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Working-Class Jobs and New Parents' Mental Health

Little research has explored linkages between work conditions and mental health in working-class employed parents. The current study aims to address this gap, employing hierarchical linear modeling techniques to examine how levels of and changes in job autonomy, job urgency, supervisor support, and coworker support predicted parents' depressive symptoms in a sample of 113 dual-earner couples interviewed five times across the transition to parenthood. Increases in job autonomy and decreases in job urgency predicted fewer depressive symptoms in fathers at 1 year postpartum. For mothers, coworker support predicted fewer depressive symptoms, and supervisor support mitigated the negative effects of job urgency on depressive symptoms. Higher work hours coupled with low job urgency predicted declines in mothers' depressive symptoms across the first year of parenthood. Our findings suggest that interventions that lead to greater autonomy, less job urgency, and more supportive work relations may enhance employee well-being among working-class families.

The transition to parenthood, defined as the period from late pregnancy through the infant's first year of life, is a time of change and accommodation as parents learn to cope with new roles and responsibilities (Belsky & Pensky, 1988; Cowan & Cowan, 1992; Lawrence, Nylen, & Cobb, 2007). Although the majority of parents eventually adjust to this major life transition, new parenthood is often accompanied by psychological and interpersonal stress (Huston & Holmes, 2004). Demographic data indicate that in addition to coping with the challenges of caring for a newborn, the majority of both men and women are also coping with the second transition of returning to work soon after their child's birth.

In 2010, 56.5% of mothers with infants under a year old were employed, compared to 17% of mothers in the early 1960s (Bureau of Labor Statistics, 2010; Johnson, 2008). Moreover, dual-earner couples make up approximately 78% of all married wage-and-salary employees

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(Bond, Thompson, Galinsky, & Prottas, 2003). Although scholars (e.g., Cowan & Cowan, 1992) have underscored the importance of evaluating the multiple factors that can influence new parents' adjustment, few studies have examined how employment conditions affect new parents' well-being. Job conditions have the potential to be both a source of stress as well as a source of support and empowerment. For example, jobs that offer little autonomy in conducting daily work tasks may diminish workers' sense of control and well-being (Clark, 2001). In contrast, supportive and friendly relationships with supervisors and coworkers can enhance one's job experiences and overall well-being (Schieman, 2006).

Notably, in much of the work–family literature little distinction is made between the challenges facing working-class versus middle-class and professional workers, despite the many inequities that occur across social class. Working-class employees are more likely to face stressful work conditions involving mandatory overtime, low autonomy, variable work shifts, time-pressured productivity targets, and unpaid family leave than their middle-class counterparts (Perry-Jenkins, 2005). Thus, an aim of the present study is to look within a working-class sample to examine how new parents' work conditions, specifically job autonomy (one's sense of control at work), job urgency (degree of time stress and pressure), and supervisor and coworker support are related to both levels of and change in depressive symptoms across the first year of parenthood for dual-earner mothers and fathers.

Depression Across the Transition to Parenthood

Estimates of the incidence of postpartum depression indicate that about 25%–50% of new mothers experience short-term depressed mood, 10%–15% experience postpartum depression, and 1%–2 % experience postpartum psychosis (Bina, 2008). Only a few studies have examined postnatal depression in men, with results indicating that prenatal and postnatal depression occurs for approximately 10% of new fathers (Paulson & Bazemore, 2010); moreover, husbands' and wives' depressive symptoms are interrelated such that if one partner is depressed, this increases the likelihood of depression in the other partner (Dudley, Roy, Kelk, & Bernard, 2001; Matthey, Barnett, Ungerer, & Waters, 2000). Although new fathers report fewer depressive symptoms than mothers, fathers do report more depressive symptoms during pregnancy and the postnatal period than men in matched, nonparent samples (Perren, von Wyl, Burgin, Simoni, & von Klitzing, 2005). Research indicates that factors such as a past history of psychopathology, poor marital relations, unplanned or unwanted pregnancy, difficult child temperament, and low socioeconomic status are all risk factors for mothers' postpartum depression (Beck, 2002). Few studies have examined job conditions as potential risk factors for new parents' depression, despite the fact that more parents than ever before are juggling the demands of work and new parenthood (Johnson, 2008).

Job Conditions and Depression

The dominant theory describing the relationship between job conditions and mental health is the Demand/Control/Support (DCS) model (Karasek & Theorell, 1990). This model posits that workers will experience the most distress under conditions of high demand, low control, and low workplace supports. Numerous studies have documented links between high levels of job strain (i.e., low autonomy, high time pressure) and increased depression and anxiety disorders among workers (e.g., Bourbonnais, Comeau, & Vezina, 1999; Mausner-Dorsch & Eaton, 2000; O'Connor, O'Connor, White, & Bundred, 2001). Parcel and Menaghan (1994) found positive connections between job autonomy and complexity (i.e., lack of repetitiveness, creativity in job duties) and healthy developmental outcomes for both employed mothers and their children. Studying civil servants, Griffin, Greiner, Stansfeld, and Marmot (2007) found that job resources (i.e., social support, skill utilization) had a protective effect on mental health outcomes, whereas job demands were not consistently associated with poorer mental health. Although not tested in their model, it may be that social support at work attenuates the negative effects of high job demands and low autonomy on worker well-being, a hypothesis that will be explored in the current study.

Research indicates that social support on the job enhances workers' well-being (Heaney, Price, & Rafferty, 1995). Hochschild (1997) has even argued that supportive work contexts provide an escape from stressful home demands.

Some evidence suggests that women tend to place higher value on positive work relationships whereas men place higher value on advancement and pay (Loscocco & Spitze, 1990; Ross & Wright, 1998). Yet, little research has addressed how social class issues may play a role in the value of workplace supports. For example, in lower status jobs, where there is limited opportunity for advancement or high pay raises, the role of supportive supervisors and coworkers may be more valuable in buffering negative job conditions for men. The DCS model suggests that supportive work environments buffer the demands of stressful and low-autonomy jobs. In the current study, we examined how workplace supports moderate the effects of poor job conditions on depression and also examined gender differences in the role of workplace supports on employee mental health.

