Changing Work, Not Workers: A Work, Family and Health Conceptual Model

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Abstract

Demographic, social, technological, and economic changes occurring in the US since the 1950s have radically altered family life, work, and the labor market, making it harder for families to juggle work and family responsibilities. However, workplace structures and human resource policies and practices addressing work-family issues have changed relatively little. The goal of this article is to develop a new model of how work-family strains impact the health and well being of employees, their families, and the organizations in which they work. We argue that both structure and culture count at the workplace: work-family conflict increases with both a lack of supervisor support for family obligations and ineffective workplace policies and programs regarding employees' control over the time and timing of work. Research using this model will challenge the existing organization of work, which was designed for a workforce without the family care responsibilities prevalent in today's workforce.

Demographic, social, technological, and economic changes occurring in the US since the 1950s have radically altered family life, work, and the labor market, making it harder for families to juggle work and family responsibilities, yet workplace structures and human resource policies and practices addressing work-family issues have changed relatively little. Moreover, technological, economic and globalization forces are reducing job security while simultaneously increasing productivity expectations and time pressures for those who retain their jobs (Kossek, Lewis & Hammer, 2010). Employees are increasingly subjected to greater job demands and asked to be available to work all hours of the day and all days of the week, often with neither schedule consistency (Presser, 2003) nor schedule control (Kelly & Moen, 2007). With the vast majority of women in the paid workforce, relatively stable fertility levels, increases in single-parent families, and an aging population, many workers are confronted with the need to care for family members while coping with increased work demands. In the US, few public and limited private sector policies enable workers to manage the dual needs of work and family. The resulting disconnect has increased work-family conflict (Nomaguchi, 2009), a type of inter-role conflict where work and family roles are incompatible (Greenhaus & Beutell, 1985), and reduced employee, family, and community health and well-being (Bianchi, Casper & King, 2005; Christensen & Schneider, 2010; Kossek, Lewis, & Hammer, 2010).

Given the breadth and pace of these changes, it is incumbent on researchers, policy makers, and employers to develop a new model of how work-family strains impact the health and well being of employees, their families, and the organizations in which they work. A comprehensive model of these mechanisms will provide a schematic for diagnosing the sources of work-family conflict and the ways in which they impact health. The goal of this article is to do exactly that. Our model maps out the pathways through which the conditions and demands of

work and family and work-family conflict affect health and well-being. The model also incorporates the role of workplace policies and practices in exacerbating or ameliorating the strains on workers and their families. In this article, we describe the conceptual model that establishes these links and the theoretical foundation that undergirds pieces of the causal chain, grounding it in what is known and unknown about work-family conflict and health outcomes in the social and behavioral sciences.

Increased job insecurity, high unemployment, and declining wages for men, along with shifts in gender roles mean that more wives and mothers are now in the labor force (Casper & Bianchi, 2002; Sayer, Cohen, & Casper, 2004). Families as a unit now contribute far more hours on the job (Jacobs & Gerson 2004). This shift means that in most households with children, all adults are in the workforce, and dual-earner families must coordinate the schedules of two jobs along with those of the home front, with little backup support at home (Chesley & Moen, 2006; Moen, 2003; Moen & Chesley, 2008; Moen & Hernandez, 2009). To add even more complexity, in 2010, almost 7 million Americans (ages 16 and older) were working two or more jobs (Bureau of Labor Statistics, 2011). Role incompatibility is experienced especially by parents of young children who can not rely on elementary schools as a backstop and by families with older relatives who need care (Casper & Bianchi, 2002; Moen, 2003; Moen & Chesley, 2008; Moen & Roehling, 2005).

Additional shifts in demographic behaviors, such as increased cohabitation, delayed or foregone marriage, and postponed or reduced childbearing reflect the growing incompatibility between jobs and families. In part because young adults increasingly are faced with an inhospitable job market, they delay marriage—in 2009, the median age at first marriage rose to 28 years for men and 26 years for women (U.S. Census Bureau, 2010). The postponement of

marriage translates into greater proportions of young adults cohabiting. In 2002, about half of adults aged 15 to 44 had ever cohabited (Goodwin, Mosher, & Chandra, 2010). Greater demands of work both in terms of time and energy also result in the postponement of children, especially among the better educated segments of the population. Currently in the US, among women aged 40 to 44, 20 percent have never had a child, double the percentage of 30 years ago (Dye, 2008). Highly educated women in the National Longitudinal Survey of Youth were asked at the beginning of their childbearing years how many births they wanted to have. Their stated intentions averaged about half a child more than their completed fertility, suggesting that they may have had difficulty reaching their childbearing goals (Morgan, 2010). A plausible explanation for this trend is the demanding nature of jobs highly educated women are likely to occupy.

Increasing rates of non-marital childbearing and high levels of divorce result in more single-parent families and mean that, on average, families have fewer adults to fulfill work and caregiving obligations (Casper & Bianchi, 2009). Non-marital childbearing comprised 10% of all births in the 1960s; the most recent estimate indicates that 40% of births are now to unmarried mothers (Hamilton, Martin, & Ventura, 2009). Divorce probabilities have not risen in 30 years, but they remain high. According to the 2002 National Survey of Family Growth (NSFG), about two-thirds of marriages last at least 10 years and only about half of married couples are still together at their 20th anniversary (Goodwin, Mosher, & Chandra, 2010). In 1970, 6 percent of family households with children were maintained by a single mother, and 1 percent by a single father. By 2007, these figures were 23 and 5 percent respectively. When cohabiting couples are excluded from the tally of single parents, current estimates suggest single parents account for about one quarter of households with children under 18 (Krieder & Elliott, 2009).

Care demands are particularly great for single parents and for "sandwich" families, who must provide care for young and old alike (Casper & Bianchi, 2002; Neal & Hammer, 2007). Increased mobility for education and employment take many families geographically out of reach from extended family and other childhood social support networks. Future generations of elderly are likely to have fewer biological children on whom they can rely for care. At the same time, the number of step-children is expanding due to high levels of union disruption and repartnering. Thus, caregiving is likely to be shared among fewer adult siblings and those who may not be biological relations. These changes in working families suggest the need for policies promoting greater workplace flexibility to provide care in circumstances where back-up from other family members is increasingly less likely (Bianchi, Casper & King, 2005; Christensen & Schneider, 2010; Executive Office of the President Council of Economic Advisors, 2010).

