

Marital Satisfaction and Equity in Work/Family Responsibilities in Dual-Earner Shift Workers

This study investigates the impact of gender and non-traditional work schedules on marital satisfaction and perception of equity in work/family role responsibilities after controlling for gender role ideology, number of children living in the household, and wage differential. Using data from the National Survey of Families and Households, four work schedule patterns of full-time, blue collar, dual-earner couples were compared.

The results of this study indicate that female respondents have significantly lower level of marital satisfaction and were more likely to perceive work/family role responsibilities to be unfair to them regardless of work schedule pattern. Work schedule pattern did not have an effect on marital satisfaction or perception of equity in work/family role responsibilities for males or female respondents. One explanation may be that non-traditional work schedule patterns may be used as a strategy for working class families to meet the demands of work/family responsibilities.

Marty Elquist, University of Nevada, Reno¹

In the traditional, one-earner family household responsibilities clearly were drawn along gender lines. Women's traditional tasks included activities such as cooking, vacuuming, dishwashing, doing laundry, and child care, while men's traditional household tasks typically involved household repairs and car maintenance (Ahlander & Bahr, 1995; Blair & Lichter, 1991; Hiller & Philliber, 1986; Hochschild, 1989; Ray, 1988; Shelton, 1990). Changes in women's work-force participation have disrupted these gender role patterns. Although there is ample evidence of an increase of men's participation in traditionally female household tasks, especially when the wife is employed full-time (Almeida, Maggs & Galambos, 1993; Barnett & Baruch, 1987b; McHale & Huston, 1985; Perry-Jenkins & Crouter, 1990). There also is ample evidence that women's decrease in household work has not been met by a parallel increase in men's participation (Berardo, Shehan & Leslie, 1987; Coverman, 1985; Coverman & Sheley, 1986; Gershuny & Robinson, 1988; Pleck & Staines, 1985).

Much of the research on gender roles has focused on the division of household chores in relation to marital satisfaction and marital quality. The results of this research have varied widely in relation to the sample (single earners vs. dual-earners, full-time vs. part-time, etc.) (Barnett & Baruch, 1987b; Booth, Johnson, White & Edwards, 1984; Keith & Schafer, 1980; Kingston & Nock, 1987; Spitz & South, 1985; Winkler, 1998; Yogeve, 1981), the gender role ideology of the respondents (Amato & Booth, 1995; Chassin, Zeiss, Cooper & Reaven, 1985; Nicola & Hawkes, 1986; Ray, 1988; Rosin, 1990; Spitz & South, 1985), the presence of children in the household (Hill, 1988; Lavee, Sharlin & Katz, 1996; Orbuch, House, Mero, & Webster, 1996; Rogers, 1996; White, Booth, & Edwards, 1986), and the education of the respondents (Maret & Finlay, 1984; Mederer, 1993; Ross, Mirowsky & Huber, 1983). Despite these varied findings, one point is clear: the distribution of household work has been found to be one of the most critical issues that dual-earner couples face (Baruch & Barnett, 1986; Gunter & Gunter, 1990; Lavee, et al., 1996; Lewis & Cooper, 1987; Rosin, 1990; Ross, et al., 1983; Yogeve & Brett, 1985).

Initial research on changes in men's and women's work and family roles has focused on the negative associate between women's employment and marital satisfaction (Baruch & Barnett, 1986; Booth, 1977; Burke & Weir, 1976; Lueptow, Guss, & Hyden, 1989; Nicola & Hawkes; 1985). Rosin (1990) states that much of the older research concentrated on the impact of women's labor force participation on husband's domestic participation and on job, marital, and life satisfaction, while ignoring the effects of women's employment on women themselves. Recent research has shifted away from targeting women's employment as the primary satisfaction variable, and moved toward identifying several factors that can affect marital satisfaction and the division of household responsibilities in dual-earner couples (Barnett, Brennan, Raudenbush & Marshall, 1994; Lavee, et al., 1996). The most significant of these factors is the presence of children (Brayfield, 1995; Guelzow, Bird & Koball, 1991; Hughes, Galinsky, & Morris, 1992; Orbuch, et al., 1996).

Shift work is a second highly important factor that can affect the division of household labor and marital satisfaction (Gramling & Forsyth, 1987; Greenhaus & Beutell, 1985; Presser, 1989; Staines, 1985; Staines & Pleck, 1984; Weiss & Liss, 1988; White & Keith, 1990). In at least 25% of all dual-earner couples, the spouses work different shifts (Presser, 1986), and 18.3% have no overlap in the hours that they work (Presser, 1989). No overlap

in shifts leaves little time for family and leisure, which has been found to negatively affect marital satisfaction (Hill, 1988; Kingston & Nock, 1987; White, et al., 1988). This issue has major implications for the population as a whole, considering that in May 1997, shift workers accounted for more than 15 million, or 16.8% of all full-time wage and salary workers (Beers, 2000).

Although shift workers make up a large percentage of dual-earners, many studies do not differentiate, or control for this population. In fact, in many of the studies of dual-earners, it is not clear what hours the subjects are working. Most of the studies where shift work is addressed focus on negative physical effects (Akerstedt, 1988; Finn 1981; Quick & Quick, 1989) and the limited research on familial effects is inconsistent and far from complete. Furthermore, the small number of studies that focus on familial effects are small-scale studies that concentrate on specific industrial sectors (e.g., nursing, military, public safety). In many of these studies gender is not controlled.

