

The Moderating Effect of Work-Family Conflict on the Attitudinal Factors and Organizational Citizenship Behavior Relationship

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Abstract

Work–family conflict (WFC) represents the incompatibility between roles at work and at home. This study empirically examined the effects of WFC on organizational citizenship behavior (OCB). While previous studies have found a negative effect of WFC on OCB, this study revealed that WFC has a moderating effect on the relationship between attitudinal factors and OCB. An empirical study using data collected from 416 workers in Japan revealed that WFC moderated the relationship between job satisfaction or organizational commitment and OCB such that the positive effect of these attitudinal factors on OCB was more substantial when WFC was low than when it was high. Furthermore, of the two dimensions of WFC, this study also found that work interference with family (WIF) had a similar moderating effect on WFC, while family interference with work (FIW) did not. Implications for future studies are also discussed.

Keywords: organizational citizenship behavior, work–family conflict, work interference with family, family interference with work, job satisfaction, organizational commitment

Introduction: The Concept of Work-Family Conflict

The importance of work-life balance should always be emphasized in modern society. It is crucial to theoretically and empirically investigate the effect of work-family conflict (WFC) on individuals and the entire organization in which they work. This study empirically examined the effect of WFC on organizational citizenship behavior (OCB). Before considering the effect of WFC, we discuss what WFC is and how it has been treated by OCB researchers.

WFC is an incompatibility between working individuals' roles at work and those at home. Incompatibility between two roles might result even when one role contradicts the other role ethically or philosophically, as when individuals work at a cigarette company when they have a family member with lung problems. However, in most cases,

incompatibility between two roles is based on a situation in which one role is not sufficiently filled owing to the heavy burden of the other.

WFC is comprised of work-to-family conflict (WtFC) or work interference with family life (WIF) and family-to-work conflict (FtWC) or family interference with work life (FIW) (Bragger, Rodriguez-Srednicki, Kutcher, Indovino, & Rosner, 2005; Chernyak-Hai & Tziner, 2016; Frye & Breagha, 2004). An exemplary case of WIF is when individuals experience difficulty performing household tasks because of excessive overtime work at their workplace. On the other hand, individuals face FIW if they need help to focus on work because of the burden of household tasks, such as childcare.

Many researchers have emphasized that WFC comprises these two different kinds of conflicts. For example, Hammer, Bauer, and Grandy (2003) argued that “(w)ork-family conflict has been conceptualized as a two-dimensional construct where work interferes with family (work-to-family conflict) and family interferes with work (family-to-work conflict)” (p. 420). Kalliath, Kalliath, and Chan (2015) also found that “researchers have recognised the bi-directional nature of conflict and argue that conflict can occur in both directions from work-to-family and from family-to-work” (p. 2,388). Further, Jansen, Kant, Kristensen, and Nijhuis (2003) also note that “conflict between work and family is reciprocal in nature in that work can interfere with family and family can interfere with work” (p. 479).

Although WFC, in the broader sense, includes heavy work and family role burdens, some researchers use WFC to describe role conflict because of the heavy burden of the work role; they also use family-work conflict (FWC) to represent a heavy burden of family role. This study uses the terms WIF and FIW to represent two kinds of conflicts and WFC in the broader sense, which includes these conflicts to avoid confusion due to differences in terminology, except for citing other researchers. We also use the term “WFC-related variables” to represent all three conflict factors in this study.

There is no consensus among researchers regarding the relationship among WIF and FIW and other variables. Some researchers have shown that WIF and FIW have similar effects on other variables. Other researchers have found that the effects of these two factors on other variables differ. For example, Kalliath et al. (2015) considered the effects of three aspects (time, behavior, and strain) of WIF and FIW on psychological strain. They entered these six aspects (three aspects by two conflicts) into regressions with psychological strain as the dependent variable, although they had a significantly

positive correlation with each other. However, their empirical analyses showed that both WIF and FIW strains had a positive impact on psychological strain. Thus, WIF and FIW had similar effects on psychological strain, based on this empirical result.