The aging US population is another factor pushing workplace flexibility to the forefront of national discussions. According to the Census Bureau, the fraction of the population aged 65 and over is projected to increase from the current 12 percent to 20 percent in 2030 (He, Sengupta, Velkoff, & DeBarros, 2005). Older workers may be driven from the workforce earlier than their health dictates by overly demanding jobs or work schedules that do not allow them to fulfill the care needs of aging companions (Dentinger & Clarkberg, 2002; Moen, 2007; Moen & Altobelli, 2007; Sweet, Moen, & Meiksins, 2007). Older workers in full-time jobs with little schedule flexibility risk experiencing both health and safety difficulties (National Research Council and the Institute of Medicine, 2004). As the US increasingly becomes an "aged society," new ways of work that incorporate flexibility and part-time possibilities may enable older workers to remain actively engaged.

Thus, employees face a variety of stressful situations that lead to work-family conflict. Time deadlines and speedups; increased workloads and overloads; dual-earner and single-parent conflicts and strains; and even routine obligations at work and home are often at odds with one another. Individuals and families may have exhausted their ability to rearrange their lives (by reducing fertility and delaying childbearing, for example) to fit the existing social organization of work (Casper & Bianchi, 2009; Moen & Chesley, 2008; Moen & Roehling, 2005; Sayer, Casper, & Cohen 2004). Yet, it is increasingly apparent that the economic and social development of nations, the workforce, and families are linked to successful labor force experiences. American society has a clear need for initiatives that change current working conditions in ways that might reduce these stressors, enhance workforce participation, and improve the health of employees, families, and communities.

Work-Family Policies and Practices

In the US, the primary responsibility for providing support to working families rests with companies and employers (Kelly, 2005; Stebbins, 2001). The federal government oversees employer compliance with legislation such as the Fair Labor Standards Act and protections such as non-discrimination requirements, but the enactment of family-friendly policies beyond the Family and Medical Leave Act are left to the states. Most current work-hour and supervisory policies and practices were designed in the mid-20th century on the premise that employees have few non-work responsibilities since another family member, usually the wife, primarily handles the home responsibilities (Bianchi, Casper, & King, 2005; Moen, 2003; Moen & Chesley, 2008; Moen & Roehling, 2005; Perlow, 1997; Neal & Hammer, 2007; Rapoport, Bailyn, Fletcher, & Pruitt, 2002; Williams, 2000). More recently, some organizations have adopted “family-friendly” or “work-life” policies, although these initiatives are often implemented unevenly across and

within organizations (Crouter & Booth, 2009; Eaton, 2003; Kelly & Kalev, 2006; Kossek, Lewis, & Hammer, 2010). Moreover, work-family policies are often treated as accommodations available to some employees rather than work process adaptations useful to a wide range of employees (Kelly & Moen, 2007; Lee, MacDermid, & Buck, 2000; Williams, 2000). As a result, employee usage of these policies and practices is low; workers fear, and often experience, career penalties such as slower wage growth as a consequence of using them (Blair-Loy & Wharton, 2002; Glass, 2004).

Given the limitations at the micro-level (the individual) and the macro-level (the government), the meso-level, or the workplace itself, may be the best scientific focus for designing and evaluating interventions to ameliorate work-family conflict and improve health. Interventions on this level may later inform more macro-level policies in the public and private sectors. Survey and interview evidence links policies and practices, such as flextime, schedule-control, and supervisor support for work-family issues, to a variety of positive outcomes. These outcomes include increases in job and life satisfaction and organizational commitment, and decreases in work-family conflict, absenteeism, health, intentions to quit, and actual turnover (Berkman, Buxton, Ertel & Okechukwu, 2010; Kelly et al., 2008; Kossek, Pichler, Bodner & Hammer et al., 2011; Moen, Kelly & Hill, 2011; Moen, Kelly, Tranby, & Huang, under review; O'Neill et al., 2009).

We argue that both structure and culture count at the workplace: work-family conflict increases with both a lack of supervisor support for family obligations and ineffective workplace policies and programs regarding employees' control over the time and timing of work (e.g., Hammer, Kossek, Zimmerman, & Daniels, 2007; Kelly & Moen, 2007; Kelly, Moen & Tranby, 2011; Moen, Kelly, & Huang, 2008; Kossek, Pichler, Bodner, & Hammer, in press; Kossek &

Michel, 2011; Hammer et al., 2009). Therefore, successfully intervening at workplaces may lower work-family conflict; have salutary impacts on workers, their spouses, and their children; and improve the employer's bottom line.

Rigorous evaluations of programs and policies affecting work-family conflict are rare (for some exceptions see Hammer, Neal, Newsom, Brockwood, & Colton, 2005; Kelly, Moen, & Tranby, 2011; Thomas & Ganster, 1995; Hammer, Kossek et al., 2011). Even fewer studies have examined the associations between work-family policies or practices and health (Melchior et al., 2007). Few studies have systematically modeled the alleviation of work-family conflict as a lever for improving health, and most have not included the social pathways by which these factors affect health across work units and at home (see Bianchi, Casper, & King, 2005; Kelly et al., 2008). Health interventions focus on changes at the individual level, widely overlooking organizational-level workplace interventions and work process designs (Rapoport, Bailyn, Fletcher, & Pruitt, 2002). No study, to our knowledge, has tested the existence of a causal relationship between policies and practices, work-family conflict, and health in a longitudinal, experimental design. Further, none has investigated how such policies and practices may have implications for family life and for the well-being of family members.

The Work, Family, and Health Network (WFHN)

The Work Family and Health Network is a collaborative network of researchers that was formed with grant support from several federal government agencies and foundations and given the charge of designing and scientifically testing an innovative intervention aimed at reducing work-family conflict and improving health (www.workfamilyhealthnetwork.org). WFHN researchers possess expertise in a wide array of disciplines spanning demography; economics; developmental psychology; biobehavioral health; social epidemiology; sociology;

industrial/organizational psychology; organizational behavior; occupational health psychology; medicine; study design, methodology and data collection; and the science of translation. For three years, the WFHN conducted pilot studies with hourly workers in the long-term nursing care, hotel, and grocery industries, and in the white-collar headquarters of a multinational, retail corporation. These studies together generated evidence to suggest effective methods for reducing work-family conflict and improving health among different employee populations.

