

From D. R. Crane and E. J. Hill (Eds), *Handbook of Families & Work: Interdisciplinary Perspectives*. (pp. 62-78). New York: University Press of America, 2009.

### *Chapter Four*

## **The Effects of Job Stress on the Family: One Size Does Not Fit All**

by Rena L. Repetti and Darby Saxbe

### **ABSTRACT**

*This chapter focuses on how families and individuals adapt and respond to demands and constraints placed by the workplace, arguing that it is time to move beyond "one size fits all" models in our understanding of work-family spillover. We begin with a review of research indicating that the effects of job stressors on family life vary according to the gender and the psychological well-being of the individual worker, characteristics of the family, and characteristics of other family members. Explanations for why and how the individual and family difference variables may exert their influence are discussed. Physiological responses to stress may mediate some of the observed moderator effects, and the social, emotional, and physical milieu to which employees return after work may explain other differences.*

### **MODERATORS OF WORK-FAMILY LINKAGES**

Work-family researchers find that families differ in how they are influenced by parents' experiences at work (Crouter & Helms-Erikson, 1997; Crouter & Bumpus, 2001; Perry-Jenkins & Gillman, 2000; Perry-Jenkins, Repetti, & Crouter, 2000; Repetti, 2005). Our review focuses on non-uniformities in the effects that job stressors have on families; summarizing evidence for a number of variables that appear to act as moderators.

## Sex Differences

Although gender is probably the most frequently examined group difference variable in the work-family literature, few studies of the effects of job stressors have considered variability in the impact of women's versus men's experiences. However when gender is examined, differences are often found. For example, in one study of dual-earner families, mothers' descriptions of the interpersonal atmosphere at work predicted changes in both maternal and paternal parenting three months later. Both mothers' and fathers' interactions with their year-old infants were more negative (e.g., more intrusive) and less positive (e.g., less sensitive and responsive) when the mother reported a negative social climate at work. Fathers' work experiences were unrelated to either parents' play behavior (Costigan, Cox, & Cauce, 2003).

An unusual feature of the study by Costigan and colleagues is the fact that all of the mothers in the sample were employed full-time. In most studies of dual-earner families, a substantial proportion of the women are employed part-time but almost all of the men are employed full-time. Moen and Yu (2000) consider these full-time/part-time dual-earner arrangements to be a modified form of the traditional husband breadwinner/wife homemaker model. Although these couples represent many dual-earner U.S. families, particularly those with young children at home, they do not present equivalent male and female samples for comparing the effects of stressful work experiences. In the Costigan et al. (2003) study, mothers and fathers devoted a similar amount of time to work each week, and the effects of their experiences could be reasonably compared.

Gender differences have also been observed in the short-term effects of job stressors on marital interaction. The studies described below used daily-report methodologies with samples of dual-earner couples; in all cases, the average work week of the wives was shorter than that of the husbands. Bolger, DeLongis, Kessler, and Wethington (1989) found that husbands' reports of "tensions or arguments" at work predicted an increase in the same type of interpersonal stress at home later that evening. On the other hand, wives' reports of problems at work did not have a short-term impact on their marital interactions. It is possible that the difference was due to the gender difference in job hours; wives were employed an average of 22 hours per week compared to the husbands' average of 43 hours.

A recent study found that wives were more socially withdrawn following a higher-paced workday (Schulz, Cowan, Cowan, and Brennan, 2004). However their husbands showed no association between the workday's pace and their marital behavior later at home. Story and Repetti (2006) replicated this

pattern in another daily diary study using the same measure of marital withdrawal. Among wives, higher workload days were followed by withdrawal but there was no evidence for increased withdrawal among the husbands. The Story and Repetti study did not, however, replicate the gender pattern reported by Bolger et al. (1989), in which only husbands' job experiences predicted marital arguments. Story and Repetti (2006) found that both husbands and wives described more marital anger (and more marital withdrawal) after days when they had more distressing interactions with coworkers and supervisors.

Thus, it may be that daily job stressors, such as work overload and interpersonal problems at work, have a greater impact on women's parenting and marital behavior than on men's behavior. A greater impact of workload on wives' involvement and responsiveness during marital interaction was observed in two daily diary studies despite the fact that in both samples the average husband worked 15–18 more hours each week.<sup>1</sup> The gender difference may be consistent with Moen and Yu's (2000) finding that wives in two-earner couples report higher levels of distress and less confidence in their own ability to cope with difficulties than do husbands. There is a clear need for the continued investigation of possible gender differences in the effects of job stressors on behavior in the family. In particular there is a shortage of research comparing women and men who devote the same number of hours to their jobs each week.

