

Different strategies for managing the work/non-work interface: a test for unique pathways to work outcomes

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Scientific evidence linking employers' efforts to help workers to manage the work/non-work interface to actual outcomes at work remains scarce. In this study of 200 women employed in a Canadian school district, a research model was devised to explain how two strategies for managing the interface may affect stress symptoms, absenteeism and turnover intention. Several features distinguish this model from earlier models of the work/non-work interface. That is, two directions of work/non-work conflict, a mediator between the strategies and work outcomes, are specified, each strategy is set to relate directly to only one direction of conflict, and each direction is set to relate directly to stress symptoms and either absenteeism or turnover intention. LISREL analysis supported the superiority of the research model to a general model incorporating more common conceptualizations of the work/non-work interface.

1. Introduction

Conflict between work and non-work roles has received considerable attention from social scientists during the 1980s and 1990s. This attention can be attributed to the increased labour force participation of women and the heightened role demands on men and women who are part of dual-earner families. Interest in employer efforts to help workers to manage the work/non-work interface has been great among personnel and family specialists. Recent surveys, however, indicate that most workers still experience few of the popularized practices such as on-site child care, alternative work arrangements, and workshops on work/family coping (Kirchmeyer 1995, Osterman 1995). Moreover, concern is heard from scholars about the dearth of scientific evidence linking support practices to actual outcomes at work (Goff *et al.* 1990, Kossek and Nichol 1992, Osterman 1995, Thomas and Ganster 1995). Without firm evidence that employer support for non-work affects behaviour such as job performance and absenteeism, many employers may remain reluctant to implement relevant practices. Osterman (1995) reported that employers' attention was shifting to AIDS and disability concerns.

The failure of researchers to link employer support for non-work to outcomes at work may be explained partially by inadequate research models. In particular, the targets of employer efforts to help workers manage the work/non-work interface are defined rather broadly. Yet, work/non-work conflict, a recognized mediator between inter-role management and its consequences (Thomas and Ganster 1995, Parasuraman *et al.* 1996),

appears to require precise specification. Frone *et al.* (1992), for example, argued that most research on work/non-work conflict had failed to make distinctions between interference from work and that from non-work. The former occurs when work demands deplete a person's resources of time, commitment, and energy and thereby reduce his or her ability to enact non-work roles, whereas the latter occurs when non-work demands deplete these resources and thereby reduce his or her ability to enact work roles. In instances where the directions of conflict were distinguished, role-specific demands were found to affect them differently, and combining them into one measure would have diluted the effects (Frone *et al.* 1992, 1997, Cohen and Kirchmeyer 1995, Parasuraman *et al.* 1996). Frone *et al.* (1992) also speculated that different strategies for managing the work/non-work interface may affect the two directions of conflict in unique ways, but no research has tested for that possibility.

The findings of Frone and his colleagues (1992) further revealed that models of the work/non-work interface could be improved by setting a reciprocal relationship between the two directions of conflict. This feature deserves re-testing with other samples of workers and may be important for explaining the effects of inter-role management if such effects flow indirectly through one form of conflict to another. In addition, some evidence indicates that work/non-work conflict influences a narrower range of attitudinal and physiological outcomes than previously thought (Thomas and Ganster 1995) and that the two directions of conflict may have unique outcomes (Frone *et al.* 1992, Parasuraman *et al.* 1996). Such unique outcomes along with inter-role management strategies affecting the directions of conflict differently may establish unique pathways to work outcomes.

In this study of Canadian women who are teachers and other school-district employees, the authors examined two strategies for managing the work/non-work interface. The authors aimed to determine if the ability of the strategies to predict absenteeism and turnover intention could be improved by specifying both a unique pathway for each, and a reciprocal relationship between the two directions of work/non-work conflict. One strategy involves the employer directly supporting workers' non-work activities and appears to be as dependent on the actions of immediate supervisors as on organization-wide programmes (Goff *et al.* 1990, Warren and Johnson 1995). Individuals' experiences with such support can vary also owing to personal usage or demand (Kossek and Nichol 1992). The subjects of this study were drawn from 18 worksites located in a single school district, hence the authors focused on support practices that varied across sites such as flexibility in work scheduling and accommodating requests for time off, rather than on organization-wide benefits, such as employee assistance programmes. The strategy was called worksite support, and the authors relied upon women's self-reports to gauge its availability. Thomas and Ganster (1995) found workers' perceptions of non-work support to reflect accurately the practices available to them.

The second strategy involves workers using their own personal resources to cope independently with multiple roles. Although the strategy is self-directed by individuals, employers can play a role by providing workshops and other educational forums that encourage self-awareness and stress management (Osterman 1995). Warren and Johnson (1995) concluded that most employer-sponsored work/non-work programmes typically envelop both worksite support and personal coping through a variety of practices, but the possibility that the strategies have distinct consequences has not been addressed.

To test the proposition that inter-role management strategies have unique pathways to work outcomes, the authors compared three models of the work/non-work interface using LISREL analysis. The models and procedure are described below. In brief, one model presents the two strategies as having the same consequences, whereas another presents them

as each affecting only one direction of work/non-work conflict that in turn affects stress symptoms and either absenteeism or turnover intention directly. A final model incorporates the idea of reciprocity between the two directions of conflict.

2. Research models

2.1. General model

The generally-applied model or general model encompasses variable relationships that are found commonly in conceptualizations of the work/non-work interface and is illustrated in figure 1. It follows the accepted practice among researchers of setting work/non-work conflict as a mediator between both role demands and inter-role management and work outcomes (Kossek and Nichol 1992, Thomas and Ganster 1995, Parasuraman *et al.* 1996). Underlying this model is the assumption that better management of the work/non-work interface will reduce conflict between the domains. Research evidence of a relationship between such management and conflict in general has ranged from supportive (Warren and Johnson 1995) to non-supportive (Goff *et al.* 1990) as well as providing mixed results (Beutell and Greenhaus 1983). The model does recognize the two directions of conflict to be correlated, a relationship reported consistently (Gutek *et al.* 1991, Cohen and Kirchmeyer 1995, Parasuraman *et al.* 1996), although no direct relationship has been assumed.