Effective interventions included providing employee control over the time and timing of their work, refocusing workgroup culture away from time and toward results, (cf Kelly, Ammons, Chermack, & Moen, 2010; Kelly, Moen, & Tranby, 2011; Moen, Kelly & Hill, 2011). Specifically, the pilot study in the corporate headquarters confirmed that employees who participated in an intervention focusing on results, not work time, reported greater schedule control, lower levels of negative work-to-family spillover, better sleep, more energy, and better health management (such as seeing a doctor when sick) (Kelly, Moen, & Tranby, 2011; Moen, Kelly, Tranby, & Huang, under review). This study also showed that reduced work-family conflict improves employee health behaviors (Kelly, Moen, & Tranby, 2011). In the hotel industry, lack of workplace flexibility was associated with greater daily stressor exposure and reactivity, as well as the greater potential for stress transmission from employees to their children (Almeida & Davis, 2010).

Another set of effective interventions increased social support for work-family issues from supervisors (Hammer, Kossek, Bodner, Anger, & Zimmerman, 2011; Kossek et al., 2010). In the grocery industry, employees whose supervisors received family-supportive supervisory training had improved reports of physical and mental health, compared with employees whose supervisors were in the control group (Hammer et al., 2011). In the long-term care setting,

employees' cardiovascular risk and sleep patterns were related with how supervisors manage work-family issues (Berkman et al., 2010; Ertel, Koenen, & Berkman 2008). These and other studies also found that supervisory support and/or job strain reduction is related to better self-reported physical and mental health (Hammer et al., 2011; Ertel, Koenen, & Berkman, 2008), lower turnover intentions, and less actual turnover in these various settings (Hammer et al., 2009; Hammer et al., 2011; O'Neill et al., 2009; Moen, Kelly, & Hill, 2011). Work-group-level supervisor style and job strain predicted actual turnover, actual performance appraisals, and sleep quality (Kossek et al. 2009).

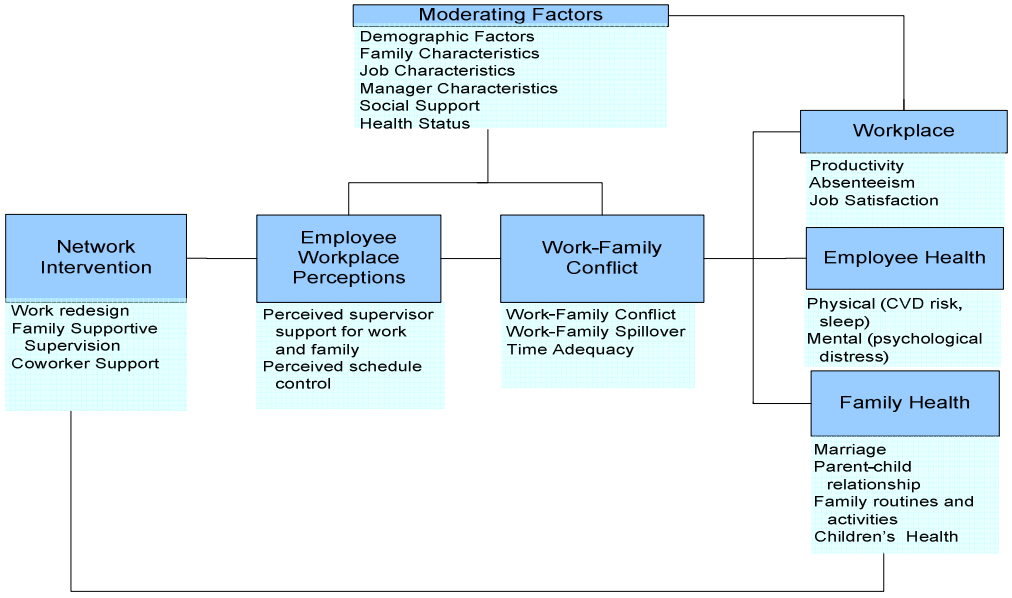
Importantly, these experimental and quasi-experimental studies of interventions provide strong evidence for a mediational model in which increases in employees' schedule control first reduces work-family conflict. Decreases in work-family conflict then lead to increased time adequacy, increased hours of sleep, and improved health behaviors (Kelly, Moen, & Tranby, 2011; Moen, Kelly, Tranby & Huang, under review; Hammer et al., 2011). While this meditational model has not yet been confirmed for hourly workers, we can think of no theoretical reason the model should not transfer to hourly workers as well.

Network Conceptual Model

Based on these pilot results, an interdisciplinary literature review (Kelly et al., 2008), and previous scholarship by network members, we present a theoretically and empirically based conceptual model (see Figure 1). This model enables the rigorous evaluation of a workplace intervention designed to reduce work-family conflict and improve the health and well-being of employees, their families, and the workplace. The conceptual model represents our understanding of the critical indicators and causal pathways linking an intervention to increased employee temporal control within the context of family-supportive supervision and job design.

Figure 1 presents the core components of this conceptual model. We theorize that a successful intervention will reduce work-family conflict, which will mediate effects on the health and well-being of employees and their families. It would also improve workplace outcomes such as productivity, absenteeism, turnover, and overall job satisfaction. We hypothesize that moderating factors affecting work-family conflict and the intervention's effectiveness include job, family, and manager characteristics; employee health; social support outside the workplace; and gender and family stage.

Figure 1: Work, Family, and Health Conceptual Model



Workplace Intervention and Work-Family Conflict

The evidence discussed above suggests that supervisors' support for family and personal life and employees' control over their work time are crucial components of interventions to reduce work-family conflict. Theory from a number of disciplines (e.g., Bronfenbrenner, 2005; Karasek & Theorell, 1990; Landsbergis, 1988) postulates an orthogonal relationship between

employee schedule control and social support, and that, within the context of reasonable demands, both together produce healthy environments that encourage individual development and well-being. These theoretical underpinnings have served as the foundation for the Work, Family, and Health Network intervention.

