Thus, when the matches of the WFC and FWC are not congruent, their joint effect of them is U-shaped in relation to CWB. WFC and FWC were divided into two groups, with 27% as the boundary (Table 4). According to

the ranking of the mean value from high to low, the level of CWB, low WFC-high FWC > high WFC-low FWC. Thus, H1 is supported.

To verify the mediating effect of self-control resource depletion, this paper follows the calculation method of block variables proposed by Edwards and Cable (2009). This is a test method for the mediation effect. The confidence interval is given by using the structural equation model in SPSS and Bootstrap analysis. The mediation effect is significant if the confidence interval does not contain 0. Results are shown in Table 5. The 95% confidence interval does not include 0; the mediating effect is significant. Thus, self-control resource depletion has a mediating effect in the process of the impact of WFC on CWB. Thus, H3 is supported.

Table 3: Polynomial Regression and Response Surface Analysis Results

Variables	CRD		CWB		
	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	3.043***	2.643***	2.313***	2.196***	1.055***
Gender	-0.045	-0.041	-0.159*	-0.183**	-0.166**
Age	-0.077	-0.031	-0.023	-0.023	-0.009
Edu	-0.238**	-0.134*	0.001	0.013	0.071
WFC, b1	2.710***	0.302***	0.129**	0.118**	-0.012
FWC, b2	-0.024	0.240***	0.353***	0.310***	0.206***
WFC2, b3		-0.022		0.013	0.023
WFC × FWC, b4		0.001		-0.016	-0.016
FWC2, b5		0.097**		0.127**	0.085*
CRD					0.431***
Slope1: b1+b2		0.542***		0.428***	0.194**
Curvature1:b3+b4+b5		0.076		0.124	0.092
Slope2:b1-b2		0.062		-0.192**	-0.218***
Curvature2:b3-b4+b5		0.074		0.156*	0.124
ΔR^2	0.439***	0.451***	0.347***	0.379***	0.492***
F	66.163	43.801	45.191	32.713	45.784

Note: * p -value < 0.1; ** p -value < 0.05; *** p -value < 0.001. WFC: Work-family conflict; FWC: Family-work conflict; EI: Emotional Intelligence; CRD: self-control resource depletion; OCB: Organizational Citizenship Behavior.

Table 4: Analysis of the Interaction Effect of WFC and FWC ($n = 307$)

Variable	Matching Condition	M	SD	95% Confidence Interval		Compare
				Lower Limit	Upper Limit	
CWB	high WFC-low FWC	1.840	0.154	1.538	2.142	high WFC-low FWC < low WFC-high FWC
	low WFC-high FWC	2.290	0.181	1.933	2.646	

Table 5: Analysis of the Mediating Effect of Self-control Resource Depletion

Variable	Effect	Value	Beta	95% Confidence Interval	
				Lower Limit	Upper Limit
CWB	a	0.533	0.075	0.385	0.681
	b	0.464	0.065	0.337	0.590
	c	0.997	0.063	0.873	1.120

Note a the direct effect; b, the indirect effect; c, the total effect.

Table 6: Analysis of the Moderating Effect of Emotional Intelligence

Variables	CRD			
	Low EI		High EI	
	β	Se	β	se
Constant	2.062***	0.381	1.462***	0.298
Gender	-0.008	0.104	0.044	0.08
Age	-0.021	0.082	-0.003	0.066
Edu	0.004	0.114	0.119	0.087
WFC, b1	0.128	0.076	0.086	0.059
FWC, b2	0.316***	0.078	0.291***	0.061
WFC2, b3	0.017	0.065	-0.019	0.056
WFC × FWC, b4	-0.053	0.07	0.134	0.084
FWC2, b5	0.153*	0.061	0.047	0.055
CRD				
Slope1: b1 + b2	0.444***		0.377***	
Curvature1: b3 + b4 + b5	0.117		0.162	
Slope2: b1 – b2	-0.188		-0.205*	
Curvature2: b3-b4+b5	0.223*		-0.106	
ΔR^2	0.277***		0.445***	
F	9.675***		21.677***	

Note: * p -value < 0.1; ** p -value < 0.05; *** p -value < 0.001.

