Multiple Roles: Gender Differences in Shift Workers' Balance of Work and Family

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Abstract
Previous research on shift workers suggests that this type of employment schedule causes increased strain, health problems, and social difficulties for employees. An examination of the literature on work and family conflict and gender demonstrates that there are inconsistent outcomes based on gender and experience of conflict between work and home, however, social role theory posits that women would experience more family-work conflict and men would experience more work-family conflict. Shift workers have been chosen to test this theory due to the likelihood that their unique employment arrangements may exacerbate any challenges that may be present in more typical employment, based in the belief that the role expectations of work and home are not always compatible, and may create conflict. Work-family and family-work conflict was evaluated separately based on the belief that there are differences in how individuals experience role imbalance.

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MULTIPLE ROLES: GENDER DIFFERENCES
IN SHIFT WORKERS’ BALANCE OF WORK AND FAMILY

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Abstract

Previous research on shift workers suggests that this type of employment schedule causes increased strain, health problems, and social difficulties for employees. An examination of the literature on work and family conflict and gender demonstrates that there are inconsistent outcomes based on gender and experience of conflict between work and home, however, *social role theory* posits that women would experience more family-work conflict and men would experience more work-family conflict. Shift workers have been chosen to test this theory due to the likelihood that their unique employment arrangements may exacerbate any challenges that may be present in more typical employment, based in the belief that the role expectations of work and home are not always compatible, and may create conflict. Work-family and family-work conflict was evaluated separately based on the belief that there are differences in how individuals experience role imbalance.
Introduction

A Changing Workforce

Since women began to rapidly enter the workplace throughout the 1970s, the workforce and the family have experienced changes on many levels. Increasing numbers of women enter the workforce each year. Employment rates demonstrate the women’s labor force continues to grow and is nearly equal to men with women now estimated to occupy 48% of the workforce (Barnett, 2004). The workforce includes more single parents and dual earning families than ever before (Swanberg, 1994), with the current modal American family a dual earning couple (Barnett & Hyde, 2001). The majority of these couples also have children (Barnett, 2004) and many are also caring for their aging parents, adding to their dependant care responsibilities (Scandura & Lankau, 1997). In fact, there are indications that as few as 7% of American families make up the former traditional family structure of a father who works, a mother who stays at home, and two or more kids (Hessing, 1998). While woman are now occupying more roles outside the home, men are also taking on more responsibilities within the home (Lero, 2003). The workforce has changed, and so too has the structure of domestic life, raising new challenges for families as they attempt to manage the frequently competing realms of work and home. Researchers have termed these competing demands work-family conflict and family-work conflict (WFC, FWC).

Unlike their mothers who were likely to give birth in their early 20s, many women are delaying marriage and childbearing until their late 20s and 30s, choosing to develop their careers prior to starting families. Age of first marriage is also increasing (Barnett, 2001). This lifestyle plan is significantly different from these women’s mothers, who mostly stayed home to raise their families. While the majority of women from earlier generations maintained more
complementary roles of wife and mother, women today frequently occupy multiple roles that include paid employment. As these multiple roles have evolved, we have seen subsequent changes in our social structure as women and men have sought to recalibrate their responsibilities.

Kanter (1977) once defined work and home as separate “spheres” that were impermeable. This oversimplified definition assumed that the responsibilities, demands and psychological environments of each sphere were limited to individual and contained realms that did not influence each other. We now understand that the interrelationship between the two is dynamic and complex: each sphere affecting the other to varying degrees (Huang, Hammer, Neal & Perrin, 2004). Multiple variables affect how that relationship is maintained, developed and influenced, providing various ways for families to balance their work and family life. Work-family balance has become increasingly important as family structures have changed; with women’s responsibilities turning away from home, and men’s responsibilities turning increasingly towards the home (Pleck, 1979; Michelson, 1983).

As gender defined roles in the work and family sphere have become more aligned, many have found that there are new conflicts associated with the shared roles men and women are increasingly enjoying. One area where these conflicts may be most visible is with shift workers. Shift work, a unique type of employment that constitutes work done outside of the typical 9-5 schedules, tends to underscore dynamics indicated in other work spheres because it is believed that the nature of shift work exacerbates more typical work stressors. While shift work has been indicated in many studies as intensifying certain problems, more people than ever are choosing shift work positions (Grosswald, 2002).
The question remains as to whether or not shift work is actually creating more work family conflict than exists in other realms, because it is assumed that the benefits of shift work must outweigh the positives. Thus, the purpose of this study is to investigate the relationship between work family conflict, and shift workers, focusing on the type of shift work, and differences between genders, to elucidate the impact of shift work on work life balance.

Shift Work

Non-standard work schedules have become increasingly prevalent in the past 20 years. In 1986, shift workers were estimated to comprise 22% of the total workforce, though current estimates are closer to 45% (Grosswald, 2002). Others calculate that among dual earner families, approximately one-third has a parent working a non-day shift (Hattery, 2001). Jamal (2004) notes that in Canada, one-sixth of the full-time work force is shift workers, and one-half of the part time labor force is involved in shift work.

While the popularity of shift work has increased, there have been significant negative effects for shift workers. Research has indicated that shift work schedules are responsible for increased levels of mood, sleep and cognitive problems (Akkinawo, 1988). Shift work has also been associated with increased mortality rates, fewer friendships, lower quality of life, work-family conflict and increased role conflict (Rau & Highland, 2002). Possible health risks of shift work include increased likelihood of myocardial infarction (heart attack), increased drug and alcohol use, ulcers, and accidents (Wilson, 2002).