The Network intervention is not a one-size-fits-all or one-time treatment but, rather, a facilitated process in which supervisors and employees look carefully at current supervisory and temporal practices and identify concrete changes that may improve their work conditions to ameliorate work-family conflict. The intervention is designed to prompt reflection and improve workplace practices regarding two questions: (1) What concrete actions can supervisors take to demonstrate their support of employees' lives and family responsibilities? (2) What concrete actions can work groups take to increase the control team members have over when, where, and how work is done (i.e., hours and/or predictability) while simultaneously meeting business goals? We claim that any workplace change effort should focus on improving these constructs to generate measureable change in outcome measures. Specifically, we propose a workplace intervention that consists of 1) a *work redesign*, and 2) increasing *support* from supervisors and coworkers.

Both supervisor training and work redesign promoting flexibility occur in the context of an organization's existing policies, regulations, staffing strategies, and financial constraints. Some organizational constraints may be re-evaluated in light of the intervention while others, such as collective bargaining agreements, are less amenable to change in the short-term. Family-supportive supervisor training coupled with actions to ensure transfer of training, such as behavioral self monitoring, provides supervisors with managerial tools to assist employees as they gain more control over their work time. Previous research has found wide variability in

supervisors' implementation of flexible work and scheduling policies (Blair-Loy & Wharton, 2002; Hammer et al., 2007; Kelly & Kalev, 2006; Kossek, 2005). It is therefore essential to teach supervisors how to facilitate greater social support and enable greater schedule control on the part of their employees.

The proposed work redesign initiative is innovative compared to both customary and so-called flexible work arrangements (Kelly & Moen, 2007; Moen, Kelly, & Chermack, 2008). It aims to change the organizational structure by having employees and managers focus solely on the desired result of an assignment, not the time that employees spend at the workplace. Employees are instructed that they now have autonomy to decide when and where they work so long as they are meeting their objectives and contributing to their team's goals and effectiveness. Unlike typical arrangements that may accommodate individual employees, this redesign process is implemented by work groups ("teams" of employees and supervisors). Interactive training sessions guide each work group through a critical assessment of their traditional work culture; prompt group members to clarify specific work outcomes/expectations; and help group members identify new strategies for meeting job expectations while providing employees more control over their work time.

Measurable changes" resulting from the intervention are expected to include increases in employee schedule control, changes in organizational systems supportive of employee time control, changes in managerial self-awareness and supportive behaviors, and changes in employee behavior and organizational citizenship. We hypothesize, as depicted in our model (Figure 1), that the intervention effects are mediated through employee perceptions of the support that the supervisors and coworkers provide (Hammer, Kossek, Zimmerman, & Daniels, 2007), and the perceived schedule control they have over the timing and location of work (Kelly

& Moen, 2007). These perceptions about the psychosocial work environment then affect employees' experience of work-family conflict and work-family fit (Kelly et al., 2008). Changes in workplace behaviors and work-time expectations may also directly affect more objective measures such as the proportion of schedule changes that are initiated by employees versus managers and turnover.

Work-family Conflict and Workplace Outcomes

Meta-analyses and reviews show that work-family conflict is significantly correlated with higher work stress, turnover intentions, absenteeism, and family stress (Allen, Herst, Bruck, & Sutton, 2000). It is also correlated with lower family, marital, life, and job satisfaction, and lower organizational commitment and productivity (e.g., Allen, Herst, Bruck, & Sutton, 2000; Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Kossek & Ozeki, 1998). Recent research has demonstrated that higher levels of work-family conflict are also related to lower levels of participation in workplace safety procedures (Cullen & Hammer, 2007). Negative stress in the workplace also creates consequences for businesses, including reduced employee productivity and increased turnover (e.g., Grandy & Cropanzano 1999; Netemeyer, Boles, & McMurrian 1996; Kelly et al. 2008; Moen & Huang 2010; Moen, Kelly & Hill, 2011; O'Neill & Davis, 2011). Outcomes in our model for employers include turnover, absenteeism, productivity, higher job satisfaction of workers, better safety compliance, and return on investment (ROI). Employers will not implement new policies and practices, unless they can ensure that the benefits of the implementation outweigh the costs, or that there is a positive return on investment.

Work-Family Conflict and Employee Health

Work-family conflict is correlated with both the mental and physical health of employees (Frone, Russell, & Cooper, 1997). Negative work-to-family spillover, when an individual's

experiences at work continue to affect him or her even after leaving the worksite, is related to lower self-reported health status, more chronic disease, and higher levels of dysphoria, psychological distress, and sickness absence (Grzywacz, 2000; Väänänen, Kevin, Ala-Mursula, Pentti, Kivimäki, Vahtera, 2004). Over time, the effects of work-family conflict appear in objectively measured health indicators, such as high blood pressure (e.g., Belkic, Landsbergis, Schnall, & Baker, 2004; Landsbergis, Schnall, Belkic, Baker, Schwartz, & Pickering, 2002) and other mental and physical health problems (Frone, 2000; Frone, Russell, & Cooper, 1997; Ganster & Schaubroeck, 1991; Greenhaus, Allen, & Spector, 2006; Grzywacz & Bass, 2003). A recent national study showed that increases in work-family conflict predicted increases in the number of chronic health conditions and self-rated health problems over a ten-year period (Dmitrieva, Baytalskaya, & Almeida, 2007). We hypothesize that these effects work in much the same way as classical job strain measures based on high demand and low control; often, low workplace support has impacted a host of outcomes, especially cardiovascular-related outcomes (Karasek et al., 1998; Bosma et al., 1997). Health outcomes included in our model for employees include cardiovascular risk, sleep, other indicators of chronic conditions and function, and mental health (e.g., psychological distress, well being).

Work-family Conflict and Family Outcomes

Drawing from an emotional transmission paradigm (Larson & Almeida, 1999) and family systems theory (Cox & Paley, 1997), our model also considers that employees' work experiences can spill over and cross over to the family. Families are a nexus of social exchanges, and the emotional tone of family interactions varies in intensity and valence in ways that have implications for family members' individual well-being and family relationships (Repetti et al., 2002). Extant research has demonstrated that workplace stressors can spill over to family life and

strain parent-child and marital relationships evidenced by more conflict or withdrawal (Almeida, Wethington, & Chandler, 1999; Crouter, Bumpus, Head, & McHale, 2001; Repetti, 2005). Furthermore, time conflicts between work and family can interfere with families' daily routines and activities, such as family meals and effective parenting. McLoyd and colleagues (2008) found that among single mothers, work demands were linked to higher work-family conflict which, in turn, was associated with fewer family routines.