Finally, from a methodological standpoint, a potential shortcoming of a number of studies conducted with large, nationally representative data sets that examine linkages between job conditions and mental health is the practice of assigning characteristics of occupations as defined by the Dictionary of Occupational Titles (National Academy of Sciences, 2003) to workers' experiences of their jobs (Parcel & Menaghan, 1994; Raver, 2003; Spector, Jex, & Chen, 1995). Although this represents a creative approach to linking work characteristics to workers' jobs in the absence of their subjective reports of job conditions, it assumes that all individuals working in a particular occupation experience the same levels of complexity, autonomy, and control on the job. Thus, this approach would code the majority of working-class jobs as low in complexity, autonomy, and control, an assumption that we empirically test. As studies have shown, jobs at all social class levels are not experienced in the same way by all workers (Gorman, 2000). From a policy perspective, it is important to understand what conditions of low prestige jobs can be experienced as productive and challenging, as this knowledge could improve the development of effective interventions focused on enhancing job conditions for working parents.

Work Conditions and New Parents' Mental Health

Although the work socialization and occupational health literatures have greatly contributed to our understanding of the relationship between job conditions and mental health, the question of how work – family issues and processes may differ at various stages of the life course has received little attention. Many studies linking job conditions and mental health in the occupational health literature have recruited samples through the workplace, with the goal of examining conditions of different types of jobs and worker well-being. Thus, the age and life stage of participants is often quite varied, ranging from young, never-married employees to new parents to empty nesters. The current study examines one particular phase of the life course, the transition to parenthood, to understand the unique work and family challenges at this life stage.

When considering the transition-to-parenthood literature, which indicates that new parents are at risk for increased depression and anxiety, in conjunction with the work-socialization and occupational-health literatures, which point to the risk of poor work conditions (i.e., high urgency, low autonomy) for employee well-being, important questions arise as to how poor job conditions contribute to parents' mental health across the transition to parenthood. The few studies that have examined work and family issues across the transition to parenthood have tended to focus on benefits and policies, such as parental leave, sick time, and personal time, which provide parents flexibility to be away from work. For example, Feldman, Sussman, and Zigler (2004) found that shorter maternity leave was related to higher maternal depression, lower parental preoccupation with the baby, and more negative views of how the birth affected marital quality and self-esteem. For fathers, shorter leaves were associated with lower paternal preoccupation with the baby and lower family salience. Shorter maternity leaves have also been associated with more negative affect and reduced sensitivity of mothers to their infants (Clark, Hyde, Essex, & Klein, 1997). Notably, the majority of research on parental employment across the transition to parenthood has focused on the amount of time parents have away from work (e.g., paid leave, personal time), with little attention to how the conditions of employment to which parents are returning influence their well-being. Given that parental employment within the baby's first year of life is now the norm in the United States (Johnson, 2008), more research is needed regarding how conditions of employment, as opposed to time away from work, are related to new

parents' mental health. In addition, stressful job conditions, such as inflexible work hours, little control, and high job demands, are likely to be experienced as even more challenging when one's family life also becomes more demanding. These issues become even more salient for working-class parents, who are more likely than their more affluent counterparts to have to return to employment sooner after their child's birth (Naples, 2001).

Despite the increase in research focused on working-poor and working-class families and the challenges they face in obtaining good jobs with livable wages (Conger, Conger, & Martin, 2010), our understanding of how the work conditions of low-wage workers influence their well-being is underdeveloped. An important contribution of the current study is the focus on the effects of work experiences on the mental health of employed working-class parents as they experience the transition to parenthood, controlling for key factors identified in the literature as important for parents' depressive symptoms (i.e., initial depression, child temperament, and prenatal marital relations; Beck, 2002).

Research Questions and Hypotheses

The first goal of this study is to empirically test the hypothesis that the conditions of working-class jobs are experienced differently by different employees. Specifically, we ask if there is variability in both average levels and degree of change in job autonomy and urgency and in supervisor and coworker support for new mothers and fathers. We predict there will be variability in the level of all indicators of job conditions for both mothers and fathers. Because of the lack of previous research on how job conditions may change over time for workers, we have little data on which to base our hypotheses when considering how autonomy, urgency, and support might change across the first year of parenthood.

The second research question focuses on the relationships between job conditions and new parents' mental health. Specifically, we ask: Are conditions of employment during pregnancy, as well as change in employment conditions across the first year of parenthood, related to levels of fathers' and mothers' depressive symptoms 1 year postpartum and to change in depressive symptoms across the first year? We hypothesize that parents reporting low autonomy and high job urgency will report increases in depressive symptoms across the first year and higher levels of depressive symptoms 1 year postpartum. We hypothesize that higher levels of supervisor and coworker support will predict fewer depressive symptoms and declines in depressive symptoms over time. We also predict that high levels of supervisor and coworker support will moderate the negative effects of low autonomy and high urgency on the job by alleviating negative effects on mental health. Although we do not predict differences in the type of relationships that exist between job conditions and mothers' and fathers' depressive symptoms, we hypothesize that more robust linkages may emerge for mothers than fathers because of research suggesting that employed mothers bear more of the responsibility in managing home than fathers (Goldberg & Perry-Jenkins, 2004). Finally, because all mothers did not return to full-time work, and it is possible that linkages between work conditions and depressive symptoms differ based on mothers' work hours, work hours and interactions between work hours and job conditions are examined. We predict that fewer work hours will predict fewer depressive symptoms and hypothesize that positive work conditions will diminish the negative effects of long work hours.

