Predicting Work-Family Conflict via Perceived Involvement and Overload

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ABSTRACT

The study aims to understand the importance of both involvement and overload in predicting work-family conflict. Specifically, job involvement, family involvement, work overload and family overload were used to predict time-based and strain-based work interference with family conflict. Also, involvement and overload in the work and family domains were used to predict time-based and strain-based family interference with work conflict. Significant differences were found in predicting the various forms and directions of work-family conflict.

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The amount of time and energy devoted to either the work or family domain has been suggested to be an important precursor to the experience of work-family conflict (WFC). When an individual is heavily involved in one domain, the consequence is that there is little time and energy available for the other, which may lead to the experience of WFC. Furthermore, overload occurs where multiple demands exceed one's resources such as time and/or energy (Elloy & Smith, 2003). Both involvement and overload in the work and family domains offer valuable explanations for WFC.

The design of the present study allows for expanding upon previous WFC research by examining the effects of both involvement and overload by using a bidirectional measure of WFC that accounts for the specific form perceived (e.g., time-based). The purpose of the present study is to understand the extent to which job involvement, family involvement, work overload, and family overload are related to time-based WIF conflict, strain-based WIF conflict, time-based FIW conflict, and strain-based FIW conflict.

Work-Family Conflict

Greenhaus and Beutell (1985) defined WFC as "a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect" (p. 77). Greenhaus and Beutell (1985) suggested that WFC is composed of three distinct forms: time-based, strain-based, and behavior-based. Time-based WFC occurs when the time needed for one role makes it difficult to commit sufficient time to other roles. Strain-based WFC occurs when strain from one role makes it difficult to fulfill the requirements of another role. Behavior-based WFC occurs when behaviors

from one role make it difficult to fulfill the requirements of another role. Behavior-based WFC, however, has been difficult to operationalize and measure. Little empirical research exists that provide evidences for this form of WFC. Therefore, behavior-based WFC will not be examined in the present study.

Gutek, Searle, and Klepa (1991) proposed that conflict between work and family may originate in either domain. Thus, WFC is produced from simultaneous pressures from the work and family domain whereby work demands can interfere into the family domain (WIF conflict) and family demands can interfere into the work domain (FIW conflict). Research has suggested that the distinction of WIF and FIW conflict is important in understanding the effects of work and family demands. Furthermore, researchers have shown that WIF and FIW conflict are distinct constructs with discriminant validity (Gutek et al., 1991).

Job and Family Involvement

Previous researchers have found that high involvement in the family and work domain translates to greater experiences of WFC (e.g., Fox & Dwyer, 1999). Evidence from past research supports a strong positive relationship between job involvement and WIF conflict (e.g., Gutek et al., 1991). While the evidence is strong for the relationship between job involvement and WIF conflict, what is missing from these studies is an understanding of how the form of WFC (i.e., time-based, strain-based) may impact the relationship with job involvement. Thus, the present study will examine the effect of job involvement on time-based WIF conflict and strain-based WIF conflict.

Evidence for the relationship between family involvement and FIW conflict are less clear. Researchers have found that family involvement is positively related to FIW

conflict (e.g., Gutek et al., 1991). However, the relationship that family involvement seems to have is more complex than the work involvement-WIF conflict relationship. For example, high family involvement was more strongly related to WFC for men than women (Duxbury & Higgins, 1991). However, the finding from Duxbury and Higgins (1991) should be mitigated due to the researchers' unidimensional measurement of WFC and not accounting for the direction of WFC. The present study will expand upon the existing research by examining the effect of family involvement on both time-based and strain-based FIW conflict.

Furthermore, family involvement was found to have cross-domain effects, as it was found to be associated with lower levels of WIF conflict (Parasurman, Purohit, Godshalk, & Beutell, 1996). Therefore, the present study sets forth to examine the effects of family involvement upon both time-based and strain-based FIW conflict and time-based and strain-based WIF conflict. Since the existence of cross-domain effects for job involvement remains unclear. The present study examines whether job involvement has cross-domain relationships with time-based and strain-based FIW conflict.