The general model also incorporates research evidence that role-specific demands are associated with only one direction of conflict. Two measures of role demands, number of children and personal income, were included here. Note that such demographic variables are not prone to common method variance in self-reporting (Crompton and Wagner 1994). Parenting, for example, represents the most demanding non-work role in terms of time and involvement (Gutek *et al.* 1991, Kirchmeyer 1993). The demands of parenting tend to increase with number of children, and family size has been shown to predict family-role strain (Katz and Piotrkowski 1983) and work/non-work conflict (Keith and Schafer 1980).

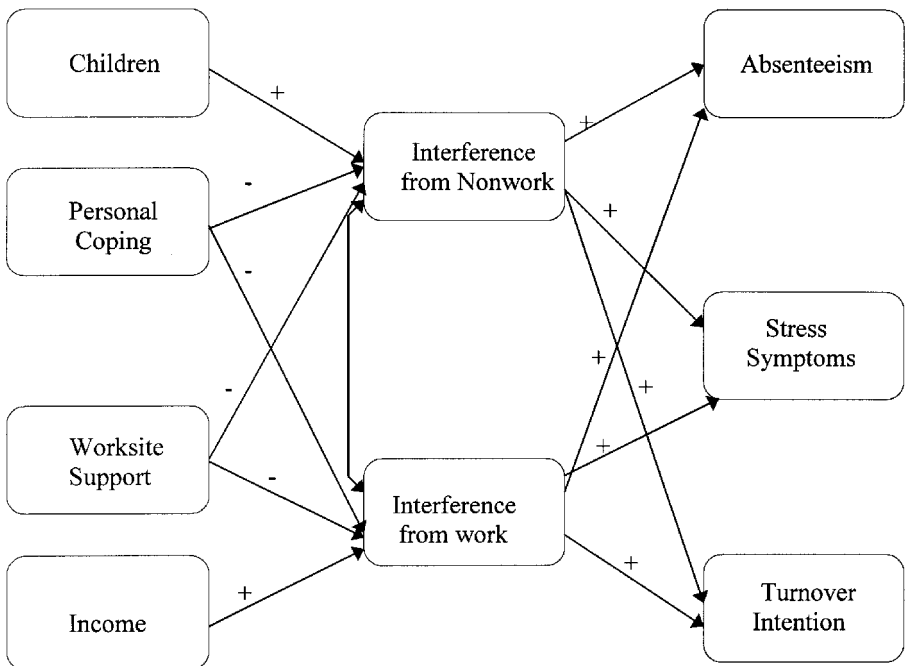


Figure 1. General model.

In several studies that explicitly distinguished interference from non-work and that from work, only the former was associated with number of children, hours spent in family work, and family involvement (Gutek *et al.* 1991, Frone *et al.* 1992, Matsui *et al.* 1995). That disruptions flow mostly from the high-demand roles makes sense intuitively, and thus family size was set here to affect only interference from non-work.

Income was used as an indicator of work demands and set to affect only interference from work. Greater income, particularly within a single organization, suggests a higher-level job requiring more involvement and time commitment (Hughes and Galinsky 1994). Although salary scales for teachers are based on years of experience, teachers can increase their positions on the scales through further development, and thereby take on more demanding teaching, such as 'special education', or by assuming administrative duties. In a broad sample of workers, Staines and O'Connor (1980) found those in jobs at the upper level of their range to report the greatest work/family conflict. In studies where the direction of conflict was specified, job demands correlated significantly with interference from work and not with the other direction (Wiley 1987, Gutek *et al.* 1991, O'Driscoll *et al.* 1992, Kirchmeyer 1995, Parasuraman *et al.* 1996). Once again, that disruptions flow mostly from the high-demand domain is understandable.

As for the relationship between work/non-work conflict and work withdrawal, voluntary absenteeism is considered to be not only a reaction to the discomfort of this conflict (Thomas and Ganster 1995) but also a means to relieve it by restructuring the work week as well (Youngblood 1984). Absenteeism has been shown to correlate positively with work/non-work conflict in some studies (Goff *et al.* 1990, Kossek 1990). The same reactive and proactive aspects could be applied to alternative forms of work withdrawal such as turnover. That is, changing jobs may be both an escape from the discomfort of work/non-work conflict and an attempt to restructure one's life.

The authors also included in the model an outcome that has been associated with work/non-work conflict consistently, that is, stress symptoms including tiredness, nervousness, feeling 'blue', and lack of enthusiasm for life (Keith and Schafer 1980, Tiedje *et al.* 1990, Ray and Miller 1994, Thomas and Ganster 1995). In these studies, the two directions of conflict were not measured separately, and disruptions from both work and non-work were assumed to act as stressors. Given the body of evidence suggesting that role conflict in general leads to health problems (for review see Ganster and Schaubroeck 1991), in the present model both directions of conflict were set to affect stress symptoms. When the two directions have been distinguished, both have been associated with stress symptoms in some studies (Klitzman *et al.* 1990, Parasuraman *et al.* 1996), whereas in others, only interference from non-work (Frone *et al.* 1992) or that from work (O'Driscoll *et al.* 1992) revealed relationships.

