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Job Content Quality and Social Change in the New Millennium: Incorporating Job Flexibility as a Strategy to Assist Working Families

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Abstract

The U.S. has been slow to adopt public and workplace policies that assist working families.¹ Yet, the changing nature of employment and working families in the new millennium suggests that job content quality may have significant effects on employee well-being, and that traditional views of job content quality (JCQ) may be in question. Using data from the 2002 National Study of the Changing Workforce, we tested an expanded model of JCQ on employees' health status. The model included traditional JCQ factors and two new factors: job flexibility and supervisor support for work-family issues. Findings indicated that flexibility, coworker support, and job insecurity were significant predictors of employee health. Implications for workplace policy and future research are presented.

¹ The term "family or families" in this paper is used to be all-inclusive. It goes beyond the traditional notion of family as parents and children, to include all aspects of employees' caregiving responsibilities, including caring for self, pets, extended family, etc.

Job Content Quality and Social Change in the New Millennium: Incorporating Job Flexibility as a Strategy to Assist Working Families²

Social workers, social welfare scholars, and other researchers concerned about the general welfare of others often scan the social, economic and political environments to identify important trends and provide leadership for social change that promotes well-being or reduces inequitable access to resources and opportunities.³ Times of turbulence and social change, such as those we have witnessed during the past ten years, make it necessary for social policy analysts and social workers to periodically reflect on what social issues may be looming undetected.

One issue that has received minimal attention in relation to its impact is the effect of workplace policy on the quality of life for working families. In the last part of the 20th century, the United States has witnessed significant changes both in employment trends and family caregiving arrangements (See Bianchi, Casper, and King 2005). These changes have had, and will continue to have, an impact on the quality of life experienced by diverse families in the U.S. and around the world. Scholars from a variety of disciplines have contributed significantly to the discourse on working families (for review see Pitt-Catsouphes, Kossek, and Sweet 2006), suggesting that the institutional mismatch between the needs of working families and the needs of workplaces has a profound effect on the daily lives of employees (Bianchi, Casper, and King 2005). Yet, as a society, the U.S. has been slow to adopt public policies that assist working

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³ Section 6.01 of the NASW Code of Ethics states, “Social workers should promote the general welfare of society, from local to global levels, and the development of people, their communities, and their environments. Social workers should advocate for living conditions conducive to the fulfillment of basic human needs and should promote social, economic, political, and cultural values and institutions that are compatible with the realization of social justice.” The fulfillment of this important goals requires that social workers develop strategies for being cognizant of and informed about a range of social, economic and political issues.

families with caregiving responsibilities. Gornick and Meyers' (2006) analysis of work-family policies in the U.S., Canada and Europe clearly demonstrates that the U.S. lags behind its counterparts in the provision of federally sponsored work-family policies. The authors argue that the lack of extensive social and labor market work-family policies in the U.S. creates significant social and economic costs in the form of inequities in the workplace and at home, family stress, and economic insecurity. Gornick and Meyers contend that there is no reason for the U.S. to be lagging so far behind other western countries.

Despite the limited adoption of work-family policies in the U.S., some scholars have argued that the effects of workplace policies on the lives of working families demand attention at the level of broader social policies. In her seminal article on workplace policy as social policy, Susan Lambert purports that, "family-responsive policies in the workplace constitute an important area of social policy because of their intimate connection to the individual and family well-being, government action and inaction, the state of the economy, and the distribution of resources in our society" (Lambert 1993: 253). She further asserts that, "government must take the lead in this policy arena because problems of balancing work and family life are social problems, not just business problems or women's problems" (254). Lambert concludes that major social institutions (government, businesses, and families) must evolve and collaborate to address this growing social problem.

In the 13 years since publication of Lambert's article in *Social Service Review*, changes in work-family policies have been slow, with a minimally integrated response. For example, the Family and Medical Leave Act of 1993 came with good intentions, including protecting employees from job loss due to serious illness and providing families with time to adjust to the birth or adoption of a child. However, limitations on eligibility, such as time in tenure on the job

and minimum hours worked combined with the fact that the leave is unpaid, means that many workers cannot access the benefit when they need it, either because they do not meet the eligibility requirements or they cannot afford the loss in earnings (Parrott 1998). Similarly, while the Earned Income Tax Credit program was expanded in 1993 to enhance the income levels of working poor families, estimates have shown that fewer than one-half of eligible families actually receive this benefit (Hill et al. 1999). These trends indicate that social policies aimed at improving the work-family balance have not been a federal priority.