Work and Family Overload

Previous researchers have found evidence for the relationship between role overload and WFC (e.g., Frone, Yardley, & Markel, 1997). Specifically, evidence from past research is much more plentiful in supporting the relationship between work overload and WIF conflict (Frone et al., 1997; Aryee, Luk, Leung, & Lo, 1999; Fu & Shaffer, 2001; Wallace, 1999). While these studies helped to further understand the role of work overload with WIF conflict, they were limited in their research design. For

example, Frone et al. (1997) and Aryee et al. (1999) did not differentiate between the various forms of WIF conflict. Wallace (1999) only assessed WIF conflict and ignored the experience of FIW conflict. Fu and Shaffer (2001) did not test the possibility for cross-domain effects of work overload onto FIW conflict and did not study the impact of family overload. Therefore, the present study aims to go beyond previous research to realize the extent of existing cross-domain effects of work overload.

Research on the contribution of family overload in the experience of WFC is much more limited. Only a handful of studies have examined the role of family overload in the WFC experience. Frone et al. (1997) and Aryee et al. (1999) both examined the influence of family overload on the experience of FIW conflict. These studies, however, did not differentiate between the various forms of FIW conflict. This study aims to add an understanding of how family overload contributes to explaining both time-based and strain-based FIW conflict.

Additionally, the measure used to assess family overload in both of these studies (Frone et al., 1997; Aryee et al., 1999) focused on items assessing overload associated with parenthood. This conceptualization may have been too narrow and there were certainly items excluded from this measure that could have been used to obtain an understanding of a larger subset of family-oriented demands that lead to the experience of family overload. The present study chooses a less restrictive measure of family overload. Using such a measure may help this study to find cross-domain effects for family overload that were not previously found by past researchers.

In summary, limited research has addressed the impact of involvement and overload in job and family domains in relation to time-based and strain-based forms of WIF and FIW conflict. The following hypotheses are considered in the present study:

Hypothesis 1a. Within-domain work stressors such as job involvement and work overload, and cross-domain family stressors such as family involvement and family overload will be significant in predicting time-based WIF conflict.

Hypothesis 1b. Within-domain work stressors such as job involvement and work overload, and cross-domain family stressors such as family involvement and family overload will be significant in predicting strain-based WIF conflict.

Hypothesis 2a. Within-domain family stressors such as family involvement and family overload, and cross-domain work stressors such as job involvement and work overload will be significant in predicting time-based FIW conflict.

Hypothesis 2b. Within-domain family stressors such as family involvement and family overload, and cross-domain work stressors such as job involvement and work overload will be significant in predicting strain-based FIW conflict.

Method

Participants and Data Collection

A convenience sample of employees from a medium-sized private hospital in the Midwest as well as a convenience sample of other organizations in the Midwest served as the sample. A website link for the survey was sent to employees with access to email at the hospital. Paper copies of the survey were also created to distribute to employees without access to email or who preferred to complete the written survey. Overall, there were 228 responses. Demographic characteristics of the sample included: ages ranged

from 23 to 60; 85% female; 69% had children living at home; 78% worked full-time; 79% were married or lived with a partner; 51% of the participants were non-managers.

Variables and Measures

The following measures are part of a larger survey designed by an international team of scholars (Korabik, Lero, & Ayman, 2003). All items in the measures described below utilized a six-point scale from "strongly disagree" to "strongly agree."

Work-Family Conflict.

Twelve items were used to assess WFC (Carlson, Kacmar, & Williams, 2000). Three items assessed time-based WIF conflict, three items assessed strain-based WIF conflict, three items assessed time-based FIW conflict, and three items assessed strain-based FIW conflict. The reported coefficient alphas for the four dimensions are as follows: time-based WIF conflict ($\alpha = .87$), strain-based WIF conflict ($\alpha = .85$), time-based FIW conflict ($\alpha = .79$), and strain-based FIW conflict ($\alpha = .87$) (Carlson et al, 2000). For each participant, an overall average score was calculated for time-based WIF conflict, strain-based WIF conflict, time-based FIW conflict, and strain-based FIW conflict.