Growing evidence suggests that the stress employees experience on the job can also cross over to family members. Crossover occurs when the stress and strain of an individual are then experienced by another person in the course of social interactions (Westman, 2001). For example, increased work-family conflict is associated with depression among spouses (Hammer, Allen, & Grigsby, 1997; Hammer, Cullen, Neal, Sinclair, & Shafiro, 2005). Most of the crossover research focuses on crossover between spouses (e.g., Hammer et al., 1997; Westman, 2001; Westman, Etzion, & Horovitz, 2004), but some research also shows crossover from parents to children (Crouter, Davis, Updegraff, Delgado, & Fortner, 2006; Davis, 2008; McLoyd, Toyokawa, & Kaplan, 2008) and even on child caregivers (Kossek, Pichler, Meece, Barratt, 2008). For example, Davis' daily diary study (2008) of female hourly hotel workers and children demonstrated that work stressors on a given day were associated with boys' lower positive affect that same day. Therefore, based on existing research and family theory, outcomes in our model for family health include marital relationship quality, parent-child relationship quality, effective parenting practices, family routines, and children's psychological and physical health.

Moderating Factors

We also recognize that the links between working conditions (and changes in them), work-family conflict, and health-related outcomes occur in particular social-locational contexts.

Accordingly, we include in our model the potential for moderating effects. Demographic factors such as gender, marital status, race, age or life stage, and socio-economic status affect such things as family status, the types of jobs people hold, and their health (Casper & Bianchi, 2002). They are also associated with the contexts in which people deal with work and family issues. For example, low wage employees and those in poor neighborhoods are less likely to have access to goods and services that would lessen work-family conflict and improve health. Other factors affecting employees' abilities to manage work-family conflict might include the degree of social support they have in their families and communities, and family characteristics, such as the number of children and adults in family, or the presence of a disabled family member. These factors help to define the number and types of work-family issues that arise and the availability of others who can be counted on for help should assistance become necessary. The health of employees is also likely related to their ability to perform work and family duties. Manager characteristics may affect employees' level of work-family conflict and their health, irrespective of the job characteristics and the intervention being applied. Thus, moderators in our model include demographic and contextual factors, social support, family characteristics, health status, and manager characteristics.

Conclusions

Mounting evidence suggests that Americans are experiencing difficulty in meeting work and family responsibilities, leading to negative consequences for the health and well being of employees, their families, and the workplace. Work-family conflict has been defined more as a "private trouble" (cf Mills, 1959) of individual workers and their families than as a public issue. While family-friendly or work-life policies in US workplaces have increased dramatically in recent years (Bond, Galinsky, Kim, & Brownfield, 2005; Glass & Estes, 1997; Kelly, 2003;

Kossek, 2005), they are frequently only on the books or otherwise defined on the margins, not challenging the basic organization of work (Kelly & Moen, 2007; Kossek et al., 2010). The Work, Family, and Health Network theorizes that changing working conditions is the best way to respond to the dilemmas faced by working families. Moreover, few theoretically driven longitudinal studies are using experimental designs to evaluate how specific work-family interventions affect work-family conflict and health outcomes (Kelly et al., 2008). The conceptual model described in this paper addresses limitations in current studies and provides a framework for an intervention study that can be applied to diverse industries and employees.

To fully evaluate this model requires a number of subsequent studies. First, we will undertake a comprehensive test of the model and model parameters (mediational hypothesis), including assessing measures and measurement methods. Second, because this model relies on a workplace intervention, we will include a process evaluation to fully document the program and the context in which it is implemented, and to measure dosage and exposure of the intervention. Finally, we will conduct an outcome study to assess program effectiveness, evaluate economic implications for the employers, and assess translational potential. We anticipate that our findings will challenge the existing organization of work, which was designed for a workforce in the middle of the last century without the family care responsibilities prevalent in today's workforce.

REFERENCES

Allen, T. D., Herst, D. E. L., Bruck, C. S., & Sutton, M. (2000). Consequences associated with work-to-family conflict: A review and agenda for future research. *Journal of Occupational Health Psychology, 5,* 278-308.

Almeida, D. M., & Davis, K. D. (2010, November). Workplace flexibility and daily stress processes in hotel employees and their children. Invited paper for the Alfred P. Sloan Foundation Focus on Workplace Flexibility national conference, Washington, DC.

Almeida, D. M., Wethington, E., & Chandler, A. (1999). Daily spillover between marital and parent child conflict. *Journal of Marriage and the Family, 61,* 49-61.

Belkic, K. L., Landsbergis, P. A., Schnall, P. L., & Baker, D. B. (2004). Is job strain a major source of cardiovascular disease risk? *Scandinavian Journal of Work and Environment & Health, 30,* 85–128.

Berkman, L.F., Buxton, O., Ertel, K., & Okechukwu, C. (2010). Managers' practices related to work-family balance predict employee cardiovascular risk and sleep duration in extended care settings. *Journal of Occupational Health Psychology, 15,* 316-29.

Bianchi, S. M., Casper, L. M., & King, R. B. (Eds.) (2005). *Work, family, health, and well-being*. Mahwah, NJ: Lawrence Erlbaum.

Blair-Loy M., & Wharton, A.S. (2002). Employee's use of work–family policies and the workplace social context. *Social Forces, 80,* 813–845.

Bond, J., Galinsky, E., Kim, S., & Brownfield, E. (2005). *National study of employers*. New York, NY: Families and Work Institute.

Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives on human development*. Thousand Oaks, CA: Sage.

Bureau of Labor Statistics (2011). *Employment and Earnings On-line* 58(1):49. Accessed at http://www.bls.gov/cps/cpsaat36.pdf.

Casper, L. M., & Bianchi, S. M. (2002). *Continuity and change in the American family: Anchoring the future.* Thousand Oaks, CA: Sage.

Casper, L. M., & Bianchi, S. M. (2009). The stalled revolution: gender and time allocation in the United States. In B. Mousli-Bennett and E. Roustang-Stoller (Eds.), *Women feminism and femininity in the 21st century: French and American perspectives*. New York, NY: Palgrave Macmillan.

Chesley, N., & Moen, P. (2006). When workers care: Dual-earner couples' caregiving strategies, benefit use, and psychological well-being. *American Behavioral Scientist, 49*(9), 1248-1269.

