## Association for Information Systems AIS Electronic Library (AISeL)

ICIS 1989 Proceedings

International Conference on Information Systems (ICIS)

1989

# THE ELECTRONIC BRIEFCASE AND WORK-FAMILY CONFLICT: AN ANALYSIS BY GENDER

Linda Duxbury
Carleton University

Shirley Mills
Carleton University

Follow this and additional works at: http://aisel.aisnet.org/icis1989

#### Recommended Citation

Duxbury, Linda and Mills, Shirley, "THE ELECTRONIC BRIEFCASE AND WORK-FAMILY CONFLICT: AN ANALYSIS BY GENDER" (1989). ICIS 1989 Proceedings. 5.

http://aisel.aisnet.org/icis1989/5

This material is brought to you by the International Conference on Information Systems (ICIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICIS 1989 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

#### THE ELECTRONIC BRIEFCASE AND WORK-FAMILY CONFLICT: AN ANALYSIS BY GENDER

Linda Duxbury School of Business Carleton University

Shirley Mills
Department of Statistics and Mathematics
Carleton University

#### ABSTRACT

Individuals who have personal computers or terminals at home which they use for job-related purposes outside of regular office hours are said to use an electronic briefcase. This study uses Profile Analysis to examine how selection of an electronic briefcase workstyle affects employee work-family conflict. Data was collected from 359 dual-career couples with children. Seventy-three percent of the men in the sample and forty-nine percent of the women used an electronic briefcase workstyle. The rest of the sample choose not to use this work arrangement. Men and women with computers at home work significantly more hours per week and a significantly greater number of hours of overtime than do men and women who do not use an electronic briefcase. Based upon the profile analysis, a genderelectronic briefcase interaction effect appears to exist. Men and women who do not use an electronic briefcase experience essentially the same levels of work-family conflict as do men who work at home on a computer outside of office hours. However, women who use this work arrangement show a considerably different profile. Using an electronic briefcase seems to enable men to work longer hours without increasing their work-family conflict. A computer at home does not help women cope with conflict caused by dual role expectations. Women who use an electronic briefcase experience significantly more work-family conflict than do women who do not use such a work arrangement and men who do.

#### 1. INTRODUCTION

The traditional family model of the husband as breadwinner and wife as homemaker is becoming a vestige of a past society (Hall and Hall 1980). The economic pressures of inflation and the social psychological need "to develop one's self identity" are encouraging women to take a more active role outside the home, to pursue full time careers and to participate more widely in society in general (Cooper 1981). A major consequence of this change away from the traditional family is a dramatic increase in workfamily conflict. This is a form of role stress which occurs when the demands of work and the demands of family are in conflict.

The impact of work-family conflict on family life and organizational effectiveness is becoming a critical social issue as (1) changing demographics transform workplace populations, (2) the traditional model of separate job and family worlds becomes less viable, and (3) North American society becomes more concerned with worktime issues (Michelson 1983).

One major challenge for management today is to utilize the vast potential of computer and communications technology to increase organizational productivity while, at the same time, improving the quality of work and family life by decreasing work-family conflict for employees (Olson and Primps 1984). While telecommuting, the use of computer and communications technology to support innovative work arrangements at sites away from the central office itself (Nilles et al. 1976), has not gained popular acceptance, a survey of data processing professionals by Olson (1985) showed clearly that many people (64 percent of those responding) work at home after normal office hours using telecommunications and personal computers. The survey indicated that, while these employees did not want to work at home full time, an overwhelming majority (71.2 percent) of them favored the idea of working at home after hours on a computer.

A Canadian survey conducted in 1985 (Duxbury, Higgins and Irving 1989) obtained similar results. One hundred and seventy-seven Ontario businesses on *Datamation*'s reading lists were asked if they had a work at home program. A telephone follow-up indicated that while only 3.5 percent of the sample had programs where the workers could work from the home for at least part of the work day, 15.5 percent of the companies provided their employees with home computers for after hours work.