2.2. *Unique determinants and unique outcomes model*

As shown in figure 2, the second model represents a subset of the general model. The main research hypothesis was that this model with its fewer paths would account for variance more efficiently. The management strategies as well as the role demands were set to each affect only one direction of conflict. A recent study of female nurses (Cohen and Kirchmeyer 1995) supports the idea of the strategies serving as unique determinants. That is, the extent that personal coping was used by the nurses correlated significantly with interference from non-work and not with that from work. At the same time, the extent to which they experienced their employers as directly supporting non-work correlated significantly with only interference from work. These findings are consistent with arguments about workers having greater personal control over non-work as compared to

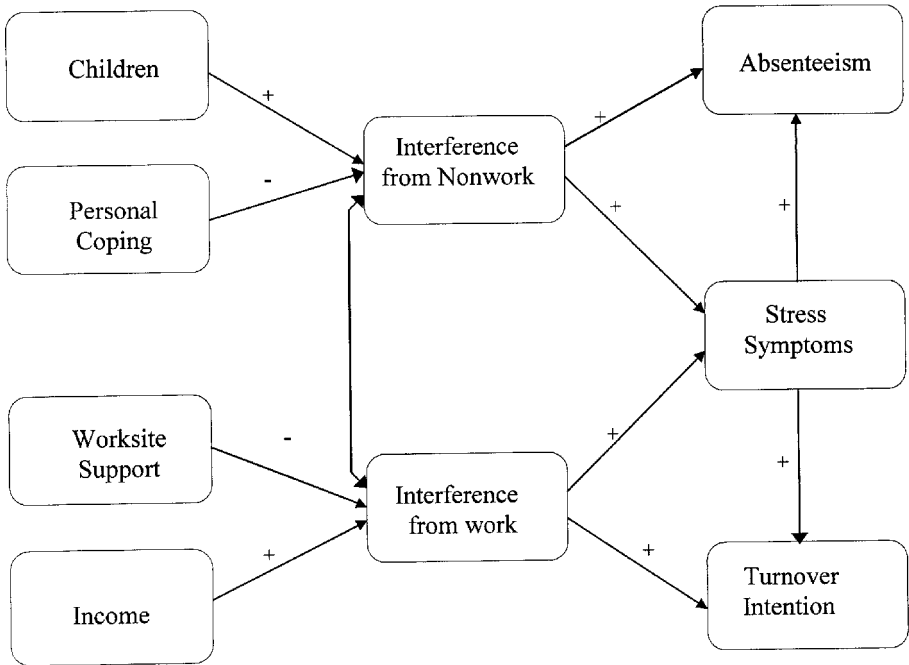


Figure 2. Unique determinants and unique outcomes model.

work and being ultimately responsible for managing non-work demands themselves (Schonfeld 1990, Gutek *et al.* 1991, Frone *et al.* 1992). Hence, personal coping, and not worksite support, was set to affect interference from non-work.

In contrast, worksite support and not personal coping was set to affect interference from work; a prediction also consistent with Cohen and Kirchmeyer's (1995) finding with nurses. Frone *et al.* (1992) proposed that workers should hold their organizations responsible for such interference and accept less responsibility for it themselves. Hence, it seems reasonable that strategies associated directly with employers' efforts would best address interference from work.

In addition, the second model incorporates the idea of the two directions of work/non-work conflict leading to different outcomes. Turnover and absenteeism are thought to be alternative forms of work withdrawal to each other (Dalton and Todor 1993) and a portion of their variance to result from different underlying processes (Lee and Mitchell 1994). This line of thinking supports the possibility of the two directions of conflict affecting turnover and absenteeism in unique ways.

Studies of absenteeism that compare the effects of work variables with those of non-work variables reported that the non-work ones more strongly predict absence duration and frequency (Morgan and Herman 1976, Rousseau 1978, Youngblood 1984). Morgan and Herman (1976) found that frequent absenteeism often was motivated by a need for free time to meet non-work demands, thus demonstrating the proactive side of absenteeism. For absenteeism to serve as an effective means of relieving work/non-work conflict, the disruptions would be more likely to stem from non-work than from work. Taking absences from work as a way in which to address the disruptive demands of work could create even more time pressures at work and possibly greater conflict with non-work.

On the other hand, job turnover may be the more likely form of work withdrawal to result from interference from work. Changing to a less demanding job should reduce the

disruptions from work but not necessarily those from non-work because the latter do not stem from the work role itself. For example, changing jobs does not directly alter the demands of parenting and their potential to disrupt work. Therefore, in the second model, only interference from non-work was set to lead directly to absenteeism, and only interference from work to lead directly to turnover intention, a strong predictor of eventual turnover (Hom *et al.* 1992).

The final feature of this model involves the indirect effects of work/non-work conflict on both forms of work withdrawal through stress symptoms. Absence from work may represent not only an attempt to deal with non-work disruptions, but also a reaction to psychological and physical strain caused by conflict in general. This indirect route is a way in which interference from work could lead to absenteeism. Similarly, turnover may be a response to interference from non-work when that interference leads to strain. For example, changing jobs may represent an attempt to restructure one's life when the disruptions from non-work progress to a stressful level. In previous studies, stress symptoms have been found to be associated with absenteeism and turnover (Ivancevich 1986, Ganster and Schaubroeck 1991), and when structural equation modelling was undertaken (Bacharach *et al.* 1991), work/non-work conflict was found to affect job attitudes indirectly through stress symptoms.

2.3. *Unique determinants and unique outcomes model with reciprocal relationship*

In the last model, the relationship between the two directions of conflict was set to be reciprocal in nature. Its only variation from the model depicted in figure 2 lies in the addition of two paths between the two directions, one flowing from work's interference and the other from non-work's interference. With this model, the authors re-tested the finding of Frone *et al.* (1992) that models of the work/non-work interface could be improved by recognizing such reciprocity. Frone *et al.* (1992) explained that when the demands of a domain interfere with one's ability to fulfil obligations in a second domain, these unfulfilled obligations may begin to interfere with one's day-to-day functioning in the first domain. Likewise, when a management strategy relieves the interference from one domain, the demands of a second domain may be better met and prove to be less disruptive to the first domain.