### **Psychological Well-Being**

Virtually all models of job stress influences on family interaction cast individual emotional and psychological functioning in key mediating roles (Perry-Jenkins et al., 2000). The assumption is that stressors affect a worker's energy, mood, and cognitions which, in turn, influence his or her social behavior at home. The logical next step, therefore, is to consider how stable differences in personality or other psychological factors help to fashion the impact that job stressors do (or do not) have on an individual's behavior at home. Two studies of employed women found that a mother's psychological well-being moderated the association between her work experiences and her parenting behavior. In a daily-report study of employed mothers and their preschool-age children, a higher-workload day was followed by more withdrawn and aversive behavior during the parent-child reunion, but this effect was observed only in the more distressed group of mothers (Repetti & Wood, 1997a). Among mothers who reported few symptoms of depression or anxiety, daily workload had no impact on subsequent interactions with their chil-

dren. A different job stressor, negative social interactions at work, had the same short-term impact on parenting, but only among the mothers who reported more Type A behaviors, such as generally feeling pressed for time or getting upset at having to wait. In each case, once individual differences in personality or emotional well-being were considered, it was only the more distressed mothers who reacted to daily variations in job stressors.

A study that investigated how the length of a maternity leave might affect the quality of mother-infant interactions found a negative impact of a short maternity leave (six weeks or less) among the mothers who experienced postpartum depressive symptoms (Clark, Hyde, Essex, & Klien, 1997). For those mothers, a shorter leave was associated with fewer positive behaviors with the baby, like a warm tone of voice, a cheerful mood, and expressions of pleasure and enjoyment. For other mothers, however, a quick return to work was not associated with less positive maternal affect or behavior.

A pattern emerges in these two studies. For some women, stressful occupational conditions—a short maternity leave, an especially busy day or tense social interactions at work—had no detectable impact on parenting. But the same experiences were associated with variations in parenting among women who showed some signs of psychological distress. This suggests that emotional and psychological functioning are important sources of individual differences in responses to stressful employment experiences.

### **Characteristics of the Family**

Just as individual differences play a role in determining how job stressors are carried into the home, characteristics of the household to which that individual returns are also a factor. The family's stage in its life cycle, the quality of relationships, and the division of labor within the home are all examples of family-level variables that have been found act as moderators.

An analysis of survey data from the 1992 National Study of the Changing Workforce found that men and women who were part of dual-earner couples faced more conflict in balancing work, personal, and family life if they had children living at home. They also described higher levels of stress and overload, and less mastery and control over their lives compared to dual-earner couples without children (Moen & Yu, 2000). Grzywacz, Almeida, and McDonald (2002) reported similar findings in a representative sample of employed individuals in the United States. The survey included questions about negative spillover from work to home, such as whether respondents thought their jobs reduced the effort they put into activities at home. Results indicated that negative spillover varied across the life cycle, with a decline beginning

when employees were in their mid-50s. Similarly, the odds that work and family stressors would both occur on the same day gradually increased across young adulthood and midlife, but then declined during the later years. Thus, reports of negative spillover from work to home were strongest during the years when children are present, which is when labor and responsibilities in the family peak; this is the life stage that is most often studied by work-family researchers.

A good example of that tradition is research conducted by the Alfred P. Sloan Foundation's Center on Everyday Lives of Families (CELf) at UCLA. Our group studied a sample of dual-earner families with school-aged children through videotaping and other intensive data collection methods to obtain a rich and detailed picture of a week in their lives. One analysis found that, among fathers who were less happily married, more stressors at work were associated with observations of more intense and more negative social behavior with wives and school-aged children on weekday afternoons and evenings (e.g., more talking and more expressions of negative emotion). For the fathers in happier marriages, job stressors were linked with observations of less intense and less negative family interactions. Fathers' psychological distress also acted as a moderator, strengthening the connection between stressors at work and negative social behavior at home (Wang, Repetti, & Campos, 2008). Interestingly, there was no reliable evidence of a connection between the mothers' stressors at work and mothers' social behavior, whether or not individual or relationship distress was tested as a moderator. Another investigation, comparing parental monitoring in different groups of dual-earner families, uncovered a similar pattern. When fathers were employed in high-stress jobs, families were less adept at monitoring young sons, but only if the parents also described an unhappy marriage (Bumpus, Crouter, & McHale, 1999). That is, on average, there were no differences in how knowledgeable parents were about their children's daily lives, but parental monitoring differences were found when marital quality was considered. In families with young sons and less happy marriages, more employment demands on the father (but not more demands on the mother) were associated with the parents being less aware of their children's daily experiences, activities, and whereabouts. The findings from these two studies suggest that the well-being of a marriage, perhaps in combination with parent gender, helps to determine whether a stressful job has a negative impact on family behavior.