It can be expected that putting a computer in one's home for job related purposes will have far reaching implications and consequences. For example, will an employee's family perceive that a company microcomputer is an intrusion into their home? Will it cause family problems if the employee is locked in his/her office trying one more "what if" scenario? Corporate decision makers need to carefully evaluate this strategy by identifying the possible advantages and disadvantages for themselves and their employees before adopting the electronic briefcase as a company policy.

The primary objective of this study is to examine how the selection of an electronic briefcase workstyle effects employee work-family conflict. By electronic briefcase, we are referring to those situations where an individual has a personal computer or terminal at home which is used for job-related purposes outside of regular office hours. While all 359 respondents in this study had the opportunity to perform computer-mediated work at home after office hours, only half availed themselves of the opportunity. This study compares work-family conflict profiles of men and women who choose to use the electronic briefcase to those who do not. Several questions are addressed.

- 1. How do the work-family conflict profiles of men who elect to use an electronic briefcase differ from those of men who choose not to use this workstyle?
- 2. How do the work-family conflict profiles of women who elect to use an electronic briefcase differ from those of women who choose not to use this workstyle?
- 3. How do the work-family conflict profiles of men who elect to use an electronic briefcase differ from profiles of women who choose to use this workstyle?

To date, very few studies are available on the electronic briefcase (most focus on telecommuting). This research is, therefore, significant in that it provides needed data on a trend that is becoming increasingly prevalent. Organizations will need information concerning the effects this work arrangement has on an employee's ability to manage the work-family interface. Employees need to appreciate the possible impact the electronic briefcase will have on their work and family life. The more organizations understand about the stresses facing their employees, the more effective they will be in developing and implementing policies to assist employees in managing stress. Such policies should enable organizations to more effectively utilize the resources of their workers and avoid the consequences of health-related problems, turnover, absenteeism and decreased job performance that are the outcome of work-family conflict.

#### 2. BACKGROUND LITERATURE

#### 2.1 Work-family Conflict

Kopelman, Greenhaus and Connolly (1983) define work-family conflict as the extent to which a person experiences pressures within one role that are incompatible with pressures from another role. Greenhaus and Beutell (1985) identified three ways in which role pressures can be incompatible: time spent in one role may leave little time to devote to other roles, strain within one role domain may "spillover" into another, and behavior appropriate to one role domain may be dysfunctional in another (Burke and McKeen 1989).

Two major types of work-family conflict have been identified: overload and interference. Role overload exists when the total demands on time and energy associated with the prescribed work and family role activities are too great to allow an individual to perform both roles adequately. Interference occurs when conflicting work-family role demands make it difficult to fulfill the requirements of multiple roles. Work-family role interference commonly occurs because many work and family activities must be performed during the same time periods in different physical locations.

The literature suggests that men and women experience work-family conflict in different ways. The family is considered to be a greater source of work-family conflict for women than it is for men; conversely, work is considered to be a greater source of work-family conflict for men than it is for women. Initial studies suggest that working longer hours causes greater work-family conflict for working women than it does for working men (Voydan-off 1987). These differences appear to be related to the husband's expectations that their wives would perform most of the household and child care duties.

Women have traditionally been exposed to stronger sanctions for non-compliance with family demands than have men (Greenhaus and Beutell 1985). Consequently, for women, the demands of the family role are permitted to intrude into the work role more than vice versa (Voydanoff 1987; Pleck 1984). Although working mothers may devise schedules to accommodate the demands of both roles, should an emergency arise (requiring a choice between the two), the family will often take priority. This vulnerability of the female work role to family demands is a major source of stress for women on the job (Pleck 1984).

For men, on the other hand, the opposite situation often occurs as the demands of the work role are allowed to intrude into the family role more than vice versa (Voydan-

off 1987; Pleck 1984). Many husbands literally "take work home" with them or use family time to recuperate from the stresses they face in their work role. Husbands are expected to manage their families so that their family responsibilities do not interfere with their work efficiency and families make any adjustments necessary to accommodate the demands of husbands' work roles.

Women with children (especially young children) have been found to experience greater role stress than do men (Gutek and Nakanura 1981; Hall and Hall 1980). Because child-care has traditionally been seen as the woman's responsibility, if a woman chooses to work when she has children, it may be seen as her responsibility to find means of coping with both a job and the children. The demands of childrearing, particularly the problems associated with finding satisfactory childcare arrangements, are cited by Skinner (1980) as an especially significant source of strain for working women.