Method

Data for this project came from a longitudinal study of 153 working-class couples interviewed five times across the transition to parenthood between 1999 and 2002. Data were obtained during in-depth, 2- to 3-hour interviews where parents completed survey questionnaires and answered open-ended questions about their experiences of new parenthood. Participants were interviewed separately from their partners. Heterosexual couples in their third trimester of pregnancy were recruited from various prenatal classes at hospitals in Western New England. Criteria for eligibility included the following: (a) both members of the couple were employed full-time (32+ hours per week) prior to the baby's birth, (b) both members of the couple planned to return to full-time work within 6 months of the baby's birth, (c) both members of the couple were ''working class'' (defined by restricting educational level to an associate's degree and work in a unskilled or semiskilled job), (d) both members of the couple were expecting their first child, and (e) the couple was either married or cohabiting (for at least

1 year) at the time of inclusion in the study. We focused only on first-time parents because we were interested in how new parents addressed the challenges of work and parenting for the first time, without the set of skills parents develop with multiple children.

Trained graduates students were given 5 minutes at the beginning of prenatal classes to describe the study to expectant parents. All parents filled out a short demographic form with basic information on age, relationship status, income, type of job, work hours, and intent to return to work after the baby's birth. Interested families were contacted and scheduled for an interview; all families received a total of $150 for their participation in all five interviews. In comparing our sample of first-time parents to the broader population of first-time parents in the prenatal classes, the present sample, as expected given the selection criteria, was less educated, had lower family income, and worked more hours than the full sample. In addition, our sample was older, on average, than national norms for first-time parents, likely due to the fact that couples had to be married or long-time cohabiters to participate.

Over the course of the study we lost 12 families, an attrition rate of approximately 8%. These families did not differ on key demographic variables such as work hours, income, marital status, or age from those families who remained in the study. Of the 12 families we lost, 4 were either separated or divorced by Time 5 and 8 families chose to withdraw. For the current analysis we eliminated families in which mother or father was not employed at Time 5. Participants who were self-employed or had no supervisor or coworkers were also dropped from the models. Thus, the final sample size for the analyses was 113 couples.

Men's average age at the time of the pregnancy was 29.1 (Mdn 28.7), and women's average age was 27.8 (Mdn 27.5). Nearly 80% (79.7%) of the couples were married, and the average length of relationship was 3.3 years. Cohabiting couples had to have lived together for at least a year prior to the pregnancy and, on average, had been together for 2.1 years. The majority of those who participated were White (92.2% of women, 90.6% of men) with only 1.5 % African American, 1% Latina women, 3% Latino men, and 5% Asian.

For 16% of women and 22.5% of men, the highest degree held was a high school diploma or GED; a majority of the sample (44.8% of women and 63.4% of men) had some type of additional schooling or vocational training after high school (e.g., cosmetology school, refrigeration mechanic training). Only 31% of women and 14.1% of men held a 1- or 2-year associate's degree. None of the parents had a college degree.

Self-reported gross individual income ranged from $10,000 to $63,330 annually for men and from $4,300 to $60,830 for women. Median salaries were $31,237 and $25,320 for men and women, respectively, and the median family income was $58,607. Importantly, these estimates represent gross income; thus, take-home pay is significantly less. Clearly these families were not in poverty; however, in most cases, the loss of one partner's income would have moved many of the families close to or below the poverty line. The most common types of jobs held by men were factory worker, truck driver, and food service worker. Women were employed most often as food service workers, factory workers, and beauticians. All partners were employed full-time at Time 1; men worked an average of 47 hours per week and women averaged 40 hours.

Procedure

Fathers and mothers participated in a series of five interviews across the first year of parenthood: (a) during the couples' third trimester of pregnancy (Time 1); (b) one month after the baby's birth (Time 2); (c) one month after mothers returned to full-time employment (15 weeks postpartum, on average; Time 3); (d) a mail survey conducted when the baby was 6 months old (Time 4); and (e) a final face-to-face interview when the baby was 1 year old (Time 5). The timing of the third interview is based upon mothers' return to work; thus, there is variability in this assessment occasion. Once mothers were back at work for approximately 1 month, the Time 3 interview was completed. Multilevel models can account for this within-person variability in the time series (Sayer & Klute, 2005). The majority of mothers returned to full-time work by 6 months postpartum, which is not surprising given that this was a criterion for participation. If mothers returned to only part-time work or did not plan to return at all, they still completed a Time 3 interview. If the mother was not returning to work at all, the interview was conducted at 12 weeks, the length of leave time mandated by the

Family and Medical Leave Act. If she was going back part time, the interview was conducted after she was back at work for 1 month.

Measures

Work hours. During each in-home interview, both partners provided detailed information on work schedule and hours. Since all mothers were employed full time at Time 1, and unemployed (due to the baby's birth) at Time 2, only Times 3 through 5 were used to assess mothers' work hours. Growth curve analyses revealed no significant variability in mothers' or fathers' work hours over time; thus, we averaged mothers' work hours across Times 3, 4, and 5 to represent average work hours. For husbands, we averaged work hours across all points.

Job autonomy and job urgency. Job conditions were assessed using a scale developed by Greenberger, O'Neil, and Nagel (1994). Respondents evaluated job autonomy and job urgency at three different points, Time 1 (prenatally), Time 3 (1 month after mother returns to work), and Time 5 (1-year follow-up). The questionnaire used a 5-point Likert scale with responses ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The complete scale contained 26 items: 18 items assess *job autonomy,* the degree to which the respondent's job is challenging and self-directed; 8 items assess *job urgency*, the degree of speed and time pressure experienced on the job. Across the three points, Cronbach's α reliability for autonomy ranged from .85 to .87 for men and from .83 to .89 for women, and for urgency from .65 to .76 for men and from .80 to .86 for women.