Job and Family Involvement

Job involvement was measured using four items from Kanungo's (1982a, b) job involvement scale. This job involvement scale has a reported coefficient alpha of 0.80 (Frone & Rice, 1987). An overall job involvement score was calculated as the average of these four items for each participant.

To assess family involvement, items from the job involvement scale were modified so that all the items referred to family instead of job. This family involvement

scale has a reported coefficient alpha of 0.76 (Frone & Rice, 1987). An overall family involvement score was calculated as the average of these four items for each participant.

Work and Family Overload

Overload in the work and family domain were each assessed using five items from a scale created by Peterson, Smith, Akande, Ayestaran, Bochner, Callan, et al. (1995). Participants were directed to answer these five items in regard to their work life and then in regard to their family life. Overall work and family overload scores were calculated by averaging the five items in each domain. The overload scale has a reported coefficient alpha of 0.79 (Peterson et al., 1995).

Results

Table 1 presents the descriptive statistics including means, standard deviations, ranges, and reliabilities for the variables in the present study. The scale reliabilities for all of the variables were equal to or above .70. Participants utilized the entire range of the scales for all of the variables except for family involvement.

The present sample included various demographic characteristics that are relevant to consider when studying WFC. Table 2 depicts the frequencies of the sample's demographic characteristics. To assess the impact of these variables on the dependent variables, t-tests were utilized. The results from the t-tests revealed that position (i.e., manager, non-manager) was the only significant factor that would have to be controlled for in the regression analyses. Individuals in a non-managerial position reported higher scores on time-based WIF conflict ($M = 3.80$, $SD = 1.28$) than individuals in a managerial position ($M = 3.47$, $SD = 1.20$), $t(226) = 2.00$ $p < .05$. Thus, position was controlled for in the regression equations.

To analyze the hypotheses of the present study, four hierarchical regression analyses with each of the dimensions of work-family conflict (time-based WIF conflict, strain-based WIF conflict, time-based FIW conflict, and strain-based FIW conflict) as the dependent variables were conducted. Due to the use of four independent regressions Bonferroni adjustment was used to control the experimental wide error rate. An alpha level of .10 was divided by 4 (the number of multiple regression that were conducted) resulting in the .025 significance level. An alpha level of .10 was used to adjust the significance level to decrease the risk of making a Type II error. Using the Bonferroni adjustment will allow for decreasing the risk of falsely accepting the present study's hypotheses, while starting with a higher alpha rate of .10 will help with increasing power and allow for the opportunity to correctly accept the research hypotheses.

In each equation, the significant demographic variable, position, was entered in the first step, work overload, family overload, job involvement, and family involvement were entered in Step 2. Step 2 tested the main effect relationships of work overload, family overload, job involvement, and family involvement that were made in Hypothesis 1 and Hypothesis 2.

The results for Hypothesis 1a examining the effects of involvement and overload variables on time-based WIF conflict are presented in Step 2 of Table 3. There was a significant $\underline{R}^2$ value at Step 2 when the independent variables were entered (.22; *F* change (4, 219) = 14.67, $p < .00005$). Work overload was significant at the .025 Bonferroni adjusted significance level accounting for variance in time-based WIF conflict ($\beta = .41$, $p < .025$). Family overload was marginally significant in accounting for variance in time-based WIF conflict ($\beta = .13$, $p < .05$). Hypothesis 1a was partially supported.

The results for Hypothesis 1b examining the effects of involvement and overload variables on strain-based WIF conflict are presented in Step 2 of Table 4. There was a significant $\underline{R}^2$ change value at Step 2 when the independent variables were entered (.29; *F* change (4, 219) = 22.80, $p < .00005$). Two variables were significant in accounting for variance in strain-based WIF conflict: work overload ($\beta = .49$, $p < .025$), and family overload ($\beta = .14$, $p < .025$). Hypothesis 1b was partially supported.

The results for Hypothesis 2a examining the effects of involvement and overload variables on time-based FIW conflict are presented in Step 2 of Table 5. There was a significant $\underline{R}^2$ change value at Step 2 when the independent variables were entered (.07; *F* change (4, 219) = 4.33, $p < .005$). Family overload was the only significant variable accounting for variance in time-based FIW conflict ($\beta = .22$, $p < .025$). Hypothesis 2a was partially supported.

