

Predictors of Work-Family Conflict, Stress, and Job Satisfaction among Nurses

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La présente étude, d'après une analyse de régression multiple, a examiné en quoi les variables démographiques, liées à l'emploi, au soutien social et à la prestation de soins pouvaient augurer du conflit entre le travail et la famille, le stress et la satisfaction professionnelle parmi un échantillon de cent une infirmières hospitalières ayant la responsabilité de s'occuper d'un enfant et/ou d'un parent âgé. Les conclusions ont révélé que le soutien familial, le soutien organisationnel perçu pour la vie de famille, le volume de travail perçu et l'engagement dans les soins aux enfants étaient principalement responsables des résultats étudiés. De plus, l'étude indique combien il est important de mesurer séparément la source et la direction du conflit entre le travail et la famille.

Using multiple regression analysis, this study examined the contribution of demographic, job-related, social-support, and caregiving variables to the prediction of work-family conflict, stress, and job satisfaction among a sample of 101 hospital-based nurses who had responsibility for the care of a child and/or an elderly relative. The results revealed that family support, perceived organizational support for family life, perceived workload size, and involvement in child care were mainly responsible for the outcomes studied. In addition, the study underscores the importance of separately measuring both the source and the direction of work-family conflict.

Whereas the study of stress at work and the study of stress in the family each have long histories, only recently has attention turned to the relations between these two spheres of life. This is probably because the two spheres were largely demarcated along gender lines, except for the few occupations dominated by women. Even in the nursing and teaching fields, the prevailing assumption was that women's sense of identity and self-worth was primarily founded on their domestic roles as mothers and wives, and only secondarily on their performance and achievements at work. Moreover, it was expected that women would withdraw from the workforce during periods in the family life cycle when children had the greatest need for protection and support and when elderly family members required sustained caregiving. In addi-

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tion, employees, whether male or female, who appeared to have personal or family problems that interfered with their productivity or relations at work were subject to reprimand, and even dismissal.

Today, demographic and labour-force trends have forced recognition of the interplay between work and family, especially the tensions that can arise at the intersection of these two domains of life. In Canada, the number of working women has increased dramatically in the past 30 years, rising to 45% in 1991 (Mitchell, 1993). Participation in the labour force varies according to age, however. Whereas, in 1991, 37% of women aged 45 and older were employed, fully 80% of women aged 35-44 and 79% of those aged 25-34 were employed (Mitchell, 1993). The number of dual-income families with children more than doubled between 1961 and 1986, from less than 20% to 41%. Moreover, the majority of women with preschool-age children no longer follow the convention of withdrawing from the workforce or deferring their entry into it. These statistics clearly reflect the blurring of traditional patterns of women's participation in the labour force.

Women's and mothers' heavy representation in the labour force is not the only development that complicates the relationship between work and family life. There is also evidence of a greying workforce, increasingly dominated by middle-aged employees who are likely to have responsibility for the care of an elderly relative (Statistics Canada, 1993). In an era when government policy regarding long-term care favours "family care" – a euphemism for care by wives and daughters – the ramifications for employed women can be job loss, curtailment of hours of work, disruption of work schedules, and lost opportunities for advancement (Martin-Matthews & Campbell, 1995; Martin-Matthews & Rosenthal, 1993; Myles, 1991).

Sources, Bases, and Predictors of Work-Family Conflict

What circumstances heighten the likelihood of conflict between work life and family life? To answer this question, it is necessary to distinguish between the source and the basis of the conflict. Since the source of the conflict concerns its origins in either the work domain or the family domain, we must distinguish between work interference with family and family interference with work (Frone, Russell, & Cooper, 1992; Gutek, Searle, & Kelpa, 1991). Each of these sources of conflict is likely to have its own determinants. In addition, previous research on issues of work-family conflict among a national sample of Canadian employees (Gottlieb, Kelloway, & Fraboni, 1994) led us to suspect that both sources can have two bases: (1) time-based conflict, whereby the

time demands of one sphere *interfere* with role performance in the other; and (2) strain-based conflict, whereby strain arising from the demands of one role *spill over* to performance in the other role. Examples of strain-based conflict are thoughts, moods, or energy depletion that cross boundaries (Greenhaus & Beutell, 1985).