Similarly, Ng, Sorensen, Zhang, and Yim (2019) determined, through their meta-analytic technique, that WIF and FIW had similar signed correlations with anger, anxiety, depression, and others. Further, although Michel, Kotrba, Mitchelson, Clark, and Baltes (2011) tried to reveal that work-related factors become a cause of WIF and family-related factors enhance FIW, they empirically found that both factors eventually affected both types of conflict, which meant that WIF and FIW similarly received the effect of other factors. The similar relationships of these two conflicts with other variables are considered to be one of the reasons why the scale of WFC comprising those of WIF and FIW is sometimes desired (Bragger et al., 2005; Chernyak-Hai & Tziner, 2016).

On the other hand, although Baral (2016) considered WFC as a combination of WIF and FIW, she treated them as distinctive variables affecting attitudinal factors differently. Similarly, Boles, Howard, and Donofrio (2001) also showed that the effects of WFC and FWC on various kinds of job satisfaction are different despite a significant positive correlation between them.

Even if it is true that WIF and FIW are conceptually different, individuals' thoughts regarding which one, WIF or FIW, happens to strongly depend not on objective measures but on their subjective ideas about work-life balance. For example, suppose individuals assign their entire time to work and family chores at 6:4. If they consider the ideal ratio of work and family chores to be 5:5, they might feel a high WIF. On the other hand, if they regard 7:3 as an ideal position for work and family chores, they might consider that they are facing high FIW.

Furthermore, individuals without consideration of such an ideal position of work and family chores might feel WIF and FIW simultaneously, depending on their working conditions. When they feel busy, they do not consider whether WIF or FIW occurs. However, they often need more time and energy to fulfill their work and family obligations. This is why many empirical studies have found a positive correlation between WIF and FIW (e.g., Beham, 2011; Boles, Howard, & Donofrio, 2001; Cloninger, Selvarajan, Singh, & Huang, 2015; Li, Butler, & Bagger, 2017).

Individuals may only sometimes be burdened by work or family chores. If busy

workers suddenly have the additional burden of work, they cannot do family chores; at least temporarily, they might feel some WIF. In contrast, unexpected family chores might make them feel FIW. Workers might feel WIF or FIW depending on how they divide their time between work and family chores and what they consider about their ideal work–life balance. This point should be noted if WIF and FIW are analyzed separately. Moreover, depending on the research objective, it is often easier to use a WFC scale to represent the degree of incompatibility of these roles at worksites and families than the WIF and FIW scales.

The Effect of WFC on OCB

Some researchers have focused on the effect of WFC on OCB. However, their arguments and empirical results have not been consistent. For example, Bragger et al. (2005) considered WFC as comprising WIF and FIW, and Table 4 shows that WFC, WIF, and FIW consistently had a negative impact on OCB in their regressions.

On the other hand, some researchers have found that WIF and FIW have different effects on OCB. For example, Beham (2011) examined whether WIF and FIW affected organizational citizenship behavior for the individuals (OCBI), organizational citizenship behavior for the organization (OCBO), and organizational citizenship behavior for task (OCBT). He found that FIW had a significantly negative impact on OCBI and OCBT. In contrast, WIF had no impact on any OCB measure, although the correlation between WIF and FIW was significantly positive ($\gamma = 0.40$). However, he found a significantly negative effect of WIF on OCBO using only the female sample.

Further, some researchers, such as Dennis Organ and his co-researchers, have focused on a different aspect of OCB, presupposing OCB as a kind of voluntary behavior of employees in the organization. For example, Bolino, Turnley, Gilstrap, and Suazo (2010) found that workers often perform OCB under informal pressure rather than voluntarily. They also assumed that compulsorily performing OCB would be one of the causes of WFC. Their empirical study produced the result of a positive relationship between WFC and OCB, implying that OCB had a positive impact on WFC. Similarly, Liu, Zhao, and Sheard (2017) assumed citizenship pressure would increase compulsory citizenship behavior (CCB), which in turn enhances WFC in a narrow sense, or WIF.