Research on shift workers and the effects of shift work on family/home life vary widely. Several factors contribute to this variability. One is the broadly defined category of what constitutes a shift worker. Shift worker categories can vary by hours and time of day. Even among these subcategories there is further delineation. Workers may work 24-hour shifts, split
shifts, evening shifts, or multi-day shifts. There are traditional varied 8-hour days, where workers begin and end outside of the typical 9-5 structure. However, other schedules also exist, including workers who work 4-10’s, or four days a week for 12 hrs a day, and other such variations on the division of time. Also, some shift workers work weekends, and such schedules may offer the most evidence for being out of sync with many socially pleasurable activities. Table 1 lists the most commonly identified shift work schedules.

Table 1
*Types and definitions of shift work*

<table>
<thead>
<tr>
<th>Type of work</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal workweek</td>
<td>A &quot;normal&quot; work schedule is considered 5 days a week, 8 hours per day. Most common work schedule for workers in the U.S.</td>
</tr>
<tr>
<td>Day Shift</td>
<td>Most common shift for shift workers, with the hours being between 6 am and 6 pm.</td>
</tr>
<tr>
<td>Afternoon or evening shift (a.k.a. Swing Shift)</td>
<td>Most often the hours are between 3:00 pm to midnight</td>
</tr>
<tr>
<td>Night Shift</td>
<td>Work hours from 11:00 pm to 6:00 am</td>
</tr>
<tr>
<td>Fixed Rotating Shift</td>
<td>A work schedule where the time of work is always the same (first, evening or night shift) but the days worked changes. This is used in continuous operations</td>
</tr>
<tr>
<td>Rotating shift</td>
<td>A work schedule where the shift time changes, usually on a weekly basis and the days worked also change. This is used in continuous operations.</td>
</tr>
<tr>
<td>Compressed work week</td>
<td>A compressed workweek is when workers work 40 hours per week but in less than 5 days, usually for 10 or 12 hours per day.</td>
</tr>
<tr>
<td>Flexible schedule</td>
<td>An informal schedule in which one can work different hours each day, in any increment, as long as the number of hours per day (typically 8) quota is met.</td>
</tr>
<tr>
<td>Flextime</td>
<td>A shift that contains a typical 8-hour shift, but begins at 8 a.m., and ends at 4 p.m. This is a formal schedule</td>
</tr>
</tbody>
</table>
Early research on shift work focused largely on the disruption of circadian rhythms in
night shift workers (Barton, 1994) though researchers have recently begun to expand their
investigation of these rhythms to encompass an overarching understanding of the disruption that
can occur when humans operate “off cycle”, or out of rhythm. The basic notion that our bodies
function in cycles is known in the literature as a tendency towards “rythmicity” (Wilson, 2002).
It is well known that disruption of circadian rhythms leads to increased cognitive errors. This
data has been expanded to encompass other systems that rely on rhythms. These systems may
also experience disruption when unusual work hours are kept. Wilson points to the Three Mile
Island incident as an example of the impact to shift workers who experience a disruption in
rythmicity, and the finding that it was “more than coincidence that the accident occurred at 4
a.m. and that workers had been changing shifts weekly” (p. 213).

The concept of rythmicity has become recognized as an important aspect of our ability to
adjust to non-traditional work hours. Humm (1997) states, “the majority of biochemical,
physiological and behavioral processes all have cyclical circadian rhythms” (p.40). He further
points out that the importance of rhythm and the cycles of our biological makeup are complex
and interrelated. Circadian rhythms and support structures operates around creating homeostatic
conditions. For example, our body temperatures are programmed to begin to rise at 6 a.m., and
continue to rise through 5-6 p.m., at which point they decrease. This cycle assists us by
facilitating sleep. An employee who works hours that conflict with programming may experience
internal disruption that may express itself as a myriad of symptomatology. As a consequence
circadian rythmicity has a potentially tremendous impact on our quality of life, and shift workers
are those who are likely to exhibit the greatest effects of this.
The disruption goes beyond the biological level, as well: Shift work has both positive and negative social consequences. Positively, shift work schedules can facilitate family time and allow for people to balance childcare, especially in dual earner households with young children. However individuals may be impacted negatively by virtue of desynchrony with majority societal schedules, causing more disruption than it alleviates leading to a life that is, “out of sync” with the rest of the world. This can be particularly true of night shift workers who tend to have more negative consequences than day shift, weekend, and afternoon shift workers. For these reasons, shift work is not suitable or even desirable for all people. One area of alternative scheduling that does not appear to increase desynchrony is flextime. Flextime, originally developed to ease traffic patterns, involves a slight deviation from the typical ‘9 to 5’ work schedule (e.g., 7 a.m. to 3 p.m. or 10 a.m. to 6 p.m.). For parents, this often coincides more suitably with children’s schedules; however it does not offer day-to-day flexibility. Flextime has become more popular and available to the workforce, as employers have begun to recognize that flexible scheduling is appealing to many employees, especially given the increased prevalence of dual earner households. Research has demonstrated that offering flextime assists in improving job satisfaction and contributing to positive organizational culture (Acker, 1990). Organizations have alternative motives beyond the happiness of their employees, as well, and a large impetus for the move towards these changes has to do with research that indicates when workers are happy and have a positive organizational culture organization see increased productivity.