Facilitating change within three of the most fundamental social institutions within the United States, government, business and family, requires shared goals, multiple strategies, and incremental approaches (Stone 2002). One approach to social change in general, which can be applied to workplaces, has been to use scientific inquiry to solicit policy change (Stone 2002). Scientific data can be used to demonstrate the effects of current workplace practices on employee well-being, business outcomes, or employee turnover. For instance, in the 1990s, work-life professionals caught the attention of the business community and public policy leaders by demonstrating that modifying workplace practices to assist employees in meeting their multiple responsibilities benefits employees and workplaces (Bond, Galinsky, and Swanberg 1998). As a result, large firms and certain divisions of the federal government reconsidered the ways jobs were designed and focused on workplace strategies that would assist employees in meeting their work and non-work responsibilities. Continuing in the tradition of social change, this paper builds on previous scientific knowledge about the associations between job characteristics and employee health to further understand which workplace factors are associated with employees' perceived ill health. In particular, we explore whether workplace factors that have been associated with easing the time burdens of managing work and family responsibilities, namely

job flexibility and supervisor support of work-family issues, are associated with improved health. These findings may be a starting point for additional research, and possible leverage for social change within the workplace.

Working Families, Workplace Assumptions and the Changing Nature of Work

Working Families and Workplace Assumptions

The U.S. workforce is composed of more single mothers and fathers, more dual earner couples, and more employees with caregiving responsibilities than 25 years earlier (Bond et al. 1998). Moreover, according to the *2002 National Study of the Changing Workforce* (Bond 2002), 85 percent of U.S. wage and salaried workers live with family members and have immediate, daily family responsibilities off the job. Forty-eight percent of workers have children under the age of 18, and more than three out of four partnered employees have spouses or partners who are also employed. Nearly 20 percent of workers currently care for an elder family member or friend, and 48% expect to care for an aging loved one in the next five years.

Although the social demographics of the U.S. workforce have changed, the fundamental assumptions on which U.S. workplace policies were developed have essentially remained the same (Acker 1990; Williams 2000; Swanberg 2004). The mainstream view of waged work in the 20th century was built on the idea that men were the paid workers, while women, unpaid, met the needs of the family. In this view, women's paid employment was considered a strain on the family, and men's paid employment was considered the general custom, presuming the male employee had little or no family responsibilities. Some argue this perspective of women and men's employment and its relationship to family created the backdrop on which contemporary organizational blueprints were constructed (Acker 1990; Williams 2000; Swanberg, 2004). Job schedules, performance expectations, and management operations were based on the assumption

of male as “provider” and female as “nurturer.” Taking this argument further, Joan Williams (Williams 2000), a legal scholar from Georgetown University, posits that the marketplace is organized around the “ideal worker.” This ideal employee works full-time, willingly agrees to overtime, and takes minimal time off for caregiving and other family responsibilities.

Unfortunately, many employees can not realistically meet the demands of the “ideal worker” given their personal and family responsibilities. As such, this often causes a misalignment between work and family responsibilities and expectations. In part, as a result of this disparity between the needs of working families and the places they work employees may rely on sundry strategies and social support networks creating additional stress for working families (Swanberg 2005; See Bianchi et al. 2005).

The Changing Nature of Work

Although the values underlying the fundamental structure of contemporary workplaces have virtually remained unchanged, the nature of work and the jobs available has changed significantly over the past two decades. Marmot identifies three primary changes in the nature of work during this time span: (1) “fewer jobs are defined by physical demands, while more jobs are defined by psychological and emotional demands; (2) fewer jobs are available in mass production, and more are available in the service sector; and (3) more jobs are concerned with information processing due to computerization and automation.” (Marmot 1999: 2).

Additionally, 86 percent of the new job growth has been within service-based industries (Presser 2000), with low-wage service occupations as the second fastest-growing occupation (Hecker 2004). Hecker predicts these trends will continue through 2012 (Hecker 2004).

Marmot and colleagues (Marmot et al. 1999) recommend that researchers update their research paradigms by integrating these new job demands and associated characteristics when

measuring the effect that work environments have on employees' emotional and physical well-being. In fact, Marmot and colleagues suggest that the previously constructed ideas about job quality may not "fit" with the contemporary nature of work, especially for the workers employed within the service economy. Likewise, Swanberg's (2005) supposition that, in combination, temporal and structural job factors are stress-producing further strengthens the argument that previous constructs of job quality may be incomplete for the contemporary workforce. That is, measures of job quality may need to include measures of flexibility and reexamine factors such as supervisor for work-family matters.