Gender-role ideology (or sex-role ideology) is another variable that warrants further research in the dual-earner, shift work, division of household chores, and marital satisfaction literature. A conservative gender-role ideology supports the division of labor in a traditional family lifestyle. A liberal gender-role ideology supports equity across gender. Therefore, one might expect a liberal gender-role ideology to yield a more equitable division of labor in household chores and greater marital satisfaction in dual-earners and shift workers. However, research on this topic is limited and what exists tends to be inconsistent. These inconsistencies may be due to the fact that several scales (many with low reliability or no reliability noted at all) are used across the research to measure gender-role ideology.

Differences between dual-earner, same-shift couples and dual-earner, shift work couples have not been examined in earlier studies. Although there is an abundance of research on dual-earner families, the results need to be interpreted with caution due to non-representative samples (e.g., Almeida, et. al., 1993; Becker & Moen, 1999), not controlling for the presence of children (e.g., Maret & Finlay, 1984; Ray, 1988), using dual-earner and dual-career constructs interchangeably (e.g., Brett & Yogev, 1988; Keith & Schafer, 1980; Winkler, 1998), and not controlling for the shift worked (e.g., Bonney, Kelley & Levant, 1999; Brennan, Bamett & Gareis, 2001; Chassin, et al., 1985). Shift work research is also limited by the minimal number of studies, by lack of information about spouse/partner work force participation, and whether or not the respondents were employed full-time. Shift-work studies also often fail to control for the gender of the respondent. Gender-role ideology is found throughout the literature on dual earners, shift work, marital satisfaction, and equity in household chores; however, it has not been used to examine differences in marital satisfaction among dual-earner couples engaged in shift work.

Theoretical Framework

Interactional role theory was used to develop the hypotheses for the study (Stryker & Statham, 1985). There are two major types of role theories: structural and interactional (Heiss, 1980; Stryker & Statham, 1985). Structural role theory is based in structural-functional theory and rooted in classical sociological theory. Interactional role theory is a refinement, and in part, an extension of the traditional symbolic interactionist perspective. Stryker & Statham (1985) stated that without symbolic interactionism, role theory lacks an adequate sense of the processual, constructed aspects of social life. Equally, symbolic interactionism needs role theory to provide a more adequate sense of social structure. The concept of role "bridges" social structure and social person.

Interactional role theory is concerned with the study of behaviors that are "characteristic of persons within contexts and with various processes that presumably produce, explain, or are affected by those behaviors" (Biddle, 1979, p. 4). Stryker (1968, p. 558) stated that theories must "specify the consequences of role expectations or of self for familial role performance" in order to understand and begin to explain the variability in behavior. Stryker & Statham (1985) explained that for interactionist role theorists, "a major problem is not how persons fit their behavior to fixed sets of cultural expectations, but how persons manage to interact with others in ways that are both meaningful and satisfying (pg. 348)." Interactionist role theorists see the person as capable of creating ongoing interactions, and are interested in role-bargaining processes, or how interacting individuals work out suitable role arrangements to meet participants' needs (Blume, 1996). Perceived inequities can result from differences in work/family role behaviors and corresponding gender role expectations of others and of self, and they can create marital discord in dual-earner couples (Benin & Agostinelli, 1988; Burley, 1995; Rachlin, 1987; Stohs, 1995; Stryker & Statham, 1985).

According to Interactional Role Theory, gender roles are shared expectations about appropriate qualities and behaviors on the basis of being male or female (Eagly, 1987; Condor, 1986; Firestone, Harris, & Lambert, 1999). Gender roles are learned patterns of human conduct (Mangus, 1957) and create expectations of behaviors necessary to fulfill the role of 'female' or 'male' (Kidder & Parks, 2001).

Gender role ideology is a self-conception resulting from socialization from parents, teachers and society

about what behaviors are appropriate for males and females forming a dimension ranging from traditional/conservative to liberal (Condor, 1986; Eagly, 1987; Krausz, 1986; Presser, 1994; Stryker & Statham, 1985). Work on marital adjustment suggests that congruence between behavior in gender roles and gender role ideology is more important for marital satisfaction than conformity to pre-existing (traditional) role definitions (Hill, 1988; Krausz, 1986; Stryker & Statham, 1985). Having a nontraditional/liberal sex role orientation has been associated with decreased role specialization, greater household task sharing, greater decision-making power, and influences couples to move in the direction of adopting more egalitarian values in work/family role responsibilities (Kraus, 1986). Rachlin (1987) argued that while egalitarianism may be ideal, it is exceedingly difficult to achieve. The breakdown occurs in the realm of domestic responsibilities, even among those couples trying to behave in an equitable fashion.

Role expectations are behavioral requirements that are structured for the roles of positions within a social system (Biddle, 1979). Role expectations can be perceived as pressure to meet role responsibilities. Mangus (1957) stated that role expectations are learned through role models and other forms of informal learning, and become "internalized in the attitudinal make-up of the individual" (p. 202). Role expectations might pose a particular problem for a husband whose role expectations for himself include being a dominant, masterful patriarchal head of the household, when he is married to a wife who insists on equity in the division of work/family responsibilities. Although traditional gender role beliefs are declining over time for both men and women (Amato & Booth, 1995; Firestone, et al., 1999; Yeung, Sandberg, Davis-Kean, & Hofferth; 2001), work/family role responsibilities are still highly sex segregated (Berardo, et al., 1987; Blair & Lichter, 1991; Ferree, 1991; Gunter & Gunter, 1990; Hersch & Stratton, 1994; Hiller & Philliber, 1986; Hilton & Haldeman, 1991; Hochschild, 1989; Krausz, 1986; Stohs, 1995). Those caught between traditional and newer standards for conduct are likely to experience role conflict and role dissatisfaction (Eagly, 1987; Mangus 1957; Stryker & Statham, 1985).