The results for Hypothesis 2b examining the effects of involvement and overload variables on strain-based FIW conflict are presented in Step 2 of Table 6. There was a significant $\underline{R}^2$ change value at Step 2 when the independent variables were entered (.11; *F* change (4, 219) = 6.12, $p < .00005$). Family overload was the only significant variable accounting for variance in strain-based FIW conflict ($\beta = .32$, $p < .025$). Hypothesis 2b was partially supported.

Discussion and Conclusion

The results from the analyses demonstrate that for the present sample, work overload and family overload are significant in explaining the experience of time-based and strain-based WIF conflict and FIW conflict. Specifically, it was found that work overload was significant in predicting time-based WIF conflict and strain-based WIF

conflict. Family overload was significant in predicting time-based FIW conflict, strain-based FIW conflict, and strain-based WIF conflict. Also, family overload was marginally significant in predicting time-based WIF conflict.

The design of the present study allowed for expanding upon previous research by examining the effects of both work and family overload using bidirectional measurement of WFC that accounted for the specific form that was perceived (i.e., time-based and strain-based). Consistent with previous research (Fu & Shaffer, 2001; Wallace, 1999) it was found that work overload was related to time-based and strain-based WIF conflict. However, the present research did not find cross-domain effects of work overload on time-based and strain-based FIW conflict as Frone et al. (1997) and Aryee et al. (1999) had reported.

Thus, for the present sample being overloaded with work did not translate into the family domain interfering with the work domain. One possible explanation for the lack of cross-domain findings is that the individuals in this sample have learned to deal with high levels of job stress and have developed defense mechanisms to alleviate the pressures and not allow the family domain to interfere with the work domain, further exacerbating the feeling of work overload. For example, the individuals in this sample may have hired help to assist them with their family chores, or found a source for social support that allows them not to let their family problems to interfere with work (Fox & Dwyer, 1999).

The current study found that family overload, in contrast, had both within and cross-domain effects on the types and forms of WFC measured. It seems that in the present sample, individuals are not able to effectively manage their work and family lives

when feeling overwhelmed with family. Thus, when an individual is feeling overloaded with their family life they may not have been able to hire the extra help, or have the needed social support. These feelings of being overloaded with the family in conjunction with no ability to alleviate this, the family domain ends up interfering with the work domain. Also, when individuals in this sample experienced family overload, the work domain interfered with the family domain, which may have further intensified their experience of family overload.

Neither job nor family involvement was significant in predicting time-based or strain-based WIF conflict and FIW conflict. The lack of finding significant results in the present study are in contradiction to previous research reporting a strong relationship between work involvement and WIF conflict and family involvement and FIW conflict (Gutek et al., 1991). However, these previous studies did not account for the form of WIF conflict (i.e., time-based or strain-based) as the current study did. Since the previous measurement of family and job involvement differed from the present study's measurement of these variables, further research is warranted in this area.

The results of the present study need to be interpreted with some caution because of the particular characteristics of the sample. The majority of participants in this study comprised a sample of women who were either married or living with a partner, working full-time in the health industry, and with at least one child living with them at home. The sample used in the present study is not representative of the general population. Thus, the findings obtained from this study do not generalize to all samples. Furthermore, this sample was primarily obtained from two hospitals within a healthcare organization in the Midwestern area of the United States.

Another limitation of the present study is that all the responses were collected using a single self-report survey. The use of such a methodology introduces common method bias into the study, inflating the relationships between the variables. The use of cross-sectional data does not allow for definitive conclusions on the causality and directions of the variables. In this study it was inferred that work overload, family overload, job involvement, and family involvement predict time-based and strain-based WIF conflict and FIW conflict. However, it is possible that work overload, family overload, job involvement, and family involvement, are a result of the experience of time-based and/or strain-based WIF conflict or FIW conflict.