Job Content Quality

Job Content Quality and Employee Health

A broad body of literature has demonstrated a significant relationship between job content quality and employee health, including cardiovascular disease, stress, hypertension, and depression (Karasek 1979; Karasek et al. 1981; Karasek, et al., 1988; Johnson and Hall 1988; Karasek and Theorell, 1990; Kasl 1996; Theorell and Karasek 1996). Karasek observed that the psychological demands of work in combination with structural aspects of the job relating to decision-making latitude and skill utilization were significantly related to employee behavioral and physical health (Karasek 1979). Based on these findings, Karasek developed the job demands-control model. This initial demand-control model (Karasek 1979; Karasek and Theorell 1990) suggests that high psychological job demands in association with low decision latitude produces psychological strain and results in negative health effects (Karasek et al. 1998).

The demand-control model later incorporated workplace support (Johnson and Hall 1988; Pelfrene et al. 2002) as another critical aspect of job quality that may have negative effects on employee health. This expanded model has become known as the demand-control-support model

(Karasek 1979; Johnson and Hall 1988; Karasek and Theorell 1990). According to the expanded demand-control-support hypothesis, jobs high in demands, low in control, and low in support produce the most risk for physical illness (Johnson 1986; Johnson and Hall 1988; Theorell and Karasek 1996). In contrast, jobs high in demands, low in control, but high in social support minimize the risk of behavioral and physical illness, indicating the important mediating role of social support in the workplace. Using secondary data, this expanded job-control-support model has been applied across industries and across countries to demonstrate the association of poor job quality to employee ill health (Karasek et al. 1998).

Using a similar job-control-support model, other studies have found evidence to suggest that workplace psychosocial factors, such as psychological job demands, decision-making authority and skill discretion are associated with absenteeism due to sickness (North et al. 1996; Melchior et al. 2003; Nielsen et al. 2004; Christensen et al. 2005). In general, studies have found that psychosocial work factors predict sickness after controlling for other possible confounders. For example in one pharmaceutical company, high workplace levels of decision authority predicted sickness absence in a technical services company, and high workplace levels of skill discretion predicted low sickness absence (Christensen et al. 2005). Similarly, Pelfrene and colleagues' analysis of over 16,000 men and 5,000 women in Belgium suggested that psychological and physical demands are directly associated with depression, anxiety, and other symptoms of psychological distress (Pelfrene et al. 2002). This same study, however, failed to find evidence of a mitigating effect of high social support in relation to the association between high psychological demands and psychological distress.

Evolving Changes in the Perception of Job Content Quality

In the past decade, there has been increased emphasis on job characteristics that might exacerbate or minimize the time burden associated with meeting the demands of contemporary work and family life (Allen et al. 2000). Job schedule flexibility and supervisor support of work-family responsibilities are two primary characteristics of the workplace that employees have identified as helping them to more effectively manage their work and non-work responsibilities (Hyman, Scholarios, and Baldry 2005).

Job flexibility. The term “flexible schedule” usually refers to work schedules that vary from the traditional Monday-Friday, 9 to 5 work week. In contrast to non-traditional schedules established to meet business objectives (e.g., shift work), flexible schedules are established as work-family policies that are voluntary options available to employees (Swanberg and Pitt-Catsouphes 2005). Other forms of flexible work options may include working from home occasionally or regularly, modifying work hours on a daily basis, or being allowed to take time off to care for sick children without losing vacation time. Employees often express interest in gaining access to flexible work options because such arrangements help working families resolve work-family conflicts that are either caused or exacerbated by the incompatibility of work and family schedules (Axel 1996; Lee and Duxbury 1998; Bates et al. 1999). As an example, in a study of workers in a biotechnology firm, Eaton found that flexible work policies were positively associated with higher perceived employee productivity (Eaton 2003). Flexible work policies included an index of seven workplace practices such as flextime (i.e., modified starting and quitting working hours), telecommuting, compressed work weeks (e.g., working four 10-hour days) and using employee sick time to take time off to care for an ill child.

Supervisor work-family support. The second job characteristic, supervisor support of work-family issues, often refers to employees' perceptions of whether their immediate supervisor is sensitive to non-work-related issues (Galinsky et al. 1987). As a component of overall workplace support, employees who perceive their supervisor as supportive of work-family matters are more likely to be satisfied and committed to their jobs (Bond et al. 1998; Galinsky, Hughes, and Shinn 1986). Thomas and Ganster examined the effect of family-supportive supervisors on work-family conflict and individual-level strain variables (e.g., job satisfaction, depression, absenteeism) (Thomas and Ganster 1995). They found direct and indirect support for the positive relationship between family-supportive supervisors and job satisfaction. Similarly, Frye and Breugh found that reporting to a supportive supervisor was predictive of work-family conflict (Frye and Breugh 2004). Specifically, employees who perceived their supervisor as supportive of family and work-family related matters were less likely to report work-family conflict.