#### 2.2 Work-Family Conflict and the Electronic Briefcase

Research suggests that work-family conflict may be associated more strongly with inflexible work schedules than with number of hours worked (Pleck, Staines and Lang 1980). Flexibility of work arrangement refers to a worker's level of control over the scheduling of both work time and work location. Renshaw (1979) showed that a key factor in coping successfully with stress was the amount of influence individuals perceived themselves as having over the stressful event(s). In general, the available literature suggests that work arrangement flexibility will reduce work-family conflict by increasing an employees' ability to control, predict and absorb change. The ability to bring computer work home has the potential to increase work flexibility by allowing the employee to respond to unexpected changes in work and home activities.

For the most part, the literature on the consequences of computer and communications technology in the home has stressed the opportunities that new technology will create for playing both work and family roles more fully. The introduction of computer technology into the home should lead to greater work-schedule flexibility for individuals who use computers in their job. It would allow an individual to respond more quickly and make tradeoffs more easily when unexpected changes occur in work or home activities by enabling them to perform computer related work at home.

Negative consequences of the electronic briefcase such as the generation of work-family role conflict appear, however, to be an equally likely scenario (Becker and McClintock 1981). Clear distinctions between work time and private or family time may tend to blur, and obligations to the family, work and organization conflict, when work is done in the home. At a time when many individuals are

striving to develop separate work and family roles, encouragement to do office work at home may constrain and retard role differentiation. The physical separation of settings has traditionally provided a convenient cue for switching roles and keeping what are often considered conflicting roles at bay (Hall and Richter 1988). Losing the opportunity that place-specific roles provide for balancing competing and conflicting role expectations may generate conflict rather than enhance the performance of multiple roles. Olson (1985) supports this contention. She believes our society has set up a distinction between work and non-work life and that a major change such as the introduction of computers into the home for after hours work would create stress.

Individuals who use the electronic briefcase may also encounter intrusions which are not work related or helpful (home chores, children). In a recent study, Olson (1985) found that workers expressed difficulties with their families accepting that they were working when at home and not available to take care of family needs. Olson also found that some employees with primary family care responsibilities indicated that coping with both family and work in the same setting was highly stressful.

#### 3. METHODOLOGY

#### 3.1 Instrument

Scales developed by Bohen and Viveros-Long (1981) and Pleck (1979) provided the substantive basis for the measure of Work-Family Conflict used in this analysis. A principal component analysis and a factor analysis with varimax rotation of the 19 questions in the work-family conflict scale yielded five factors that explained 60 percent of the variation in this construct. Questions that were non-normal or did not have factor loadings of .60 or greater were dropped from the analysis. The final set of 16 questions included in each factor are shown in Table 1. The first factor, Role Overload, explains 32.5 percent of the variation. Chronbach's alpha coefficient of the revised measure was found to be .81.

#### 3.2 The Sample

Many individual, organizational and social factors may have an impact on electronic briefcase issues. This makes it difficult, if not impossible, to identify and control all moderating variables in any one study. To minimize these problems and maximize the generalizability of the results, we decided to limit the population of interest to married individuals (both male and female) who used a computer in their job and who had the opportunity to work on a computer in their home outside of regular office hours. To make the populations as homogeneous as possible, all individuals examined in this study had to meet three additional criteria. They had to be managers and/or professionals, parents and have a spouse who had a full-time job outside the home.

#### Table 1. Measure of Work-Family Conflict

#### FACTOR 1: Role Overload

- 1. I feel I have more to do than I can comfortably handle.
- 2. I feel physically drained when I get home from work.
- I feel emotionally drained when I get home from work.
- 4. I feel I have to rush to get everything done each day.
- Work makes me too tired or irritable to participate in or enjoy family life.

#### FACTOR 2: Role Interference

- 6. I have a good balance between my job and my family. (R)
- 7. I wish I had more time to do things for the family.
- 8. I feel I don't have enough time for myself.