Christensen, K., & Schneider, B. (Eds.) (2010). *Workplace flexibility: realigning 20th-century jobs for a 21st-century workforce*. Ithaca, NY: Cornell University Press.

Cox, M. J., & Paley, B. (1997). Families as systems. *Annual Review of Psychology, 48*, 243-267.

Crouter, A. C., & Booth, A. (2009). *Work-life policies.* Washington, DC: Urban Institute.

Crouter, A. C., Bumpus, M. F., Head, M. R., & McHale, S. M. (2001). Implications of overwork and overload for the quality of men's family relationships. *Journal of Marriage and Family, 63*, 404-416.

Crouter, A. C., Davis, K. D., Updegraff, K., Delgado, M., & Fortner, M. (2006). Mexican American fathers' occupational conditions: Links to family members' psychological adjustment. *Journal of Marriage and Family, 68*, 843-858.

Cullen, J. C., & Hammer, L. B. (2007). Developing and testing a theoretical model linking work-family conflict to employee safety. *Journal of Occupational Health Psychology, 12*, 266-278.

Davis, K. D. (2008). *Daily positive and negative work-family spillover and crossover between mothers and children.* (Dissertation), The Pennsylvania State University.

Dentinger, E., & Clarkberg, M. (2002). Informal caregiving and retirement timing among men and women. *Journal of Family Issues 23*, 857–79.

Dmitrieva, N., Baytalskaya, N., & Almeida, D. M. (2007). *Longitudinal changes in work-family conflict predict changes in health*. Poster presented at the 60th Annual Scientific Meeting of the Gerontological Society of America, San Francisco, CA.

Dye, J. L. (2008). Fertility of American Women 2006. *Current Population Reports, P20-558.* Washington, DC: U.S. Census Bureau.

Eaton, S. (2003). If you can use them: Flexibility policies, organizational commitment, and perceived performance. *Industrial Relations*, *42*, 145–167.

Eby, L.T., Casper, W. J., Lockwood, A., Bordeaux, C., & Brinley, A. (2005). Work and family research in IO/OB: Content analysis and review of the literature (1980-2002). *Journal of Vocational Behavior*, *66*, 124-197.

Ertel, K,A., Koenen, K.C., & Berkman, L.F. (2008). Incorporating home demands into models of job strain: findings from the work, family, and health network. *Journal of Occupational and Environmental Medicine, 50,* 1244-52.

Executive Office of the President Council of Economic Advisors. (2010). *Work-Life Balance and the Economics of Workplace Flexibility*. http://www.whitehouse.gov/blog/2010/03/31/economics-workplace-flexibility (Accessed March 31, 2010).

Frone, M. R. (2000). Work-family conflict and employee psychiatric disorders: The national comorbidity survey. *Journal of Applied Psychology*, *85*, 888-895.

Frone, M. R., Yardley, J. K., & Markel, K. S. (1997). Developing and testing an integrative model of the work-family interface. *Journal of Vocational Behavior*, *50*, 145-167.

Ganster, D. C., & Schaubroeck, J. (1991). Work, stress and employee health. *Journal of Management*, *17*, 235-271.

Gareis, K.C., Barnett, .RC., Ertel, K.A., & Berkman, L.F. (2009). Work-family enrichment and conflict: Additive effects, buffering, or balance? *Journal of Marriage and the Family,71*, 696-707.

Glass, J. (2004). Blessing or curse? Work–family policies and mother's wage growth over time. *Work and Occupations*, *31*, 367–394.

Glass, J. L., & Estes, S. B. (1997). The family responsive workplace. *Annual Review of Sociology*, *23*, 289-313.

Goodwin, P.Y., Mosher, W. D., & Chandra, A. (2010). Marriage and cohabitation in the United States: A statistical portrait based on Cycle 6 (2002) of the National Survey of Family *Growth. National Center for Health Statistics*. Vital Health Stat, *23*(28). http://www.cdc.gov/nchs/data/series/sr_23/sr23_028.pdf

Grandey, A., & Cropanzano, R. (1999). The conservation of resources model and work-family conflict and strain. *Journal of Vocational Behavior, 54,* 350-370.

Greenhaus, J. H., Allen, T. D., & Spector, P. E. (2006). Health consequences of work-family conflict: The dark side of the work-family interface. In P. L. Perrewe & D. C. Ganster (Eds.), *Research in occupational stress and well-being*, *5*, 61-98.

Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review, 10,* 76-88.

Grzywacz, J.G. (2000). Work–family spillover and health during midlife: Is managing conflict everything? *American Journal of Health Promotion, 14,* 236–243.

Grzywacz, J. G., & Bass, B. L. (2003). Work, family, and mental health: Testing different models of work-family fit. *Journal of Marriage and Family, 65,* 248-262.

Hamilton, B. E., Martin, J. A., & Ventura, S. J. (2009). *Births: Preliminary Data for 2007, National Vital Statistics Reports* (Vol. 57, No. 12). Hyattsville, MD: National Center for Health Statistics.

He, W., Sengupta, M., Velkoff, V., & DeBarros, K. (2005). "65+ in the United States: 200." *Current Population Reports, P23-209,* Washington DC: U.S. Census Bureau.

Hammer, L., Allen, E., & Grigsby, T. (1997). Work-family conflict in dual-earner couples: Within-individual and crossover effects of work and family. *Journal of Vocational Behavior, 50,* 185-203.

Hammer, L. B., Cullen, J. C., Neal, M. B., Sinclair, R. R., & Shafiro, M. (2005). The longitudinal effects of work-family conflict and positive spillover on experiences of depressive symptoms among dual-earner couples. *Journal of Occupational Health Psychology, 10,* 138–154.

Hammer, L. B., Kossek, E. E., Bodner, T., Anger, K., & Zimmerman, K. (2011). Clarifying work-family intervention processes: The roles of work-family conflict and family supportive supervisor behaviors. *Journal of Applied Psychology, 96*(1), 134-150. doi: 10.1037/a0020927

Hammer, L., Kossek, E., Yragui, N., Bodner, T., & Hansen, G. (2009). Development and validation of a multi-dimensional scale of family supportive supervisor behaviors (FSSB), *Journal of Management, 35*, 837-856.