Supervisor and coworker support. Workplace supports were assessed at three points: Time 1 (prenatal), Time 3 (1 month after mother returns to work), and Time 5 (1-year follow-up), using a questionnaire with a 5-point scale developed by Caplan, Cobb, and French (1975) with responses ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The scale comprises two subscales: a six-item scale assessing *supervisor support* and a four-item scale assessing *coworker support*. Items tapped general feelings of both emotional and instrumental support experienced at work. Cronbach's α for the supervisor support subscale ranged from .86 to .92 for wives and from .85 to .90 for husbands across the three points. Cronbach's α for coworker support ranged from .89 to .91 for wives and from .88 to .89 for husbands across the three points.

Depressive symptoms. A 20-item scale devised by the Center for Epidemiological Studies of the National Institute of Mental Health (CES – D) was used to assess depressive symptoms at all five points (Radloff, 1977). Participants were asked to consider the previous 7 days and to indicate how often they experienced different moods and thoughts using a 4-point scale ranging from 0 = *rarely or none of the time—less than one day a week* to 3 = *most or all of the time—5 – 7 days a week*). Cronbach's α for the 20 items ranged from .84 to .87 for women and .87 to .90 for men across all points. At Time 1, approximately 40% of mothers and 14% of fathers were at or above the clinical cutoff of 16, indicating risk of depression on the CES – D. At the postnatal points, 24% – 30% of mothers and 9% – 12% of fathers fell at or above the clinical cutoff, pointing to a decline over time in symptoms but still a significant percentage of mothers at risk for clinical depression.

Relationship conflict. Conflict was measured using a subscale from the Personal Relationships Scale (PRS; Braiker & Kelley, 1979). Parents responded to five questions asking how often they argued or had negative interactions with their partners, using a 9-point scale ranging from 1 = *not at all/never* to 9 = *very much/very often*. Cronbach's α on this subscale was .71 for mothers and .84 for fathers. Time 1 reports of relationship conflict were used as a control variable.

Negative infant temperament. Infant temperament was assessed using Rothbart's (1981) 94-item Infant Behavior Questionnaire (IBQ), which instructs parents to rate the frequency of particular behaviors of their infant within the past week, using a 7-point scale ranging from 1 = *never* to 7 = *always*. For the purposes of this investigation, the scores from the two subscales measuring child distress (distress to limitation, distress and latency to approach intense or novel stimuli) were averaged. Parents evaluated child temperament at three different points, Time 2 (at 1 month after birth), Time 4 (at 6 months) and Time 5 (at 1 year). In order to create the most reliable measure of negative temperament,

mothers and fathers reports were averaged across all three points. Cronbach's α for distress to limitation ranged from .79 – .84 and for latency to approach ranged from .63 – .76 for mothers; for fathers, α ranged from .73 – .80 for distress to limitations and .60 – .72 for latency to approach.

Results

Analytic Strategy

We used multilevel linear modeling (MLM; Raudenbush & Bryk, 2002) to fit the models testing our hypotheses. MLM provides a robust method for modeling individual change over time, in this case change in both depressive symptoms and job conditions across the transition to parenthood. Because we had assessed depressive symptoms at five points, we could examine not only linear change but also patterns of nonlinear change that indicate, for example, when symptoms might initially decrease but then begin to increase again over time. MLM also allows individual outcomes to be linked to partner outcomes, thus accommodating the dependent nature of couple data (Sayer & Klute, 2005).

The predictor variables of interest, namely, job autonomy, job urgency, supervisor support, and coworker support, were assessed at three different points: the prenatal interview (Time 1), the return to work interview (Time 3), and the 1-year follow-up (Time 5). We were interested in examining how levels of these constructs at Time 1 as well as linear change in these variables predicted levels and change in depressive symptoms. Estimates of initial levels and change in job conditions for each respondent were obtained by fitting unconditional linear change models with the job variables as outcomes. These estimates were then used as predictors in the Level 2 models if they showed significant variability between individuals.

To examine level and change in depressive symptoms we included as predictors respondents' work hours, income, job autonomy (intercept and slope), job urgency (intercept and slope), supervisor support (intercept and slope), and coworker support (intercept and slope) as well as the hypothesized interactions between job urgency, job autonomy, and supervisor and coworker support. All predictor variables were mean-centered before being entered into the model, and interaction terms were created by multiplying mean-centered variables. Because depressive symptoms were assessed across five points, preliminary unconditional models were fit to determine the best-fitting trajectories (according to model comparison tests) for husbands' and wives' depressive symptoms over time. We centered the depressive symptoms trajectory at Time 5 (1 year postpartum) by subtracting the Time 5 value of time, resulting in an intercept that represents levels when the baby is 1 year old.

Descriptive Analyses

Table 1 provides means and standard deviations for mothers' and fathers' depressive symptoms across all five points. Mothers report significantly higher depressive symptoms than fathers across all five points. Intercorrelations of fathers' and mothers' reports on depressive symptoms were modestly related, ranging from .06 to .21 across the five points. Table 2 provides means and standard deviations for mothers' and fathers' reports of job conditions at three points. Repeated measures MANOVAS revealed no significant gender differences in reports of job autonomy, job urgency, supervisor support, or coworker support.

Table 1. *Descriptive Statistics for Mothers' and Fathers' Depressive Symptoms at Five Time Points (*N = *113)*

	Mothers				Fathers			
Depressive Symptoms	*M*	*SD*	Min.	Max.	*M*	*SD*	Min.	Max.
T1	15.33[a]	8.55	2	40	8.63[c]	6.39	0	41
T2	12.11[b]	7.96	1	51	8.57[c]	6.47	0	38
T3	11.34[b]	8.51	0	39	8.44[c]	6.81	0	34
T4	11.50[b]	8.41	0	38	8.74[c]	7.97	0	49
T5	10.81[b]	8.19	0	45	7.74[c]	6.01	0	32

Note: Means that do not share superscripts differ at $p < .05$. Depressive symptoms scores are the mean of the summed score on CES – D.