To test the moderating effect of emotional intelligence, all samples were divided into high and low groups by median. Then, Zou's Test was used to test whether the polynomial coefficients were significantly different between the two groups of emotional intelligence. The regression results in Table 6 show that the regression coefficients of the

primary item in the low group are higher than those in the high group (low group, $b_1 = 0.128$, $b_2 = 0.316$; high group, $b_1 = 0.086$, $b_2 = 0.291$), the slope of the congruence line of the low emotional intelligence group was higher than that of the high emotional intelligence group ($b_1 = 0.444$, $p < 0.001$; $b_1 = 0.377$, $p < 0.001$). That is, high emotional intelligence weakens the relationship between WFC, FWC, congruence, and self-control depletion. Thus, H4 and H6 are supported.

5. Discussion and Implications

5.1. Theoretical Implications

The first contribution of the present study is that this paper comprehensively considers four conditions of the WFC and FWC matching and discusses the joint effects of these two kinds of conflict on CWB. Reviewing the existing studies, scholars mostly explore the negative or positive effects of WFC from the perspective of role theory and boundary theory (Edwards & Rothbard, 2000), but pay little attention to the joint effects of FWC and WFC. This paper reveals the joint effect of WFC and FWC, which enables us to deeply understand and explore the relationship between work-family conflict and CWB. On the other hand, although FWC can affect individual attitudes, behaviours, and motives (Junker et al., 2020), it is unclear whether it can affect CWB by matching with WFC. Therefore, this study uses quadratic polynomial and response surface analysis technology to more comprehensively and deeply explore the joint effect of WFC and FWC, which not only reveals the effects of WFC on employees' CWB but also makes a beneficial supplement and expansion to the research on the relationship between FWC and CWB.

Secondly, this study reveals the mediating effect of self-control resource loss and the moderating effect of emotional intelligence. Most of the existing studies focus on emotional variables when exploring the mediating mechanism between WFC and CWB. The discussion on the role of individual resource loss is very limited, which makes us unable to fully and deeply understand the mechanism of WFC affecting CWB. The traditional role theory or boundary theory tends to believe that the role pressures in the work field and family field are inconsistent in some aspects, which leads to psychological distress and employees' negative work performance. However, WFC will lead to the loss of employees' self-control resources, which are often ignored. This study considers that the cognitive level of self-control resource depletion is related to the level of individual emotional intelligence. Different people would have different psychological states under the same pressure. Therefore, this study integrates employees' self-control resource depletion, and emotional intelligence into the same framework and takes "resource loss" as the starting point to

prove their role in the formation of CWB, which not only deepens the research on the antecedents of CWB but also expands the research on the intermediary mechanism of CWB caused by WFC.

Finally, this study introduces COR theory into the research field of work-family conflict, deepens the explanatory power of COR theory in the field of work-family research, and enriches the theoretical achievements of COR theory. Some scholars have gradually realized that work-family conflict is one of the main stressors of employees, which will affect employees' behavior in the workplace. At the same time, existing studies have also found that WFC can lead to employees' self-resource loss, but most of these studies ignore the impact of FWC on self-resource loss. To make up for the above deficiencies, based on the COR theory, this paper explores the effects of the complex matching of WFC and FWC on self-control resource depletion. Through this research, this paper expands the application scope of COR theory from a single WFC mode to the WFC and FWC matching mode, which can verify and enrich the explanatory power or application scope of COR theory.

5.2. Practical Implications

First, the perspective of CWB control should not be limited to the internal organization but also pay attention to the relationship between work and family, regard work and family as a whole rather than an isolated area, and adopt comprehensive policies. WFC and FWC are not independent and indivisible. From the perspective of COR theory, when personal resources are lost due to completing the work task, individuals must spend more resources (including time and energy) on work, which will reduce their pay to their families, so WFC occurs. At the same time, work pressure will also spill over to the family and affect family role-playing and family relationship processing, which in turn may affect work status, which leads to FWC. Therefore, it is necessary for organizations to shape a culture that supports work-family balance and encourage leaders to play a role in supporting family life.