Considering the major demographic, economic and sociological changes over the past two decades since the original job content quality model was developed and later enhanced, a reexamination of the model is long over due. The purpose of this study is to test the job-demands control-support model of job content quality (See Johnson 1989; Karasek and Theorell, 1990) on self-reported physical health status against an expanded model of job content quality that includes the job-demands-control-support model items plus two additional factors: flexibility and supervisor support for work-family issues. Specifically, the research questions guiding the study are a) What characteristics of job content quality are associated with employees' perception of general health when following the standard job-control-support model of job content quality? and b) What characteristics of job content quality are associated with employees' perception of

general health when using an expanded model of job content quality that includes the job-demands-control items plus two additional factors: flexibility and supervisor support for work-family issues?

Methods

Data

The data set used in this study is the 2002 National Study of the Changing Workforce (NSCW) (Families and Work Institute 2004). The NSCW is an ongoing research program of the Families and Work Institute begun in 1992 that surveys representative samples of the nation's labor force every five years. It is the only data set of its kind to include specific variables concerning the quality of the work environment related to all aspects of employment for the nation's labor force. Specifically, the data set includes the following parameters pertinent to this study: (a) sociodemographics; (b) job demands; and (c) job quality; and (d) health outcomes. For purposes of this study, the wage and salaried sample was used.

Data collection. Using a stratified unclustered random probability sample, computer-assisted telephone interviewing systems were utilized to conduct phone interviews averaging 45 minutes in length with respondents meeting the following criteria: (a) age 18 or older; (b) receiving wages or salaries from a job or self-operated income-producing business in the civilian labor force; (c) living in the contiguous 48 states; and (d) not among the institutionalized population. In 2002, 3,504 respondents completed the survey, and 2,810 of these were wage and salaried workers. The overall response rate for the survey was 52%. More information on sampling and data collection can be found at www.familiesandwork.org.

Measures

The Karasek (Karasek 1979; Karasek et al. 1988; Karasek and Thoerell 1990; Karasek et al. 1998) and Johnson (Johnson 1986; Johnson and Hall 1988) model of job content quality includes six factors thought to represent the nature and quality of employment and found to effect health status. These factors include: (a) decision latitude, which incorporates skill discretion and skill authority; (b) psychological demands; (c) support from supervisor for work-related issues; (d) coworker support; (e) physical job demands; and (f) job insecurity, which incorporates opportunities for advancement and pending risk of job loss. The proposed expanded model of job quality includes the Karasek-Johnson items and two additional factors, flexibility and supervisor support for work-family issues, which reflect the changing nature of jobs in the new millennium.

Outcome Variable

Health status was used as the primary outcome variable in this paper because we were trying to replicate the Karasek-Johnson model as closely as possible. It was measured using a single item question that asked respondents to rate the quality of their health from 1 = poor to 4 = excellent. A single item question of health status has been shown to be a reliable indicator of health status and predictor of mortality in the general population (Desalvo et al. 2005). Based on the responses, health status was dichotomized, so that 1 = fair or poor health and 0 = good or excellent health.

Control Variables

Sociodemographic variables included age, sex, race, marital status, educational levels, federal poverty status, and urbanicity. Age was measured continuously. Sex was a dichotomous variable (1 = male and 2 = female). Race was defined by four categories: (a) White, non-Hispanic;

(b) Black, non-Hispanic; (c) Latino/Hispanic; and (d) other. Marital status was defined by three categories: (a) married; (b) living with a partner in a marriage-like relationship; and (c) single. Education was classified into (a) high school/GED or less; (b) some college/post-secondary school; and (c) four-year college degree or more. Federal poverty status was dichotomized (1 = below 250 percent of the federal poverty line and 2 = at or above 250 percent of the federal poverty line). Urbanicity was categorized into urban, suburban, or rural.

Predictor Variables

Decision latitude was measured using six items in the NCSW. Three of these items (ability to learn new things, repetitive work, and creativity required) reflect the level of skill discretion an employee has. The remaining three items (allowed to make one's own decisions, decision freedom, and has lots of say) pertain to employees' level of decision authority. These items were scored on a 1 to 4 Likert scale, and higher scores indicated more decision latitude. Scale reliability for these items was calculated at $\alpha = 0.67$.