In selecting the factors that may contribute to each source of time- and strain-based conflict, one must identify antecedents that have both substantive and domain relevance. Substantive relevance refers to an informed choice of predictors, based on identifying the sources of time pressure and of role strain at work and at home. Domain relevance refers to the match between the predictor and both the source and the basis of the conflict. Hence objective information about the amount of time invested in work, and how it is scheduled, should predict the extent of time-based work interference with family life, just as information about the time invested in the care of dependents should predict time-based family interference with work. Similarly, subjective perceptions of strain in each role should predict strain-based conflict. For example, measures of the frequency of intrusive thoughts about care of dependents, and of physical exhaustion caused by the job, should predict strain-based family interference with work and work interference with family, respectively. For social support, considerations of substantive relevance suggest the adoption of measures that tap both emotional and practical support from family and from co-workers. Considerations of domain relevance suggest that family support would (negatively) predict both bases of family interference with work, whereas co-worker support would (negatively) predict the two bases of work interference with family.

Predictors of Work-Family Conflict among Nurses

Neal (1990) notes that few studies have examined any aspect of the relationship between types of occupations and ability to balance work and family responsibilities. However, the limited research findings that are available suggest that the range of occupations offers employees varying opportunities to adjust their work and domestic demands. In light of the preponderance of women in the nursing profession in North America, and the substantial amount of occupational stress they experience, it is surprising that so little attention has been paid to the nature and antecedents of the conflict between their work role and their family role. In fact the theme of *continuity* in nurses' caregiving role – at home and at work – has received more attention than has the possibility of role *conflict* (Marshall, Barnett, Baruch, & Pleck, 1990; Neal); that is, it

has been suggested that their professional caregiving skills transfer well to the home and family, facilitating integration of the two roles.

There is abundant evidence that hospital nurses experience higher levels of stress than other health professionals. In two studies on the development and validation of occupational-stress measures for health-care workers, nurses reported the most stress: on the 30-item Health Professions Stress Inventory (Wolfgang, 1988) they reported more stress than family physicians and pharmacists; and on the Work-Related Strain Inventory (Revicki, May, & Whitley, 1991) they reported more stress than family physicians, emergency medical technicians, emergency medicine residents, and flight nurses. Literature on the specific sources of occupational stress among nurses reveals the most common sources to be the sheer workload, the hectic pace, shiftwork – especially frequent changes in the scheduling of shifts – strained communications among nurses and other health-care staff, and difficulties arising from administrative and organizational pressures and constraints (Bailey, 1985; Jones, Janman, Payne, & Rick, 1987; McGrath, Reid, & Boore, 1989). After conducting a qualitative study of 28 acute-care staff nurses in British Columbia, Hartrick and Hills (1993) reported that workload factors related to “too many demands” and problems with interpersonal relations topped the list of perceived stressors.

Hartrick and Hills (1993) also inquired directly about nurses’ unmet needs for support. They found that 71% of the nurse respondents did not receive sufficient help with nursing duties, while 57% reported they did not have enough opportunity to express their feelings to their peers and thereby elicit emotional support. Conversely, job satisfaction among nurses has been consistently and strongly linked to supportive relations and open communications with peers, physicians, and supervisors. In sum, it would appear that relations at work are on the whole more stressful than supportive, in part because nurses are so heavily taxed by their job responsibilities that they have little opportunity to support each other.

To date, only one study has directly examined the relations between nurses’ work lives and home lives, concentrating on the tensions and conflicts that arise from their dual caregiving role. Using a qualitative interview method, Ross, Rideout, and Carson (1994) found that nurses felt “torn between two worlds,” describing their experience largely in terms of time-based conflict. However, they also expressed sentiments that reflect strain-based conflict, mainly taking the form of mental pre-occupation with work matters while at home. In addition, the results of this study contribute to the evidence that co-worker support is a pre-

cious and rare commodity. The respondents had "a sense of working in isolation" on the job, and expressed much more satisfaction with the support they received from their spouses and children than with the support of peers and supervisors.

Study Aims

In sum, evidence from studies of occupational stress points to the substantive relevance of the following factors in predicting work-family conflict: insufficient support at home and at work, long hours, frequent schedule changes, and a perceived large workload. In the present paper, regression analysis is used to discern how much each of these factors contributes to the four types of work-family conflict, and to determine their cumulative impact on such conflicts among nurses. To reach this objective, separate measures of work-family conflict that distinguish between the source and the bases of the conflict are taken and three sources of support are distinguished. In addition, the present study aims to determine the relative and combined impact of the demands and support arising from work and from home on the perceived stress and job satisfaction experienced by nurses. By adopting these measures, the study can make a greater contribution to both theory and the formulation of practical programs and policies to assist nurses.