Flextime allows workers to do their jobs outside of traditional 9-5 work hours, typically 8-4, allowing them to be more present for outside-of-work obligations. Flextime only allows some slight variability in scheduling, while “flexible scheduling” allows workers to make decisions about how and when to order daily demands, as long as they put in 8 hours. With this
type of scheduling, workers have the most control over how they spend their time. While this is a much more informal type of schedule than flextime, it requires more effort on the part of the employer to make such schedules work, and requires some level of organization and trust from employees. This type of schedule, however, is clearly best for employees who value choices in categorizing the demands of their day.

Choosing shift work.

The reasons people choose shift work are varied. Some people work nonstandard schedules because it is the need of their employer, however, some are choosing shift work because it fits with their lifestyle and may be a way for them to achieve greater balance between work and home. Shift work as a category, however, is widely variable; it encompasses many types of schedules and vocations and has long been suspected of being responsible for a host of ills. Research outcomes vary as to the benefits and costs of shift work, but it is one of the most rapidly increasing areas of employment, encompassing roughly one of three workers (Tausig & Fenwick, 2001), or approximately 28%. There are multiple ways in which families, and employers, are choosing to take advantage of flexible/varied scheduling. Just because shift work is present, the motives underlying scheduling differences may vary. For example, some flexible scheduling exists to facilitate better work/home balance, whereas some shift work schedules are merely in place with the goal of heightening productivity.

Some types of shift work research are based on highly specific socio-economically stratified categories of individuals, like studies based solely on nurses, for example, who constitute a specialized group that is limited in generalizability to other types of work. Reynolds (2003) points out that a waitress on her feet from midnight to 9 a.m. would likely be impacted differently than a desk clerk or computer technician.
Choice has also demonstrated an influence on the effects of shift work on the home life of employees. The ability to choose one's schedule can impact feelings about a worker's sense of control, which has been known to positively influence home life, particularly among workers who care for dependants (Hill, Hawkins, Ferris, & Weitzman 2001; Galinsky, 1992). Having a sense of control, or being able to control one's schedule by choosing work hours theoretically allows workers to remain in synchrony as much as possible with their families and with the world (Staines & Pleck, 1986; Rau & Hyland, 2002). This allows workers to choose work schedules that are a better fit for their particular needs outside the realm of employment, often improving home life.

Much of the research on choice and work-family balance is grounded in Spillover Theory (Zedeck, 1992), which posits that negative work environments will spillover into home life, subsequently creating negative interactions in that realm. This theory goes both ways, positing that turbulence in the home life realm will negatively spillover onto work. The converse (positive spillover) is also believed to be true, in that happiness in one environment will spillover into the other. According to this theory, neither realm defines an individual's self-concept, but the environments we occupy will influence self-concept formation. Zedeck and Mosier offer the example of a person who feels bored by their job, or is demeaned at work. These feelings may contribute to a negative self-concept, but it is unlikely that a job will determine self-concept altogether (Zedeck & Mosier, 1991). According to this theory, having more choice at work, would lead to the individual feeling as though they have more overall "life choice", and the perception of choice is becoming increasingly appreciated as highly important variable in determining satisfaction.
Though Spillover Theory is the most recent and most pertinent to our current understanding of work and family conflict, other theories have attempted to explain the dynamics of WFC, such as compensation theory, theory and segmentation theory. Compensation theory asserts that one realm can compensate for the other, having a buffering affect, so if work is troublesome, but home is good, the two will balance each other out. On the other hand, Segmentation theory posits that it is possible to completely segment one experience from another (Zedeck & Mosier, 1991; Evans & Bartolome, 1984). This conceptualization insists on rigid boundaries in which realms are unaffected by each other. We now understand that such ability to segment rigidly, to the point that there is no influence, is unlikely and improbable.

Another area of variability within work family research is gender. Some research has found that a worker’s gender role affects work-home balance, presumably because differences inherent in gender roles will lead to different effects. Some researchers have approached the variability found among men and women from a role theory perspective, positing that those with strict gender roles would have the hardest time shifting their focus from work to home, (such theories identify home as the primarily female arena, and work as the male arena). The application of this theory has met with mixed results. Some research has found no differences among the sexes, (Hill, Hawkins, Ferris & Weitzman, 2001) while others have found large differences (Gareis & Barnett, 2003).

Ethnicity may also play an important role in how people are affected by shift work, particularly from a socio-economic standpoint, because many low-income people are employed in the least desirable shift work positions, and these individuals are often not White. For example, many of the individuals who occupy night shifts, which have been found to be the population most affected, are of ethnic minorities (Grossman, 2002). Little research has been
done on this segment of the population. The majority focusing on predominantly White, corporate organizations or health care workers from traditionally higher paying jobs which tend to lack ethnic diversity (Wilson, 2002). Ethnicity may be a significant variable because of the potential differences in how individuals handle or perceive their roles as employer and family member. In addition, different cultures may provide protective functions, such as well-defined support systems or a cohesive community, at varying levels. However, it is likely that ethnicity is less pertinent to how the individual copes with work-family balance than is the type of shift work they perform.