Main and Moderating Effect of WFC

When an individual with high WFC is loaded with work and family chores, it is easily imagined that they will not have enough time and energy to perform an extra-job behavior like OCB voluntarily. In principle, WFC has a negative effect on OCB.

However, WIF and FIW might have different relationships with OCB. As described by Bolino et al. (2010), there is the possibility that OCB is one of the causes of WFC. In particular, because OCB is performed like a formal job when it becomes a cause of WFC, it is considered to have a strong positive effect on WIF but not FIW. The results of the empirical study show that WIF has a weaker impact on OCB than FIW does. In this regard, it is important to consider not only the impact of WFC but also that of WIF and FIW on OCB.

Furthermore, this study also focuses on the moderating role of WFC in the relationship between attitudinal factors and OCB. OCB is an individual's voluntary behavior in the organization, and many individual factors have been considered by researchers as antecedents of OCB. In particular, job satisfaction and organizational commitment are known to be representative antecedents of OCB. Previous studies have consistently found that job satisfaction and organizational commitment positively affect OCB (Organ, 1988; Organ, Podsakoff, & MacKenzie, 2006). However, the effects of these attitudinal factors on OCB might differ depending on other individual factors.

As described above, WFC enhances role stress (Bergs, Hoofs, Kant, Slangen, & Jansen, 2018) and has a negative impact on job satisfaction and organizational commitment. However, while some researchers found a similar relationship (Baral, 2016; Martin, Eddleston, & Veiga, 2002), some other researchers revealed no significant correlation between WFC and organizational commitment (Gillet, Fouquereau, Huyghebaert, & Vandenberghe, 2016) or found a positive relationship between them (Memili, Zellweger, & Fang, 2013).

WFC is reflected in busy individuals who cannot do something they want to do. Individuals with high job satisfaction or organizational commitment can perform OCB only when they have enough leeway to perform discretionary behaviors. Even highly satisfied individuals with their job or organization might not be able to perform more OCB if they have no room to do it. Therefore, in addition to the assumption that WFC will have a negative impact on OCB, it will also have a moderating role in the positive effect of job satisfaction and organizational commitment on OCB. Specifically, in a

strong WFC situation, OCB will not be strongly affected by job satisfaction and organizational commitment because individuals are not considered to have room to perform OCB. In contrast, when WFC is weak, individuals can use their discretionary time and energy according to their contributive motive toward the organization. The positive impact of these attitudinal factors on OCB is considered strong. Thus, the following hypotheses are proposed:

H1: WFC will have a negative impact on OCB.

H2: WFC moderates the positive effect of job satisfaction on OCB. Specifically, the positive effect of job satisfaction on OCB is weaker when WFC is strong than when it is weak.

H3: WFC moderates the positive effect of organizational commitment on OCB. Specifically, the positive effect of organizational commitment on OCB was weaker when WFC is strong than when it is weak.

Empirical Method

Participants

The author contracted with Macromill Corp. to collect data from working persons on the Internet. This corporation has registered people who can become survey respondents at the company's request. For this study, working persons who worked with others were asked to answer the questionnaire. Although this requirement might be unique, it is crucial for OCB research because some of OCB items, such as "helping," assume that a focal worker works with others, such as a supervisor and coworkers. Data were collected in February 2021. A total of 416 workers participated in the study. Because the author also asked the company to collect data from male and female workers equally, the respondents were equally divided into 213 male and 213 female workers. Their ages ranged from 20 to 60 years, with an average age of 39.98. About 46% of them were unmarried and about 54% were married. The author and company did not specify the respondents' nationality, although all the question items of the questionnaire were presented to them in Japanese.