Table 2. *Descriptive Statistics for Mothers' and Fathers' Job Autonomy, Job Urgency, Supervisor Support, and Coworker Support at Three Time Points (*N = *113)*

	Mothers				Fathers			
Variable	Mean	*SD*	Min.	Max.	Mean	*SD*	Min.	Max.
Job autonomy T1	3.58	0.55	2.00	4.72	3.66	0.56	2.17	4.72
Job autonomy T3	3.57	0.56	1.89	4.67	3.67	0.57	2.06	4.94
Job autonomy T5	3.52	0.64	1.67	5.00	3.62	0.56	2.11	4.78
Job urgency T1	3.52	0.70	1.75	5.00	3.50	0.62	1.88	4.75
Job urgency T3	3.45	0.80	1.00	5.00	3.39	0.65	1.13	4.88
Job urgency T5	3.48	0.79	1.50	4.88	3.35	0.62	1.75	4.63
Supervisor support T1	3.98	0.88	1.00	5.00	3.85	0.95	1.25	5.00
Supervisor support T2	3.86	0.93	1.00	5.00	3.68	0.92	1.00	5.00
Supervisor support T3	3.82	0.93	1.00	5.00	3.61	0.96	1.00	5.00
Coworker support T1	4.06	0.83	1.25	5.00	3.91	0.67	2.25	5.00
Coworker support T3	3.89	0.97	1.00	5.00	3.70	0.70	1.75	5.00
Coworker support T5	3.87	0.83	1.00	5.00	3.71	0.68	1.00	5.00

*Note: N*s range from 109–113 for mothers and fathers due to missing data. There were no significant mean differences between mothers and fathers.

Change Trajectories for Depressive Symptoms and Job Conditions

We fit an unconditional model (with no Level 2 predictors) for depressive symptoms and job conditions. The best fitting model for change in depressive symptoms was a linear model for husbands and a cubic model for wives. The final estimation of variance components for depressive symptoms indicated that for both parents, there was significant variability in levels of depressive symptoms at 1 year ($\chi^2 = 239.54$, $p < .001$ for fathers; $\chi^2 = 259.01$, $p < .001$ for mothers). For mothers, there was significant variability in linear change ($\chi^2 = 149.67$, $p < .01$ linear), quadratic change ($\chi^2 = 146.96$, $p < .01$), and cubic change ($\chi^2 = 149.70$, $p < .01$). These findings indicate that some mothers had nonlinear trajectories of change. For example, initial depression levels might decrease shortly after birth but then begin to rise upon return to work (as represented by the quadratic term), and then the trajectory might level out for some mothers (as represented by the cubic term). Thus, for mothers, we included predictors for level, slope, curvature, and the cubic term. Although there was no significant variability in fathers' linear change trajectory, we included fathers' linear change in depressive symptoms as a dependent variable because research indicates that fathers do experience changes in mental health across the transition to parenthood, albeit less extremely than mothers (Perren et al., 2005). Moreover, tests of variance are less powerful than those for fixed effects in dyadic MLM, and we were interested in even small changes in fathers' depressive symptoms (Maas & Hox, 2005).

Unconditional models were also fit to examine level and change in the four work variables, namely, job autonomy, job urgency, supervisor support, and coworker support for mothers and fathers. These models were used to test the first hypothesis, determining if there was significant variability in the levels and change in job conditions between respondents. There was significant variability in levels of autonomy for fathers ($\chi^2 = 493.16$, $p < .001$) and mothers ($\chi^2 = 304.19$, $p < .001$). There was also significant variability in change in autonomy for fathers ($\chi^2 = 170.11$, $p < .05$) but not for mothers. In terms of job urgency, there was significant variability in both levels of urgency at Time 5 ($\chi^2 = 511.29$, $p < .001$ for mothers; $\chi^2 = 519.95$, $p < .001$ for fathers) and change in urgency ($\chi^2 = 289.15$, $p < .001$ for mothers; $\chi^2 = 243.22$, $p < .001$ for fathers).

Turning to supervisor and coworker support, there was significant variability in levels of supervisor and coworker support for mothers and fathers (mothers: $\chi^2 = 675.05$, $p < .001$; fathers: $\chi^2 = 814.86$, $p < .001$ for supervisor support; mothers: $\chi^2 = 599.80$, $p < .001$; fathers: $\chi^2 = 370.05$, $p < .001$ for coworker support). There was also significant

variability in rate of change for both mothers and fathers on supervisor and coworker support (mothers: $\chi^2 = 365.78$, $p < .001$; fathers: $\chi^2 = 521.21$, $p < .001$ for supervisor support; mothers: $\chi^2 = 236.88$, $p < .001$; fathers: $\chi^2 = 189.27$, $p < .001$ for coworker support). Estimated coefficients of level and change for each individual were generated and then used to predict depressive symptoms in subsequent models. These findings support hypotheses in the first research question predicting that there would be variability in respondents' assessments of work conditions, despite limiting our sample to working-class employees.

Work Conditions Predicting Fathers' Depressive Symptoms

Next we moved to predicting variability in levels of depressive symptoms 1 year postpartum and linear change in depressive symptoms for mothers and fathers, as well as variability in the quadratic and cubic terms for mothers only. The predictor variables in the model included work hours and income as well as levels and change in job urgency, job autonomy, supervisor support, and coworker support for mothers and fathers (for job autonomy, only level was used in mothers' models since there was no variability in change).

Table 3 summarizes the key findings from the analyses, with the first column showing results for the simple main effects model, Column 2 reporting the trimmed model with only significant interactions, and Column 3 indicating results for the final trimmed model. For the final trimmed model all nonsignificant main effects that were not part of significant interactions were dropped to create a more parsimonious model. Findings from the final models are discussed below.