#### FACTOR 3: Work Role Intrudes Into Family Role

- 9. My job keeps me away from my family too much.
- 10. The uncertainty of my work schedule interferes with my family life.
- 11. My preoccupation with my job affects my family life.

#### FACTOR 4: Family Role Intrudes Into Work Role

- 12. I worry about my children when I am working.
- 13. Family life interferes with work.

#### FACTOR 5: Impact of Children

- I worry about whether I should work less and spend more time with my children.
- 15. I find enough time for my children. (R)
- 16. I have as much patience with my children as I would like. (R)

Where: 5 = Always, 3 = Sometimes and 1 = Never R means the question was reverse coded in the analysis

This group was selected for several reasons. First, it seems to be a reasonable assumption, given the literature on work-family stress (Voydanoff 1987) and "telework" (Olson and Primps 1984), that dual-career married individuals with children would be the group most affected by the electronic briefcase. This group can be expected to enjoy benefits and suffer disadvantages from using an electronic briefcase not experienced by singles, couples without children or traditional families. In addition, the fact that more than half of the North American work force is married with children (Nieva 1988) suggests that information about this group will have the most relevance for both management and employees.

A judgement sample of this population was obtained by contacting large Canadian organizations in the private sector. Of the 21 organizations contacted, 19 agreed to participate in the study. Once an organization agreed to participate, a contact person within the organization was appointed to compile a list of married individuals who used a computer in their job and who had the opportunity to use a computer at home (generally this restricted their choice to managers and professionals). The contact distributed the questionnaire to people on their list who sent the responses directly to us.

Fifteen hundred questionnaires were distributed. Seven hundred and forty-eight were returned for a response rate of slightly under 50 percent. No follow up was performed. Of these 748 questionnaires, only 359 were usable for the purposes of this particular study. The reasons for eliminating a response included (1) the respondent did not meet our constraint criteria of having children or an employed spouse (we collected data from couples with no children and/or a spouse who was not employed for other purposes) and (2) the respondent had more than five percent missing values in the questionnaire.

Of the usable responses, 201 were from men, 158 from women. Seventy-three percent (N = 148) of these men and forty-nine percent (77) of these women used the electronic briefcase. Overall, 62.7 percent of the sample performed after hours work at home on a computer. The average age of our male respondents was 37 years, while females averaged 35 years. The average number of children was similar for both groups (slightly under two children per family) as was the average age of their children (6.2 years). As can be seen in Table 2, there was no significant gender difference in the total number of hours worked per week or the number hours worked at home on the computer for individuals who had computers at home. Similarly, there was no significant difference in the hours worked per week by men and women without computers at home. The data indicate, however, that men and women with computers at home work significantly more hours per week than do men and women without computers at home. The data also indicate that most of these additional work hours were performed at home on the computer after office hours.

Table 2. Time Spent Working Per Week

CHARACTERISTIC	NO COMPUTER AT HOME		COMPUTER AT HOME	
Total Hrs Worked/Wk	Men 40.36	Women 38.87	Men 44.85	Women 43.11
Total Hrs Overtime Work At home on Computer,	0.00 /Wk	0.00	4.33	4.66

#### 3.3 Data Analysis

The sample was divided into four groups: men and women who used an electronic briefcase and men and women who did not. Work-family conflict profiles were created for each of these four groups using the Profile Analysis routine under MANOVA in SPSSX. In profile analysis there are three questions of interest (Johnson and Wichern 1988; Stevens 1986):

1. Parallelism of profiles: Are the population-mean profiles similar, in the sense that the line segments between adjacent variable means are parallel? Parallelism is tested using a Hotellings T Squared

statistic. Failure of this test indicates that the profiles are significantly different and, therefore, not parallel.

- Coincidence: Assuming parallelism, are the variable mean levels equal? In other words, can the lines be superimposed so that they coincide? A Hotellings T Squared statistic is used to determine coincidence in profiles that are parallel.
- 3. Equal response means: Assuming parallelism and coincidence, are the response means for the variables equal? In other words are the profiles essentially flat? Hotellings T Squared statistic is used to determine equality of response means in profiles that are both parallel and coincident.