Measures

Job satisfaction. Brayfield and Rothe (1951) developed 18 items to measure overall job satisfaction, and a six-item version of them were created by Agho, Price, and

Mueller (1992). Job satisfaction was measured as the mean response to Agho et al.'s (1992) six-item version, on a five-point scale ranging from 1 (disagree) to 5 (agree). Cronbach's alpha for this scale was 0.826 in this study.

Organizational commitment. Following Marsden, Kalleberg, and Cook (1993), organizational commitment was measured as the mean response to their six-item scale ranging from 1 (disagree) to 5 (agree). While Meyer and Allen (1991) proposed a three-component model of organizational commitment comprising affective, continuance, and normative commitments, Marsden et al.'s (1993) items were especially associated with affective commitment. Cronbach's alpha for this scale was 0.826 in this study.

Work-family conflict (in a broader sense). Following Netemeyer, Boles, and McMurrian (1996), work-family conflict was measured as the mean of their five-item scale of WIF and their five-item scale of FIW ranging from 1 (disagree) to 5 (agree). Cronbach's alpha for the WIF and FIW scales was 0.897 and 0.922, respectively. The WFC variable was also made using this ten-item scale, and the Cronbach's alpha of the scale was 0.910.

Comprehensive OCB. Farh, Early, and Lin (1997) developed an OCB scale for individuals working in the Chinese culture. Other researchers have used this scale to collect data from Chinese and other Asian workers. In this study, the mean of the responses on a twenty-item scale ranging from 1 (disagree) to 5 (agree) was used to measure comprehensive OCB. Although their original scale was divided into five subscales representing five different dimensions of OCB, a comprehensive OCB measure was used because, through exploratory factor analysis, definitive sub-dimensions were not determined in this study (Ueda, 2021). Cronbach's alpha for the scale in this study was 0.802.

Interpersonal facilitation. For the Western OCB scale, we adopted a two-dimensional model developed by Van Scotter and Motowidlo (1996). Although this scale was established as contextual performance, contextual performance is conceptually similar to OCB and its measures. This model comprises interpersonal facilitation and job dedication. This study used a seven-item scale developed by Van Scotter and Motowidlo (1996) for interpersonal facilitation. Interpersonal facilitation corresponds to the altruism (Smith, Organ, & Near, 1983) or OCBI (Williams & Anderson, 1991) of the OCB dimensions. The Cronbach's alpha value was 0.793.

Job dedication. We used an eight-item scale developed by Van Scotter and

Motowidlo (1996). Job dedication is related to the general compliance (Smith et al., 1983) or OCBO (Williams & Anderson, 1991) dimensions. The Cronbach's alpha value was 0.763.

Gender and age. Gender (1 for male, 2 for female) and age (real) were also included as control variables.

Analytical Method

In this study, the various effects of WFC-related variables on OCB were analyzed. Specifically, we should consider the effect of three different WFC variables and two attitudinal variables on three different OCB variables, which means that three by two by three (18 in total) relations should be investigated. All of these relationships will be analyzed through hierarchical regression analysis, in which gender and age, as control variables, are first entered into the equation, then the effect of one of the WFC and one of the attitudinal variables are included. Finally, the product of these two variables is added to the equation to confirm the interactional effect of both variables.

Results

Results of Basic Statistics and Inter-correlations

Table 1. Results of Basic Statistics and Inter-correlations regarding Variables

variables	means	std. dvt.	1	2	3	4
1. gender	1.500	0.501				
2. age	39.980	10.886	-0.028			
3. WFC	2.209	0.849	-0.143**	-0.051	(0.910)	
4. WIF	2.507	1.063	-0.174**	-0.058	0.897**	(0.897)
5. FIW	1.912	0.881	-0.067	-0.028	0.846**	0.522**
6. job satisfaction	3.037	0.834	0.103*	0.118*	-.224**	-0.314**
7. organizational commitment	2.730	0.823	0.002	0.072	-0.096	-0.183**
8. comprehensive OCB	3.491	0.498	0.096	0.152**	-0.307**	-0.179**
9. interpersonal facilitation	3.473	0.676	0.077	0.036	-0.232**	-0.134**
10. job dedication	3.456	0.624	0.064	0.035	-0.203**	-0.099*