One exception to this was Grosswald’s study of transit workers (Grosswald, 2002), a job typically populated by blue-collar ethnic minorities. The service needs of a transit schedule are unique. The highest need is during peak morning and evening traffic hours, and workers split 6-hour shifts of two per day. This resulted in a home life where they were frequently gone early in the morning, home a few hours and then back at work in the early afternoon, until late at night, and often on weekends. Under these conditions the work schedule was contradictory to family time, and workers struggled to find time with their spouses and families. Ethnicity is noteworthy because it points to variables that are an effect of the ethnic stratification of our society. One of these is the family friendliness of the work culture. As Grosswald’s unique study indicates, the characteristics of some shift work environments may be particularly detrimental or challenging to maintaining work/home balance, and it may be that those jobs with the least family friendly nature are those held by lower income ethnic minorities. Family-friendly policies are not typically prevalent in lower-paying service and industry jobs that employ a predominantly ethnic minority workforce.
Grosswald’s (2002) study was focused on elucidating ways workers in these jobs effectively handled the challenges of raising a family. Her findings indicated that because formal child care was often out of the question due to cost, as well as their unusual work hours, workers who successfully balanced work and family often relied heavily on support networks of family, friends and frequently bringing their children on the bus with them. The job itself did not foster a family friendly culture and so workers had to create a subculture that worked allowed them to meet the demands of both roles. Family friendly organizational culture may mediate work-family conflict as well. Some businesses have instituted family friendly policies to assist workers in balancing the demands of work and home. All of these variables have added to the complexity of our understanding of non-traditional work hours.

*Work-Family Conflict and Roles*

Work-family conflict (WFC) is defined as a bi-directional relationship in which role pressures from the work and family domains are irreconcilable, thereby causing distress. Greenhaus and Beutell (1985) determined three distinct types of conflict based on time, strain, or behavior. Because of the demands of conflicting roles, Greenhaus & Beutell posit that time based conflict occurs when individuals may have the sense of not having enough time to meet work and family responsibilities. WFC has been directly and positively related both to the number of hours worked per week, irregularity of shift work, and long commute times (Bohen & Vivieros-Long, 1981; Burke et al., 1980; Pleck et al., 1980).

Strain based conflict is caused when participation in one role makes participation in another difficult. Examples of this type of conflict have been found in the work of Pleck (1980), and Jones & Butler (1980) who found that ambiguity within the work role led to increased home conflict. Such conflict is also known as “negative emotional spillover” (Bartolome & Evans,
Behavior based role conflict occurs when specific behaviors necessitated by one role are in direct conflict with the behaviors necessary for another role. There is little research addressing this area, but it is posited that the behavioral style of the male or female role may lead to incompatibility in the home or work realm, respectively. This explanation is similar to social role theory; social roles that are universally accepted may be imbued with characteristics and qualities that individuals may choose to assume.

Barnett (2004) investigated the possible effects of having multiple roles on WFC and role strain. She pointed out that internalized gender differences and social expectations of gender roles might be responsible for women's higher rates of WFC in some research. She indicates that women may feel guilt about working long hours because it competes with the notion that family comes first. In addition, women may feel guilty about enjoying the respite from childcare responsibilities that the workplace may be for them, because the societal message is that childrearing ought to be "fulfilling enough."

In addition to women's dramatically shifting and increasing roles, men's roles are also changing, albeit more slowly. More men are taking over domestic duties and contributing to the operation of the home than ever before. Women continue to carry the majority of the responsibilities for childrearing, but the gap is closing (Barnett, 2004). In fact some research suggests men and women are actually more alike than different. Men are not only making an increasing contribution to household duties, but also choosing schedules that allow them to be at home more (Tausig & Fenwick, 2001). Recent research indicates that schedule flexibility is an important factor in job choice among married males (Tausig & Fenwick, 2001). In a 2000 survey, males ranked scheduling flexibility above prestige, high salary, job security or challenging work (Bond, 2003). This is a turn from earlier data, which is consistent with
typically stratified gender roles. Recent data indicate a greater convergence of gender roles exemplified by an increased role in childrearing and overall household duties.

Gender differences and multiple roles.

Some social role theorists suggest that multiple roles offer a buffering effect for individuals, providing numerous areas in which to experience success. Thus, when one experiences setbacks or difficulties within one role, there are other means by which to feel successful. Based on Spillover theory multiple roles provide an expanded frame of reference for women who in the past may have felt constrained by the unitary role of mother/housewife. Following this theory, a rewarding job can mitigate the negative effects of increased home conflict (Michener, 1999; Barnett, 2004). A study by Barnett and Baruch (1985) found that women that for a large sample of middle class women, the factor accounting for the most variance in their psychological well being was whether or not they were engaged in the employee role. Those with employment had less psychopathology. Contradicting this theory, recent research has shown that numerous role identities may actually contribute to decreased health risks for women, and that divorce rates were lower in families where women are contributing income (Barnett and Hyde, 2001). Barnett argues that the reason for the disparity in the outcomes on gender has to due with the lack of a sound, modern theory to on which to group it. Primarily, she points out, we are basing our research on 1950’s ideals and beliefs about women and men, and their beliefs about their roles. These beliefs, she points out, have changed radically, and we must follow suit.