Second, reducing work and family conflicts is not just a personal responsibility. Organizations should also provide multiple resources to help employees balance work and family life. On the one hand, organizations should select appropriate resources to maximize benefits and help employees alleviate family-work conflicts, to reduce the loss of employees' self-control resources such as the implementation of flexible working hours, childcare assistance, working from home, and other formal system support to meet the needs of employees. On the other hand, we should also pay attention to informal work resources, such as guiding managers to support employees' family life. Although the support from managers is an invisible and informal work resource, it is

sometimes more effective than the formal welfare system arrangement.

Third, we should pay attention to individual emotional intelligence during recruitment. This study confirmed the moderating role of emotional intelligence in the process of WFC affecting employees' work behavior through self-control resource depletion. On the one hand, employees with high emotional intelligence have higher job adaptability and are easy to produce higher performance. On the other hand, employees with high emotional intelligence can reduce the consumption of personal resources when employees are facing pressure or negative emotions, generate more positive feedback on work behavior, have the opportunity to participate in organizational citizenship behavior, and reduce the counterproductive work behavior tendency (Jiang et al., 2022).

6. Conclusion and Limitations

Based on the COR theory, this paper discusses the joint effects of WFC and FWC on CWB. The results show that: First, WFC has four types of matching conditions. ("high WFC-high FWC", "low WFC-low FWC", "high WFC-low FWC", and "low WFC-high FWC") Compared with the "high WFC-low FWC", "low WFC-high FWC" and "low WFC-low FWC" matches for WFC, in the "high WFC-high FWC" match condition, employees have the highest level of CWB. Second, when the matches of the WFC and FWC are not congruent, the joint effect of them is U-shaped in relation to CWB. Compared with the "high WFC-low FWC" match for WFC, in the "high WFC-high FWC" match condition, employees have a higher level of CWB. Third, self-control resource depletion plays a mediating role in the effect of WFC on CWB. Fourth, emotional intelligence moderated the relationship between the congruence of WFC and FWC and self-control resource depletion. When emotional intelligence increases, the positive relationship between the congruence of WFC and FWC and self-control resource depletion weakens.

Despite its contributions, this study holds some limitations. First, the measures were all self-reported, which raises the possibility of common method bias. Future research can consider the combination of employees' self-evaluation and others' evaluation for data collection. Second, there exist multiple pathways influencing the mechanism of WFC on CWB. This study only considers the path of self-control resource depletion. Other mediating mechanisms, such as emotional balance and work attitude, can be explored in combination with relevant theories in the future. Finally, this study only takes into account the moderating effect of emotional intelligence of employees from the perspective of individual characteristics, and future research can try to replicate the present findings in the context of teams. Finally,

the limitations of the study sample. Although the sample of this study comes from different enterprises in multiple regions and industries, it ensures the external validity of the research results to a certain extent. However, this study does not consider the position difference, and future research can explore the difference between managers and non-managerial level employees.