n = 416, ** : p < 0.01, * : p < 0.05

variables	5	6	7	8	9	10
1. gender						
2. age						
3. WFC						
4. WIF						
5. FIW	(0.922)					
6. job satisfaction	-0.052	(0.826)				
7. organizational commitment	0.035	0.716**	(0.826)			
8. comprehensive OCB	-0.377**	0.411**	0.319**	(0.802)		
9. interpersonal facilitation	-0.285**	0.358**	0.300**	0.750**	(0.793)	
10. job dedication	-0.272**	0.421**	0.349**	0.695**	0.618**	(0.763)

Table 1 shows the basic statistics (means and standard variables) and intercorrelations of the variables. Here, paying attention to correlations between variables, gender had a significantly negative correlation with WFC and WIF, but not with FIW. This result means females tend to consider that too much work inhibits them from doing housework. However, this does not mean that females have more things to do than males at worksites. Rather, they often must bear a much greater burden of housework than their male counterparts in Japan, and this situation around females might prompt their higher WIF consciousness than males. Age was significantly positively correlated with job satisfaction and comprehensive OCB. It is uncertain whether old workers actually do their OCB more than young workers, but they are more satisfied with their jobs and tend to perceive that they do their OCB more than young people. Interestingly, age does not significantly correlate with interpersonal facilitation or job dedication, although these two OCB variables strongly correlate with

comprehensive OCB.

As expected, there were significant positive correlations between the three WFC-related variables. In particular, although WIF and FIW are in conceptual contraposition with each other, a significantly positive correlation between them is observed, similar to the findings of many other researchers. As expected, each WFC-related variable had a significant negative correlation with each OCB variable.

Result of Hierarchical Regression Analysis

In this study, eighteen different hierarchical regression analyses were conducted to reveal the main and moderating effects of WFC-related variables on OCB. The results of the 18 analyses are presented in Table 2. From these results, attitudinal variables were found to positively and consistently affect OCB. WFC and FIW have a significantly negative effect on OCB, which supports H1. These results are similar to those of past research, and as expected. However, five of the six WIF cases did not show a significant effect on OCB.

Even if individuals are on the condition that they do not work sufficiently due to the heavy load of household duties, it might be difficult for them to avoid fulfilling their formal role at a worksite. Under this condition, it can be easily imagined that they tend to decrease their OCB because they can determine the amount of OCB they are performing. On the other hand, if they have too much work at the worksite to carry out their family obligations, this work might include formal jobs and OCB, whose ratio is different depending on each individual, the effect of WIF on OCB might sometimes be insignificant.

As for the moderating effect of WFC-related variables, some hierarchical regression analyses show a significantly negative effect on attitude–OCB relationships. While a substantial number of moderators is significant when comprehensive OCB and interpersonal facilitation are used as OCB measures, no significant moderating effect of WFC-related variables is observed in the equation with job dedication as an OCB measure.

Job dedication is positively affected by job satisfaction and organizational commitment, and negatively influenced by WFC-related variables. The lack of a significant effect of the interaction of these variables on job dedication means that the effect of one factor on job dedication does not vary regardless of the other factor. Job

dedication is work-related OCB, and some of the behaviors classified into this category might be performed in the process of formal work. Individuals with high job satisfaction or organizational commitment may perform job dedication embedded in formal jobs to some degree.