We first examined predictors of fathers' Time 5 depressive symptoms. As hypothesized, increases in job autonomy and higher income predicted fewer depressive symptoms; in contrast, increases in job urgency predicted more depressive symptoms. Levels of coworker support were unrelated to depressive symptoms; however, increases in coworker support predicted higher depressive symptoms at Time 5. In predicting change in fathers' depressive symptoms across the first year, there was a significant interaction between coworker support at Time 1 and job urgency at Time 1 (Figure 1). As shown by both of the dashed lines in Figure 1, there was little change in depressive symptoms for men reporting high levels of coworker support, regardless of the amount of urgency they experienced. In contrast, men with high job urgency and low coworker support at Time 1 reported an increase in depressive symptoms over time, supporting the hypothesized job DCS model. For fathers with low job urgency, however, depressive symptoms declined under conditions of low coworker support.

Work Conditions Predicting Mothers' Depressive Symptoms

Turning to mothers' depressive symptoms levels, higher coworker support predicted fewer depressive symptoms at Time 5. As hypothesized, a significant interaction between supervisor support and job urgency revealed that women with high job urgency and little supervisor support reported higher depressive symptoms at Time 5 as compared to women with high urgency and high supervisor support and as compared to all women with low urgency no matter what degree of support (see endpoints in Figure 2). A significant interaction between work hours and supervisor support indicated that women who worked long hours but with high supervisor support had the lowest levels of depressive symptoms at Time 5 when compared to all other groups.

Two significant interactions predicted change in mothers' depressive symptoms. A significant supervisor support × job urgency interaction revealed that women with high job urgency and low supervisor support did not experience a significant decline in depressive symptoms as compared to women in all other groups (see Figure 2, bold line), supporting our hypotheses based on the DCS model that stressful work with little support leads to poorer worker outcomes. The significant work hours × urgency interaction supported our hypothesis that the effect of job conditions would vary as a function of work hours. Results indicated that the sharpest decline in depressive symptoms occurred for mothers working relatively high hours but in low-urgency jobs. In contrast, mothers with high work hours plus high urgency and low work hours plus low urgency reported a decline in symptoms early in the year and then experienced an increase in symptoms at the end of the year. It is important to note that the only

Table 3. *Final Summary Table: Work Conditions Predicting Mothers' and Fathers' 1-Year Postnatal Depressive Symptoms and Change in Symptoms Across First Year of Parenthood (*N = *113)*

	Model 1 Main Effect Model		Model 2 Trimmed Interaction Model		Final Model Best-Trimmed Model	
	β	*SE*	*β*	*SE*	*β*	*SE*
Fathers' level of symptoms						
Intercept	6.59	4.36	8.18	0.57	8.16	0.58
Supervisor support	−0.06	1.14	−0.58	1.11	—	—
Δ Supervisor support	0.23	1.59	0.19	1.55	—	—
Coworker support	−1.47	1.82	−0.94	1.84	−1.37	1.48
Δ Coworker support	6.13	7.82	7.78	7.77	14.11	4.59**
Job autonomy	−2.04	1.87	−2.12	1.82	—	—
Δ Job autonomy	−15.13	8.64	−14.47	8.49	−12.22	6.22*
Job urgency	0.71	1.68	1.02	1.65	0.72	1.49
Δ Job urgency	10.86	2.90***	10.75	2.85***	9.74	2.63**
Work hours	0.12	0.09	0.13	0.09	—	—
Income	−0.12	0.064	−0.12	0.06*	−0.10	0.05*
Coworker × urgency	—	—	−4.50	3.62	−4.91	3.61
Fathers' Rate of Change in Symptoms	*β*	*SE*	*β*	*SE*	*β*	*SE*
Intercept	−5.46	4.44	−0.52	0.57	−0.54	0.57
Supervisor support	−0.49	1.14	−0.28	1.12	—	—
Δ Supervisor support	−0.46	1.58	−0.69	1.55	—	—
Coworker support	0.92	1.82	2.22	1.85	1.76	1.43
Δ Coworker support	−5.31	7.90	−1.62	7.86	—	—
Job autonomy	−0.21	1.87	−0.48	1.84	—	—
Δ Job autonomy	1.01	8.46	2.32	8.34	—	—
Job urgency	1.75	1.67	2.09	1.65	1.72	1.28
Δ Job urgency	9.75	2.91***	9.55	2.86**	9.80	2.45***
Work hours	0.14	0.09	0.15	0.09	—	—
Income	−0.04	0.06	−0.06	0.06	—	—
Coworker × urgency	—	—	−9.09	3.67*	−9.42	3.52**
Mothers' Level of Symptoms	*β*	*SE*	*β*	*SE*	*β*	*SE*
Intercept	13.59	3.51	10.77	0.69	10.80	0.69
Supervisor support	−2.65	1.31*	−0.81	1.31	−1.42	1.03
Δ Supervisor support	−1.34	1.62	−0.47	1.52	—	—
Coworker support	−1.03	1.31	−1.17	1.21	−2.33	0.76**
Δ Coworker support	−1.61	2.14	−0.07	2.03	—	—
Job autonomy	−.85	2.29	−1.06	2.15	—	—
Job urgency	2.19	1.59	3.26	1.51*	2.45	1.36
Δ Job urgency	1.79	1.96	2.23	1.84	—	—
Work hours	−0.02	12.00	−0.02	0.11	−0.06	0.11
Income	−0.06	0.09	0.09	0.09	−0.05	0.08
Supervisor support × urgency	—	—	−5.09	2.17*	−4.89	2.10*
Work hours × urgency	—	—	0.30	0.15*	0.29	0.15
Work hours × support	—	—	−0.28	0.11*	−0.28	0.11*
Mothers' Rate of Change in Symptoms	*β*	*SE*	*β*	*SE*	*β*	*SE*
Intercept	20.69	19.01	0.55	3.50	0.99	3.40
Supervisor support	−8.06	6.36	−6.29	6.16	−0.92	1.07