Role satisfaction occurs when dual-earner shift work couples have their preferences and needs met in work and family role relationships. Work satisfaction is an emotional response representing how well one's values are met in the workplace, and family satisfaction is an emotional response representing how well one's values are met in the family domain (Perrewé & Carlson, 2002). The more spouses share each other's values, orientations, and preferences, "the more readily role arrangements can be devised that meet the preferences and needs of those involved" (Stryker & Statham, 1985, pg. 349). If spouses in dual-earner, shift-work couples can agree on preferred work/family role arrangements, their satisfaction in those roles is likely to be high.

Role conflict is defined by Biddle (1979) as "polarized dissensus that poses problems for the object person" (p. 196). The expectations from the work and family domains, which are mutually incompatible in some respects, are a good example of role conflict. Greenhaus & Beutell (1985) found in a review of literature on work/family conflict that conflict occurs when (a) time invested in the requirements of one role creates makes it difficult to meet the needs of the other; (b) strain from fulfilling one role makes it hard to fulfill the requirements of another; and (c) specific actions needed by one role makes it difficult to fulfill the requirements of another. A greater occurrence of work/family conflict has been associated with the amount and frequency of overtime and the presence of irregular schedules and shift work (Pleck, Staines, & Lang, 1980). Dual-earner couples can modify the structural sources of the conflict and can eliminate the conflict altogether by discussing what is important to them to receive satisfaction in a role and devalue what they cannot obtain (Stryker & Statham, 1985). If conflicting roles are not resolved through role bargaining or another method of negotiation, the impact may be serious, not only for the marriage but also for the mental health of those involved (Mangus, 1957; Stryker & Statham, 1985).

In summary, gender role ideology affects the congruence between work and family roles. Perception of equity in work/family responsibilities varies according to gender-role ideals and expectations. If work/family responsibilities are perceived to be inequitable, then dissatisfaction in these roles may result. Therefore, gender role ideology must be controlled when looking for differences in marital satisfaction and equity in work/family responsibilities across traditional and non-traditional schedules of dual-earner couples.

There is a wealth of information on dual-earner couples, equity in work/family responsibilities, and marital satisfaction; however, there is little consistency in how variables are measured or controlled. Furthermore, there is no consistency in controlling for gender role ideology. In those studies that do control for gender role ideology, several different scales with varying reliabilities are used. Many studies use the term dual-earner, when their sample is clearly dual-career, while others do not differentiate between the two. This fails to allow for potential differences between a career with greater levels of pressures and demands versus a dual-earner job which often requires less personal investment when looking at issues of work/family coordination (Rachlin, 1987).

Very few studies put shift work into the equation, especially when a female is working the non-traditional shift. Furthermore, studies use the terms equity and equality interchangeably when examining household/family responsibilities of dual-earner couples. Equity is a feeling of fairness derived from one's perception of the overall

balance of rewards and constraints in a relationship. Equality is the state of having the same quantity, measure or value as another, or having the same status, privileges, or rights (Rachlin, 1987). If work/family role responsibilities are equal, but the perception of the responsibilities is perceived as unfair, then there are still negative consequences for role satisfaction.

This study examines equity in work/family role responsibilities and marital satisfaction in dual-earner couples that work traditional, non-traditional, and mixed-work schedules. Blue collar workers were selected because they are more likely to work non-traditional shifts, and they are more likely to hold traditional beliefs about gender roles, than workers in technical or professional jobs. The purpose of the study is to examine the differences in perceived equity in work/family role responsibilities and marital satisfaction for male and female blue collar workers across four work schedule patterns used by full-time dual-earner couples: 1.) both work a traditional shift, 2.) both work a non-traditional shift, 3.) female works a non-traditional shift and male works a traditional shift, and 4.) the male works a non-traditional shift and the female works a traditional shift. The study also examines how gender-role ideology influences perceived equity in work/family responsibilities and marital satisfaction among the couples.

Hypotheses

The following research hypotheses were developed using Interactional Role Theory and the existing literature. Based on the stresses inherent in the dual-earner lifestyle, and men's resistance to gender equity in the division of household labor (especially among blue-collar workers), we expected that female workers with children at home, who are employed full time, would be less satisfied with marriage and perceive less equity in gender roles than their male counterparts. Because shift work adds another layer of complexity to the dual-earner lifestyle, we expected that non-traditional shifts would negatively impact marital satisfaction and the ability to negotiate a satisfactory balance in the division of work/family role responsibilities, especially when the husband was home during the day and the wife was not. Based on this approach, we hypothesized that:

1. Female workers are significantly less satisfied with marriage than male workers.
2. Workers with non-traditional work schedules are less satisfied with their marriages than workers with traditional work schedules.
3. Workers with husband traditional/wife nontraditional work schedules are less satisfied with their marriages than workers with wife traditional/husband nontraditional work schedules.
4. Female workers perceive less equity in work/family role responsibilities than male workers.
5. Workers with non-traditional work schedules perceive less equity in work/family role responsibilities than workers with traditional work schedules.
6. Workers with husband traditional/wife nontraditional work schedules perceive less equity in work/family role responsibilities than workers with wife traditional/husband nontraditional work schedules.