From a research perspective, these limitations withstanding, the present study contributed to the existing WFC research by better understanding the impact of job involvement, family involvement, work overload, and family overload in predicting time-based and strain-based WIF conflict and FIW conflict. The role of these variables in relation to time-based and strain-based WIF conflict and FIW conflict was tested only in a very few previous studies. Previous research had some methodological limitations as it had not examined the relationship of these variables in relation to within or cross-domain WFC variables that used bidirectional measurements accounting for the form of WFC. Also, limited research had existed that studied the effects of involvement or overload in the family domain upon time-based and strain-based WIF conflict and FIW conflict.

From a practical perspective, the results of this study point out that is quite important to alleviate pressures in the work and family domain that lead to feelings of being overloaded. Since perceptions of overload in the work and family domain were found to predict experiences of WFC, it is worthwhile for individuals to carefully

consider their family and work environment. Specifically, individuals should learn how to effectively manage the pressures that arise from the work and family domains by considering the outlets that may already be currently available that could be of help.

Another practical implication of the present study's findings is that organizations in the United States need to change their corporate culture that seems to discourage the use of family-friendly policies. The reality within most organizations in the United States is that even though these policies are put in place to help workers balance work and family demands, they oftentimes go unused (Elloy & Smith, 2003). This gives the message to organizations that employees do not need this support, which may discourage organizations from establishing programs that will help employees with work/life balance. The only way this phenomenon will change is if organizations urge their employees to consider work/life balance and to use the programs available to meet their needs. Learning to effectively manage work and family domains is a tough challenge that everyone is confronted with in this day and age. Handling the daily work and family responsibilities in a way that meets the needs of the family as well as the employer continues to be a test for all.

Table 1. Descriptive Statistics of Variables

	No. of items	Mean	Std. Deviation	Range	α
Time-based FIW Conflict	3	2.43	1.02	1.00-6.00	.75
Time-based WIF conflict	3	3.65	1.25	1.00-6.00	.85
Strain-based FIW Conflict	3	2.27	1.12	1.00-6.00	.92
Strain-based WIF conflict	3	3.75	1.27	1.00-6.00	.87
Job Involvement	4	3.33	0.83	1.25-5.75	.70
Family Involvement	4	5.14	0.79	2.25-6.00	.73
Work Overload	5	3.14	1.16	1.00-6.00	.93
Family Overload	5	2.95	1.24	1.00-6.00	.94

N=228

Table 2. Characteristics of Demographics from Sample

Variables	Percent in each category	Number in each category
Schedule		
Full-time	78.2	179
Part-time	21.8	50
Industry		
Health	92.2	212
Other	7.8	18
Position		
Manager	49.1	113
Non-manager	50.9	117
Marital Status		
Married or living together	78.8	182
Single and all others	21.2	49
Presence of Children at home		
Yes	68.5	159
No	31.5	73
Gender		
Women	84.7	194
Men	15.3	35

Table 3. Time-based WIF Conflict - Testing Main Effects

Block or Variable	R^2	F change	CI	b	SE b	β
Step 1	.02	3.53				
Position			-.64, .02	-.31	.17	-.13
Step 2	.22(**)	14.67(**)				
Position			-.67, -.07	-.37(**)	.15	-.15(**)
Work Overload			.30, .57	.43(**)	.07	.41(**)
Family Overload			.01, .25	.13(*)	.06	.13(*)
Job Involvement			-.30, .09	-.11	.10	-.07
Family Involvement			-.29, .11	-.09	.10	-.06

** Correlation is significant at the 0.025 level (two-tailed)

* Correlation is significant at the 0.05 level (two-tailed)

Table 4. Strain-based WIF Conflict - Testing Main Effects

Block or Variable	R^2	F change	CI	b	SE b	β
Step 1	0	.07				
Position			-.38, .29	-.05	.17	-.02
Step 2	.29(**)	22.80(**)				
Position			-.46, .12	-.17	.15	-.07
Work Overload			.40, .66	.53(**)	.07	.49(**)
Family Overload			.02, .26	.14(**)	.06	.14(**)
Job Involvement			-.12, .26	.07	.10	.05
Family Involvement			-.13, .26	.07	.10	.04