3. Method

3.1. *Sample and procedure*

The subjects of this study were 200 female teachers, school administrators, and support staff including clerical and maintenance workers employed by a single school district in Canada. Their mean age was 40.8 years and mean tenure in the school district was 9.2 years. A total of 78% were parents. The women represented a subsample from a larger survey of this school district where self-administered questionnaires had been distributed to men and women at all levels. An acceptable response rate of 42% had been achieved. Data from 96 men who had responded also were not included in the analysis because men and women can respond differently to employer support (Kossek and Nichol 1992), and, for the purposes of gender comparisons, the size of the male subsample was below that required for meaningful causal modelling (Bearden *et al.* 1982).

The school district welcomed the request to conduct this study because it was considering the implementation of an employee assistance programme. The only 'work/non-work benefits' that were available at the time to all workers encompassed those mandated by provincial law or the collective agreement, such as maternity leave and long-term leave.

3.2. Measures

3.2.1. *Children*: Number of children was used as an indicator of family size.

3.2.2. *Income*: This variable was measured in dollars earned per year.

3.2.3. *Personal coping*: This strategy for managing the work/non-work interface was measured with eight items developed by Kirchmeyer (1993). Her factor analysis found the respective practices that involve time management and reframing demands to have a common underlying dimension. Example items include 'overlap different roles whenever possible (such as participating in a sport that my kids enjoy and doing community service that really uses my professional skills)' and 'develop attitudes which put role demands in a positive light'. A 5-point scale ranging from 'not typical of me' to 'very typical' was applied. The resultant Cronbach's α was .73.

3.2.4. *Worksite support*: Kirchmeyer's (1995) corresponding 4-item, unidimensional scale of employer respect for workers' non-work activities was used to measure this strategy. Example items regarding the respondent's worksite include 'is flexible about employees' work schedules (such as providing Flexitime and not rigid about keeping certain hours)' and 'accommodates employees' special non-work need (such as arranging time-off for an employee to participate in a community event important to the employee)'. Kirchmeyer's factor analysis found these practices to represent a separate dimension from more formalized practices such as on-site day care and personal assistance programmes. The scale was anchored with five points ranging from 'not typical' to 'very typical'. The resultant Cronbach's α was .74.

3.2.5. *Interference from non-work*: Kirchmeyer's (1993) 8-item measure of negative non-work-to-work spillover was used. Items began with the phrase 'being involved in non-work activities' and examples include 'demands time from me that could be spent on my job', 'makes me so irritable that I take it out on the people at work', and 'makes it hard to adjust back to the way I must act at work'. The instructions provided a list of non-work roles for respondents to consider including those related to family and friends, hobbies and recreation, and community and political associations. A Cronbach's α of .81 was achieved.

3.2.6. *Interference from work*: Shamir's (1983) 6-item conflict measure was used. Items refer to the disruption of non-work by work and include 'one of the difficulties of my job is that I am not home enough' and 'work often prevents me from participating in leisure activities that take place at the same time'. A Cronbach's α of .81 was achieved.

3.2.7. *Stress symptoms*: Body signals such as headaches, tiredness, and mood changes represent the most commonly reported symptoms of stress among workers including teaching faculty (Brown *et al.* 1986). Three such symptoms—that is, feelings of depression, tiredness, and nervousness—were included in this study. Respondents were asked to indicate the frequency of each symptom according to a 5-point scale. Reliability analysis revealed acceptable consistency across the three symptoms with a Cronbach's α of .78.

Research findings indicate that such self-reports of health do not yield inflated estimates of strain despite earlier contentions that they may do so (James *et al.* 1994).

3.2.8. *Absenteeism* : The school district workers were asked to report how many days they were absent from work during the previous 12 months. In Johns' (1994a) study of teachers in another Canadian school district, self-report and records-based absenteeism had a high correlation coefficient of .92. As with the district of Johns' study, the district studied by the present authors maintains records of absenteeism that are communicated to employees. In accordance with Johns' (1994b) advice, a free-response format was utilized and the absenteeism question was separated from questions concerning its hypothesized determinants.

3.2.9. *Turnover intention* : Three items that encompass either thinking about leaving one's job or searching for another job were used to measure turnover intention. An example is 'I think a lot about leaving my job'. Measures of this intention with as few as two items have demonstrated high validity (Jaros *et al.* 1993). A Cronbach's α of .90 was achieved.

3.3. *Data analysis*

LISREL (version 7.20, Joreskog and Sorbom 1993) was used to compare the research models. As recommended by experts on structural equation modelling (Medsker *et al.* 1994), a two-step approach of evaluating the measurement model prior to evaluating the structural portions of the models was followed. The discriminant validity of the six multi-item constructs was assessed by comparing the fit of the hypothesized measurement model to a more parsimonious measurement model; a procedure applied earlier in the study of inter-role conflict by Judge *et al.* (1994). Without adequate discriminant validity, the fit of the alternative model would not be significantly worse than that of the hypothesized multi-factor model.

Next, the structural models were evaluated using a 9x9 covariance matrix as input. A single-indicator approach was taken, hence corrections for random measurement error were made in the analysis (Netemeyer *et al.* 1990). That is, random error variance for each construct was calculated 'by taking one minus its reliability times its observed variance' (Joreskog and Sorbom 1993, p. 165). Netemeyer *et al.* (1990) reported this approach to yield virtually identical parameter estimates to latent variable analysis. The demographic variables, children and income, were assigned an error rate of 5%, a rate consistent with Hayduk's (1987) values for such variables. Absenteeism was assigned a rate of 10% based on John's (1994a) high correlation between self-report and records-based absenteeism in a similar sample of teachers.