Table 2. Summary Result of Hierarchical Regression Analyses

OCB	WF Factors	Attitudinal Factors (AF)	Sig of AF	Sig of WF Factors	Interactions	
						Sig
Comprehensive OCB	WFC	Job Satisfaction	++	--	-0.162	<0.001 **
		Organizational Commitment	++	--	-0.147	0.001 **
	WIF	Job Satisfaction	++	NS	-0.207	<0.001 **
		Organizational Commitment	++	-	-0.173	<0.001 **
	FIW	Job Satisfaction	++	--	-0.069	0.115
		Organizational Commitment	++	--	-0.096	0.031 *
Interpersonal Facilitation	WFC	Job Satisfaction	++	--	-0.132	0.004 **
		Organizational Commitment	++	--	-0.093	0.046 *
	WIF	Job Satisfaction	++	NS	-0.170	<0.001 **
		Organizational Commitment	++	NS	-0.113	0.017 *
	FIW	Job Satisfaction	++	--	-0.050	0.290
		Organizational Commitment	++	--	-0.058	0.218
Job Dedication	WFC	Job Satisfaction	++	-	-0.047	0.298
		Organizational Commitment	++	--	-0.047	0.307
	WIF	Job Satisfaction	++	NS	-0.054	0.230
		Organizational Commitment	++	NS	-0.045	0.331
	FIW	Job Satisfaction	++	--	-0.029	0.529
		Organizational Commitment	++	--	-0.051	0.268

++, -- : $p < 0.01$, +, - : $p < 0.05$

As shown in Table 2, the five regression analyses showed that both explanatory variables and their interactions had significant effects on OCB-related variables. Tables 3 and 4 exemplarily depict the two results of the regression analyses among the five analyses. A moderating effect on the attitude of the OCB relationship should be investigated through a simple slope analysis in the next section.

**Table 3. Result of Exemplary Hierarchical Regression Analysis
(WFC and Job Satisfaction)**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	F	Adj. R ²
	B	Std. Error	Beta				
1 (Constant)	3.058	0.118		25.841	<0.001	7.069**	0.028
gender	0.1	0.048	0.100	2.072	0.039		
age	0.007	0.002	0.155	3.195	0.002		
2 (Constant)	3.26	0.108		30.238	<0.001	30.418**	0.221
gender	0.031	0.044	0.031	0.713	0.476		
age	0.005	0.002	0.101	2.302	0.022		
job satisfaction (JS)	0.207	0.027	0.346	7.723	<0.001		
WFC	-0.129	0.026	-0.220	-4.918	<0.001		
3 (Constant)	3.221	0.107		30.205	<0.001	27.895**	0.245
gender	0.043	0.043	0.044	1.005	0.316		
age	0.005	0.002	0.102	2.372	0.018		
job satisfaction (JS)	0.191	0.027	0.319	7.132	<0.001		
WFC	-0.128	0.026	-0.218	-4.938	<0.001		
WFC×JS	-0.111	0.03	-0.162	-3.737	<0.001		

Dependent Variable: Comprehensive OCB

**Table 4. Result of Exemplary Hierarchical Regression Analysis
(WFC and Organizational Commitment)**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	F	Adj. R ²
	B	Std. Error	Beta				
1 (Constant)	3.058	0.118		25.841	<0.001	7.069**	0.028
gender	0.1	0.048	0.1	2.072	0.039		
age	0.007	0.002	0.155	3.195	0.002		
2 (Constant)	3.181	0.109		29.138	<0.001	25.113**	0.189
gender	0.06	0.044	0.061	1.357	0.175		
age	0.005	0.002	0.12	2.694	0.007		
organizational commitment (OC)	0.172	0.027	0.285	6.395	<0.001		
WFC	-0.156	0.026	-0.265	-5.905	<0.001		
3 (Constant)	3.154	0.108		29.164	<0.001	22.793**	0.208
gender	0.072	0.044	0.072	1.632	0.104		
age	0.006	0.002	0.121	2.761	0.006		
organizational commitment (OC)	0.16	0.027	0.264	5.954	<0.001		
WFC	-0.152	0.026	-0.259	-5.818	<0.001		
WFC×OC	-0.1	0.03	-0.147	-3.325	0.001		

Dependent Variable: Comprehensive OCB

Result of Simple Slope Analysis

Finally, a simple slope analysis (SSA) was conducted to show the moderating effect of WFO-related variables on the effect of attitudinal factors on OCB. According to the traditional idea, one positive or negative standard deviation from the mean is adopted as high or low values of focal variables. Although multiple significant moderating effects are shown in Table 2, Figure 1 and 2 exemplarily show two results for SSA.