The quality of family relationships has also been found to moderate short-term associations between job stressors and family life. In the Schulz et al. (2004) daily-diary study mentioned above, couples with varying levels of marital satisfaction differed in the extent to which daily experiences at work were linked to marital interactions after work. For example, overall, when

husbands left work in a more negative mood they were less likely to engage in angry marital behaviors (e.g., being argumentative, acting unkind and impatient with their wives). However, this effect was particularly strong among the men who were more satisfied with their marriages. Husbands in less satisfying marriages were not as likely to reduce their expressions of anger following a stressful day at work. Story and Repetti (2006) found that the short-term effects of work stressors on marital interaction differed for high-conflict and low-conflict families. Those with more conflictual social climates were more reactive to daily job stressors; both the husbands and the wives in those households were more likely to express anger and to withdraw from marital interaction on evenings following busy and interpersonally stressful days. Thus, feelings of irritability and frustration were more likely to be brought home when expressions of anger were generally more accepted or commonplace, and the spouses were also more likely to withdraw from their partners on stressful days, perhaps in an attempt to limit such unpleasant interactions.

The findings from these four studies point to the importance of the general quality of family relationships in guiding whether and how job stressors have an impact. In particular, a poor marriage or a high level of conflict and anger in the home may increase that family's vulnerability to negative spillover effects. Put another way, more satisfying and harmonious relationships may protect families from a potentially harmful carryover of job stress into the home.

The way that housework and childcare are divided between spouses also sets the stage for the influence of job stressors. An interview and questionnaire study of employed women who were pregnant at the start of the study examined how employment experiences at 4 months post-partum affected the mothers' feelings of role overload (feeling "pulled apart from having to juggle conflicting obligations" and doing "just too much"). On average, work hours were not associated with experiences of role overload; the link depended on how satisfied women were with the extent of their partners' contributions to household and family chores. Among women who were satisfied with the division of labor, there was little difference in feelings of role overload between those who worked long hours and those who worked fewer hours each week. However, among women who were dissatisfied with the division of labor in their homes, more work hours predicted greater role overload (Hyde, Essex, Clark, & Klein, 2001). As others have noted, at this point in society's adjustment to the influx of women into the paid labor force, an individual's employment hours, share of household labor, and gender are all inextricably intertwined. Therefore, any attempt to analyze how families differ in their responses to job stressors, must take all three variables into account.

## Characteristics of Other Family Members

Besides characteristics of the employed individual and of the family, the characteristics of spouse and children also help to shape how jobs affect home life. A good example is the spouse's job characteristics, as illustrated by a study of how authority at work related to division of household labor (Brayfield, 1992). The wife's share of traditionally female tasks—cooking, laundry, housecleaning—was predicted by an interaction between her own authority at work and a measure that compared her authority to her husband's authority at work. For example, among women in supervisory roles, more authority at work (relative to husband's) was associated with a reduced share of household labor; an effect that was even stronger among women in top management. Thus, husbands' job characteristics helped to shape the link between wives' positions at work and their labor at home.

Characteristics of children may also act as moderators of work-family linkages (Greenberger, O'Neil, & Nagel, 1994). A study of parental monitoring found that, on average, there were no differences between the single-earner families and the dual-earner families with respect to parents' day-to-day knowledge about their school-aged children's lives, nor with respect to children's behavior problems (Crouter, MacDermid, McHale, & Perry-Jenkins, 1990).<sup>2</sup> But there were sub-group differences. Sons, but not daughters, in dual-earner families were more likely than other children to get into trouble, quarrel, and fight, but only if their parents were not keeping track of their daily activities and experiences. The conduct of sons in dual-earner families who were well monitored did not differ from the conduct of other children. The moderating role of child characteristics is probably most evident when parenting behavior is the outcome of interest. For example, in the maternity leave study mentioned earlier, infant temperament was a significant moderator. If the infant had a difficult or fussy temperament, a relatively quick return to work was associated with less positive maternal affect and behavior with the baby (Clark, Hyde, Essex, & Klein, 1997).

To summarize, researchers are interested in understanding variability in how families are affected by experiences in the workplace. When those questions are posed in studies with adequate sample sizes, differences are often found. Our review of the research literature suggests that the gender, personality, and psychological well-being of the employed individual and of other family members all help to determine how job stress influences family life. The stage of life and quality of relationships in the family, the manner in which labor is divided in the household, and the spouse's job characteristics are other factors that appear to shape work-family linkages. The next two sections of this chapter discuss some possible explanations for why and how those individual and family difference variables exert their influence.

## STRESS PHYSIOLOGY

Recently, researchers have begun to focus attention on the biological underpinnings of personality and health differences, exploring how inherited or acquired biological characteristics might shape both individual reactivity and coping strategies in the face of stress. While the stress physiology literature has not yet been extensively applied to work-family research, this work has direct bearing on some of the variables already described in this chapter, such as gender, marital quality, and psychological well-being.