Data in profile analysis consists of "p" commensurable responses that have been collected from independent sampling units grouped according to "k" treatments or experimental conditions. In our case, p = 16 (the workfamily conflict questions). The following profiles were compared.

- (1) Men with computers at home versus men without computers at home (k = 2).
- (2) Women with computers at home versus women without computers at home (k = 2).
- (3) Men with computers at home versus women with computers at home (k = 2).
- (4) Men without computers at home versus women without computers at home (k = 2).
- (5) Men and women with and without computers at home (k = 4).

There are two underlying assumptions that must be met before one can accept the profiles calculated under MANOVA as valid: equal dispersion matrices and multivariate normality (Johnson and Wichern 1988; Stevens 1986). These assumptions were checked for each profile using BMPD and the MANOVA routine in SPSSX. All profiles reported in this study passed both check procedures (i.e., dispersion matrices were essentially equal, all variables were approximately normal).

A multiple comparison of means was done for each of the five sets of profile comparisons using the means, standard deviations and 95 percent confidence intervals calculated as part of the Profile routine. This comparison enables one to examine the profiles in detail to determine where and how the profiles differ. Tukey's multiple comparison confidence intervals were employed to control for error rates resulting from multiple testing of the mean (Stevens 1986). Means that were statistically different at a level of significance of .10 are reported.

#### 4. RESULTS AND DISCUSSION

The results are presented and discussed in 3 sections. In the first section, the work-family conflict profiles of men who use the electronic briefcase are compared to those men who do not use this work arrangement. The second section compares the work-family conflict profiles of women who use the electronic briefcase to profiles of women who do not use this work arrangement. In the final section, the work-family conflict profiles of men who use the electronic briefcase are compared to profiles of women who also use this work arrangement. The means used in each profile can be found in Table 3. Work-family conflict profiles of men and women who do not use computers at home were calculated for comparison purposes and are also included in Table 3.

Table 3. Group Differences Between Means

Variable	Computers Men	At Home Women	No Computers Men	At Home Women	Significant Differences	
GROUP NUMBER						
	1	2	3	4		
1	2.75	2.82	2.53	2.48	none	
2 3	2.97	3.36	3.00	3.11	1 and 2	
3	3.02	3.22	2.92	2.99	none	
4	3.25	3.50	2.94	3.14	2 and 3	
					3 and 4	
5	2.35	2.55	2.11	2.22	2 and 3	
					2 and 4	
6	2.53	2.52	2.51	2.24	none	
7	3.18	3.29	3.24	3.03	none	
8	2.89	3.24	2.82	2.86	1 and 2	
9	2.61	2.45	2.47	2.05	1 and 2	
					2 and 4	
					3 and 4	
10	2.28	2.01	2.10	1.63	1 and 4	
					2 and 4	
					3 and 4	
11	2.50	2.36	2.20	1.98	1 and 2	
					2 and 4	
12	2.24	2.52	2.38	2.45	1 and 2	
13	1.48	1.72	1.58	1.58	1 and 2	
14	2.37	2.52	2.23	2.38	none	
15	2.64	2.61	2.58	2.53	none	
16	2.86	2.82	2.87	2.89	none	

## 4.1 Men with Computers at Home versus Men without Computers at Home

Hotellings T Squared statistics indicate that work-family conflict profiles for men who use an electronic briefcase are parallel, coincident and non-flat when compared to profiles of men who do not use this work arrangement. In others words, the profiles are the same but mean responses to individual questions are different. Our data suggest that using a computer at home for work outside of office hours has no impact on the incidence of work-family stress in men. Men who use an electronic briefcase do, however, work significantly more hours per week, many of them at home, than those who do not use this technology. Workfamily conflict has consistently been found to be positively related to the number of hours worked per week (Keith and Schafer 1980; Pleck, Staines and Lang 1980; Voydanoff 1987). Given this, it appears that having a computer at home for after hours work does provide men with some type of increased control at the work-family interface.