Multiple roles offer increased opportunities for success, too, as well as buffering, added income, social support, increased self-complexity, and shared experiences (Barnett, 2001). Some disagree with the positive effects of multiple roles; Hochschild (1989) and others (Roberts,
O’Keefe, 1981; Gore, Mangione, 1983) have argued that the work role has increased women’s challenges at home, by adding to their aggregate workload and thereby increasing distress. Additionally, it is well documented that while multiple roles may have positive crossover effects, the crossover effects can be negative as well. As Barnett also points out, while multiple roles offer opportunities for success, they also offer those for failure, frustration, sexual harassment, and low wages. Therefore, while a slight positive correlation may exist between number of roles and satisfaction on multiple levels, a better indicator would be specific type of role as defined by the role quality. Therefore it is the quality of one’s role, and not the actual role that is held.

WFC is best defined as circumstances in which the pressures of one realm are incompatible with the other (Greenhaus & Beutell, 1985). There are likely many variables that influence WFC, and researchers have begun to investigate those with are likely to be most influential. Due to the radically changing gender structure of the home and workplace, gender has been investigated.

Researchers have looked to gender to explain differences in how people experience WFC, and many have found variability among men and women. Some researchers have found little or no variability with regard to gender differences (Frone et al, 1992; Kinnunen & Mauno, 1998), and so the role of gender in WFC has been difficult to quantify and therefore what causes this variability has been debated. One explanation for what causes WFC is based in role theory, and posits that role strain causes imbalances between roles that lead to varied effects, including increased psychopathology (Hughes and Galinsky, 1994). Role strain is viewed as one of the culprits for increased work and family conflict for both men and women, though it is more frequently believed to be a greater conflict for women due to the social roles they inhabit in our
society. While it is apparent that in some circumstances, women and men have differed in their handling of work life balance, it is unclear how and what causes this.

Hochschild (1989) opined that the work role overtaxes women, who must go home and do a "second shift", which is akin to having a second full time job, alternatively, the work role provides men respite from the challenges and stresses from the home life. Hochschild added to this theory with her 1997 book *The Time Bind* in which she addressed the changing workforce by hypothesizing that both men and women were using work to avoid challenges at home, such as dissatisfaction with their marriages, families, or housework. She wrote that the changing demographics of the workforce are evidence that many people are unhappy at home, due to the "unrelenting demands" of housework and the "drudgery" of home. The resultant effect of this escapism is that home suffers further, and families are then involved in a "third shift", which consists of trying to make up for the demands of spending so much time at work. While Hochschild’s hypotheses were compelling, Brown and Booth (2002) have found that individuals who were unhappy at home did not in fact spend more time at work. Longitudinal research spanning multiple decades has determined that the number of hours people spend with their families has remained unchanged (Bianchi, 2000).

The effects of employment on workers have been well researched, but conclusions are mixed as to the reasons for the variability between men and women. Some researchers point to increased rates of psychological distress in married women who work outside the home (Gore & Mangione, 1983; Roberts & O Keefe, 1981) suggesting that female (particularly maternal) employment is related to negative outcomes such as family conflict, increased divorce rates, problems with children, decreased health, increased psychopathy, and a host of other ills (Akkinawo, 1988; Presser, 2000). Still others point out that the convergence of the roles of men
and women have led to increases in psychological disturbances among men, and decreases in women (Kessler & McRae, 1982). As Hughes and Galinsky (1994) point out, differences in distress cannot reliably be accounted for by gender and the number of roles one has. Therefore, gender differences must be as a result of other variables.

Barnett (2004) argues that research has been led astray by the assumption that gender differences are the reason for variability, such as ability to perform, work family balance and conflict. She argues that in fact it is the gendered assumptions in the first place that account for the differences rather than gender differences, themselves. Based on this idea, she believes that researchers must first look at the gender equity of an organization before they can look at other variables. If an organization has reasonable gender equity, then looking at gender differences might be valid, however, essentially it is the gender equity of the organization that is most influential, rather than general gender differences.

Some researchers account for gender differences by positing that men do not experience similar role strain because married, employed men have greater access to socially valuable resources, such as status, power, money, and social ties, than housewives, and that these variables may buffer psychological distress (Hughes & Galinsky, 1994). While it would seem that women in the workforce might have access to the same buffers, the added variable of cultural value of women in the workplace adds to the complexity of this variable. According to Hughes and Galinsky, socially valuable resources do not merely come with working outside the home, but from being a male in our society and having, overall, more access to these resources. Cultural gender primacy alone is not enough to account for differences in work family balance, because if it were enough, men would not experience challenges in this area, and they do.
Whether or not men experience role imbalance differently than do women is the subject of much debate. Some researchers have found that there are no gender differences with regard to work and family conflict (Windle & Dumenci, 1997). The implications for there being no differences between genders in their experience of balancing work and family is extremely important because it highlights the relative importance of sex differences, which are often believed to impact our lives in innumerable ways. The implication for these findings are that we are in fact, quite possibly, closer to equality than perhaps some may think, and that our sex differences either do not influence our experience of the interrelationship of the domains, or, we have eliminated the differences due to increasingly equitable and sensitive work environments. So, there are two issues to be considered when observing gender differences: One, do the data reflect actual biological influences in how we experience this role imbalance and, two, have we accounted for the possibility of cultural experiences.