Stress physiology, defined in terms of reactivity to threatening or demanding situations, and the ability to modulate or recover from one's response to stressors, has attracted a great deal of research interest in recent years. Given the increasing accessibility of biological measures of cortisol, heart rate, blood pressure, skin conductance, and proinflammatory cytokines, researchers have begun to link these markers of physiological functioning to daily experiences, ranging from marital conflict to high workload (Robles & Kiecolt-Glaser, 2003; Steptoe et al, 1998). Both experimental and naturalistic research on stress responses have found individual variability in stress-responding systems like the hypothalamic pituitary adrenocortical (HPA) axis, which releases the hormone cortisol, and the sympathetic and parasympathetic systems (Dickerson & Kemeny, 2004; Gevirtz, 2000). Additionally, the notion of allostatic load, introduced to explain the long-term effects of chronic wear and tear on biological self-regulatory systems (McEwan, 1998), has helped researchers build a conceptual framework for understanding associations between individual differences, everyday stress, and health.

Given evidence that stress responses can be shaped by genes and early experiences, apparently leading to pervasive individual differences in reactivity (Yehuda & McEwan, 2004), it is no wonder that couples and families cope differently with the daily hassles of work, marriage, and parenting. For instance, we have discussed gender as one factor that may be implicated in different responses to work stress. There is a burgeoning research literature suggesting that women and men may show different levels of reactivity to both work and family stressors. For example, some researchers have suggested that the HPA axis (cortisol) response to acute laboratory stressors is larger in men than in women (Lovallo & Thomas, 2000). One study (Ennis, Kelly, & Lambert, 2001) found that cortisol levels increased in men and decreased in women in anticipation of a stressful exam.

Interestingly, several studies have found that women are more physiologically reactive to interpersonal conflict than are men, despite men's typically stronger response to laboratory stressors (cf., Kiecolt-Glaser & Newton, 2001). For example, among patients with hypertension, wives showed blood



pressure changes during marital conflict that were related to hostility and overall marital quality, while husbands did not (Ewart, Taylor, Kraemer, & Agras, 1991). Wives also appear to show a greater epinephrine response to marital conflict (Malarkey, Kiecolt-Glaser, Pearl, & Glaser, 1994). One study combined an achievement challenge—a public speaking task that was either rated or not rated for verbal competence—with a disagreement/communion challenge—husbands and wives were either assigned to the same or opposing sides in a discussion. The disagreement condition was associated with elevated blood pressure and heart rates among wives, but not husbands (Smith et al., 1998), while the achievement challenge affected men's, but not women's, heart rate and blood pressure (Brown & Smith, 1992). This finding might help to explain why interpersonal problems at work were salient for the mothers' behavior but not for the fathers' behavior in a study described in the first part of this chapter (Costigan et al., 2003). That is, if women show greater physiological responses to interpersonal stressors, which could include interactions taking place both at work and at home, they might also show more enduring carryover effects after exposure to these types of stressors. In contrast, men might be more responsive to work stressors relevant to achievement. Although this hypothesis has not been explicitly tested, and is not fully supported by the findings of sex differences summarized in this chapter, it offers an example of the type of research question that stress physiology research can inform.

Another relevant gender difference has emerged in research on physiological unwinding, or the process of shedding tensions generated at work. Several studies suggest that, while both sexes appear physiologically aroused at work, working fathers may recover more rapidly after the workday ends. A study that measured the physiological stress levels of male and female managers found rapid after-work unwinding among the male managers, with decreased levels of blood pressure, norepinephrine excretion, and cortisol excretion during the evening hours. In contrast, female managers' physiological stress levels stayed closer to their daytime levels (Frankenhaeuser et al., 1989; Lundberg & Frankenhaeuser, 1999). Other researchers have reported that working women exhibit higher levels of physiological arousal on rest days than men do, signaling a lack of recovery, and that women with children tend to excrete more evening cortisol than women without children (Pollard, Ungpakorn, Harrison, & Parkes, 1996; Luecken et al., 1997). Marital satisfaction may play a role in the unwinding process, at least for women. Our study of cortisol patterns in dual-earner parents found that men and happily married women seemed to show a larger-than-usual drop in cortisol after a busier-than-usual workday, an apparent sign of exaggerated recovery from work, but that maritally dissatisfied women did not show the same drop-off (Saxbe, Repetti, & Nishina, 2008). These physiological differences may ex-

tend from women's greater share of domestic responsibilities, although much more research in this area is warranted.