Method

Survey Procedure

Data for the current study were drawn from the Work and Homelife Questionnaire, which we designed for our program of research as members of the Work and Eldercare Research Group of CARNET, the Canadian Aging Research Network. The 16-page survey consisted of four sections, the first inquiring about the objective characteristics and subjective assessments of the respondent's job, as well as stress, absenteeism, and job difficulties. The second section was designed to gauge the nature and extent of the respondent's dependent-care responsibilities, the help and support received from family members, and the extent of the respondents' involvement in community activities in addition to their job and domestic commitments. The third section, which was devoted to issues of balancing employment and family life, included questions about the extent of conflict between the two spheres; the extent of perceived co-worker, managerial, and organizational support; and the respondent's use of and (if not available in her work-

place) desire for a set of flexible work arrangements and family-friendly services. The final section concerned the respondent's demographic characteristics.

The survey was distributed to designated employees in three hospitals in the province of Alberta that operated under a single corporate umbrella. Since the hospitals were unable to supply information about the total number of nurses who received a survey, it is impossible to identify the response rate for nurses in particular. Fifty percent of the workforce in each department of the three hospitals was randomly sampled, for a total of 1781 employees. Of this group, 557 employees returned survey instruments in usable condition, constituting a response rate of 31%. This response rate compares favourably with other employee surveys on the subject of balancing work and family (Neal, Chapman, Ingersoll-Dayton, & Emlen, 1993; Scharlach, Sobel, & Roberts, 1991), probably due to the following factors: respondents were given permission to complete the survey during normal working hours, the subject was of personal interest to the respondents, the survey was accompanied by a strong letter of support from the hospital's senior vice-president, and two reminders were sent, at weekly intervals. In both age (mean = 45 years) and gender (90% women), the final sample of respondents is comparable with the initial pool of employees surveyed.

Respondent Characteristics

For the purpose of the present analysis, 154 nurses were selected on the basis of the following two criteria: they had at least one child under the age of 19 living at home with them and/or they provided at least one hour of assistance per week to a relative who was at least 65 years of age. The amount of time devoted to elder care was estimated by the respondents after completing a checklist to indicate how frequently they provided 26 types of assistance to an elderly relative. Of the 154 nurses, 101 provided complete data on the study variables.

All of the respondents were women; 81% were married, 11% were divorced or separated, 2% were widowed, and 6% had never been married. Predictably, the sample averaged 15.5 years of education, revealing that the vast majority had received some post-secondary training. The mean total annual household income fell into the \$60,000-\$70,000 range, and the average age was 43.5 ($SD = 5.3$) years, with the range extending from 36 to 56 years. The respondents' average workday was 8.7 hours, with almost 20% reporting that their workday averaged at least nine hours. The potential for work-family conflict is

made even more apparent by the revelation that 75% of the respondents worked on the weekend at least twice a month and that an additional 8% worked on the weekend at least once a month. In addition, more than half the respondents reported that their work schedule changed at least on a monthly basis, 44% stating that their current work schedule involved the afternoon/evening shift and 35% reporting that they worked the night shift. Of the 101 respondents, 62% were registered nurses, the remainder having other nursing qualifications. The mean length of employment with the organization was 11 years (range = 1.5 – 28 years).

Measures

Controls. In light of evidence from previous studies that age and income are significant determinants of the outcomes examined here (Gottlieb et al., 1994; Neal et al., 1993; Scharlach et al., 1991), and because we were interested in determining the additional predictive power of the job-related, caregiving, and support variables, age and total annual household income were used as control variables in the regression analyses. Age was measured in years, and income was measured in 13 categories ranging from less than \$10,000 to more than \$120,000, with increments of \$10,000 between each category.

Predictors. Three sets of predictors were included in the analyses. Job-related information included total weekly hours of paid employment, frequency of work-schedule changes (1 = not at all; 2 = every week; 3 = every two weeks; 4 = every three weeks; 5 = every four weeks), and a four-item measure tapping perceived quantitative workload. A five-point, Likert-type response format, ranging from strongly disagree (1) to strongly agree (5), was used for these latter four items, which included the following statements: "I have enough time to complete my work" (reversed item); "In my job, I have too much to do"; "I can rarely finish the work I have to do"; "I usually have time on my hands" (reversed item). Scores ranged from four to 20, with higher scores signifying higher quantitative workload. The alpha for this measure was .76.