## 4.2 Women with Computers at Home versus Women without Computers at Home

Hotellings T Squared statistics indicate that work-family conflict profiles for women who use an electronic briefcase are parallel, non-coincident and non-flat when compared to profiles of women who do not use this work arrangement. Examination of the data in Table 3 indicates that while the work-family conflict profiles are similar in configuration, women who use an electronic briefcase experience more work-family conflict than women who do not use this work arrangement. Women who used an electronic briefcase scored higher on all but two of the work-family stress measures (means for questions 15 and 16 were essentially the same). Four of the mean differences were significant at the 0.10 level.

Women who work after hours on a computer are significantly more likely to report that their job keeps them away from their family too much, that their work schedule interferes with their family life and that their preoccupation with their job affects their family life. As all three of these variables loaded on Factor 3, "Work Role Intrudes Into Family Role," it would appear that women who choose to use an electronic briefcase are significantly more likely than other women to perceive that performance of their work role interferes with their family role. It is possible that this perception reflects reality given that these women work significantly more hours than their counterparts with no computer at home. Perhaps having a computer at home increases the perceived demands of the work role in dual-career women to their detriment.

This data also suggests that although the electronic briefcase makes it easier for women to work after office hours, this benefit is not "cost free" as such women experience more work-family conflict stemming from their perception that they are neglecting their family. This finding is consistent with the work of Greenhaus and Beutell (1985), who found that women have traditionally been exposed to stronger sanctions for non-compliance with family demands. Women with children who work longer hours, especially in the home environment, would be more likely to perceive that they are not complying with family demands than would women who do not work extra hours at home.

Women who work after hours on a computer are also significantly more likely to report that they do not have enough time for themselves than are women who do not work at home. The data indicates that, while women who use an electronic briefcase work more hours than women who do not, they do not perceive that they are performing their parental roles any less adequately (mean responses for questions 15 and 16 are essentially the same for the two groups). Since time is a limited commodity, time given to the work role has to come from time spent elsewhere. Our data suggests that women who use an electronic

briefcase are more likely to sacrifice their own personal time than time spent working or with their children.

Women with a computer at home for after hours work elected to use this work arrangement. It would appear that these women are more involved with their work and more likely to let work take precedence over their family and time for themselves than are women who do not chose to use a computer at home.

## 4.3 Men with Computers at Home versus Women with Computers at Home

Hotellings T Squared statistics indicate that work-family conflict profiles for men and women who use an electronic briefcase are not parallel. In other words, the perceived sources of work-family conflict for men who work at home after office hours are significantly different than those of women who work such an arrangement. The Hotellings T Squared statistics show that work-family conflict profiles of dual-career men and women who do not use an electronic briefcase are parallel and coincident. In other words, the work-family conflict patterns for men and women without computers at home and, in fact, men with computers at home are essentially the same. These results indicate that having a computer at home for after hours work has a negative affect on a woman's ability to effectively manage the work-family interface. No such negative impact is found for men.

An examination of the data in Table 3 indicates that the differences in these profiles corresponds to the profile pattern reported in Table 1. Men who use an electronic briefcase are significantly more likely than women who use this work arrangement to perceive that their job keeps them away from their family too much and that their preoccupation with their job affects their family life. As these variables load on factor 3, "Work Role Intrudes Into Family Role," it would appear that men who work at home on a computer are more likely than women who use this work arrangement to perceive that work intrudes into the family role. Women who use an electronic briefcase are, in turn, significantly more likely to report that work role expectations intrude into family role expectations than are women who do not elect this arrangement.

Men's work roles have traditionally been given preference over their performance of family roles (Voydanoff 1987; Greenhaus and Beutell 1985; Pleck 1985). Work at home by men after hours would, therefore, be more likely to be accepted and supported by the family than would similar behaviour by women, who are expected to give family roles preference. It would appear that intrusion of work time into family time increases as societal sanctions against working at home decrease. Dual-career women who do not use an electronic briefcase are significantly less likely to perceive that work intrudes on family than are indivi-

duals who use a computer at home. The former experience less stress because they are less likely to allow work demands to intrude on family demands (i.e., work fewer hours) and hence are less likely to feel that they are neglecting their family.