Methodology

Data from the National Survey of Families and Households (NSFH) (Sweet, Bumpass & Call, 1988) was used to conduct the proposed research. The NSFH data were collected in two waves using a nationally representative sample. The first wave of data collection was conducted in 1987 and 1988 using national, multistage area probability sampling. The main sample contained 13,017 housing units drawn from 100 sampling areas in the United States. An oversample was achieved by doubling the number of certain types of households selected within the 100 sampling areas. The oversample consisted of minorities (African-Americans, Mexican Americans and Puerto Ricans), one-parent families, families with step-children (or with neither parent in the household), cohabiters and recently married persons. An adult member (19 years of age and older) of the household was randomly selected to be the respondent. Face-to-face interviews and a self-administered questionnaire were used to collect data from the primary respondent and the spouse or partner, where appropriate.

Wave 2 was conducted five years after the original interview, using the same methods that had been in Wave 1. In Wave 2 an attempt was made to interview the original respondent from Wave 1, the spouse/partner during Wave 1, and if applicable, the current spouse/partner in Wave 2. The sample size for Wave 2 was reduced to 10,008 due to attrition.

The sample for this study was selected from the Wave 2 data set, using the following criteria: 1) the primary respondent was married for at least 5 years to the current spouse; 2) there was at least one biological, adopted or step child under the age of 18 in the home; 3) the respondent held a blue collar job; 4) the respondent was a full time employee (35 hours or more per week); 5) the respondent's spouse was a full time employee (35 hours or more per week). A total of 473 respondents (220 husbands and 253 wives) met the criteria for the study.

Measures

Dependent variables were marital satisfaction and equity in work and family role responsibilities. Independent variables were gender ideology, number of children, salary differential (covariates), gender and work schedule pattern: 1.) dual-earner married couples who worked the same traditional shift, 2.) dual-earner married couples who work the same non traditional shift, 3.) dual-earner married couples where the male worked a non-traditional shift and the female worked a traditional shift, and 4.) dual-earner married couples in which the female worked a non-traditional shift and the male worked a traditional shift.

Blue collar workers were selected by using the blue-collar/white-collar classification of careers and jobs as defined by Gabor, Holder, & Carpio (2001). Both husbands and wives were selected only if they held blue collar jobs (e.g., carpenters, tool & die makers, bus drivers, painters, miners). Professional and technical workers were excluded from this study.

Marital satisfaction was evaluated by using a set of nine questions scored on a sevenpoint Semantic Differential scale. Each question asked respondents to rate their happiness with various aspects of their relationship with the husband or wife. For example, "How happy are you with each of the following aspects of your relationship? a. The understanding you receive from your spouse." Scores range from 1 = very unhappy to 7 = very happy. The mean score of all nine questions was used for an overall rating of marital satisfaction. Cronbach's alpha reliability coefficient for this measure was .91.

Equity in work/family role responsibility was measured as perception of fairness in four areas: household chores, working for pay, spending money, and childcare. The four questions were recorded using a Likert-type scale 1 =very unfair to me, 2=somewhat unfair to me, 3=fair, 4=somewhat unfair to her/him, and 5=very unfair to her/him. Responses to this question were recoded -1 if the respondent perceived responsibility to be very unfair to him/herself, -2 if the respondent perceived responsibility to be somewhat unfair to themselves, 0 if the respondent perceived the responsibility to be fair (response category 3), +1 if the respondent perceived the responsibility to be somewhat unfair to their spouse (response category 4), and +2 if the respondent's perception of equity in work/family responsibilities was very unfair to the spouse (response category 5). A mean overall score of the four questions was used to indicate the perception of equity in work/family role responsibility. Cronbach's alpha coefficient for this measure was .60.

Gender role ideology was evaluated using thirteen statements about work and family life. A five-point Likert-type scale ranging from 1 =strongly agree to 5=strongly disagree was used. Higher scores indicated that the respondent had a conservative gender role ideology. Cronbach's alpha coefficient for this measure was .85.

Salary differential was evaluated by identifying discrepancies between the respondents' total earnings and their spouses' total earnings.

Work schedule pattern was measured as follows: 1) Couples who both started their work day between the hours of 4:00 a.m. and 1:59 p.m. were coded as 1=traditional, 2) Couples who both started their workday between the hours of 2:00 p.m. and 3:59 a.m. were coded as 2=non-traditional, 3) Couples where the male worked the traditional shift, and the female worked a non-traditional shift were coded as 3=male traditional, and 4) Couples where the female worked the traditional shift, and the male worked a non-traditional shift were coded as 4=female traditional. These four groups were compared for differences (by gender of the respondent) in marital satisfaction and equity in work/family role responsibility using a 2 x 3 (gender by work schedule pattern) factorial design. The analyses were conducted with UNIANOVA in SPSS for Windows, using a series of four analysis of co-variance (ANCOVA) and a probability level of $p \leq .05$.