Psychological demands were measured by seven items: (a) have to work fast; (b) have to work hard; (c) excessive work; (d) never enough time; (e) conflicting demands; (f) often interrupted; and (g) hectic. The items were scored on a 1 to 4 Likert scale, so that higher scores indicated fewer demands. Scale reliability for these items was calculated at $\alpha = 0.79$.

Supervisor support for work issues was measured by five items: (a) supervisor keeps me informed; (b) supervisor has realistic expectations; (c) supervisor recognizes a good job; (d) supportive with work problem; and (e) supervisor is competent. These items were scored on a 1 to 4 Likert scale, and higher scores indicated greater supervisor support. Scale reliability was calculated at $\alpha = 0.83$.

Co-worker support was measured using three items in the NCSW. These items included: (a) coworkers are interested; (b) coworkers are friendly; and (c) coworkers work together. The items were scored on a 4-point Likert scale. The scale reliability for these items was calculated at $\alpha = 0.75$. Higher scores indicated more coworker support.

Physical demands were measured by a single item in the NCSW: job is physically demanding/tiring. This item is scored on a 4-point Likert scale (1 = strongly agree to 4 = strongly disagree). A higher score indicates a less physically demanding job.

Job insecurity was measured by five variables, two of which reflected opportunities for advancement (career possibilities and valuable skills) and three of which reflected possibility of loss (recent and future layoffs and reduced work hours when work is slow). These items were scored on a 4-point Likert scale, and higher scores indicated more job security. Scale reliability for these items was calculated at $\alpha = 0.59$ for the advancement items and $\alpha = 0.35$ for the insecurity items.

Schedule flexibility has been identified as a workplace practice that assists employees in meeting their work, family, and personal responsibilities (Lambert 1999; Bond 2001; Bond 2002; Swanberg 2005). Nine job flexibility items were identified to measure flexibility. Three items were measured on a 4-point Likert scale; two of these items focused on satisfaction and control over schedule, and one item focused on the degree of difficulty in taking time off for personal/family issues. The remaining six items reflected access to alternative or flexible work arrangements. These items were dichotomously measured (1 = yes and 2 = no) and included: (a) ability to work occasionally from home; (b) allowed to take days off for sick child without losing pay or vacation time; (c) ability to choose own starting and quitting times; (d) allowed to

work a compressed work week; (e) can change schedule daily; and (f) decide when I take breaks.

Scale reliability for these items was calculated at $\alpha = 0.63$

Supervisor support for work-family issues was measured by five items that reflect the findings of work-family scholars (Galinsky, Hughes, and Shinn, 1986; Galinsky et al. 1987; Galinsky and Stein 1990) who have suggested that supervisor support for family issues in the workplace is a key element of job quality. In fact, research has shown that supervisor support that is inclusive of support for work-family issues is an important predictor of role stress and job performance (Bond et al. 1998; O'Driscoll et al. 2003) as well as a mediator of work-family conflict, perceived job productivity, and intent to turnover (See Allen et al. 2000; Frye and Brenaugh 2004). As such, five items measured support for family-related issues, including: (a) fairness about personal/family needs; (b) accommodates family/personal business; (c) understands personal/family issues; (d) comfortable bringing up personal/family issues; and (e) cares about effects of work on personal/family life. Four response categories (1=Strongly Disagree, 4=Strongly Agree) were used to measure these items. Higher scores indicated greater supervisor support for work-family issues. Scale reliability for these items was calculated at $\alpha = 0.87$.

Data Analysis

The data were analyzed using Stata 8.0 (StataCorp, 2004). The survey design and weighting were accounted for using the *svyset* command, which is based on Taylor series linearization. Categorical variables were dummy coded in all models. First, sociodemographic characteristics were analyzed for the whole sample and then compared across the workers who reported their health as good or excellent and those who reported their health as fair or poor to determine statistically significant demographic covariates to be included in the regression

models. Second, two multiple logistic regression models were run. The first model included all sociodemographic variables and the six Karasek-Johnson job content quality factors in a single block. The second model included all variables in the first model and the flexibility and supervisor support for work-family issues in a single block. The independent variables were significant in the multivariate analysis if the 95% confidence intervals for the adjusted odds ratios did not include 1. To evaluate the models as a whole, the χ^2 statistic was considered significant if the p-value for the 2-tailed test $p < .05$.