** Correlation is significant at the 0.025 level (two-tailed)

Table 5. Time-based FIW Conflict - Testing Main Effects

Block or Variable	R^2	F change	CI	b	SE b	β
Step 1	0	.04				
Position			-.29, .23	-.32(*)	.16	-.13(*)
Step 2	.07(**)	4.33(**)				
Position			-.26, .27	-.28	.16	-.12
Work Overload			-.07, .16	.05	.06	.06
Family Overload			.08, .30	.18(**)	.06	.22(**)
Job Involvement			-.27, .06	-.09	.09	-.07
Family Involvement			-.24, .11	-.08	.09	-.06

** Correlation is significant at the 0.025 level (two-tailed)

* Correlation is significant at the 0.05 level (two-tailed)

Table 6. Strain-based FIW Conflict - Testing Main Effects

Block or Variable	R^2	F change	CI	b	SE b	β
Step 1	.01	2.10				
Position			-.50, .08	-.21	.15	-.10
Step 2	.11(**)	6.12(**)				
Position			-.49, .08	-.21	.15	-.10
Work Overload			-.19, .06	-.06	.06	-.07
Family Overload			.17, .40	.28(**)	.06	.32(**)
Job Involvement			-.17, .20	.02	.09	.01
Family Involvement			-.30, .08	-.11	.10	-.08

Note. Family Overload*Family Involvement has been centered.
** Correlation is significant at the 0.025 level (two-tailed)

References

Aryee, S., Luk, V., Leung, A., & Lo, S. (1999). Role stressors, interrole conflict, and well-being: The moderating influence of spousal support and coping behaviors among employed parents in Hong Kong. *Journal of Vocational Behavior, 54*, 259-271.

Carlson, D. S., Kacmar K. M., & Williams, L. J. (2000). Construction and Initial Validation of a Multidimensional Measure of Work–Family Conflict. *Journal of Vocational Behavior, 56 (2),* 249-276(28).

Duxbury, L. E., & Higgins, C. A. (1991). Gender differences in work-family conflict. *Journal of Applied Psychology, 76 (1),* 60-73.

Elloy, D. F., & Smith, C. R. (2003). Patterns of stress, work-family conflict, role conflict, role ambiguity and overload among dual-career and single-career couples: An Australian study. *Cross Cultural Management, 10(1)*, 55.

Fox, M., & Dwyer, D. (1999). An investigation of the effects of time and involvement in the relationship between stressors and work-family conflict. *Journal of Occupational Health Psychology, 4,* 164-174.

Frone, M. R., & Rice, R. W. (1987). Work-family conflict: The effect of job and family involvement. *Journal of Occupational Behavior, 8(1),* 45-53.

Frone, M. R., Yardley, J. K., & Markel, K. S. (1997). Developing and testing an integrative model of the work-family interface. *Journal of Vocational Behavior, 50(2)*, 145-167.

Fu, C. K. & Shaffer, M. A. (2001). The tug of work and family. Direct and indirect domain-specific determinants of work-family conflict. *Personnel Review, 30(5),* 502-522.

Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review, 10(1)*, 76-88.

Gutek, B. A., Searle, S., & Klepa, L. (1991). Rational versus gender role explanations for work-family conflict. *Journal of Applied Psychology, 76*, 550-568.

Kanungo, R. N. (1982a). Measurement of job and work involvement. *Journal of Applied Psychology, 67*, 341-349.

Kanungo, R. N. (1982b). *Work Alienation: An integrative Approach*. Praeger, New York.

Korabik, K., Lero, D., & Ayman, R. (2003). A multi-level approach to cross cultural work-family research. *International Journal of Cross Cultural Management, 3*, 289-303.

Parasuraman, S., Purohit, Y., Godshalk, V., & Beutell, N. (1996). Work and family variables, entrepreneurial career success, and psychological well-being. *Journal of Vocational Behavior, 48*, 275-300.

Peterson, M. F., Smith, P. B., Akande, A., Ayestaran, S., Bochner, S., Callan, V., et al. (1995). Role conflict, ambiguity, and overload: A 21-nation study. *Academy of Management Journal, 38*, 429-452.

Wallace, J. (1999). Work-to-Nonwork conflict among married male and female lawyers. *Journal of Organizational Behavior, 20*, 797-816.