As discussed earlier, individual differences in psychological well-being may also affect coping responses to work-family challenges. Physiological researchers have found some links between mental health and stress physiology. For example, in cortisol research, clinical depression has been associated with both blunted reactivity to, and poor recovery from, laboratory stressors (Burke, Davis, Otte, & Mohr, 2005). In other words, patients with depression seem to have an unresponsive and sluggish pattern of cortisol activity. An analogous result appears in naturalistic research, which has linked depression with a flattened diurnal cortisol slope (Miller, Chen, & Zhou, 2007). Cortisol levels typically peak in the morning and drop during the day, but a person with depression might exhibit both a lower morning cortisol level and then a plateau. In other mental disorders, such as PTSD, cortisol patterns also appear dysregulated—in PTSD and in Chronic Fatigue Syndrome, for example, cortisol levels are often lower than normal (Fries, Hesse, Hellhammer, & Hellhammer, 2005). These kinds of differences in physiology may help to explain how psychological health affects coping with work-family stress. If psychological problems lead to disruptions in stress responses and self-regulatory systems, they might deplete energy reserves, increase feelings of fatigue, and impair the ability to react quickly and effectively to the small, chronic stressors that are part of the life both at work and at home. While this remains speculative, it is possible that subjective states characterized by low energy, tiredness, or slow recovery from a stressor (feeling worked up even after a threat has passed, for example) might inform family members' behavior at home. For example, social withdrawal, a common response to difficult work-days, has been described as a short-term coping response to daily stress because it might help to restore a family member's mood or arousal level (Repetti, 1992). We can speculate that a family member whose stress-responding capabilities are already compromised by allostatic load or depression might exhibit this behavior more frequently, or might require a more prolonged period of social withdrawal in order to recover adequately.

In summary, physiological paradigms can help work-family researchers understand the interrelationships between daily stress, individual differences, and even long-term health. Stress responses can influence mood and coping resources, just as our daily lives and demands help to shape their functioning.

## THE AFTER-WORK CONTEXT

When they leave work at the end of the day, employees face a new set of challenges and rewards, stressors and supports, and constraints on their energy

and time. The nature and length of their commute home, whether or not there is an opportunity to relax and unwind before jumping into family life, and the child care and household responsibilities waiting for them at home are just a few features of the after-work environment that shape how employed members feel, think, and behave. For example, in a study of emotion transmission, Larson and Gillman (1999) found that time alone reduced the transmission of anger and anxiety from mothers to their adolescent children. The buffering effect of time alone was not due to a decrease in the total amount of time spent with the child. Solitary time appeared to have an independent beneficial effect by limiting the transmission of negative emotion when the mother and adolescent were together, suggesting that work-family negative emotion spillover may be less likely to occur if the employed parent has some time alone after work. It also offers one explanation for why social withdrawal may be a common coping strategy for employed parents after a stressful day at work. The possibility of some private time after work may contribute to the variability in work-family linkages observed among families that differ in division of household labor and ages of children. The physical environment also plays a role; residential attributes can enhance or limit possibilities for restorative processes after work by influencing exposure to daily hassles (e.g., troublesome neighbors) and ambient stressors (e.g., noise) (Hartig & Lawrence, 2003).

The needs, demands, emotions, and social behavior of family members are all part of the social world an employee enters as or she crosses the threshold from job to home at the end of the workday; these features of the social environment may be crucial to determining how an individual's response to job stressors is expressed in the home and the extent to which restoration can occur. The behaviors of spouse and children may be the proximal variables that explain why some of the characteristics of families and their members act as moderator variables in the research literature discussed earlier. Support from a spouse is an important aspect of the after-work social environment. Family researchers have noted that emotional support from a spouse can help shield the marital relationship from the negative consequences of all kinds of stressors (Conger, Rueter, & Elder, 1999). Marital support may also take the form of helping with household chores and other demands on stressful days (Bolger et al., 1989), which may also facilitate the distressed partners' withdrawal-based coping. One study found that air traffic controllers were less likely to exhibit anger, and were more likely to withdraw from marital interaction, after high workload days at the airport if they received more support from their wives that evening (Repetti, 1989). Perhaps the support that the air traffic controllers got from their wives allowed a period of emotional recuperation, something that may be critical to avoiding negative emotional spillover after a stressful day at work.

Although it has not been the focus of much research in this area, the behavior of children when families are together at the end of the workday is also important in shaping work-family linkages. For instance, developmental psychologists have found that disruptive and difficult child and adolescent behaviors predict increases in parental criticism (Frye & Garber, 2005) and arguments between parents (Jenkins, Simpson, Dunn, Rasbash, & O'Connor, 2005), as well as declines in nurturant parenting and increases in harsh and inconsistent parenting (Rueter & Conger, 1998). This line of research indicates that what children do influences not only how parents behave with their children, but also how they behave with their spouses. It therefore makes sense for work-family researchers to consider how children contribute to the social situations that employed parents face at the end of the workday. For instance, Repetti and Wood (1997b) analyzed videotapes of the daily parent-child reunions of employed mothers as they retrieved their preschoolers from worksite daycare centers. When mothers showed signs of withdrawing—by speaking less and expressing less affection than on other days—their children responded by increasing attempts to engage the parent in the interaction, for instance by displaying more positive behaviors and asking more questions. Combined with the finding that these mothers were more socially withdrawn after high-stress days at work (Repetti & Wood, 1997a), we see that even young children can engage in behaviors that redirect their parents' responses to job stress.