*Family Friendly Culture as a Mediating Factor*

In recent years, organizations have made a concerted effort to accommodate workers increasing desire to meet family obligations. One way in which organizations have done this is by offering flextime, childcare options, and leaves of absence. In addition, the Family and Medical Leave Act of 1993 made it mandatory for employers to offer leave to employees to accommodate certain medical and family needs. This act referenced the tendency of the employee climate to favor men, stating that part of the impetus for the act arose from an understanding that “...due to the nature of the roles of men and women in our society, the primary responsibility for family care taking often falls on women, and such responsibility affects the working lives of women more than it affects the working lives of men” (Family Medical Leave Act).
It has long been known that supportive organizational culture effects productivity and employees who perceived their workplaces as supportive have experienced increased job satisfaction (Bond, 1998). Galinsky, Friedman & Hernandez (1991) measured family friendly organizational culture by means of a measure they developed known as the “family friendly index”. The index measures variables relating to programs that support families, policies and procedures that reduce role conflict for employees. The index also looks at the workplace culture, and whether or not it is supportive of work-life balance. The index is divided into three stages, so that companies can implement it systematically. While the measure has been adopted industry wide, few organizations have been successful at moving beyond stage III, completing the transition to “family friendly workplace”. By 1991, only 2% of Fortune 500 companies rated using the family friendly index had achieved stage III (Galinsky et al, 1991).

Merely having family friendly structures in place does not assure benefits. Research has found that without a supportive work-culture, family friendly programs languished, underutilized by employees, with utilization rates of fewer than 2% (Frye & Breaugh, 2004). In fact, those who formally support such policies outwardly may be actually discouraging employee utilization. This discouraging behavior does not have to be by directly standing in the way, it can be done by what we know behaviorally as “modeling”. One such example is that in 2000, Prime Minister Tony Blair decided not to take paternity leave; though he did encourage a new law that gave up to 13 weeks unpaid leave to fathers (Butler & Scattebo, 2004). Employee culture may facilitate this negativistic culture as well, creating a social framework that values those who do not take time off, or do not need corporate assistance.

Additionally, workers who utilize such structures can be negatively impacted, and perceived to be financially damaging the company. A study by Judiesch & Lydness (1999) found
that workers who had taken a leave of absence benefited negatively by getting smaller raises and not as many promotions as other employees. Those employees without childcare needs may feel frustrated by the perception that those with families are “getting more”. Utilizing family friendly support structures may be seem similarly to the way workers are seen whose home life is impacting their work life negatively. Workers who bring home to work can be viewed more negatively in performance appraisals. Men may believe that they will be viewed as unconventional if they are suffering from family conflict at work, and utilizing family friendly structures may be viewed negatively as “having conflict” (Butler & Scattebo, 2004).

Supportive supervisors are also necessary for family friendly policy implementation to be effective. Often this lack of support impacts women most dramatically, as they tend to be the primary caregiver’s in families. It was not long ago that women feared reprisal if bosses learned of their pregnancies and it seems there continue to be disparities between women and men in the workplace with regard to family friendly policies, and it is possible that it continues to be a fear for many women. Although the Family and Medical leave Act of 1993 (FMLA) grants federal employees 12 workweeks of unpaid leave for the care of an elder, birth, or care of a child, or other family needs, many employees are hesitant to make use of this leave (Swanberg, 2004). In fact, in Swanberg’s study, women who utilized family leave felt that there had been ramifications upon their return, and that supervisors had routinely failed to adequately prepare for their departure (2004). The result of this was that frequently, employees were contacted during their leave about work-related issues, and in some cases asked to return to the workplace early. Thus while “managers and supervisors followed legislation formally, their behaviors suggested resistance to the policy” (Swanberg, 2004, p. 14).
While there is a fairly large body of research on shift work, the vast majority of early research largely disregarded women, looking mainly at the issues men faced in the workplace. This research followed the assumption that males were the dominant employees in work situations, and that female employment was not impactful (Swanberg, 2004). Furthermore, there was a notion that women did not have issues with balance because they are innately maternal/mothering/nesting beings and therefore do not have difficulty maintaining that role. Additionally, men were assumed to not be struggling with family conflict, which was believed to be a “women’s issue” (Thomas & Ganster, 1995). Many organizations and researchers have shied away from looking at gender differences because of a fear that it might contribute to a belief that the need for family friendly policies is a women’s issue, and therefore not applicable to all employees (Swanberg, 2004). However recent evidence has indicated that work and family balance are salient issues for both men and women. This is not to say there is not data on female shift workers. There exists a large body of shift work research including women however, this research has focused on how nurses handle long hours, their increased errors, and risk for psychopathology, rather than their ability to balance home and work (Suzuki, 2005).

The Present Study

The present study examined work-family (WTF) and family-work (FTW) conflict within a sample of high tech shift workers. This study most significantly mirrors the work of Galinsky and Hughes (1994) who looked at gender differences and psychological distress among a similar demographic. It differs in that shift workers were evaluated with respect to gender. Work-family conflict and family-work conflict were evaluated separately with the expectation that values for each would differ between men and women based on role theory.
It was hypothesized that women would experience more family-work conflict and men would experience more work-family conflict. Secondly, it was hypothesized that night shift workers would experience more work to family conflict than day shift workers, based on discontinuity and rhythmicity. Finally, it was hypothesized that female night shift workers would experience the most work to family conflict.