Results

Marital satisfaction and perception of equity in role responsibilities among blue-collar parents working traditional and non-traditional shifts were evaluated using a sample of 473 respondents. Characteristics of the sample are provided in Table 1. The sample consisted of slightly more female respondents (53.5%) than male respondents (46.5%). Female respondents ranged in age from 23 to 64 years, with a mean age of 38.3 years. Male respondents were 27 to 61 years old, with a mean age of 39.7 years. Female and male respondents had the same mean number of children in the household (1.9).

The majority of both female and male respondents held a high school diploma or participated in post-secondary education. Females were more likely to obtain a high school diploma than males (39.3% compared to 36.2%); however, females and males both participated in higher education at about the same rate (56.7% for females and 56.5% for males). The median household income for female respondents was slightly higher than for the male respondents (\$55,000 compared to \$52,950), but the range was much greater for females (\$0-\$421,000) than for

males (\$0-\$287,500).

The work schedule patterns were similar for male and female respondents. The largest group for both males and females was the "both spouses traditional" work schedule pattern with 57.5% of the male respondents and 60.1 % of the female respondents represented in this level. Next was the "wife traditional/husband non-traditional" work pattern representing 30.0% of the female respondents and 27.8% of the male respondents. Finally the "husband traditional/wife non-traditional" was the smallest group representing 9.9% of the female respondents and 14.7% of the male respondents.

Variable	Males (n=220)	Females (n=253)
Mean Age	38.3	39.7
Range	23 - 64	27 - 61
Education		
Less than High School Diploma	7.3%	4.0%
High School Diploma	36.2%	39.3%
Some College, no degree	22.1 %	17.4%
Associate's Degree	4.1%	8.7%
Bachelor's Degree	20.2%	17.9%
Advanced Degree	10.1 %	12.7%
Median Household Income	\$52,950	\$55,000
Range	\$0-\$287,500	\$0-\$421,000
Number of Children	1.9	1.9
Work Style		
Both Spouses Traditional Work Schedules	57.7%	60.1 %
Husband Traditional/Wife Non-traditional	14.5%	9.9%
Husband Non-traditional/Wife Traditional	27.8%	30.0%

When preliminary descriptive statistics and correlations among the variables were run, one of the four work style groups (both spouses work non-traditional shifts) had an insufficient number of cases (n=35) for the analyses, therefore it was dropped from the study. Additional analyses were conducted to screen the data for outliers, test for multicollinearity, homogeneity of variance, and homogeneity of regression, and to evaluate the covariates, using strategies recommended by Tabachnik and Fidell (2001). No adjustments in the data needed to be made.

The covariates were further evaluated using a UNIANOVA and Type III sum of squares. Only one of the covariates (gender role ideology) contributed significantly to changes in the dependent variable marital satisfaction. The same was true for the other dependent variable (equity in work-family role responsibility). Therefore, the remaining covariates (number of children and wage differential) were deleted from the analyses.

Hypotheses 1-3:

1. Female workers are significantly less satisfied with marriage than male workers
2. Workers with non-traditional work schedules are less satisfied with their marriages than workers with traditional work schedules
3. Workers with husband traditional/wife nontraditional work schedules are less satisfied with their marriages than workers with wife traditional/husband nontraditional work schedules

A 2 x 3 between-subjects analysis of covariance was used to test the first three hypotheses and to analyze the effects of gender and work schedules on marital satisfaction. Gender role ideology was used as a covariate. Because the numbers of cases in individual cells were unequal, Type I sum of squares was used to weight the cells.

After adjustment for the covariate (gender role ideology), marital satisfaction varied significantly with gender (main effect). There was no significant effect of work schedule pattern (main effect) as summarized in Table 2. Male and female respondents differed significantly in marital satisfaction $F(1, 466) = 3.927, p = .048$. The

strength of the relationship between marital satisfaction and gender was $\eta^2=.012$.

Table 2.
Analysis of Covariance: Differences in Marital Satisfaction of Males and Females with Traditional and Non-Traditional Work Schedules, After Controlling for Gender Role Ideology

Source	Adjusted SS	Df	MS	F	P
Main Effects					
Work Schedule Pattern	2.79	2	1.39	1.24	.290
Gender	4.41	1	4.41	3.93	.048*
Interaction					
Gender x Work Schedule	2.83	2	1.41	1.26	.284
Covariate					
Gender Role Ideology	7.89	1	7.89	7.03	.008**
Error	522.88	466	1.12		

*Significant at $p<.05$; **significant at $p<.01$

Adjusted marginal means (Table 3) indicate that male workers had significantly higher marital satisfaction than female workers. Marital satisfaction scores ranges from a low of 4.994 for female workers who reported that the wife worked a non-traditional shift and the husband did not to a high of 5.592 for male workers who reported that the wife worked a non-traditional shift and the husband did not. No statistically significant main effect for marital satisfaction was found for work schedule pattern, and there was no interaction between work schedule pattern and gender.