In the CELF study mentioned earlier, intensive videotaping to examine a week in the life of a sample of dual-earner families. One set of analyses examined how returning parents were welcomed home by the rest of the family at the end of the workday. When parents arrived home, family members were about as likely to be distracted and to treat the reunion as a side event as they were to be fully engaged in greeting and welcoming the parent (Ochs, Graesch, Mittmann, Bradbury, & Repetti, 2006). Children were particularly likely to be distracted when fathers returned home, perhaps reflecting the fact that fathers were often the final family member to arrive home at the end of the day and, by then, children often had been in the home for some time and were entrenched in an activity. The greeting behavior (or lack thereof) reported by the CELF researchers raises a question about the extent to which family members' behavior may promote a particular type of response to a stressful day at work. Perhaps ignoring a parent or spouse when he or she returns home promotes social withdrawal as a way of coping with a stressful day. Alternatively, displays of appreciation and affection from family members might promote a different type of response after a hard day at work, perhaps more discussion of what went on that day. The findings from these two naturalistic observational studies illustrate that,

when an individual's behavior is studied, not as an isolated specimen, but embedded within the social context of the family, a new picture of work-family processes emerges. A spouse or parent can no longer be cast as an actor in full control of his or her actions; the contributions of the behavior, attitudes, motivations, and interests of other family members must be acknowledged.

In sum, a careful consideration of the social and physical world that employees enter as they leave work each day may help researchers uncover processes that explain the why and how occupational experiences have different effects on families.

### FUTURE DIRECTIONS FOR RESEARCH

Individuals and families respond in variety of ways to job stressors; researchers have begun to identify the sources of those differences and to describe how they influence work-family linkages. Our review points to variables that seem to play a role, but the findings are not always consistent. A more strategic use of sampling methods would improve our ability to identify reliable patterns of group differences and moderator effects. Large random samples may provide enough variance to detect interaction effects. However, the sampling methods and sizes required to adequately represent the full range of individual and family characteristics are often not practical or feasible, particularly with more intensive data collection methods. Another strategy is to focus on selected samples in which the effects of moderators might be easier to observe. To the extent that some sources of variance are, in a sense, controlled by the sample's homogeneity (e.g., families with children in a particular age range), there is greater opportunity for the effects of other characteristics of interest (e.g., marital quality) to be detected (Repetti, 2005; Repetti & Wang, in press).

At the same time that researchers strive to identify moderator variables, we also need they must also begin to describe the processes that underlie those interactions. Our chapter points to some promising directions for future work, for example, physiological mechanisms might explain sex differences or the moderating effects of psychological distress. Details about the social situations that confront employees when they leave the workplace at the end of the day will help us to understand how certain characteristics of families (e.g., relationship quality) and of their members (e.g., child age) shape the impact of job stressors. Work-family researchers will need to use a broader range of methods, like naturalistic observations and physiological measures, to investigate those processes and to move beyond "one size fits all" models.

## NOTES

Rena Repetti, Ph.D., is a professor and Darby Saxe, M.A., is a graduate student in the Department of Psychology at the University of California, Los Angeles. Both authors thank the Alfred P. Sloan Foundation and the Center on Everyday Lives of Families at UCLA for supporting their research. A Graduate Research Fellowship from the National Science Foundation also supported Darbe Saxbe's work on this paper.

1. On average, husbands worked 43 and 47 hours per week and wives worked 25 and 32 hours per week in the Schulz et al (2004) and the Story and Repetti (2006) studies, respectively.

2. In dual-earner families the mothers were employed at least 15 hours per week, and in single-earner families mothers either were employed less than 15 hours or did not work outside the home at all.

## REFERENCES

- Bolger, N., DeLongis, A., Kessler, R. C., & Wethington, E. (1989). The contagion of stress across multiple roles. *Journal of Marriage and the Family*, 51, 175-183.
- Brayfield, A. A. (1992). Employment resources and housework in Canada. *Journal of Marriage and the Family*, 54, 19-30.
- Brown, P. C., & Smith, T. W. (1992). Social influence, marriage, and the heart: Cardiovascular consequences of interpersonal control in husbands and wives. *Health Psychology*, 11, 88-96.
- Bumpus, M. F., Crouter, A. C., & McHale, S. M. (1999). Work demands of dual-earner couples: Implications for parents' knowledge about children's daily lives in middle childhood. *Journal of Marriage and the Family*, 61, 465-475.
- Burke, H. M., Davis, M. C., Otte, C., & Mohr, D. C. (2005). Depression and cortisol responses to psychological stress: A meta-analysis. *Psychoneuroendocrinology*, 30, 846-856.
- Clark, R., Hyde, J. S., Essex, M. J., & Klein, M. H. (1997). Length of maternity leave and quality of mother-infant interactions. *Child Development*, 68, 364-383.
- Conger, R. D., Rueter, M. A., & Elder, G. H., Jr. (1999). Couple resilience to economic pressure. *Journal of Personality and Social Psychology*, 76, 54-71.
- Costigan, C. L., Cox, M. J., & Cauce, A. M. (2003). Work-parenting linkages among dual-earner couples at the transition to parenthood. *Journal of Family Psychology*, 17, 397-408.
- Crouter, A. C., & Bumpus, M. F. (2001). Linking parents' work stress to children's and adolescents' psychological adjustment. *Current Directions in Psychological Science*, 10, 156-159.
- Crouter, A. C., & Helms-Erikson, H. (1997). Work and family from a dyadic perspective: Variations in inequality. In S. Duck (Ed.), *Handbook of personal relationships*, 2nd ed. (pp. 487-503). Hoboken, NJ: John Wiley & Sons.