Methods

Participants

Data used for this study was archival, and collected in 2000. Participants were 263 females and 679 males ($n = 942$; 27.9% Female, 72.1% Male) at a high tech manufacturing firm based in Europe and located in the Pacific Northwest. Only the data from U.S. employees were analyzed. The sample was 64.5% white ($n = 608$), 7.1% Black ($n = 67$), 2.3% Hispanic ($n = 22$), 23.9% Asian ($n = 225$) and .4% Indian or Alaskan Native ($n = 4$). Of this sample, 928 employees, or 98%, were parents (14 responses were not included), and 933 employees (99%) were married (9 responses not included).

Procedure

The data were collected from surveys delivered through the company mail system. Surveys were sent out using an employee list. Of the 1,596 surveys sent, 943 were returned, for a response rate of 59%. Names were randomly coded, with the coded numbers kept in a separate location from the employee list and not accessible to anyone employed at the organization. Surveys were returned in drop boxes located throughout the company. As an incentive, those who returned the surveys were entered into a $500 raffle (1 winner).

Measures

The measures used to assess work-to-family conflict (WFC) and family-to-work conflict (FWC) were developed by Netemeyer, Boles and McMurrian (1996). These scales measure some commonly agreed upon aspects of WFC and FWC, including organizational commitment, job burnout, job tension, job role conflict, job role ambiguity, physical symptomology and
depression intention to leave an organization, search for another job, and number of hours worked per week. The scales consist of 43 Likert items ranging from strongly agree to strongly disagree. The scale includes both on the job and off the job questions (Netermeyer, Boles & McMurrian, 1996).

The measures have demonstrated good reliability, with coefficient alphas ranging from .83 to .89, with an average alpha of .88 for WFC, and of .86 for FWC across the 3 samples that the questionnaire was normed on. Sample one included elementary and high school teachers. Of the 182 respondents in a large Southeastern US city, 128 were women, the median age was 43, 157 were married, and 93 had children living at home. The second sample consisted of small business owners in a large southeastern city. The median age of respondents was 45 years, 96 were men, 130 were married, and 65 had children living at home. The third sample consisted of real estate salespeople in a large southeastern. The median age of respondents was 48 years, 142 were women, 148 were married, and 60 had children living at home. Overall, the scales showed adequate levels of internal consistency, dimensionality, and discriminate validity.

Results

The hypotheses that female night shift workers would experience greater WFC and FWC than males, and that night shift workers would experience greater overall WFC and FWC than day shift workers, was assessed. A two way between-group’s multivariate analysis of variance (MANOVA) was performed using SPSS, to investigate gender differences in shift workers’ family-work and work-family conflict, depending on whether they worked a day or a night shift. The MANOVA statistic was chosen, rather than multiple ANOVA analysis, to control for Type 1 error. Two dependent variables were used: Work-family conflict and family to work conflict. The independent variables were shift worked and gender. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices (Box’s M = 14.05, p = .123), and multicollinearity. All assumptions were met.
The main interaction between gender and shift work tested the hypothesis that female shift workers would experience significantly more FWC and males shift workers would experience more WFC. The interaction was not statistically significant ($A=1.00$, $F (2, 2905)=.38$, $p=.684$). Hypothesis 2, that night shift workers would experience greater WFC than day shift workers, did not reach statistical significance ($A= 0.99$, $F (2, 2905) = 2.08$, $p = .125$). Hypothesis 3, that female night shift workers would experience greater FWC than males did not reach statistical significance ($A=1.00$, $F (2, 2905) = .26$, $p = .77$). Tables 2 and 3 list the statistical results of the analyses.

Table 2
*Results of Multiple Analyses Of Variance*

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<th>Variable</th>
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<th>$p$</th>
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<tbody>
<tr>
<td>Gender</td>
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<td>905</td>
<td>.773</td>
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<tr>
<td>Shift Work</td>
<td>2</td>
<td>905</td>
<td>.125</td>
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</tbody>
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Table 3
*Mean, SD, and n of WFC and FWC by Gender and Shift.*

<table>
<thead>
<tr>
<th></th>
<th>WFC</th>
<th>FWC</th>
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<tr>
<td></td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td>Day</td>
<td>2.84 (.91)</td>
<td>2.86 (.91)</td>
</tr>
<tr>
<td>$n$</td>
<td>455</td>
<td>168</td>
</tr>
<tr>
<td>Night</td>
<td>2.99 (.96)</td>
<td>2.99 (1.03)</td>
</tr>
<tr>
<td>$n$</td>
<td>455</td>
<td>168</td>
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Using Levene’s Test of Equality of Variances it was determined that the DV of Family-to-work conflict violated the assumption of equal variances, and so more stringent significance level of .025 was used. In tests of between subject’s effects, one variable, shift, did reach statistical significance \(p = .050\). However, Wilkes Lambda was not significant for this test \(\Lambda = 1.00\), and it is more likely due to Type 1 error than true statistical significance.

Independent Samples t-tests were run to explore the impact of gender on WFC and FWC. There were no significant differences in scores on WFC for males \(M = 2.90, SD = 0.93\) and females \((M = 2.89, SD = .95; t(924) = .10, p = .922\). There were also no significant differences in score on FWC for males \((M = 2.15, SD = .69)\) and females \((M = 2.11, SD = .75; t(924) = .10, p = .457)\).