Caregiving information constituted the second set of predictors, including both child care and elder care. Both types of dependent care were measured by separately summing respondents' ratings of the frequency (1 = never; 2 = once a month or less; 3 = two or three times a month; 4 = once a week; 5 = several times a week; 6 = daily) with which they provided 26 different kinds of assistance to one or more children who lived with them and/or to one or more elderly relatives. The types

of assistance included five activities of daily living (ADL; e.g., help with bathing, feeding, dressing) and 21 instrumental activities of daily living (IADL; e.g., help with transportation, shopping, household chores, meal preparation, money management). The alpha for child-care assistance was .93 and for elder-care assistance .91. The validity of these caregiving variables is based on evidence that they correlate in a predictable fashion with measures of global stress and subjective burden (Gottlieb et al., 1994).

The third set of predictors tapped perceptions of three sources of social support. The first is an eight-item measure of satisfaction with perceived family support, of which four items tapped tangible support (e.g., "The amount of practical help you get from family members when problems come up between work and family") and four items tapped emotional support (e.g., "The amount of caring and concern you get from family members"). The alpha for this measure was .91. The second measure tapped perceived co-worker support in the same fashion, including four items to gauge tangible help (e.g., "If I had to miss work for part of the day, I have co-workers who would fill in for me as much as they could") and four to gauge emotional support (e.g., "I have co-workers who would support me through tough personal times"). The alpha for this measure was .79.

The final measure of support included seven items that tapped perceived organizational support for employees' family responsibilities. It included such items as "In order to succeed in this organization, employees have to put their personal/family life second" (reversed item) and "This organization has ways of showing that it supports people who have personal/family responsibilities." The alpha for this scale was .83. All three of these scales had five-point response formats, the family-support measure calling for ratings of satisfaction (1 = very dissatisfied; 5 = very satisfied), whereas the co-worker- and organizational-support scales called for ratings of agreement (1 = strongly disagree; 5 = strongly agree).

Outcomes

A total of 22 items was used to assess work interference with family (WIF) and family interference with work (FIW), five items tapping time-based WIF (e.g., "Job demands keep me from spending the amount of time I would like with my family"), five tapping time-based FIW (e.g., "Family demands make it difficult for me to have the work schedule I want"), six tapping strain-based WIF (e.g., "I do not listen to

what people at home are saying because I am thinking about work”), and six tapping strain-based FIW (e.g., “My family life puts me into a bad mood at work”). The empirical basis for distinguishing among these four dimensions of work-family conflict has been established by a confirmatory factor analysis (Kelloway, Gottlieb, & Barham, 1995). Moreover, the scales demonstrated satisfactory test-retest reliability over a six-month period and they correlated in a predictable fashion with measures of global stress and organizational attitudes (Kelloway et al., 1995). A four-point response scale was adopted (1 = never; 2 = sometimes; 3 = often; 4 = almost always), and all but one of the alphas exceeded .70 (time-based WIF = .80; time-based FIW = .62; strain-based WIF = .72; strain-based FIW = .80).

Ten items, derived from a standardized measure (Cohen & Williamson, 1988), were used to inquire about global perceived stress; these included such items as how much of the time in the previous month the respondent had felt in control, tired, calm, energetic, and unable to cope. The response format was: none of the time (1), almost never (2), some of the time (3), most of the time (4), and all of the time (5). The alpha for this measure was .76. Finally, job satisfaction was measured with 15 items based on standardized measures of organizational life (Cammann, Fichman, Jenkins, & Klesh, 1979; Seashore, Lawler, Mirvis, & Cammann, 1982) that tapped both extrinsic and intrinsic satisfaction on a five-point Likert-type scale ranging from very dissatisfied (1) to very satisfied (5). The alpha for this measure was .90.

Results

Descriptive statistics and intercorrelations for all study variables are presented in Table 1.

To identify the predictors of the outcomes (time-based WIF, strain-based WIF, time-based FIW, strain-based FIW, stress, and job satisfaction), we conducted a series of hierarchical regression analyses using forced entry of variables at each step. For each outcome variable, we first entered the demographic measures (age and household income). At the second step, the work-related variables were entered (length of average work week, quantitative workload, frequency of work-schedule changes). At the third step, the caregiving activities (child care and elder care) were entered. Finally, at the fourth step we entered measures of workplace (co-worker and organizational) and family support. Results of these analyses are presented in Table 2.