The fit of each model to the data was assessed with five indices. Experts advise that multiple fit criteria be examined. First, the chi-square goodness-of-fit statistic (χ^2) is used routinely and compares the predicted and observed covariance matrices, with a non-significant value indicating good fit. Second, the chi-square/degrees-of-freedom ratio (χ^2/df) is a common *ad hoc* measure less susceptible to sample size effects. Although there is no consensus regarding what ratio constitutes an acceptable fit, a value below 2 falls within the most conservative estimates (Bollen 1989). LISREL's adjusted goodness-of-fit index (AGFI) measures the relative amount of variances and covariances jointly accounted for by the model. This index ranges from 0 to 1, with values $>.90$ indicating acceptable fit. The comparative fit index (CFI) was recommended by Medsker *et al.* (1994) in their review as the best approximation of the population value for a single model. It also is

normed to the range of 0 to 1, with values $>.90$ being acceptable. Last, the root mean square error of approximation (RMSEA) proposed by Browne and Cudeck (1989) tests the null hypothesis of close fit, a more meaningful approximation than the null hypothesis of perfect fit. RMSEA $<.05$ indicates very good fit; a value from $.05$ to $.08$ indicates fair to mediocre fit; a value from $.08$ to $.10$ indicates poor fit, and a value $>.10$ indicates a very bad fit.

In addition, a χ^2 difference test was used to compare the structural models (Bollen 1989). The statistic for this test is calculated as the difference in χ^2 estimators between restricted and unrestricted models, with degrees of freedom equal to the difference in the separate model values. The question answered by this test is whether or not the restrictions incorporated into the research model adversely affect the fit as compared to that of a saturated model containing all conceptual paths. A non-significant χ^2 difference indicates that the constraints imposed by the restricted model while increasing degrees of freedom do not reduce fit to the data.

4. Results

Descriptive statistics and bivariate correlations are presented in table 1. Among the exogenous variables, there were several significant correlations. Income correlated significantly with personal coping ($r = .14$ at $p < .05$) and worksite support ($r = -.31$ at $p < .001$) and with both directions of conflict ($r = .13$ at $p < .05$, $r = .27$ at $p < .001$). Number of children correlated significantly with none of these variables. Relationships among the school employees' strategies and directions of conflict were consistent with Cohen and Kirchmeyer's (1995) findings with nurses. That is, the significant correlations were between personal coping and interference from non-work ($r = -.33$ at $p < .001$) and between worksite support and interference from work ($r = -.28$ at $p < .001$). Also consistent with others' findings was the positive correlation between the two directions of conflict ($r = .43$ at $p < .001$). Among the directions of conflict and outcomes, interference from non-work correlated with absenteeism ($r = .30$ at $p < .001$), and both directions correlated with stress symptoms ($r = .37$ at $p < .001$, $r = .40$ at $p < .001$) and turnover intention ($r = .15$ at $p < .05$, $r = .23$ at $p < .001$).

The LISREL test for discriminant validity among the hypothesized constructs indicated that they were empirically distinct. The comparison of the hypothesized measurement model (where the six multi-item scales were constrained to load on their respective factors) with that obtained from an alternative single factor model showed that the hypothesized structure was a better fit to the data at the $.001$ level of significance ($\chi^2(449, N = 200) = 830.67$ versus $\chi^2(464, N = 200) = 1891.71$).

Table 2 presents goodness-of-fit indices for the three models. The unique determinants and unique outcomes model fit the data best and setting two paths between the forms of conflict did not improve it. Its indices revealed a small, non-significant χ^2 ; ratio of χ^2 to degrees of freedom well below 2; AGFI of $.93$; CFI of $.96$; and RMSEA lower than $.05$, indicating very good fit. For the other models, χ^2 values were significant, indicating less than good fit, and RMSEA indices fell between $.05$ and $.08$, indicating only mediocre fit. AGFI and CFI indices revealed acceptable fit for all models, although those for the unique determinants and unique outcomes model were highest.

Results of the χ^2 difference test also supported the superiority of the unique determinants and unique outcomes model. The difference between it and the saturated model was 11.75 ($df = 6$, $p = ns$). Non-significance indicates that the restrictions incorporated into the research model did not compromise fit. In contrast, the difference with the general model, the other nested model, was significant. That is, 17.25 ($df = 4$, $p < .01$).

Table 1 Basic statistics and intercorrelations among variables ($N = 200$).

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. Children	1.90	1.35									
2. Income (\$1,000)	34.12	16.76	.02								
3. Personal coping	29.42	4.95	.11	.14*	(.73)						
4. Worksite support	8.97	3.83	.00	-.31***	.25***	(.74)					
5. Interference from non-work	13.11	5.23	-.11	.13*	-.33***	-.10	(.81)				
6. Interference from work	18.98	7.91	-.04	.27***	-.07	-.28***	.43***	(.81)			
7. Stress symptoms	10.64	2.97	-.16*	.13*	-.27***	-.31***	.37***	.40***	(.78)		
8. Absenteeism	4.22	6.90	-.04	.05	-.15*	.03	.30***	.11	.22***		
9. Turnover intention	12.48	3.27	-.02	-.08	.06	.20**	.15*	.23***	.36***	.11	(.90)

Cronbach α s are shown on the diagonals in parentheses.* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2. Fit indices for the research models.

Model	df	χ^2	χ^2/df	AGFI	CFI	RMSEA
1. General model	17	33.22*	1.95	.90	.93	.069
2. Unique determinants and unique outcomes model	19	27.72	1.45	.93	.96	.048
3. Unique determinants and unique outcomes model with reciprocal relationship	18	32.23*	1.79	.91	.94	.063
4. Saturated model	13	15.97	1.22	.94	.99	.034

* $p < .05$.

AGFI: adjusted goodness-of-fit index; CFI: comparative fit index; RMSEA: root mean square error of approximation.