Table 3.
Adjusted and Unadjusted Means for Differences in Marital Satisfaction among Males and Females with Traditional and Non-Traditional Work Schedules

Gender	Work Schedule Pattern	Adjusted	Unadjusted
Male	Husband Traditional/Wife Traditional	5.45	5.47
	Husband Traditional/ Wife Non-Traditional	5.60	5.59
	Wife Traditional/Husband Non-Traditional	5.25	5.26
Female	Husband Traditional/Wife Traditional	5.30	5.28
	Husband Traditional/ Wife Non-Traditional	4.99	4.99
	Wife Traditional/Husband Non-Traditional	5.15	5.13

Hypotheses 4-6:

4. Female workers perceive less equity in work/family role responsibilities than male workers
5. Workers with non-traditional work schedules perceive less equity in work/family role responsibilities than workers with traditional work schedules
6. Workers with husband traditional/wife nontraditional work schedules perceive less equity in work/family role responsibilities than workers with wife traditional/husband nontraditional work schedules

A 2 x 3 between subjects analysis of covariance was used to evaluate the effects of gender and work schedules on perception of equity in work-family role responsibilities. Gender role ideology was used as a covariate. Because the numbers of cases in individual cells were unequal, Type I sum of squares was used to weight the cells.

After adjustment for the covariate (gender role ideology), perception of equity in work family role responsibilities varied significantly with gender (main effect). There was no significant effect of work schedule (main effect) or the covariate (gender role ideology). See Table 4 for a summary of the findings. Male and female respondents differed significantly in equity in work-family role responsibilities $F(1, 466) = 62.541$; $P = .000$. The strength of the relationship between perception of equity in work-family role responsibilities and gender was $\eta^2=.118$.

Table 4.

Analysis of Covariance: Differences in Perception of Equity in Work/Family Role Responsibilities of Males and Females with Traditional and Non-Traditional Work Schedules, After Controlling for Gender Ideology

Source	Adjusted SS	df	MS	F	P
Main Effects					
Work Schedule Pattern	.04	2	.02	.15	.863
Gender	8.67	1	8.67	62.54	.000***
Interaction					
Gender x Work Schedule	.130	2	.07	.47	.626
Covariate					
Gender Role Ideology	.39	1	.39	2.83	.093
Error	64.59	466	1.4		

***significant at $p < .001$

Adjusted marginal means (Table 5) indicate that female workers consistently felt that their work and family role responsibilities were more unfair than compared to their husbands. Male workers consistently reported feeling slightly advantaged compared to their wives. Equity scores range from a low of -.197 for female workers who reported that the husband worked a non-traditional shift to a high of .122 for male workers who reported that the wife worked a non-traditional shift and the husband did not. No statistically significant main effect for equity was found for work schedule pattern, and there was no interaction between work schedule pattern and gender in this analysis.

Table 5.

Adjusted and Unadjusted Means for Differences in Perception of Equity in Role Responsibilities among Males and Females with Traditional and Non-Traditional Work Schedules

Gender	Work Schedule Pattern	Adjusted	Unadjusted
Male	Husband Traditional/Wife Traditional	.06	.07
	Husband Traditional/ Wife Non-Traditional	.12	.12
	Wife Traditional/Husband Non-Traditional	.12	.12
Female	Husband Traditional/Wife Traditional	-.18	-.18
	Husband Traditional/ Wife Non-Traditional	-.19	-.19
	Wife Traditional/Husband Non-Traditional	-.20	-.20

Discussion

As expected, a significant main effect was found for sex of respondent on both dependent variables. Compared to males, female workers in marriages where both spouses worked full-time in blue collar jobs were more dissatisfied with their marriages and perceived their investment in work/family role responsibilities as more unfair, regardless of their work schedules. There were no significant differences among the work schedule patterns in marital satisfaction or in perception of equity in work/family role responsibilities. Gender role ideology was the only covariate that contributed significantly to variance in marital satisfaction, and none of the covariates contributed significantly to perception of equity in work/family role responsibilities.

Marital Satisfaction

Gender and Marital Satisfaction. The literature suggests that marital satisfaction is affected by a multitude of factors including, but not limited to, role behaviors, role expectations, employment of women, children, salary or wage differential between spouses, and the division of household labor. The present study found that marital satisfaction is significantly affected by gender and gender role ideology. Work schedule pattern, number of children and wage differential did not produce any significant differences in marital satisfaction for blue-collar, dual-earner couples.

Women in this study were less satisfied with their marriages than men, across all three work schedule

patterns. Yogeve (1981) warns researchers that just concentrating on gender, female participation in the labor force, and marital satisfaction produces an overly simplistic analysis of the issue. The present study validated Yogeve's forewarning by also finding a significant adjustment in marital satisfaction when gender role ideology was used as a covariate. It is important to note that the present study only used the respondent's scores on gender role ideology, and not the spouse's scores. Research shows that congruence between spouses gender role ideologies may be the salient variable. Perry-Jenkins & Grouter (1990) suggest that instead of focusing on role sharing and equal responsibilities in families, the focus should move to emphasizing the importance in matching role attitudes and role behaviors. When role expectations are violated, one consequence may be dissatisfaction with the relationship (Ghassin, et al., 1985; Mangus, 1957; Perry-Jenkins & Grouter, 1990). Not being able to control for gender role congruence was a limitation to the present study. Future research should not overlook the importance of congruence of gender role ideologies when investigating marital relations.