Table 1
Descriptive Statistics and Intercorrelations for All Study Variables (N = 101)

Variables	Correlations															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Age																
2. Household income	-.08															
3. Frequency of shift-schedule changes	-.21*	.17														
4. Hours worked/week	.12	-.06	-.11													
5. Quantitative workload	.15	-.25*	-.16	.05												
6. Child care	-.44**	.00	.14	-.08	-.14											
7. Elder care	.13	-.08	-.05	-.03	.01	.15										
8. Family support	-.11	.11	.15	-.13	.02	-.03	-.05									
9. Co-worker support	-.04	.11	.02	-.09	.15	.07	.10	.19								
10. Organizational responsiveness	-.03	.14	.05	-.30**	-.22*	-.08	-.10	.20*	.39**							
11. Time-based WIF	.06	-.19	-.02	.24*	.06	.19	-.04	-.17	-.17	-.36**						
12. Strain-based WIF	.15	-.12	-.02	.21*	.27**	.00	-.03	-.18	-.21*	-.37**	.61**					
13. Time-based FIW	-.02	-.06	-.06	-.00	-.00	.19	.00	-.18	-.04	-.16	.40**	.39**				
14. Strain-based FIW	-.08	-.01	.12	.07	-.06	.28**	-.00	-.26**	-.08	-.24*	.45**	.53**	.71**			
15. Stress	.12	-.17	-.05	.01	.31**	-.02	.17	-.15	-.21*	-.38**	.48**	.69**	.47**	.55**		
16. Job satisfaction	-.03	.20*	.01	-.04	-.28**	.14	-.09	.18	.39**	.41**	-.12	-.15	-.03	-.06	-.32**	
Mean	43.5	7.3	1.6	31.4	12.0	63.5	34.9	26.7	30.3	22.4	9.9	11.8	7.5	9.8	27.7	54.1
SD	5.3	2.4	1.7	12.0	2.8	29.5	16.3	6.1	4.3	4.4	2.6	2.6	2.0	2.5	5.0	7.2
Notes: * $p < .05$; ** $p < .01$																

Table 2 <i>Hierarchical Regression Analyses for Work-Family Conflict, Stress, and Job Satisfaction: Standardized Beta Weights (β)</i>				
Variable/Step	Work Interferes with Family		Family Interferes with Work	
	Time-Based	Strain-Based	Time-Based	Strain-Based
Step 1: Demographic Variables				
Age	.16	.14	.06	.04
Household income	-.14	.00	-.03	-.00
R ² _{change}	.04	.03	.00	.01
Step 2: Job-Related Variables				
Hours/week	.14	.10	-.04	.00
Quantitative load	-.02	.24*	-.06	.12
Work-schedule change	.03*	.08	-.04	-.07
R ² _{change}	.05	.09*	.00	.02
Step 3: Caregiving Variables				
Child care	.26*	.09	.21*	.25*
Elder care	-.13	-.07	-.07	-.08
R ² _{change}	.07*	.01	.04	.07*
Step 4: Support Variables				
Co-worker support	-.02	-.13	.05	.05
Family support	-.05	-.10*	-.14	-.23*
Org. responsiveness	-.27*	-.21*	-.16	-.22*
R ² _{change}	.08*	.10*	.04	.09*
Overall R²	.24**	.23**	.08	.19*
Notes: * = $p < .05$; ** = $p < .01$; N = 101				

Table 2 continued on page 110

Table 2 (cont'd)*Hierarchical Regression Analyses for Work-Family Conflict, Stress, and Job Satisfaction: Standardized Beta Weights (β)*

Variable/Step	Stress	Job Satisfaction
Step 1: Demographic Variables		
Age	.05	.13
Household income	-.04	.07
R ² _{change}	.04	.04
Step 2: Job-Related Variables		
Hours/week	-.10	.07
Quantitative load	.26*	-.27*
Work-schedule change	.04	-.08
R ² _{change}	.07*	.06*
Step 3: Caregiving Variables		
Child care	-.02	.19
Elder care	.14	-.13
R ² _{change}	.02	.03
Step 4: Support Variables		
Co-worker support	-.15	.32*
Family support	-.08	.11
Org. responsiveness	-.27*	.22*
R ² _{change}	.13*	.23*
Overall R²	.26**	.36**
Notes: * = $p < .05$; ** = $p < .01$; N = 101		

Time-Based WIF

Collectively, the predictors accounted for 24% of the variance in time-based WIF. Both the caregiving and support variables accounted for significant portions of this dimension of work-family conflict. Specifically, having children under the age of 19 living at home was associated with increased time-based WIF. In addition, nurses who felt that their employer was responsive to employees' family demands reported less time-based WIF.