Hammer, L. B., Kossek, E. E., Zimmerman, K., & Daniels, R. (2007). Clarifying the construct of family supportive supervisory behaviors (FSSB): A Multilevel perspective. In P. L. Perrewe & D. C. Ganster (Eds.), *Research in occupational stress and well-being, 6*, 171-211.

Hammer, L.B., Neal, M.B., Newsom, J.T., Brockwood, K.J., & Colton, C.L. (2005). A longitudinal study of the effects of dual-earner couples' utilization of family-friendly workplaces supports on work and family outcomes. *Journal of Applied Psychology*, *90*(4), 799–810.

Jacobs, J. A., & Gerson, K. (2004). *The time divide: Work, family, and gender inequality*. Cambridge, MA: Harvard University Press.

Karasek, R.A. Jr., Theorell, T. (1990). *Healthy work: Stress, productivity, and the reconstruction of working life*. New York, NY: Basic Books.

Kelly, E. L. (2003). The strange history of employer-sponsored child care: Interested actors, uncertainty, and the transformation of law in organizational fields, *American Journal of Sociology, 109*, 606–49.

Kelly, E. L. (2005). Discrimination against caregivers? Gendered family responsibilities, employer practices, and work rewards. In L. B. Nielsen & R. L. Nelson (Eds.), *Handbook of Employment Discrimination Research* (pp. 353-374). Berlin/Heidelberg: Springer-Verlag.

Kelly, E. L., & Kalev, A. (2006). Managing flexible work arrangements in US organizations: formalized discretion or 'a right to ask'. *Socio-Economic Review*, *4*, 379 -416. doi:10.1093/ser/mwl001.

Kelly, E., Kossek, E., Hammer, L. Durham, M., Bray, J., Chermack, K., Murphy, L., & Kaskubar, D. (2008). Getting there from here: Research on the effects of work-family initiatives on work-family conflict and business outcomes. *The Academy of Management Annals*, *2*, 305- 349.

Kelly, E. L. & Moen, P. (2007). Rethinking the clockwork of work: Why schedule control may pay off at work and at home. *Advances in Developing Human Resources*, *9*, (4), 487-506. DOI: 10.1177/1523422307305489.

Kelly, E. L., Moen, P., & Tranby, E. (2011). Changing workplaces to reduce work-family conflict: Schedule control in a white-collar organization. *American Sociological Review, 76*, 1-26.

Kelly, E. L., Ammons S. K., Chermack K., & Moen P. (2010). Gendered Challenge, Gendered Response: Confronting the Ideal Worker Norm in a White-Collar Organization. *Gender & Society,* 24, (3), 281-303.

Kennedy, S. & Bumpass, L. (2007). "Cohabitation and Children's Living Arrangements: New Estimates from the United States." *Center for Demography and Ecology Working Paper, 2007-20.* Madison, WI

Kossek, E. E. (2006). Work and family in America: growing tensions between employment policy and a changing workforce. A thirty year perspective. In E. Lawler & J. O'Toole

(Eds.), *America at Work: Choices and Challenges* (pp. 53-72) New York, NY: Palgrave MacMillan.

Kossek, E. E. (2005). Workplace policies and practices to support work and families. In S. Bianchi, L. Casper & R. King (Eds.), *Work, family, health, and well-being* (pp. 97-116). Mahwah, NJ: Lawrence Erlbaum.

Kossek, E. E., Lewis, S., & Hammer, L. (2010). Work-life initiatives and organizational change: Overcoming mixed messages to move from the margin to the mainstream, *Human Relations, 63,* 1-17.

Kossek, E., Hammer, L., Michel, J., Petty, R. & Yragui, N. (2009). An embedded leadership and work group context perspective on work- family conflict. Paper presented at Society of Industrial Organizational Psychology National Meetings.

Kossek, E. E., Michel, J. (2011). Flexible Work Scheduling. *Handbook of Industrial-Organizational Psychology*. Zedeck, S., (Ed.) American Psychological Association, *1*, (pp. 535-557).

Kossek, E., Pichler, S., Bodner, T. & Hammer, L. (In press). Workplace social support and work-family conflict: A meta-analysis clarifying the influence of general and work-family specific supervisor and organizational support. *Personnel Psychology*.

Kossek. E. E., & Ozeki, C. (1998). Work- family conflict, policies, and the job-life satisfaction relationship: A review and directions for organizational behavior/human resources research. *Journal of Applied Psychology, 83,* 139-149.

Kossek, E. Pichler, S., Meece, D., & Barratt, M. (2008). Family, friend and neighbor child care providers and maternal well-being in low income systems: An ecological social perspective. *Journal of Organizational and Occupational Psychology, 81,* 369-391.

Kreider, R. M. & Elliott, D.R. (2009). America's Families and Living Arrangements 2007. *Current Population Reports* (pp. 20-561). Washington, DC: U.S. Census Bureau.

Landsbergis, P. A. (1988). Occupational stress among health care workers: A test of the job demands-control model. *Journal of Organizational Behavior, 9,* 217-239.

Landsbergis, P. A., Schnall, P. L., Belkic, K. L., Baker, D., Schwartz, J. E., & Pickering, T. G. (2002). The workplace and cardiovascular disease: Relevance and potential role for occupational health psychology. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of Occupational Health Psychology* (pp. 265-288). Washington, DC: American Psychological Association.

Larson, R. W., & Almeida, D. M. (1999). Emotional transmission in the daily lives of families: A new paradigm for studying family process. *Journal of Marriage and the Family, 61,* 5-20.

Lee, M.D., MacDermid, S.M., & Buck, M.L. (2000). Organizational paradigms of reduced load work: Accommodation, elaboration, and transformation. *Academy of Management Journal*, *43*(6):1211–1226.

McLoyd, V. C., Toyokawa, T., & Kaplan, R., (2008). Work demands, work-family conflict, and child adjustment in African American families: The mediating role of family routines. *Journal of Family Issues, 29,* 1247-1267.

Melchior, M., Berkman, L.F., Niedhammer, I., Zins, M., & Goldberg, M. (2007). The mental health effects of multiple work and family demands: a prospective study of psychiatric sickness absence in the French GAZEL study. *Social Psychiatry and Psychiatric Epidemiology, 42,* 573-582.

Mills, C. W. (1959). *The Sociological Imagination*. New York: Oxford University Press.