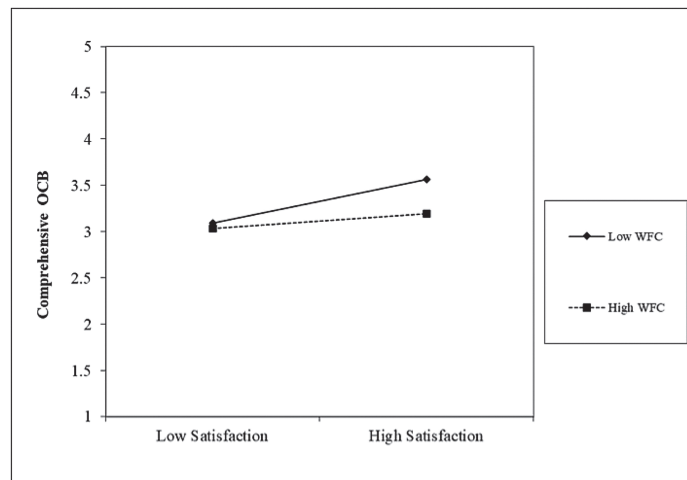


Figure 1. Result of Exemplary Simple Slope Analysis (WFC and job satisfaction)

Figure 1 shows the moderating effect of WFC on the effect of job satisfaction on comprehensive OCB. The gradient of the slope was 0.285 (t-value: 8.470, $p < 0.001$) when the WFC was low, and this gradient decreased to 0.096 (t-value: 2.433, $p = 0.015$) when the WFC was high. Although both gradients of the slope are significantly positive, the value is higher when WFC is lower than when WFC is high, which supports Hypothesis 2.

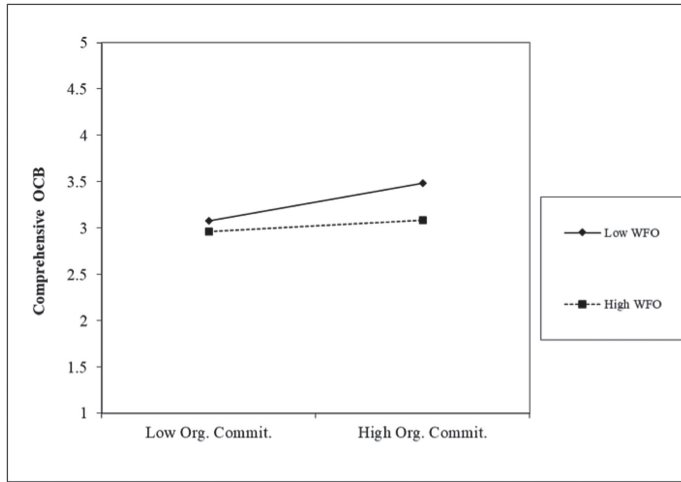


Figure 2. Result of Exemplary Simple Slope Analysis (WFC and organizational commitment)

Figure 2 also shows a similar result for SSA, examining the moderating effect of WFC on the relationship between organizational commitment and comprehensive OCB. The gradient of the slope was 0.245 (t-value: 7.116, $p < 0.001$) when the WFC was low, and this gradient decreased to 0.075 (t-value: 1.909, n.s.) when the WFC was high. While the gradient of the slope is significantly positive when the WFC is low, this value is no longer significant when it is high, which supports our hypothesis.