Strain-Based WIF

The predictors of strain-based WIF show evidence of domain relevance, reflected by the significant contribution made by the variables in the

workplace and support blocks. Specifically, of the total 23% of the variance accounted for by all the predictor variables, the greater the quantitative workload (the perception of having too much to do) and the lower perceived organizational and family support, the more strain-based WIF was experienced.

Time-Based FIW

None of the sets of variables considered here made a significant contribution to the prediction of time-based FIW. However, one variable, the amount of assistance provided to children under the age of 19 who lived at home, was positively associated with time-based FIW.

Strain-Based FIW

Nineteen percent of the variance in strain-based FIW was accounted for by the entire set of predictors. Like strain-based WIF, it was predicted by the two blocks of variables most relevant to this outcome – namely, the caregiving and the support blocks. That is, the more assistance provided to children under the age of 19, the more strain-based FIW. In addition, the more satisfied the nurses were with the support they received from their families, and the more they perceived their employer as responsive to their homelife, the less strain-based FIW they experienced.

Stress

Of the total 26% of the variance in stress that was accounted for by all the predictors, the work-related and support variables proved to be the critical determinants of this outcome. Not surprisingly, quantitative workload predicted (greater) stress, whereas organizational responsiveness to family life was inversely associated with stress.

Job Satisfaction

Job satisfaction was also predicted by both the work-related and support variables. Nurses who felt they had too much to do were less satisfied with their jobs. The more they perceived their co-workers as supportive and the more they viewed their employer as responsive to their family demands, the more satisfied they were with their jobs. As a set, the predictors accounted for more of the variance (36%) of this outcome than of the other.

Discussion

The results of this study underscore the importance of distinguishing between the direction and bases of the conflict between work and family, among nurses, revealing that the four kinds of conflict have somewhat different determinants. Specifically, the findings reveal that time-based conflict, whether from work to family or from family to work, arises largely from caring for children. Hence nurses who reported providing a greater amount of assistance to their children experienced more time-based WIF and FIW. In addition, the determinants of strain-based conflict show evidence of substantive and domain relevance. Specifically, nurses who feel they have too much to do on the job are more likely to have thoughts and feelings generated at work intrude on their home lives, whereas nurses who provide a large amount of assistance to their children are more likely to experience mental and emotional spill-over from the family domain to the work domain.

The support variables show more limited evidence of domain specificity. The findings reveal that nurses who are relatively satisfied with the practical and emotional support they enjoy from their families are less likely to be preoccupied at work with concerns and distracted by negative moods that arise from family demands. In contrast, co-worker support did not show any predictive power across the four types of work-family conflicts. Instead, for three of the four types of work-family conflicts, the more nurses perceived their employer as supportive of their home lives, the less conflict they experienced.

It is noteworthy that elder care did not predict any of the outcomes. This finding is probably a reflection of the fact that the average age of the nurses was 43.5 years, placing them at a developmental stage that is earlier than the time when more onerous filial elder-care responsibilities normally are assumed (Martin-Matthews & Rosenthal, 1993; Rosenthal, Matthews, & Marshall, 1989). Descriptive data reveal that the respondents spent an average of only 3.9 hours per week ($SD = 8.75$, range = 1-60) assisting one or more elderly relatives, whereas they devoted an average of 29.8 hours per week ($SD = 29.9$, range = 1-168) to child care.

The finding for co-worker support is more puzzling and intriguing. Contrary to the finding of Ross et al. (1994), based on their interviews with nurses, that family support exceeded workmate support, the present study documents higher mean ratings of co-worker support ($M = 30.3$, $SD = 4.3$) than family support ($M = 26.7$, $SD = 6.1$). However,

the emotional and practical aid of other nurses was not found to affect either WIF or FIW, nor to predict stress. It is only with respect to job satisfaction that it shows predictive power. Considered together, these findings suggest that co-worker support affects morale at work but has little bearing on the integration of work and family duties.