Table 3. *Continued*

	Model 1 Main Effect Model		Model 2 Trimmed Interaction Model		Final Model Best-Trimmed Model	
	β	*SE*	*β*	*SE*	*β*	*SE*
Δ Supervisor support	−0.46	8.89	−0.39	8.67	—	—
Coworker support	−6.17	6.67	−6.22	6.60	—	—
Δ Coworker support	−4.75	10.26	−3.27	10.05	—	—
Job autonomy	20.60	11.35	17.81	11.14	—	—
Job urgency	3.77	6.72	6.06	6.48	10.47	5.93
Δ Job urgency	−16.99	9.66	−12.87	9.39	—	—
Work hours	−0.47	0.57	−0.82	0.58	−0.93	0.47
Income	−0.15	0.39	0.08	0.38	0.16	0.08
Supervisor support × urgency	—	—	−8.69	2.26**	−8.57	2.14***
Work hours × urgency	—	—	−1.71	0.65**	−1.50	0.63*
Mothers' Quadratic Change	*β*	*SE*	*β*	*SE*	*β*	*SE*
Intercept	71.43	51.28	−0.30	9.64	−0.32	9.32
Supervisor support	−19.58	17.16	−18.76	16.35	—	—
Δ Supervisor support	3.57	23.86	2.89	23.02	—	—
Coworker support	−22.47	17.95	−22.81	17.43	—	—
Δ Coworker support	−8.53	29.03	−12.19	27.96	—	—
Job autonomy	53.31	30.60	42.39	29.44	—	—
Job urgency	13.46	19.31	17.84	18.31	31.44	16.57*
Δ Job urgency	−42.86	27.21	−33.58	26.10	—	—
Work hours	−1.85	1.59	−2.91	1.57	−2.58	1.25*
Income	−0.36	1.12	0.48	1.07	—	—
Work hours × urgency	—	—	−6.84	1.87**	−6.12	1.81**
Mothers' Cubic Change	*β*	*SE*	*β*	*SE*	*β*	*SE*
Intercept	48.03	32.62	−4.20	6.20	−4.58	5.99
Supervisor support	−13.46	11.04	−12.52	10.46	—	—
Δ Supervisor support	3.78	15.16	4.12	14.57	—	—
Coworker support	−15.23	11.50	−15.62	11.09	—	—
Δ Coworker support	−6.67	19.07	−9.92	18.30	—	—
Job autonomy	31.96	19.39	23.69	18.49	—	—
Job urgency	9.42	12.79	12.66	12.09	21.09	10.89*
Δ Job urgency	−24.80	17.63	−18.82	16.83	—	—
Work hours	−1.47	1.03	−2.17	1.01*	−1.76	0.79*
Income	−0.07	0.74	0.53	0.70	—	—
Work hours × urgency	—	—	−4.77	1.23***	−4.26	1.19**

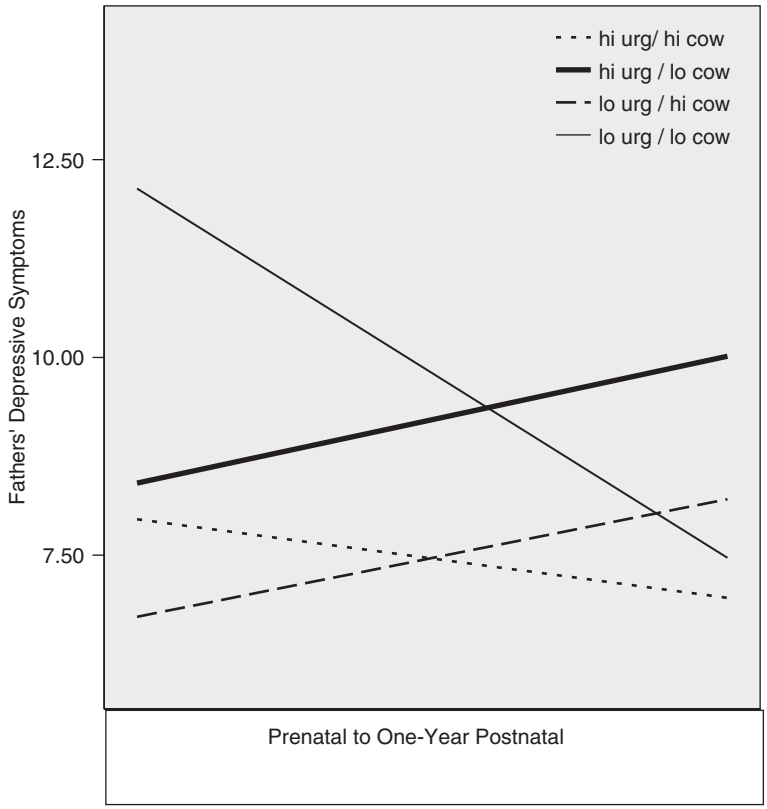
*$p < .05$. **$p < .01$. ***$p < .001$.

group experiencing a continual, steady decline in depressive symptoms across the first year was women working full time in low-pressure jobs.

Follow-Up Analyses

Research on the transition to parenthood has revealed a number of key factors related to parents' mental health. Some of the most consistent findings point to (a) initial levels of depressive symptoms, (b) child temperament, and (c) prenatal marital quality as significant predictors of parental well-being (Beck, 2002). Given our limited sample size we could not include all of these variables in one model. We did, however, conduct follow-up analyses to see

FIGURE 1. INTERACTION OF FATHERS' COWORKER SUPPORT AND JOB URGENCY PREDICTING LEVEL AND CHANGE IN DEPRESSIVE SYMPTOMS ($N = 113$)