References

- Allen, T. D., French, K. A., Dumani, S., & Shockley, K. M. (2020). A cross-national meta-analytic examination of predictors and outcomes associated with work-family conflict. *Journal of Applied Psychology, 105*(6), 539–576. <https://doi.org/10.1037/apl0000442>
- Amstad, F. T., Meier, L. L., Fasel, U., Elfering, A., & Semmer, N. K. (2011). A meta-analysis of work-family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *Journal of Occupational Health Psychology, 16*(2), 151–169. <https://doi.org/10.1037/a0022170>
- Barling, J. D., Dupré, K. E., & Kelloway, E. K. (2009). Predicting workplace aggression and violence. *Annual Review of Psychology, 60*(1), 671–692. <https://doi.org/10.1146/annurev.psych.60.110707.163629>
- Baumeister, R. F. (2002). Ego depletion and self-control failure: An energy model of the self's executive function. *Self and Identity, 1*(2), 129–136. <https://doi.org/10.1080/152988602317319302>
- Bazzy, J. D., & Woehr, D. J. (2017). Integrity, ego depletion, and the interactive impact on counterproductive behavior. *Personality and Individual Differences, 105*(10), 124–128. <https://doi.org/10.1016/j.paid.2016.09.037>
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 9*(2), 233–255. https://doi.org/10.1207/S15328007SEM0902_5
- Dalal, R., Lam, H., Weiss, H. M., Welch, E. R., & Hulin, C. L. (2009). A within-person approach to work behavior and performance: Concurrent and lagged citizenship-counterproductivity associations, and dynamic relationships with effect and overall job performance. *Academy of Management Journal, 52*(5), 1051–1066. <https://doi.org/10.5465/AMJ.2009.44636148>
- Dogra, H., & Dani, K. G. S. (2019). Defining features of age: Specific fertility and seed quality in senescing indeterminate annuals. *American Journal of Botany, 106*(4), 604–610. <https://doi.org/10.1002/ajb2.1265>
- Edwards, J. R., & Cable, D. M. (2009). The value of value congruence. *Journal of Applied Psychology, 94*(3), 654–677. <https://doi.org/10.1037/a0014891>
- Edwards, J. R., & Rothbard, N. P. (2000). Mechanisms linking work and family: Clarifying the relationship between work and family constructs. *Academy of Management Review, 25*(1), 178–199. <https://doi.org/10.5465/amr.2000.2791609>
- Goff, S. J., Mount, M. K., & Jamison, R. L. (1990). Employer supported child care, work-family conflict, and absenteeism: A field study. *Personnel Psychology, 43*(4), 793–809. <https://doi.org/10.1111/j.1744-6570.1990.tb00683.x>
- Gong, Z., Chen, Y., & Wang, Y. (2019). The influence of emotional intelligence on job burnout and job performance: Mediating effect of psychological capital. *Frontiers in Psychology, 10*, 2707. <https://doi.org/10.3389/fpsyg.2019.02707>
- Hobfoll, S. E. (2001). Conservation of resources: A rejoinder to the commentaries. *Applied Psychology, 50*(3), 419–421. <https://doi.org/10.1111/1464-0597.00064>
- Houliort, N., Philippe, F. L., Bourdeau, S., & Leduc, C. (2017). A comprehensive understanding of the relationships between passion for work and work-family conflict and the consequences for psychological distress. *International Journal of Stress Management, 25*(4), 313–329. <https://doi.org/10.1037/str0000068>
- Jiang, D. K., Liu, T., Chen, Z., Zhang, X. Y., Wang, S., Huang, T. C., & Ning, L. (2021a). The effects of congruence between person and environment on innovation performance in ports. *Frontiers in Psychology, 12*, 732660. <https://doi.org/10.3389/fpsyg.2021.732660>
- Jiang, D. K., Chen, Q., & Liu, T. (2022). The effects of congruence between work-to-family conflict on organizational citizenship behavior: An empirical study in China. *Journal of Asian Finance, Economics, and Business, 9*(4), 345–355. <https://doi.org/10.13106/jafeb.2022.vol9.no4.0345>
- Jiang, D. K., Chen, Z., Liu, T., Zhu, H. H., Wang, S., & Chen, Q. (2021b). Individual creativity in digital transformation enterprises: Knowledge and ability, which is more important? *Frontiers in Psychology, 12*, 734941. <https://doi.org/10.3389/fpsyg.2021.734941>
- Johnson, R. E., Lanaj, K., & Barnes, C. M. (2014). The good and bad of being fair: Effects of procedural and interpersonal justice behaviors on regulatory resources. *Journal of Applied Psychology, 99*(4), 635–650. <https://doi.org/10.1037/a0035647>
- Judge, T. A., Scott, B. A., & Ilies, R. (2006). Hostility, job attitudes, and workplace deviance: Test of a multilevel model. *Journal of Applied Psychology, 91*(1), 126–138. <https://doi.org/10.1037/0021-9010.91.1.126>
- Junker, N. M., Baumeister, R. F., Straub, K., & Greenhaus, J. H. (2021). When forgetting what happened at work matters: The role of affective rumination, problem-solving pondering, and self-control in work-family conflict and enrichment. *Journal of Applied Psychology, 106*(11), 1750–1766. <https://doi.org/10.1037/apl0000847>
- Kang, W., & Furnham, A. (2016). Gender and personality differences in the self-estimated intelligence of Koreans. *Psychology, 07*(8), 1043–1052. <https://doi.org/10.4236/psych.2016.78105>
- Law, M. Y., To, K. Y., Ho, S. H., Pang, B. C. M., Wong, L. M., Wun, H. L., Yau, S. K., Chan, K., & L. (2002). STR data for the PowerPlex 16 loci for the Chinese population in Hong Kong.