Results

Table 1 provides the sample characteristics for the entire sample ($N=2,795$), and for the workers who reported good/excellent health ($n=2,302$) and the workers who reported fair/poor health ($n=493$). The average age of respondents was 41.78 years ($SD=12.58$). Nearly 49 were women and 51.3 percent were men. Over one-half of workers (58.7 percent) were married, while 34.6 percent were single, and 6.7 percent were living with a partner. More than three-fourths of respondents were non-Hispanic White (75.4 percent), 10 percent were non-Hispanic Black, 9.8 percent were Hispanic/Latina, and 4.8 percent identified as other. Over 40 percent of respondents had a high school degree/GED or less; 29.6 percent had some college or post-secondary education, and 28.6 percent had a four-year college degree or more. Slightly more than one-half of respondents (55.4 percent) lived in urban areas, while 22.2 percent lived in suburban areas and 22.4 percent lived in rural areas. Comparing between the two groups, there were statistically significant differences on all variables except for age and race, so these variables were dropped from the demographic covariates in the regression models.

Table 2 presents the results of the first model specified for the Karasek-Johnson job content quality variables. After controlling for the five sociodemographic covariates, there were

two statistically significant job content quality variables. Workers who reported more coworker support, and less job insecurity were significantly less likely to report fair or poor health (Adjusted odds ratio [AOR] coworker support: 0.76, $p \leq .05$; job security AOR: 0.61, $p \leq .05$).

In the second model, flexibility and supervisor support for work-family issues were incorporated into the model. Table 4 presents the results. After controlling for demographic covariates in this model, job flexibility was a statistically significant predictor of self-reported health status, in addition to coworker support and job security. Specifically, workers who reported greater coworker support, less job insecurity, and greater job flexibility were less likely to report their health status as fair or poor (coworker support AOR: 0.77, $p \leq .05$; job security AOR: 0.64, $p \leq .05$; flexibility AOR: 0.43, $p \leq .01$).

Discussion

The purpose of this study was to test the Karasek-Johnson model of job content quality on self-reported physical health status against an expanded model of job content quality that includes the Karasek-Johnson items plus two additional factors: job flexibility and supervisor support for work-family issues. Given the changing nature of work and working families, a reexamination of the composition of job content quality and associated consequences of employee health was long over due. Job flexibility and supervisor support of work-family issues were added into our second model because they are well supported in the literature as associated with employees' perceived ease or ill ease in managing work and non-work responsibilities.

A close replication of the job demand-control-support model suggests that only two factors of job quality, co-worker support and job security, are associated with employees' perception of general health. This finding is significantly different from previously discussed research on job quality and employee health (e.g. Karasek 1979; Karasek et al.1981; Karasek et

al.1986; Johnson and Hall 1988; Karasek and Thoerell 1990; Kasl, 1996; Thoerell and Karasek 1996). In fact, this finding implies that coworker support and perceived job insecurity are more important to understanding the relationship between job characteristics and employee health than other job characteristics such as psychological demands of the job, decision latitude, and supervisor support. There are a few plausible explanations for our findings. First, our study uses a national representative sample of the U.S. wage and salaried labor force, which includes workers from a variety of occupations and industries. Previous research, on the other hand, has focused primarily on studies that examine job quality of employees within the same industry (Theorell and Karasek 1996). Secondly, much of the previous research on job quality and health, at least in the U.S., was completed prior to 2000. As suggested by Marmot and colleagues, the change in both the types and quality of jobs available in the 21st century may call for a re-conceptualization of job quality, especially when determining the relationships between job quality and employee health (Marmot et al. 1999). Our analyses demonstrate that job insecurity is associated with perceptions of poor health. Unlike in previous decades when factories and companies provided lifetime job tenures, or when union membership helped to provide some aspects of job security, in today's economy there is limited commitment between employer and employee (Litchfield et al. 2003). As such, our research implies that this adjustment in the employer-employee contract may have significant negative consequences on employee health.

Results from the second model imply a significant association between various components of job flexibility and employees' perception of general health: employees with greater job flexibility were less likely to report fair to poor overall health. This finding provides further support for the idea that job quality may be very different for workers in the new millennium than it was during the latter part of the 20th century. Moreover, it suggests that

employees' perceptions of job quality as they relate to health consequences may be related to the complex relationships between the temporal and structural aspects of employment and family life. That is, workers experience difficulty in meeting both their job responsibilities and their home responsibilities because the timing of these responsibilities often conflict. In cases of conflict, workers who do not have flexibility must make difficult choices and may feel they are not fulfilling expectations at home, work, or even both. These conflicts and the subsequent feelings associated with them can lead to stress and stress-induced illnesses. Conversely, workers who have job flexibility can better manage these conflicts, because they can adjust their work schedules to meet responsibilities at home, thereby mitigating the stress they might otherwise experience. Recent research demonstrates this growing importance of flexibility to employees. The Radcliff Public Policy Institute found 79% of workers in their national survey reported that having a flexible schedule was "very important" to them (Rayman et al. 2000). Another survey of 1,000 employees conducted by Aon Consulting found that on a scale of 0 to 10 (with 0 being "extremely dissatisfied"), the respondents gave flexible work arrangements a mean satisfaction rating of 7.44, which ranked flexible work arrangements eleventh on a list of 38 possible benefits and programs (Godwins, Booke, & Dickenson/HR Strategies 1995).