Table 5 summarizes the summary results. This table includes a gradient of slope and its t-value and p-value for each case, resulting in significant interactions through hierarchical regression analysis. These results support H2 and H3:

Table 5. Summary Result of SSA

OCB	Comprehensive OCB					
	WFC		WIF		FIW	
WFC variables	JS	OC	JS	OC	JS	OC
Attitudinal Variables						
Gradient of Slope for Low WFC variables	0.285	0.245	0.330	0.267		0.236
t-value of Slope for Low WFC variables	8.47	7.116	9.369	7.283		7.513
p-value of Slope for Low WFC variables	<0.001	<0.001	<0.001	<0.001		<0.001
Gradient of Slope for High WFC variables	0.096	0.075	0.114	0.085		0.12
t-value of Slope for High WFC variables	2.433	1.909	3.124	2.321		2.773
p-value of Slope for High WFC variables	0.015	0.057	0.002	0.021		0.006
OCB	Interpersonal Facilitation					
WFC variables	WFC		WIF		FIW	
Attitudinal Variables	JS	OC	JS	OC	JS	OC
Gradient of Slope for Low WFC variables	0.347	0.292	0.399	0.315		
t-value of Slope for Low WFC variables	7.211	5.975	7.991	6.138		
p-value of Slope for Low WFC variables	<0.001	<0.001	<0.001	<0.001		
Gradient of Slope for High WFC variables	0.138	0.147	0.157	0.155		
t-value of Slope for High WFC variables	2.434	2.627	3.045	3.014		
p-value of Slope for High WFC variables	0.015	0.009	0.002	0.003		

Discussion and Conclusion

One of the crucial findings of this study is that WFC has a different main or moderating effect on OCB, depending not only on WFC-related variables, but also on the type of OCB. First, in five out of the six multiple regression equations with WIF as an independent variable, the main effect of WIF was not significant. This result shows that even if employees recognize that the heavy burden of work inhibits the execution of family roles, they tend to maintain OCB. If their work behaviors at the office include formal tasks only, and not informal OCB, a high level of WIF would decrease OCB because they do not have enough time and energy to engage in extra-role behaviors such as OCB. However, it is possible that some OCB is recognized by them as part of formal work. Although the causal relationships were different, there were mixed cases of positive and negative relationships between WIF and OCB, which might explain why no significant relationship was found in this study.

Next, when job dedication was used as an OCB variable, no WFC-related variables had a significant moderating effect on the effect of attitudinal factors on OCB. This means that a consistent effect of job satisfaction and organizational commitment on job-related OCB factors, such as job dedication, is observed regardless of differences in the level of WFC-related variables. Individuals with a strong positive attitude toward their

jobs or the organization might be able to perform job-related OCB freely, regardless of their busy work schedules. Although this is an exciting finding, we have yet to determine the reasons for this relationship.

This study has several limitations, including a lack of data on the contents of work and family roles. In particular, the boundary between formal work and OCB is often ambiguous among Asian people (Lam, Hui, & Law, 1999). It is crucial to uncover how and why individuals feel about WFC to investigate the relationship between WFC and OCB. Future studies should focus on this issue.

Finally, although this might be beyond the immediate goal of this study, the effect of remote work on OCB should be considered one of the implications of this study's findings. Remote work using the Internet has recently been recognized as an effect of COVID-19, and some researchers have focused on the effect of remote work on OCB. Many researchers have considered OCB in a remote work environment by paying attention to the particularity of a remote work style compared to a regular one, such as not observing others working. However, more than focusing on the particularity of remote work style is necessary to consider the comprehensive effect of remote work on OCB. Because remote work is considered to affect WFC, it is also necessary to address the indirect effect of remote work on OCB through WFC.

If remote work is considered to have some impact on decreasing WFC, the results of this study provide an important clue to consider how remote work influences various types of individual OCB. According to the empirical findings of this study, individuals with a positive attitude toward their jobs or organizations are generally expected to perform more OCB in remote work environments, which could decrease WFC. However, depending on whether they recognize that the burden of work roles or that of family roles is decreased, different effects of remote work can be observed.

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