- Crouter, A. C., MacDermid, S. M., McHale, S. M., & Perry-Jenkins, M. (1990). Parental monitoring and perceptions of children's school performance and conduct in dual- and single-earner families. *Developmental Psychology, 26*, 649–657.
- Dickerson, S. S., & Kemeny, M. E. (2004). Acute stressors and cortisol responses: A theoretical integration and synthesis of laboratory research. *Psychological Bulletin, 130*, 355–391.
- Ennis, M., Kelly, K. S., & Lambert, P. L. (2001). Sex differences in cortisol excretion during anticipation of a psychological stressor: Possible support for the tend-and-befriend hypothesis. *Stress and Health, 17*, 253–261.
- Ewart, C. K., Taylor, C. B., Kraemer, H. C., & Agras, W. S. (1991). High blood pressure and marital discord: Not being nasty matters more than being nice. *Health Psychology, 10*, 155–163.
- Frankenhaeuser, M., Lundberg, U., Fredriksson, M., Melin, B., Tuomisto, M., & Myrsten, A. (1989). Stress on and off the job as related to sex and occupational status in white collar workers. *Journal of Organizational Behavior, 10*, 321–46.
- Fries, E., Hesse, J., Hellhammer, J., & Hellhammer, D. H. (2005). A new view on hypocortisolism. *Psychoneuroendocrinology, 30*, 1010–1016.
- Frye, A. A., & Garber, J. (2005). The relations among maternal depression, maternal criticism, and adolescents' externalizing and internalizing symptoms. *Journal of Abnormal Child Psychology, 33*, 1–11.
- Gevirtz, R. (2000). The physiology of stress. In D. T. Kenny, J. G. Carlson, F. J. McGuigan, & J. L. Sheppard (Eds.), *Stress and health: Research and clinical applications* (pp. 53–71). Amsterdam: Harwood Academic Publishers.
- Greenberger, E., O'Neil, R., & Nagel, S. K. (1994). Linking workplace and homeplace: Relations between the nature of adults' work and their parenting behaviors. *Developmental Psychology, 30*, 990–1002.
- Grzywacz, J. G., Almeida, D. M., & McDonald, D. A. (2002). Work-family spillover and daily reports of work and family stress in the adult labor force. *Family Relations: Interdisciplinary Journal of Applied Family Studies, 51*, 28–36.
- Hartig, T., & Lawrence, R. J. (2003). Introduction: The residential context of health. *Journal of Social Issues, 59*, 455–472.
- Hyde, J. S., Essex, M. J., Clark, R., & Klein, M. H. (2001). Maternity leave, women's employment, and marital incompatibility. *Journal of Family Psychology, 15*, 476–491.
- Jenkins, J., Simpson, A., Dunn, J., Rasbash, J., & O'Connor, T. G. (2005). Mutual influence of marital conflict and children's behavior problems: Shared and nonshared family risks. *Child Development, 76*, 24–39.
- Kiecolt-Glaser, J., & Newton, T. (2001). Marriage and health: His and hers. *Psychological Bulletin, 127*, 472–503.
- Larson, R. W., & Gillman, S. (1999). Transmission of emotions in the daily interactions of single-mother families. *Journal of Marriage and the Family, 61*, 21–37.
- Lovallo, W. R., & Thomas, T. L. (2000). Stress hormones in psycho-physiological research. In: Cacciopo, J., Tassinari, L., Bernston, G. (Eds.), *Handbook of Psychophysiology*, 2nd ed. (pp. 342–367). Cambridge, UK: Cambridge University Press.