Results from this study also may suggest a link to healthcare expenditures. Employer-sponsored health insurance costs have been increasing dramatically over the past five years. In 2005, employer health insurance premiums increased by 9.2%, a rate that is almost three times the rate of inflation (Kaiser Family Foundation 2005). As a strategy to stabilize and possibly reduce costs, workplaces are relying more than ever on employee wellness (Deloitte and Touche 2004). Although employer sponsored wellness programs may be one way to improve the health and well-being of employees and subsequently contain employer health care costs, findings from

this study suggest that there may be another strategy for containing employer health care costs: increasing work flexibility. By increasing access to flexible work arrangements, workplaces can assist employees in managing the temporal and structural conflicts they experience and, consequently, reduce the stress associated with these conflicts. In essence, improving the quality of jobs and workplace practices by minimizing the job-related factors that have been shown to be associated with employee poor health may be an effective strategy for improving employee health and reducing healthcare expenditures.

A surprising finding was the lack of significance of supervisor support for either work-related or work-family issues in both models of job quality. Although previous literature has suggested that this type of support from supervisors is an important element of job quality (Galinsky et al. 1986; Galinsky et al. 1987; Galinsky and Stein 1990) and it contributes to role stress (O'Driscoll et al. 2003), we found no significant association with self-reported employee health. This finding may reflect the fact that the social support received from supervisors may be less important than other forms social support received at work. The fact that neither type of supervisor support was associated with employee health, while co-worker support was associated with self-perceived health, may imply that that supervisor support plays less of a role in employees' every day work life. Instead, it may be that the social relationships with which employees regularly interact on the job (co-workers) may be more connected to perception of general health. Jobs in the current labor market are more likely to require a team effort, thus if an employee's performance on the job is linked somehow to their co-workers performance it could have a significant effect on employees' perceived health. Additionally, since most employees have responsibilities outside of work, it may be that co-workers, rather than supervisors, are the people to whom employees look to for assistance with fulfilling their multiple obligations.

Findings from this study suggest the need for more research focused on understanding job quality in the new millennium. Specifically there is a need for greater understanding of the role of job flexibility in assisting employees with their responsibilities on and off the job, and as a consequence, the role job flexibility plays in employee health. Longitudinal studies that track and link changes in family roles and responsibilities (e.g., changes in marital status, birth or adoption of a child, elder caregiving responsibilities) and changes in roles and responsibilities at work (e.g., changes in production expectations, workload, or supervisory responsibilities) with a variety of health outcomes/indicators would provide important information about any causal associations between job quality and health. Additionally, a better understanding of social support in the workplace is needed. Although previous work has suggested that supervisor support is an important aspect of job content quality (Galinsky et al. 1986; Johnson 1986; Galinsky et al. 1987; Galinsky and Stein 1990; Karasek et al. 1998), at least as it pertains to health, findings from our study do not reflect this. Rather, coworker support was the better predictor of self-reported health status in this sample. More in-depth studies should examine how workers utilize their social supports differently and in the context of more or less flexible employment.

Limitations

Results from this study should be considered within the context of its limitations. First, although the data are nationally representative, the 52 percent response rate is low compared to other national studies (e.g., the National Comorbidity Survey Response Rate [RR] =826 percent (Kessler 2002); the National Longitudinal Survey of Youth 1997 RR=71.6 percent). Thus, these findings may not be generalizable to all workers in the U.S. who have fair or poor health status. Second, these data are cross-sectional. While findings may provide some information about the

nature of the identified relationships, no causal claims may be made about the relationships of job flexibility, coworker support, and job security to employee health outcomes. Further studies, especially those longitudinal in nature, are needed. Third, although authors tried to recreate an exact replica of the traditional job demands-control-support model, job quality items available in the NSCW data set limited an exact replication. Nonetheless, all components of the traditional model were included though they may be conceptualized slightly differently from the original.