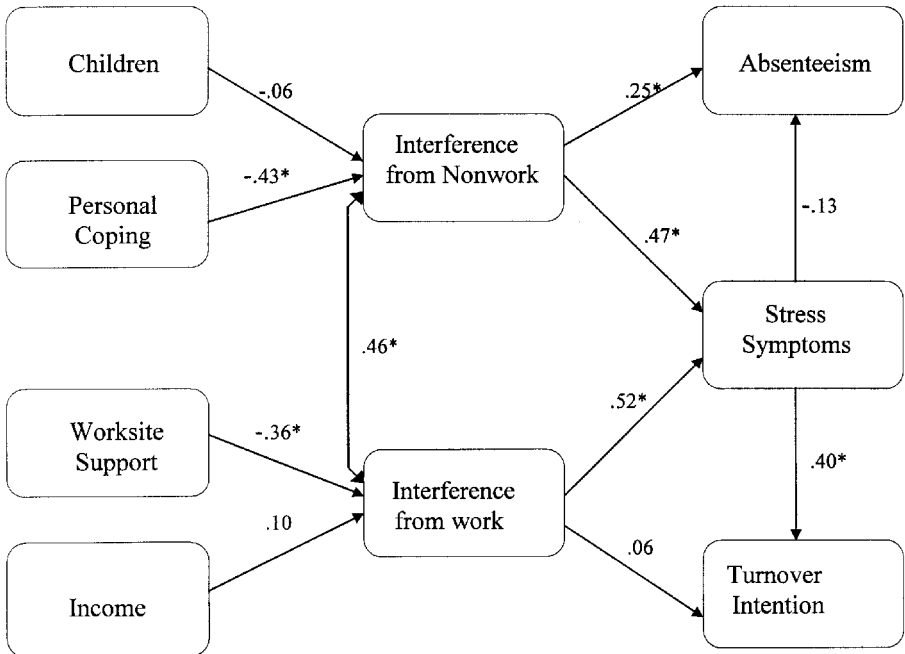


Figure 3. Standardized parameter estimates for the unique determinants and unique outcomes model, (*significant paths, $p < .05$).

Parameter estimates for the superior model are presented in figure 3. Of the 10 proposed paths, six were significant. Personal coping, and not number of children, was a significant predictor of interference from non-work. Likewise, worksite support, and not income, predicted interference from work. Both greater personal coping and greater worksite support meant lower interference. Note that in the general model the paths from personal coping to interference from work and from worksite support to interference from non-work proved to be non-significant. As for relationships between conflict and work withdrawal, both direct and indirect routes through stress symptoms were supported by the parameter estimates of the superior model. The direct path from interference from non-work to absenteeism was significant, whereas the direct path from interference from work to turnover intention was not. Paths from both directions of conflict to stress were significant and that from stress symptoms to turnover intention was significant as well. The path from stress symptoms to absenteeism was not significant.

5. Discussion

This study of female teachers, school administrators, and teaching support staff provides evidence that strategies for managing the work/non-work interface may influence work outcomes favourably, and contributes to an understanding of how that influencing could occur. The findings overall are encouraging for employers who are considering the implementation of support practices for non-work or have already done so. Other research (Goff *et al.* 1990, Kossek 1990, Kossek and Nichol 1992) has failed to link popularized practices, such as child day care, to self-reported or records-based absenteeism. In the present study, setting the different management strategies as each predicting only one direction of work/non-work conflict that in turn predicts either absenteeism or turnover intention directly produced a research model superior to the generally-applied one.

The argument of Frone *et al.* (1992) that the two directions of work/non-work conflict should be distinguished and speculation that distinct forms of inter-role management may be required to address them received support. The present analysis revealed personal coping to be associated only with interference from non-work, and worksite support to be associated only with interference from work. These relationships are consistent with those reported for nurses (Cohen and Kirchmeyer 1995). Workers having more control over non-work activities than over work ones, and feeling responsible for non-work demands themselves (Schonfeld 1990, Gutek *et al.* 1991, Frone *et al.* 1992), can explain the effectiveness of a strategy that relies on workers' own personal resources for reducing interference from non-work. In comparison, workers having less control over work activities, and holding their employers largely responsible for work demands, explains the effectiveness of a strategy that relies on worksite flexibility and accommodation for reducing interference from work. The extent of personal control and perceptions of role responsibility may represent key considerations when identifying the means to address other kinds of inter-role conflict as well.

The present analysis also revealed differences in the relationships between the two directions of conflict and the two forms of work withdrawal. Both the direct path from interference from non-work to absenteeism, and the indirect one from that interference to turnover intention through stress symptoms, proved to be significant. Counter to expectations, there was no evidence of interference from work affecting either turnover intention directly or absenteeism indirectly. Only the indirect route from interference from work to turnover intention through stress symptoms was supported. Bacharach *et al.* (1991) reported the same indirect route by which work/family conflict may affect job satisfaction. Voluntary absenteeism may be motivated mostly by the need to meet disruptive non-work demands, whereas turnover intention and other negative job attitudes may be reactions to the strain associated with conflict in general. Although the findings support the contention of Lee and Mitchell (1994) that a portion of the variance in alternative forms of work withdrawal results from different underlying processes, they also lend credence to the progressive argument of the absenteeism-turnover relationship (Mitra *et al.* 1992). That is, absenteeism may be an immediate response to interference from non-work, but once elevated stress accompanies that interference, thoughts of leaving the job completely may arise.

The analysis failed to support the reciprocal relationship between the two directions of conflict that Frone *et al.* (1992) revealed earlier. This inconsistency may be attributed to model and construct differences between the earlier study and the present one. The present authors used a different set of exogenous variables, and in contrast to Frone *et al.*'s (1992) job involvement and family involvement variables, the present authors' variables were not attitudes about either work or non-work. Furthermore, unlike the earlier approach, the present authors' conflict measures included non-work activities beyond the family. With

only two studies now having tested specifically for reciprocity, no firm conclusion can be drawn at this time. More research on the two directions of conflict and the effects of other determinants is required to establish the nature of this relationship.