Work Schedule Patterns and Marital Satisfaction. In this study, there were no differences in marital satisfaction across the three work schedule patterns. This finding adds to earlier research that found shift work to be positively related to divorce (White & Keith, 1990), schedule conflict (Pleck & Staines, 1985), role conflict (Staines, 1985), work/family interference (Staines & Pleck, 1984), and family stress (Hattery & Merrill, 1997; Pleck & Staines, 1985). However, marital satisfaction was not assessed in these studies. The closest variable to be examined in the shift work literature was marital quality. Johnson (2000) assessed marital quality and found that when couples with small children worked a non-traditional shift, their marital quality improved, but it decreased for couples with older children. The lack of research on shift work and marital satisfaction makes it very difficult to draw any conclusions regarding why work schedule pattern did not produce any variance in marital satisfaction.

Contribution of the Covariates to Marital Satisfaction. Three covariates were used in the study: number of children, wage differential, and gender role ideology. The significant contribution of gender role ideology to marital satisfaction was expected. For this sample, the more conservative or traditional respondents were in their gender role ideology, the more satisfied they were with their marriage. The literature supports this finding in that men, in general, hold a more conservative gender role ideology than women (Crouter & Manke, 1997; Ray, 1988; Rosin, 1990), blue-collar workers are more traditional in their work/family role expectations than professionals (Deutsch, 1999), and couples with children are more traditional than childless couples (White et al., 1986). In addition, although traditional role expectations have been positively related to men's marital satisfaction (Suitor, 1991; Yogeve & Brett, 1985), several studies found traditional role expectations negatively related to women's marital satisfaction (Lavee, et al., 1996; Nicola & Hawkes, 1986; Ray, 1988; Suitor, 1991; Yogeve & Brett, 1985). This finding also was replicated in the current study.

It was expected that the number of children would adjust the scores for marital satisfaction, but it did not. This was surprising, as researchers have found that the number of children living at home significantly increases marital dissatisfaction (Lavee, et al., 1996; Rogers, 1996), and parental stress (Guelzow et al., 1991). Furthermore, Hill (1988) found that the sheer presence of children also increases marital dissatisfaction, but at the same time increases marital stability. It could be that the number of children simply does not increase marital satisfaction in dual-earner, blue-collar workers. Significant differences might be obtained in future research by looking at families who have children compared to those who do not.

It was also expected that wage differential would influence marital satisfaction, but it did not. This may be due to the differential effects of this variable. Brennan et al. (2001) found that when men earn more than women, their marital role quality increased, but the reverse was not true for women. Wives do not consider it important to exceed their husband in performance of the traditional female roles, but men consider it more important to be the primary breadwinner of the family (Deutsch, 1999; Hiller & Philliber, 1986). Deutsch (1999) explains that when women earn more than men it is a blow to their masculinity.

Perceptions of Equity

The literature is mixed when attempting to explain variance in equity across work patterns. Researchers have noted that workers on afternoon shifts spend more time on housework than do workers on a day shift (Staines & Pleck, 1984). Furthermore, the more hours the husband is not employed while the wife is employed significantly increases the husband's participation in household tasks (Presser, 1994). This increased participation in household tasks could contribute to a perception of equity that is "fair to both" in household responsibilities. The findings of this study do not support this speculation.

Gender and Work Schedule. One of the major findings of this study was the effect of gender on perception of equity in work/family role responsibilities regardless of work schedule pattern. Women clearly perceive that they are disadvantaged in terms of equity in this area. Furthermore, men tend to agree that their spouses are disadvantaged. The related literature has produced mixed findings on this variable. The current study duplicated the

findings of Baker, Kiger & Riley (1996), Burley (1995), Lewis & Cooper (1987), Rachlin (1987), Schafer & Keith (1981); however, other studies have found that despite women's greater participation in family work, most women do not feel that the work is unfair to them (Benin & Agostinelli, 1988; Hoschschild, 1989; Pleck & Staines, 1985). It is important to note that most studies only look at the perception of equity in family work and not perception of equity in work AND family roles.

The most unexpected finding in the study was that there was no difference in perception of equity in work/family role responsibilities among respondents across the three work schedules. One reason could be that some couples actually choose mixed-type shifts, especially blue-collar workers with children. Blue-collar families use shift work as a strategy to avoid the cost of formal day care (Hattery & Merrill, 1997; Presser, 1986; Presser 1995), and they tend to mistrust caretaking outside the family (Deutsch, 1999). Weiss & Liss (1988) also found that only 10% of night shift workers disliked night work, and over 50% of the workers were not interested in changing their shift. Again, it may be that congruence is what matters. If a couple chooses shift work, and agrees that shift work is best for their family, then maybe shift work is not a factor. Unfortunately, the present study was unable identify those couples who chose shift work and those whose schedule was imposed by their employer.

Contribution of the Covariates to Perceptions of Equity in Work/Family Role Responsibilities. Although gender role ideology was retained as a covariate, it was surprising that it did not significantly adjust the means for perception of equity in work/family role responsibilities in this study. Several studies have found that when gender role beliefs were less traditional, males performed more household tasks (Barnett & Baruch, 1987a; Coltrane & Ishii-Kuntz, 1992; Perry Jenkins & Crouter, 1990; Presser, 1994; Yogev & Brett, 1985). Furthermore, Blair & Johnson (1992) found that increased performance of males in "female" chores increased wives' perception of fairness; however, they also found that gender role ideology did not contribute to whether or not one perceived the division of work/family responsibilities to be fair or unfair. It appears that gender role ideology and perception of equity are not directly related. A liberal gender role ideology may indicate work/family role responsibilities are shared more equitably, but it does not guarantee that the division of the responsibilities will be perceived as fair.