Moen, P. (2003). *It's about time: Couples and careers*. Ithaca, NY: Cornell University Press.

Moen, P. (2007). Not so big jobs (and retirements): What older workers (and retirees) really want. *Generations, 31*(1), 31-36.

Moen, P. & Altobelli, J. (2007). Strategic selection as a retirement project: Will Americans develop hybrid arrangements? In J. James & P. Wink (Eds.), *The crown of life: Dynamics of the early postretirement period* (pp. 61-81). New York, NY: Springer Publishing Company.

Moen, P. & Chesley, N. (2008). Toxic job ecologies, lagging time convoys, and work-family conflict: can families (re)gain control and life course "fit"? In K. Korabik, D.S. Lero & D. Whitehead (Eds.) *Handbook of Work – Family Integration: Theories, Perspectives, and Best Practices* (pp. 95–122). New York, NY: Elsevier.

Moen, P., & Hernandez, E. (2009). Social convoys: Studying linked lives in time, context, and motion. In G. Elder, Jr. & J. Giele (Eds.), *The craft of life course research* (pp. 258 - 279). New York, NY: Guilford Press.

Moen, P., & Huang, Q. (2010). Customizing careers by opting out or shifting jobs: Dual-earners seeking life-course 'fit'." In K. Christensen & B. Schneider (Eds.), Workplace flexibility: Realigning 20th century jobs to 21st century workers (pp. 73–94) New York, NY: Cornell University Press.

Moen, P., Kelly, E., & Chermack, K. (2009). Learning from a Natural Experiment: Studying a Corporate Work-Time Policy Initiative. In A. C. Crouter & A. Booth (Eds.), *Work-Life Policies that make a real difference for individuals, families, and organizations* (pp 97-131). Washington, D.C.: Urban Institute Press

Moen, P., Kelly, E.L., & Hill, R. (2011). Does enhancing work-time control and flexibility reduce turnover? A naturally occurring experiment. *Social Problems, 58*(1), 69-98. doi: 10.1525/sp.2011.58.1.69

Moen, P., Kelly, E.L., Huang, Q. (2008). Work, Family, and Life-Course Fit: Does Control over Work Time Matter? *Journal of Vocational Behavior*, 73, 414-425.

Moen, P., Kelly, E., Tranby, E., & Huang, Q. (under review). Changing work, changing health: Can real work-time flexibility promote health behaviors and well-being?

Moen, P., & Roehling, P. (2005). *The career mystique: Cracks in the American dream*. Lanham, MD: Rowman and Littlefield.

Morgan, S.P. (2010). "Thinking about demographic family differences." In Carlson, M. & England, P. *Changing Families in an Unequal Society.* Unpublished Book Manuscript.

National Research Council and the Institute of Medicine (2004). Health and safety needs of older workers. Committee on the health and safety needs of older workers. In D. H. Wegman & J. P. McGee (Eds.), *Division of Behavioral and Social Sciences and Education*. Washington, DC: The National Academies Press.

Neal, M. B., & Hammer, L. B. (2007). *Working couples caring for children and aging parents: Effects on Work and well-being*. Mahwah, NJ: Lawrence Erlbaum Associates.

Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology, 81,* 400-410.

Nomaguchi, K. M. (2009). Change in work-family conflict among employed parents between 1977 and 1997. *Journal of Marriage and Family, 71,* 15-32.

O'Neill, J. W., & Davis, K. D. (2011). Differences in work and family stress experienced by managers and hourly employees in the hotel industry. *International Journal of Hospitality Management, 30,* 385-390

O'Neill, J. W., Harrison, M. M., Cleveland, J., Almeida, D., Stawski, R., & Crouter, A. C. (2009). Work-family climate, organizational commitment, and turnover: Multilevel contagion effects of leaders. *Journal of Vocational Behavior, 74,* 18-29.

Perlow, L. (1997). *Finding time: How corporations, individuals, and families can benefit from new work practices*. Ithaca, NY: Cornell University Press.

Presser, H. (2003). Race-ethnic and gender differences in nonstandard work shifts. *Work and Occupations, 30*(4), 412-439. DOI: 10.1177/0730888403256055.

Rapoport, R., Bailyn, L., Fletcher, J., & Pruitt, B. (2002). *Beyond work–family balance: Advancing gender equity and work performance*. London: Wiley.

Repetti, R. (2005). A psychological perspective on employment and family well-being. In S. Bianchi, L. Casper & R. King (Eds.), *Work, family, health, and well-being*. Mahwah, NJ: Erlbaum.

Repetti, R. L., Taylor, S.E. & Seeman, T. E. (2002). Risky families: Family social environments and the mental and physical health of offspring. *Psychological Bulletin, 128,* (2), 330–366. DOI: 10.1037//0033-2909.128.2.330

Sayer, L. C., Cohen, P. N. & Casper, L. M. (2004). Women, men, and work. In R. Farley & J. Haaga (Eds.), *The American people: Census 2000*. New York, NY: Russell Sage.

Stebbins, L. (2001). *Work and family in America: A reference handbook* (annotated edition). Santa Barbara, CA: ABC-CLIO.

Sweet, S., Moen, P., & Meiksins, P. (2007). Dual earners in double jeopardy: Preparing for job loss in the new risk economy. *Research in the Sociology of Work ,17,* 445 - 469.

Thomas, L. T., & Ganster, D. C. (1995). Impact of family-supportive work variables on work-family conflict and strain: A control perspective. *Journal of Applied Psychology*, *80*, 6-15.

U.S. Census Bureau. (2010). Press Release (January 15, 2010). http://www.census.gov/Press-release/www/releases/archives/families_households/014540.html

Vaananen, A., Kevin, M.V., Ala-Mursula, L., Pentti, J., Kivimaki, M., & Vahtera, J. (2004). The double burden of and negative spillover between paid and domestic work: Associations with health among men and women. *Women and Health*, *40*(3),1–18.

Westman, M. (2001). Stress and strain crossover. *Human Relations*, *54*, 717-751.

Westman, M., Etzion, D., & Horovitz, S. (2004). The toll of unemployment does not stop with the unemployed. *Human Relations, 57*, 823-844.

Williams, J. (2000). *Unbending gender: Why family and work conflict and what to do about it*. New York, NY: Oxford University Press.