In addition, family size was not found to be associated with interference from non-work among the school district employees; a finding seemingly inconsistent with that of Keith and Schafer (1980). In the earlier study, men and women had been asked simply about disruptions from the family, whereas in the present study the authors had asked women about interference from various non-work roles including those related to community work and recreation. This broader measure may have diluted any association between family size and interference from non-work. Although it is worth carrying out research on the work/non-work relationship beyond the family domain, those who wish to examine conflict with a variety of non-work roles would be advised to aim their questioning at one non-work domain at a time. This would extend current knowledge beyond family roles and at the same time allow direct comparisons with other work in the area. Kirchmeyer's (1993) study of three non-work domains provides an example of this alternative approach.

The path from income, the indicator of work demands, to interference from work was not significant also. It seems that for school district employees higher-paying jobs are not associated with increased work/non-work conflict, at least once worksite support is controlled. Recall that the high-income earners tended to report the lowest level of worksite support. Perhaps some women in high-income, and supposedly high-ranking, jobs are unable to take advantage of the flexibility in work hours and other accommodations for non-work even when employers provide them, and thereby experience high interference from work. Whether the high-income earners of this study actually received less support from their worksites than did others, or simply perceived less, remains an unanswered question. In addition, it is possible that income is not an accurate barometer of work demands for school district employees.

There may be limits to the generalizability of the findings to men and to other occupations because this study examined women in a single occupational setting only. However, the consistency of the findings with those with female nurses (Cohen and Kirchmeyer 1995) suggests that they do have implications for women beyond a single occupation. In addition, all subjects in this study were employed by a single school district, and therefore no variance in organization-wide support existed. As such efforts are also important ingredients of employer support for non-work, research that examines their outcomes is required to provide comprehensive understanding. Hence, it would be worth carrying out future studies that examine men and women employed by a variety of organizations.

Another limitation of this study stems from all measures being gathered from the same source at one point in time, and thus allowing for the possibility of common method variance. The constructs revealed adequate discriminant validity, two variables were demographic in nature, and self-reports of absenteeism and turnover intention have demonstrated predictive validity in the past, thus it is unlikely that this type of bias posed a serious problem here. Moreover, in a recent investigation, Crampton and Wagner (1994) concluded that common method variance may not be as widespread in work-related research as was previously thought to be the case.

The findings of this study have practical implications for human resources management at least in regard to female workers. Employer support for non-work whether in the form of respecting and accommodating women's special non-work needs, or helping women to develop life management skills, appears to have the potential to affect work/non-work conflict directly and in turn withdrawal from work. For employers, the key to developing successful practices to help workers manage the work/non-work interface, and to

evaluating them fairly, may rest on carefully targeting the specific kind of interference and the desired behavioural consequences. Expecting one management strategy to relieve both directions of conflict and to improve a range of work outcomes invites disappointment and could detract from the real benefits of that particular strategy.

References

- BACHARACH, S. B., BAMBERGER, P. and CONLEY, S. 1991, Work-home conflict among nurses and engineers: mediating the impact of role stress on burnout and satisfaction at work, *Journal of Organizational Behavior*, **12**, 39–53.
- BEARDEN, W. O., SHARMA, S. and TEAL, J. E. 1982, Sample size effects on chi-square and other statistics used in evaluating causal models, *Journal of Marketing Research*, **19**, 425–430.
- BEUTELL, N. J. and GREENHAUS, J. H. 1983, Integration of home and nonhome roles: women's conflict and coping behavior, *Journal of Applied Psychology*, **68**, 43–48.
- BOLLEN, K. A. 1989, *Structural Equations with Latent Variables* (New York: Wiley).
- BROWN, R. D., BOND, S., GERNDT, J., KRAGER, L., KRANTZ, B., LUKIN, M. and PRENTICE, D. 1986, Stress on campus: an interactional perspective, *Research in Higher Education*, **24**, 97–112.
- BROWNE, M., and CUDECK, R. 1989, Single sample cross-validation indices for covariance structure, *Multivariate Behavioral Research*, **24**, 445–455.
- COHEN, A. and KIRCHMEYER, C. 1995, A multidimensional approach to the relation between organizational commitment and non-work participation, *Journal of Vocational Behavior*, **46**, 189–202.
- CRAMPTON, S. M. and WAGNER, J. A. 1994, Percept-percept inflation in microorganizational research: an investigation of prevalence and effect, *Journal of Applied Psychology*, **79**, 67–76.
- DALTON, D. R. and TODOR, W. D. 1993, Turnover, transfer, absenteeism: an interdependent perspective, *Journal of Management*, **19**, 193–219.
- FRONE, M. R., RUSSELL, M. and COOPER, M. L. 1992, Antecedents and outcomes of work-family conflict, *Journal of Applied Psychology*, **77**, 65–78.
- FRONE, M. R., YARDLEY, J. K. and MARKEL, K. S. 1997, Developing and testing an integrative model of the work-family interface, *Journal of Vocational Behavior*, **50**, 145–167.
- GANSTER, D. C. and SCHAUBROECK, J. 1991, Work stress and employee health, *Journal of Management*, **17**, 235–271.
- GOFF, S. J., MOUNT, M. K. and JAMISON, R. L. 1990, Employer supported child care, work/family conflict, and absenteeism: a field study, *Personnel Psychology*, **43**, 793–809.
- GUTER, B. A., SEARLE, S. and KLEPA, L. 1991, Rational versus gender role explanations for work-family conflict, *Journal of Applied Psychology*, **76**, 650–658.
- HAYDUK, L. A. 1987, *Equation Modeling with LISREL* (Baltimore, MD: Johns Hopkins University Press).
- HOM, P. W., CARANIKAS-WALKER, F., PRUSSIA G. E. and GRIFFETH, R. W. 1992, A meta-analytic structural equations analysis of a model of employee turnover, *Journal of Applied Psychology*, **77**, 890–909.
- HUGHES, D. and GALINSKY, E. 1994, Work experiences and marital interactions: elaborating the complexity of work, *Journal of Organizational Behavior*, **15**, 432–438.
- IVANCEVICH, J. M. 1986, Life events and hassles as predictors of health symptoms, job performance, and absenteeism, *Journal of Occupational Behavior*, **7**, 39–51.
- JAMES, K., LOVAHO, C. and KHOO, G. 1994, Social identity correlates of minority workers' health, *Academy of Management Journal*, **37**, 383–396.
- JAROS, S. J., JERIMER, J. M., KOCHLER, J. W. and SINCICH, T. 1993, Effects of continuance, affective, and moral commitment on the withdrawal process: an evaluation of eight structural equation models, *Academy of Management Journal*, **36**, 951–995.
- JOHNS, G. 1994a, Absenteeism estimates by employees and managers: divergent perspectives and self-serving perceptions, *Journal of Applied Psychology*, **79**, 229–239.
- JOHNS, G. 1994b, How often were you absent? A review of the use of self-reported data, *Journal of Applied Psychology*, **79**, 574–591.
- JORESKOG, K. G. and SORBOM, D. 1993, *LISREL 8 User's Reference Guide* (Chicago, IL: Scientific Software International).
- JUDGE, T. A., BOUDREAU, J. W. and BRETZ, R. D. 1994, Job and life attitudes of male executives, *Journal of Applied Psychology*, **79**, 767–782.