- Forensic Science International*, 129(1), 64–67. [https://doi.org/10.1016/S0379-0738\(02\)00169-X](https://doi.org/10.1016/S0379-0738(02)00169-X)
- Li, Z., He, B., Sun, X., & Zhang, Y. (2020). Demonstrating the psychological aspects of stressors and abusive supervision behavior: Attainment of sustainability under the rubric of resources theory. *Frontiers in Psychology*, 11, 293. <https://doi.org/10.3389/fpsyg.2020.00293>
- Major, V. S., Klein, K. J., & Ehrhart, M. G. (2002). Work time, work interference with family, and psychological distress. *Journal of Applied Psychology*, 87(3), 427–436. <https://doi.org/10.1037/0021-9010.87.3.427>
- Mayer, J. D., Roberts, R. D., & Barsade, S. G. (2008). Human abilities: Emotional intelligence. *Annual Review of Psychology*, 59(1), 507–536. <https://doi.org/10.1146/annurev.psych.59.103006.093646>
- Miao, C., Humphrey, R. H., & Qian, S. (2020). The cross-cultural moderators of the influence of emotional intelligence on organizational citizenship behavior and counterproductive work behavior. *Human Resource Development Quarterly*, 31(2), 213–233. <https://doi.org/10.1002/hrdq.21385>
- Mulki, J. P., Jaramillo, F., & Locander, W. B. (2006). Effects of ethical climate and supervisory trust on salesperson's job attitudes and intentions to quit. *Journal of Personal Selling and Sales Management*, 26(1), 19–26. <https://doi.org/10.2753/PSS0885-3134260102>
- Netemeyer, R. G., Boles, J. S., & Mcmurrian, R. (1996). Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology*, 81(4), 400–410. <https://doi.org/10.1037/0021-9010.81.4.400>
- Nohe, C., Michel, A., & Sonntag, K. (2014). Family–work conflict and job performance: A diary study of boundary conditions and mechanisms. *Journal of Organizational Behavior*, 35(3), 339–357. <https://doi.org/10.1002/job.1878>
- Podsakoff, P. M., Mackenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Shi, M., Yan, X., You, X., & Li, J. (2015). Core self-evaluations, emotional intelligence, and job satisfaction in Chinese soldiers. *Social Indicators Research*, 124(1), 221–229. <https://doi.org/10.1007/s11205-014-0784-6>
- Shui, Y., Xu, D., Liu, Y., & Liu, S. (2020). Work-family balance and the subjective well-being of rural women in Sichuan, China. *BMC Women's Health*, 20(1), 1. <https://doi.org/10.1186/s12905-019-0871-6>
- Spector, P. E., & Fox, S. (2002). An emotion-centered model of voluntary work behavior. *Human Resource Management Review*, 12(2), 269–292. [https://doi.org/10.1016/S1053-4822\(02\)00049-9](https://doi.org/10.1016/S1053-4822(02)00049-9)
- Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality*, 72(2), 271–324. <https://doi.org/10.1111/j.0022-3506.2004.00263.x>
- Zhang, Y., Rasheed, M. I., & Luqman, A. (2020). Work-family conflict and turnover intentions among Chinese nurses: The combined role of job and life satisfaction and perceived supervisor support. *Personnel Review*, 49(5), 1140–1156. <https://doi.org/10.1108/PR-01-2019-0017>