Women who use an electronic briefcase are significantly more likely to perceive that family role demands intrude into their work role than are men who work this arrangement. They are significantly more likely to experience work-family conflict that comes from worry about their children when they are working and the perception that their family intrudes into their work. These findings combined with those discussed above agree with work done by Hall and Richter (1988) and Pleck (1984), who suggest that the work-family interface is differentially permeable. Men who use an electronic briefcase seem to be less likely to allow their family responsibilities to interfere with their work efficiency. They are more likely to allow work to intrude on family time. On the other hand, women who work at home on the computer appear to be more vulnerable than men to family demands when they are working. These findings suggest that when work is performed in the family setting, women are less able than men to ignore conflicting family role expectations.

Women who use an electronic briefcase experience significantly more role overload than any other group examined. They are significantly more likely to feel physically drained and rushed. These findings are not surprising given that they work more hours than men and women who do not use the electronic briefcase and that they perceive more family demands than men who work after hours at home. Having a computer at home seems to be related to an increase in role demands for dual career women who are involved with both their work and family roles.

There were no differences between response means on questions 14, 15, and 16. These three variables measure the amount of work-family conflict that comes from having to balance work and parenting roles. Contrary to what was expected from the literature (Greenhaus and Beutell 1985: Pleck, Staines and Lang 1980; Cooke and Rousseau 1984). parental demands did not appear to conflict with work demands. Our data suggests that dual career couples give their children priority and devote what they perceive to be sufficient time in the parent role. It appears that having a computer at home for work related purposes does not take away from time and energy spent with children. This attempt to minimize the negative impact of increased time spent on the work role does, however, appear to result in role overload for women who traditionally are expected to spend more time in the parent role than are men.

The finding that women who use an electronic briefcase are significantly more likely to feel that they do not have enough time for themselves is consistent with the above results. Women with a computer at home spend time with

their children and work more hours. It appears that this leaves them little time for themselves.

#### 5. CONCLUSIONS

Men and women with computers at home work more hours per week and a greater number of hours of overtime than do men and women who do not have a computer at home. It appears that having a computer at home makes it possible to work longer hours, perhaps by increasing an individual's ability to fit work demands in with family expectations.

Based upon the profile analysis, a gender-electronic briefcase interaction effect appears to exist. Men and women who do not use an electronic briefcase experience essentially the same levels of work-family conflict as do men who work at home on a computer outside of office hours. However, women who use this work arrangement show a considerably different profile.

Using an electronic briefcase seems to enable men to work longer hours without increasing their work-family conflict. Men who work at home seem to manage their stress by giving the work role preference over the family role.

A computer at home does not appear to help women cope with conflict caused by dual role expectations. Women who use an electronic briefcase experience more work-family conflict than women who do not use such a work arrangement. One major cause of this increase in work-family stress is the greater number of hours worked per week by women who work at home. This increased involvement with the work role is associated with a perception that they are neglecting their family role. Women who use an electronic briefcase are more likely than other women to perceive that their work role is interfering with the performance of their family role.

Women who use an electronic briefcase suffer significantly more work-family conflict than do men who use this workstyle. They report significantly more role overload and interference. Our data suggest that this occurs because women who bring a computer home for work related purposes work more hours but also provide the same time and energy to their parent role as do women who do not have as high an involvement with work. They also perceive that their family role demands interfere with their work. Their presence in the home environment appears to make it difficult for them to ignore family responsibilities. This places them at a disadvantage to men who work at home, who have traditionally been able to allow work responsibilities to take precedence over family.

It would seem then that the electronic briefcase provides men with an increased ability to handle work-family conflict. For women, on the other hand, this work arrangement appears to be associated with a decreased ability to handle work-family conflict. Working at home leads to increased work demands for such women with no concomitant decrease in family role responsibilities. Such women are more likely to suffer role overload and role interference than are any other group studied.

#### 6. ACKNOWLEDGEMENTS

This research was supported by a grant from the Social Sciences and Humanities Research Council of Canada.

#### 7. REFERENCES

Becker, B., and McClintock, C. "Mixed Blessings: The Office at Home." Office Automation Conference, March 1981.