- KATZ, M. H. and PIOTRKOWSKI, C. S. 1983, Correlates of family role strain among employed black women, *Family Relations*, **32**, 331–339.
- KEITH, P.M. and SCHAFER, R.B. 1980, Role strain and depression in two-job families, *Family Relations*, **29**, 483–488.
- KIRCHMEYER, C. 1993, Nonwork-to-work spillover: a more balanced view of the experiences and coping of professional women and men, *Sex Roles*, **28**, 531–552.
- KIRCHMEYER, C. 1995, Managing the work-non-work boundary: an assessment of organizational responses, *Human Relations*, **48**, 515–536.
- KLITZMAN, S., HOUSE, J. S. ISRAEL, B. A. and MERO, R.P. 1990, Work stress, non-work stress, and health, *Journal of Behavioral Medicine*, **13**, 221–243.
- KOSSEK, E. E. 1990, Diversity in child care assistance needs: employee problems, preferences, and work-related outcomes, *Personnel Psychology*, **43**, 769–791.
- KOSSEK, E. E. and NICHOL V. 1992, The effects of on-site child care on employee attitudes and performance, *Personnel Psychology*, **45**, 485–509.
- LEE, T. W. and MITCHELL, T.R. 1994, An alternative approach: the unfolding model of voluntary employee turnover, *Academy of Management Review*, **19**, 51–89.
- MATSUI, T., OHSAWA, T. and ONGLATCO, M. 1995, Work-family conflict and the stress-buffering effects of husband support and coping behavior among Japanese married working women, *Journal of Vocational Behavior*, **47**, 178–192.
- MEDSKER, G. J., WILLIAMS, L. J. and HOLAHAN, P. J. 1994, A review of current practices for evaluating causal models in organizational behavior and human resources management research, *Journal of Management*, **2**, 439–464.
- MITRA, A., JENKINS, G. D. and GUPTA, N. 1992, A meta-analytic review of the relationships between absence and turnover, *Journal of Applied Psychology*, **77**, 879–889.
- MORGAN, L. G. and HERMAN, J. B. 1976, Perceived consequences of absenteeism, *Journal of Applied Psychology*, **61**, 738–742.
- NETEMEYER, R. G., JOHNSTON, M. W. and BURTON, S. 1990, Analysis of role conflict and role ambiguity in a structural equations framework, *Journal of Applied Psychology*, **74**, 148–157.
- O'DRISCOLL, M. P., ILGEN, D. R. and HILDRETH, K. 1992, Time devoted to job and off-job activities, interrole conflict and affective experiences, *Journal of Applied Psychology*, **77**, 272–279.
- OSTERMAN, P. 1995, Work/family programs and the employment relationship, *Administrative Science Quarterly*, **40**, 681–700.
- PARASURAMAN, S., PUROHIT, Y. S., GODSHALK, V. M. and BEUTELL, N. J. 1996, Work and family variables, entrepreneurial career success, and psychological well-being, *Journal of Vocational Behavior*, **48**, 275–300.
- RAY, E. B. and MILLER, K. I. 1994, Social support, home/work stress, and burnout: who can help? *Journal of Applied Behavioral Science*, **30**, 357–373.
- ROUSSEAU, D. M. 1978, Relationship of work to non-work, *Journal of Applied Psychology*, **63**, 513–517.
- SCHONFELD, I. S. 1990, Coping with job-related stress: the case of teachers, *Journal of Occupational Psychology*, **63**, 141–149.
- SHAMIR, B. 1983, Some antecedents of work-non-work conflict, *Journal of Vocational Behavior*, **23**, 98–111.
- STAINES, G. L. and O'CONNOR, P. 1980, Conflicts among work, leisure, and family roles, *Monthly Labor Review*, **103** (8), 35–39.
- THOMAS, L. T. and GANSTER, D. C. 1995, Impact of family-supportive work variables on work-family conflict and strain: a control perspective, *Journal of Applied Psychology*, **80**, 6–15.
- TIEDJE, L. B., WORTMAN, C. B., DOWNEY, G., EMMONS, C., BIERNAT, M. and LANG, E. 1990, Women with multiple roles: role-compatibility perceptions, satisfaction, and mental health, *Journal of Marriage and the Family*, **52**, 63–72.
- WARREN, J. A. and JOHNSON, P. J. 1995, The impact of workplace support on work-family strain, *Family Relations*, **44**, 163–169.
- WILEY, D. L. 1987, The relationship between work/non-work role conflict and job-related outcomes: some unanticipated findings, *Journal of Management*, **13**, 467–472.
- YOUNGBLOOD, S. A. 1984, Work, non-work, and withdrawal, *Journal of Applied Psychology*, **69**, 106–117.

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