- Luecken, L., Suarez, E., Kuhn, C., Barefoot, J., Blumenthal, J., Siegler, I., & Williams, R. (1997). Stress in employed women: impact of marital status and children at home on neurohormone output and home strain. *Psychosomatic Medicine*, 59, 352-359.
- Lundberg, U., & Frankenhaeuser, M. (1999). Stress and workload of men and women in high ranking positions. *Journal of Occupational Health Psychology*, 4, 142-151.
- Malarkey, W., Kiecolt-Glaser, J. K., Pearl, D., & Glaser, R. (1994). Hostile behavior during marital conflict alters pituitary and adrenal hormones. *Psychosomatic Medicine*, 56, 41-51.
- McEwan, B. S. (1998). Protective and damaging effects of stress mediators. *New England Journal of Medicine*, 338, 171-179.
- Miller, G. E., Chen, E., & Zhou, E. S. (2007). If it goes up, must it come down? Chronic stress and the hypothalamic-pituitary-adrenocortical axis in humans. *Psychological Bulletin* 133, 25-45
- Moen, P., & Yu, Y. (2000). Effective work/life strategies: Working couples, work conditions, gender, and life quality. *Social Problems*, 47, 291-326.
- Ochs, E., Graesch, A. P., Mittmann, A., Bradbury, T., & Repetti, R. (2006). Video ethnography and ethnoarchaeological tracking. In M. Pitt-Catsoupes, K. Kossek & S. Sweet (Eds.), *The work and family handbook: Multi-disciplinary perspective, methods, and approaches* (pp.387-409). Mahwah, NJ: Lawrence Erlbaum.
- Perry-Jenkins, M., & Gillman, S. (2000). Parental job experiences and children's well-being: The case of two-parent and single-mother working-class families. *Journal of Family and Economic Issues*, 21, 123-147.
- Perry-Jenkins, M., Repetti, R. L., & Crouter, A. C. (2000). Work and family in the 1990's. *Journal of Marriage and the Family*, 62, 981-998.
- Pollard, T., Ungpakorn, G., Harrison, G., & Parkes, K. (1996). Epinephrine and cortisol responses to work. *Annals of Behavioral Medicine*, 18, 229-237.
- Repetti, R. L. (1989). Effects of daily workload on subsequent behavior during marital interaction: The roles of social withdrawal and spouse support. *Journal of Personality and Social Psychology*, 57, 651-659.
- . (1992). Social withdrawal as a short-term coping response to daily stressors. In H. S. Friedman (Ed.), *Hostility, coping, & health* (pp.151-165). Washington, DC: American Psychological Association.
- . (2005). A psychological perspective on the health and well-being consequences of parental employment. In S. M. Bianchi, L. M. Casper, & R. B. King (Eds.), *Work, family, health, and well-being* (pp. 245-258). Mahwah, NJ: Lawrence Erlbaum.
- Repetti, R. L., & Wang, S. (in press). Parent employment and chaos in the family. In G. Evans & T. Wachs (Eds.), *Chaos and children's development: Levels of analysis and mechanisms*. Washington, DC: APA Books.
- Repetti, R. L., & Wood, J. (1997a). Effects of daily stress at work on mothers' interactions with preschoolers. *Journal of Family Psychology*, 11, 90-108.
- . (1997b). Families accommodating to chronic stress: Unintended and unnoticed processes. In B. H. Gottlieb (Ed.), *Coping with chronic stress* (pp. 191-220). New York: Plenum Publishing.



- Robles, T. F., & Kiecolt-Glaser, J. K. (2003). The physiology of marriage: pathways to health. *Physiology and Behavior*, *79*, 409–16.
- Rueter, M. A., & Conger, R. D. (1998). Reciprocal influences between parenting and adolescent problem-solving behavior. *Developmental Psychology*, *34*, 1470–1482.
- Saxbe, D., Repetti, R. L., & Nishina, A. (2008). Marital satisfaction, recovery from work, and diurnal cortisol among men and women. *Health Psychology*, *27*, 15–25.
- Schulz, M. S., Cowan, P. A., Cowan, C. P., & Brennan, R. T. (2004). Coming home upset: Gender, marital satisfaction, and the daily spillover of workday experience into couple interactions. *Journal of Family Psychology*, *18*, 250–263.
- Smith, T. W., Gallo, L. C., Goble, L., Ngu, L. Q., & Stark, K. A. (1998). Agency, communion, and cardiovascular reactivity during marital interaction. *Health Psychology*, *17*, 537–545.
- Steptoe, A., Wardle, J., Lipsey, Z., Mills, R., Oliver, G., & Jarvis, M. (1998). A longitudinal study of work load and variations in psychological well-being, cortisol, smoking, and alcohol consumption. *Annals of Behavioral Medicine*, *20*, 84–91.
- Story, L. B., & Repetti, R. L. (2006). Daily occupational stressors and marital behavior. *Journal of Family Psychology*, *20*, 690–700.
- Wang, S., & Repetti, R. L. (2008). *Work and family relationships: Links between job stress, distress, and social behavior at home*. Unpublished manuscript.
- Yehuda, R., & McEwen, B. (2004). Biobehavioral stress response: Protective and damaging effects. *Annals of the New York Academy of Sciences*, *1032*, 1–7.
- Young, A. H. (2004). Cortisol in mood disorders. *Stress: The International Journal on the Biology of Stress*, *7*, 205–208.