Bohen, H., and Viveros-Long, A. Balancing Jobs and Family Life. Philadelphia: Temple University Press, 1981.

Burke, R., and McKeen, C. "Work and Family: What We Know and What We Need To Know." *Canadian Journal of Administrative Sciences*, Volume 5, Number 2, 1989, pp. 30-40.

Cooke, R., and Rousseau, D. "Stress and Strain From Family Roles and Work-Role Expectations." *Journal of Applied Psychology*, Volume 69, Number 2, 1984, pp. 252-260.

Cooper, G. Executive Families Under Stress. Englewood Cliffs, New Jersey: Prentice-Hall, 1981.

Duxbury, L.; Higgins, C.; and Irving, R. "Gender Differences in Work-Family Stress." Submitted for Publication, January, 1989.

Greenhaus, J., and Beutell, N. "Sources of Conflict Between Work and Family Roles." *Academy of Management Review*, Volume 10, Number 1, 1985, pp. 76-88.

Gutek, B., and Nakanura, C. "Sexuality, Sex Roles and Work Behavior." In E. Allgier and B. McCormick, Editors, *The Changing Boundaries: Gender Roles and Sexual Behavior*, New York: Mayfield, 1981.

Hall, D., and Hall, F. "Stress and the Two-Career Couple." In C. Cooper and R. Payne, Editors, *Concerns in Occupational Stress*, 1980, pp. 243-266.

Hall, D., and Richter, J. "Balancing Work Life and Home Life: What Can Organizations Do to Help." *The Academy of Management Executive*, Volume 11, August 1988, pp. 214-223.

Johnson, R. A., and Wichern, D. N. Applied Multivariate Statistical Analysis, Second Edition, Englewood Cliffs, NJ: Prentice-Hall, 1988.

Keith, P., and Schafer, R. "Role Strain and Depression in Two-Job Families." *Family Relations*, Volume 29, 1980, pp. 483-488.

Kopelman, R.; Greenhaus, J.; and Connolly, T. "A Model of Work, Family, and Interrole Conflict: A Construct Validation Study." *Organizational Behavior and Human Performance*, Volume 32, 1983, pp. 198-215.

Michelson, W. The Logistics of Maternal Employment: Implications for Women and their Families, Child in the City. (Report Number 18). Report for the Minister of National Health and Welfare, Centre for Urban and Community Studies, University of Toronto Press, 1983.

Nieva, V. "Work and Family Linkages." In B. Gutek, A. Stromber and L. Larwood, Editors, *Women and Work*, Volume 3, New York: Sage, 1988, pp. 162-191.

Nilles, J.; Carlson, F.; Gray, P.; and Ganneman, G. *The Telecommunications Trade Off.* New York: Wiley Interscience Publications, 1976.

Olson, M. "Do You Telecommute?" *Datamation*, Volume 31, October, 1985, pp. 129-132.

Olson, M., and Primps, S. "Working at Home With Computers: Work and Nonwork Issues." *Journal of Social Issues*, Volume 4, 1984, pp. 97-112.

Pleck, J. Work-Family Conflict: A National Assessment. Presented at the Annual Meeting of the Society for the Study of Social Problems, Boston, Massachusetts, 1979.

Pleck, J. "The Work Family Role System, Work and Family: Changing Roles of Men and Women." In P. Voydanoff, Editor, *Work and Family*, California: Mayfield Publishing Company, 1984.

Pleck, J. Working Wives\Working Husbands. Beverly Hills, California: Sage, 1985.

Pleck, J.; Staines, G.; and Lang, L. "Conflicts Between Work and Family Life." *Monthly Labor Review*, March 1980, pp. 29-32.

Renshaw, J. R. "An Exploration of the Dynamics of the Overlapping Worlds of Work and Family." Family Process, Volume 15, 1979, pp. 143-165.

Skinner, D. "Dual-Career Family Stress and Coping: A Literature Review." Family Relations, Volume 29, 1980, pp. 473-480.

Stevens, J. Applied Multivariate Statistics for the Social Sciences. London: Lawrence Erlbaum Associates, 1986.

Voydanoff, P. Work and Family Life. Newbury Park, California: Sage, 1987.