Of all the predictive variables, only the subjective perception of having too much to do proved to be a salient precursor of stress, job dissatisfaction, and strain-based WIF. These pervasive negative consequences may represent the psychological effects of nurses' lack of control over their work. That is, only when nurses perceive that they have too much to do in too little time at work do their job demands result in adverse effects such as having workplace concerns penetrate their home lives. In short, when nurses feel they have too much to do, their sense of mastery can be undermined, contributing to disaffection with their jobs and adding to the feelings of disillusionment with their chosen career that stem from conflict between their personal values and the values espoused by the health-care system (Oberle & Davies, 1993).

Finally, it is evident that nurses who perceive their employer as supportive of family life experience less time-based and strain-based WIF, suggesting that the norms, policies, and attitudes toward home life communicated by supervisory personnel and senior management are far more consequential than the support of co-workers. This means that a more "family-friendly" employment environment may mitigate unwanted spill-over from work to family life. It would be instructive for research to assess the determinants of perceived organizational support for family, including both the informal or unwritten rules that govern corporate responses to work-family conflicts, and existing family-friendly services and programs. How does a culture of support for family arise, and what are the dividends that accrue to employers who place a premium on and reward managerial flexibility? Should employers take steps to lighten employees' family responsibilities by introducing a range of substitute-care arrangements (e.g., emergency child care, day care), or should they make it easier for employees to manage their dependent-care obligations – by introducing more flexible work arrangements, for example?

Although generally the social-support variables proved to be important predictors of the several outcomes examined here, it would also be valuable if future investigations explored the kinds of personal coping strategies that nurses use to manage their dual role. Such information would yield new insights about how women cope with the chronic stress that attends fulfilling multiple social roles (Gottlieb,

1997). As well, the inclusion of coping data could add more power in predicting the extent and the type of work-family conflict they experience. On the former score, it would be enlightening to know whether certain kinds of cognitive strategies of coping – such as distancing, lowering standards for job performance or for housekeeping, or downward social comparisons – prove efficacious as ways of meeting the challenge of balancing job and family demands. It would also be instructive to learn about the steps that women take to prevent work-family conflicts from arising in the first place, and to compare the actual and anticipatory coping responses of women who have had to terminate their employment due to work-family conflict with those who have found ways to harmonize the two spheres. Finally, by marshalling data about individual coping efforts and social support in both the workplace and the home, it may be possible to determine the extent to which certain kinds of support are contingent on certain ways of coping, as well as the constraints on coping that arise from interactions with family members and co-workers. For example, it is possible that family support is contingent upon the ability to work out compromises and to make accommodations that maintain family cohesion and harmony.

Although these results underscore the value of distinguishing between time-based and strain-based conflict, researchers may wish to explore more fully the determinants and the components of these two sources of conflict. For example, little is known about the actual situations that lead to each type of conflict. Is there something about the structure of nurses' work, or about management practices, that generates more or greater conflict between work and family life than in other professions in which women are engaged? Perhaps comparative studies of nurses in various settings and roles, such as in community-based work and in hospital settings, would illuminate the factors that are implicated in the genesis of work-family conflicts. In addition, it would be valuable to know which aspects of strain-based conflict – whether thoughts, moods, or energy depletion – are stronger determinants of the outcomes examined here, as well as other outcomes. For example, is it mainly the negative moods produced by work that affect nurses' relationships with their spouses and children? To what extent do intrusive thoughts about the well-being of dependents affect perceived stress and thereby reduce organizational commitment? These and other inquiries into the impacts of certain aspects of strain-based conflict would also clarify how conditions at work and at home could be altered to minimize their adverse psychological sequelae.

In closing, it must be acknowledged that the present study is limited by virtue of its cross-sectional design and the data's grounding

in a relatively small sample of hospital-based nurses. The former limitation precludes any causal inferences; a prospective design would be required to strengthen conclusions about the factors that place nurses at risk of the several outcomes examined here. The latter limitation, which affects the generalizability of the findings, could be overcome by selecting a larger, representative, sample of nurses drawn from multiple nursing settings and living in a variety of family circumstances. In addition, to examine the impact of elder care more effectively, it would be desirable to recruit older nurses who are at a life stage when they are more likely to have assumed responsibility for the care of an aged relative.

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Acknowledgements

The data reported in this paper were collected as part of a study of "Work and Family" conducted by the Work and Eldercare Research Group of CARNET (Canadian Aging Research Network). The project was funded by the Canadian Ministry of Science and Technology through its Networks of Centres of Excellence Program.

Date accepted: June 1996