Additional Independent Samples t-tests were conducted to compare WFC and FWC by shift. There was no significant difference of WFC for day workers \((M = 2.88, SD = .91)\); however a significant difference was found for night workers \((M = 2.99, SD = .98; t(909) = -2.15, p = .032)\), demonstrating that night shift workers of specific shifts, had greater levels of work to family conflict. There were no significant differences in FWC for day shift workers \((M = 2.11, SD = .68)\) or night workers \((M = 2.16, SD = .73; t(908) = -1.06, p = .303)\).

**Discussion**

The purpose of this study was to investigate gender differences between day and night shift workers as evidenced by WFC and FWC to elucidate the existence of stressors on individuals engaged in shift work. The belief underlying this hypothesis is that shift workers are unique in their susceptibility to experiencing rhythmicity disruption, or desynchrony of lifestyle and health. Shift workers may be more susceptible to the deleterious effects of balancing work
and home and therefore it may be possible to see more clearly the effects of interventions aimed at alleviating their stressors, which could then be applied to all types of workers.

Investigation of work-life patterns assists us in obtaining a greater understanding of the experiences of our workforce so that we can improve the quality of our home and work lives. While the statistical analysis of this study indicated the null hypothesis was true, and no differences were found between groups, the investigation still illuminates important some information about the lives of shift workers. Firstly, there are several reasons why it is likely that no gender differences were found in the present study. It may signify that men and women have in fact attained a more equitable work family relationship. However, it is more likely that there are variables involved that are equalizing the differences that may otherwise be present in this sample, such as the presence of family-friendly culture, as well as the utilization of policies and structures in place to support families.

The small difference found between groups of shift workers might represent the levels of desynchrony that can be present as shifts become more extreme. For example, a shift that begins at 2am might be more desynchronous that one that begins at 1pm and ends at 10pm. It is likely that shift workers experience greater desynchrony with schedules that are less traditional.

Limitations and Future Directions

It has long been known that supportive organizational culture effects productivity; employees who perceive their workplaces as supportive tend to experience increased job satisfaction (Bond, 1998). It is not known at this time what policies were in place at this company, and to what extent they were utilized and respected by employees (and what affect this may have had on the data). Merely having family-friendly structures in place does not assure benefits. In fact, some research has found that without a supportive work-culture, these benefits
have utilization rates of fewer than 2% (Frye & Breaugh, 2004)). Employee culture may facilitate this negativistic culture as well, creating a social framework that values those who do not take time off, or do not need corporate assistance.

Employers and fellow employees can view employees who allow home life to impact work life negatively, and it is possible that workers who utilize family friendly structures experience a similar effect. Workers who "bring home" to work can be viewed more negatively in performance appraisals. Men may believe that they will be viewed as unconventional if they are suffering from family conflict at work, and utilizing family friendly structures may be viewed negatively as "having conflict" (2004).

Supportive supervisors are also necessary for family friendly policy implementation to be effective. Often this lack of support impacts women most dramatically, as they tend to be the primary caregivers in families. It was not long ago that women feared reprisal if bosses learned of their pregnancies and it seems there continue to be disparities between women and men in the workplace with regard to family friendly policies, and it is possible that it continues to be a fear for many women. Although the Family and Medical leave Act of 1993 (FMLA) grants federal employees 12 workweeks of unpaid leave for the care of an elder, birth, or care of a child, or other family needs, many employees are hesitant to make use of this leave (Swanberg, 2004). In fact, in Swanberg's study, women who utilized family leave felt that there had been ramifications upon their return, and that supervisors had routinely failed to adequately prepare for their departure (2004). The result of this was that frequently, employees were contacted during their leave about work-related issues, and in some cases asked to return to the workplace early. Thus while "managers and supervisors followed legislation formally, their behaviors suggested resistance to the policy" (Swanberg, 2004, p. 14). Another possibility is that social expectations
may be consistent with a view that work family balance is a women's issue. This may cause underreporting in men (Butler et al., 2004).

Socioeconomic status and ethnicity may also have impacted the variability in this sample. It is more common in highly stratified corporate environments and types of businesses to have more policies in place to support employees. Additionally, in higher SES homes, families may have more resources to assist with balancing competing demand, such as in house childcare. It is likely that families with greater resources will be less affected by the strain of WFC. The scales developed by Netemeyer, Boles and McMurrian while statistically effective at indicating WFC and FWC in their samples, may not have been the most sensitive indicators in this population, which likely differs in terms of SES, from the teachers, real estate agents, and small business owners represents. In addition, the scales were developed in the Southeastern part of the United States, and may not be applicable to the culture of the Pacific Northwestern high tech industry, therefore affecting and limiting their generalizability.

Choice, as well, may be ultimately involved in modifying the impact of WFC. Research indicates that choice in schedule often determines whether stressors are present for families. Some families actually choose shift work so that one parent is always home for the children, thereby alleviating childcare stresses, well known to be a source of WFC. Therefore, analysis of job selection criteria may be a more powerful variable in which to observe the impact of WFC.

A confound variable exists with day shift workers between workers who are employed 9-5 during typical Monday-Friday workdays, and those who worked weekends. While this information was not available for this sample, it is possible that weekend workers made the day shift worker variable "less pure".
References


Family Medical Leave Act, February 5, 19995 U.S.C. 6381-6387; 5 CFR part 630, subpart L