Regardless of the study limitations, this is one of the first studies to reconsider a standard model of job content quality as it relates to employee health within the context of contemporary working families and the evolving U.S. economy. While it is difficult to draw definitive conclusions about the meaning of our studies results, we can conclude that additional research is needed to fully understand the complex relationships between job content quality and employee perceived health.

Notes

The first-listed author wishes to emphasize that this paper was a collaborative effort and the order of names in no way implies a junior-senior relationship between the authors.

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Table 1. Demographic characteristics

	Whole Sample	Good Health	Poor Health	
	N=2,795	n=2,302	n=493	
	%	%	%	<i>p</i>-value
Marital Status				<.001
Legally married	58.7	60.5	50.3	
Living with partner, unmarried	6.7	5.8	10.7	
Single	34.6	33.7	39.0	
Sex				.012
Male	51.3	52.6	45.5	
Female	48.7	47.4	54.5	
Ethnicity				.263
Non-Hispanic White	75.4	76.3	71.3	
Non-Hispanic Black	10.0	4.0	12.7	
Hispanic/Latino	9.8	9.6	10.7	
Other	4.8	7.0	5.3	
Education				<.001
12 years or less	41.8	39.0	55.0	
Some post-secondary	29.6	29.8	28.6	
4-year degree or more	28.6	31.2	16.4	
Poverty Status				< .001
< 250% of poverty	25.2	23.4	33.9	
≥250% of poverty	74.8	76.6	66.1	
Urbanicity				.026
Urban	55.4	56.6	49.8	
Suburban	22.2	22.1	22.7	
Rural	22.4	21.3	27.5	
Age	<i>M</i> =41.78	<i>M</i> =41.60	<i>M</i> =42.60	.129
	<i>SD</i> =12.58	<i>SD</i> =12.57	<i>SD</i> =12.64	

Table 2. Odds of being in poor health: Karasek-Johnson indicators of job content quality (JCQ)

Variable	Odds Ratio	Confidence Interval
Sex		
Male	Ref	Ref
Female	1.31	(0.99-1.72)
Education		
12 years or less	Ref	Ref
Some post-secondary	0.65**	(0.48-0.88)**
4-year degree or more	0.48***	(0.34-0.68)***
Family Type		
Legally married	Ref	Ref
Living with partner, unmarried	1.81*	(1.09-3.02)*
Single	1.19	(0.88-1.61)
Poverty Level		
< 250% poverty line	Ref	Ref
≥ 250% poverty line	0.68*	(0.49-0.93)*
Urbanicity		
Urban	Ref	Ref
Suburban	1.15	(0.81-1.63)
Rural	1.31	(0.94-1.83)
Job Content Quality Variables		
Physical demands	0.96	(0.84-1.09)
Supervisor work support	0.80	(0.61-1.03)
Coworker support	0.76*	(0.60-0.97)*
Psychological demands	0.84	(0.69-1.03)
Decision latitude	0.75	(0.60-1.00)
Job security	0.61*	(0.39-0.96)*
<i>F</i> (14, 2240)		7.56
Prob > <i>F</i>		< .001

*Significant at $p \leq .05$

**Significant at $p \leq .01$

***Significant at $p \leq .001$

Table 3. Odds of being in poor health: Karasek-Johnson and work-family indicators of JCQ

Variable	Odds Ratio	Confidence Interval
Sex		
Male	Ref	Ref
Female	1.31	(0.99-1.74)
Education		
12 years or less	Ref	Ref
Some post-secondary	0.69*	(0.51-0.94)*
4-year degree or more	0.49***	(0.36-0.70)***
Family Type		
Legally married	Ref	Ref
Living with partner, unmarried	1.78*	(1.07-2.96)*
Single	1.17	(0.87-1.59)
Poverty Level		
< 250% poverty line	Ref	Ref
≥ 250% poverty line	0.68*	(0.49-.95)*
Urbanicity		
Urban	Ref	Ref
Suburban	1.14	(0.81-1.62)
Rural	1.27	(0.91-1.78)*
Job Content Quality Variables		
Physical demands	0.99	(0.87-1.13)
Supervisor work support	0.89	(0.62-1.27)
Coworker support	0.77*	(0.60-0.99)*
Psychological demands	0.86	(0.70-1.04)
Decision latitude	0.87	(0.66-1.15)
Job security	0.64*	(0.41-0.99)*
Flexibility	0.43**	(0.22-0.84)**
Supervisor work-family support	0.91	(0.67-1.23)
<i>F</i> (16, 2237)		7.02
Prob > <i>F</i>		< .001

*Significant at $p \leq .05$

**Significant at $p \leq .01$

***Significant at $p \leq .001$