It was unexpected that wage differential would have to be dropped from the analysis due to lack of unique adjustment to either dependent variable. The literature reports that when women earn more relative to the spouse, the spouses' participation in household responsibilities increases (Blair & Litcher, 1991; Presser, 1994; Ross, et al., 1983), and as husbands' earnings increase relative to the spouse, they do less (Hersch & Stratton, 1994). Mederer (1993) also found that the more resources women command, the less tolerant they are about imbalance in household labor.

There was also no unique adjustment in perception of equity when number of children was used as a covariate. Researchers have found that the number of children increases domestic labor time (Coverman, 1985) and contributes to role strain (Guelzow, et al., 1991). Because of these findings it was believed that the number of children would also influence the perception of equity in work/family responsibilities due to the added work that comes with parenting.

The age of the youngest child was not used as a variable in this study because it does not appear to be a better indicator for perception of equity in work/family roles than the number of children. Mederer (1993) found that the age of the youngest child was not statistically significant in regard to perception of fairness. The greatest increase in perceived equity in work/family roles occurs between the time children leave home and when there are no children in the home (Schafer & Keith, 1981). What seems to matter for equity is the sheer presence of children, regardless of how many or their age. One child introduces a major change in family life responsibilities that is not compounded with the addition of more children in the family. For example, taking two children to daycare is not much different than taking one child, whereas having even one child demands a large adjustment, not only in terms of taking a child to day care, but also creates a brand new role as a parent. The perception of equity and marital satisfaction scales both had references to children, so workers without children could not be included in the study. If they had, one would speculate that couples without children would be more satisfied in the marriage and would perceive their work/family responsibilities to be more equitable to both spouses than in groups with children.

In line with earlier research (Blair & Johnson, 1992; Burley, 1995), these findings suggest that when household tasks are considered to be distributed unfairly, the level of marital satisfaction of wives tends to be lower than when the division of labor is perceived to be equitable. Pleck and Staines (1985) also found that wives who report they would like their spouses to assist more in housework are likely to be dissatisfied with family life. This is interesting in that females in the current study reported their work/family role responsibilities to be unequal to them, and also reported that they were less satisfied in their marriages than the males in the study, regardless of work schedule pattern. This pattern of dissatisfaction was pervasive among blue-collar wives, whether they worked traditional or non-traditional shifts, and regardless of the shift their husbands worked. This finding suggests, at least among blue-collar workers, that husbands could be more responsive to household responsibilities and couples may

need to negotiate an amicable solution about sharing these responsibilities with one another. Otherwise, marital satisfaction is likely to suffer.

Limitations of the Study

Although this was a nationally representative, random sample, there were still several limitations to this study. One of the most important limitations was that the male and female respondents in the study were not married to each other, so dyadic interpretation of the data was not possible. Another limitation was that the measure perception of equity in work/family role responsibilities only contained four items and it was not highly reliable ($\alpha=.60$).

Also, we were only able to construct a rough measure of the work schedule pattern variable because the respondents in the NSFH data set were not asked to self report what shift they worked on a regular basis. A better, more straightforward measure of shift work may have produced significant differences across the groups.

A final limitation to the study was that gender role ideology was not assessed for the spouse of the respondent; therefore congruence of gender role ideologies in couples could not be assessed. A number of earlier studies suggest that *congruence* in gender ideology may be more important in predicting marital satisfaction, than the ideology itself (Chassin, et al., 1985; Perry-Jenkins & Crouter, 1990).

Implications

In spite of these limitations, the findings of this study make a significant contribution to the very limited body of literature on shift work. The findings suggest that working couples could benefit from understanding their gender role expectations for one another. Mangus (1957) sums up the need for identifying differences in expectations by stating that the most pressing interpersonal problems in marriage stem from differences in the role expectations of one's spouse and of one's self that are pertinent to the marriage situation. If couples have expectations that vary widely from one another, the expectations fail to integrate and the spouses become a threat to each other. Marital behaviors may become defensive, inappropriate and/or maladaptive. Couples must reconcile their expectations of one another in order for a satisfying marriage to exist.

Families would also benefit from understanding the significant differences between males and females in terms of perception of equity in work/family role responsibilities and marital satisfaction. Husbands and wives need to discuss the factors responsible for creating an inequitable environment and negotiate ways they can remove some of the burden from the female role in work/family responsibilities. Husbands and wives would also benefit knowing that such strong feelings of inequity may be associated with lower levels of marital satisfaction.

Practitioners can help employees identify what they expect from their spouses and of themselves, and they can guide the worker in ways to initiate conversations with his/her spouse. Practitioners also can help workers and their spouses identify expectations that fail to integrate with each other. Practitioners can then help facilitate the negotiation process.

Finally, it is possible that the negative assumptions (that shift work puts strain on a marriage, heightens divorce, etc.) are not true. Shift work may be a viable strategy for working class couples. They may have friends and family who work shift work as well, and do not think of shift work as a burden. It may just be an issue to those who have middle class expectations for work and family responsibilities. Since we do not have much on shift work, we simply do not know. It could be very possible that we looking for a problem where one does not exist. Future studies on shift work need to address the possibility that is not necessarily a negative influence on families, and how shift work might actually facilitate meeting needs of the working class.

Endnote

¹ 2002 Master in Science Graduate, Department of Human Development and Family Studies

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