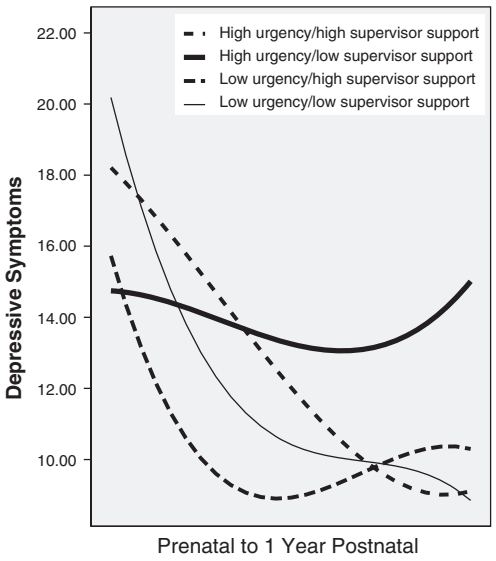


if our work findings held up after controlling for each of these constructs tested separately in three unique models. Our results indicated that difficult child temperament was unrelated to levels of maternal depressive symptoms at Time 5, but significantly predicted increases in maternal depressive symptoms. Child temperament was unrelated to fathers' depressive symptoms. Most importantly for our purposes, when controlling for child temperament, all significant work predictors in our previous models remained significant. Similarly, although Time 1 marital conflict predicted more depressive symptoms for wives at Time 5 and was unrelated to husbands' depressive symptoms, when marital conflict was entered in the model all work predictors remained significant. Finally, when controlling for Time 1 depressive symptoms in all models, all but one work predictors remained significant: for fathers, change in coworker support no longer predicted depressive symptoms (analyses available on request). Thus, the fact that most of the previously identified relationships remained when initial levels of depressive symptoms, child temperament, and marital conflict were included in the models points to the robustness of our findings.

DISCUSSION

Findings from this study point to work conditions as critical factors to examine when attempting to understand new parents' mental health. In our sample of working-class, dual-earner parents, we first addressed the question of whether there was variability in parents' experiences of their jobs in terms of autonomy, urgency, and supportive relationships with supervisors and coworkers. We basically asked the simple, yet important question: Can low-wage work be experienced as ''good work''?

FIGURE 2. INTERACTION OF MOTHERS' JOB URGENCY AND SUPERVISOR SUPPORT PREDICTING LEVEL AND CHANGE IN DEPRESSIVE SYMPTOMS AT 1YEAR AFTER BIRTH ($N = 113$)



Second, we tested the DCS model hypothesizing that whereas high urgency and low autonomy on the job would be related to negative mental health outcomes, supportive work relations would buffer negative job conditions. Important strengths of our study included a longitudinal design allowing us to examine change over time in depressive symptoms along with a focus on both mothers and fathers in the same families.

In examining workers' job conditions, we challenged a common methodological practice of assigning work conditions, such as autonomy and urgency, to a worker based on job title (Raver, 2003; Spector et al., 1995). Much of the literature on job conditions and mental health has assumed that jobs at the lower end of the social class continuum are lower in autonomy and higher in urgency than jobs at the higher end of spectrum. Our findings demonstrated that workers have a range of experiences in low-status occupations, suggesting that some employees in working-class jobs report high levels of autonomy on the job. In short, low-wage work can be ''good work.'' There were also some workers experiencing a good deal of stress and time pressure at work whereas others reported a fairly relaxed work pace. These findings not only point to the importance of assessing workers' perceptions of their job conditions, as opposed to simply assigning conditions based on job category, but more importantly they highlight the fact that it is possible to create positive job conditions for lower socioeconomic class workers.

Turning to the implications of these varying job conditions for workers' mental health, we found differences for fathers versus mothers. For fathers, increases in job autonomy over the first year predicted fewer depressive symptoms at 1 year postpartum. In direct contrast, increases in job urgency predicted higher depressive symptoms at 1 year. These results replicate the findings of Miller, Schooler, Kohn, and Miller (1979) linking job autonomy to enhanced mental health, but in this case for a homogenous group of men in lower status jobs. It is important to note that these results held up even when controlling for initial levels of depressive symptoms. Thus, it is not simply the case that more depressed fathers at Time 1 are viewing their jobs as becoming more urgent or less autonomous. Although changes in job conditions could affect levels of depressive symptoms, it is just as likely that increases in depressive symptoms negatively affect assessments of one's job. We suspect that both processes may be in action, and future research is needed to tease apart the direction of effects.

We hypothesized that supportive work environments would moderate the negative effects of low autonomy or high urgency; this hypothesis was supported, in part, for fathers. Analyses revealed that high job urgency coupled with low coworker support was related to a rise in fathers' depressive symptoms, whereas high urgency coupled with high coworker support predicted a decline in symptoms. These results highlight the potential for workplace interventions that focus on supporting and enhancing coworker relations in an effort to diminish the negative effects of high-stress jobs. For fathers with low job urgency, however, depressive symptoms declined under conditions of low coworker support. This finding is not consistent with the DCS model. It may be that fathers experiencing low levels of urgency also have boring, mundane jobs that, when coupled with poor coworker relationships, may explain the high initial levels of depressive symptoms. In this case, the birth of a child may enhance and add new meaning to life, leading to a decline in depressive symptoms.

Nevertheless, this is speculation, and further research is needed to explore this process.

For mothers, supportive relationships at work played an important role in enhancing mental health. Supportive coworkers served as a protective factor for well-being across the first year of parenthood. In addition, mothers reporting high job urgency coupled with low supervisor support reported significantly higher depressive symptoms than all other groups, as well as less decline in depressive symptoms over the year. This finding supports our hypotheses based on Karasek and Theorell's (1990) DCS model, indicating that it is the combination of stressful job tasks coupled with little support that creates the most toxic job conditions. It is of note that mothers in this later group had scores hovering between 14 – 16 points on the CES – D, which border the clinical cutoff for psychopathology. The protective role of the supervisor plays an important part in mothers' well-being, a finding that replicates the work of Heaney and colleagues (1995), who studied direct care staff (80% of whom were women) in group homes and whose findings highlighted the critical role of supervisors in supporting low-wage workers.

The topic of maternal employment has received great attention in the work – family field, because of concerns that too much work, especially in the child's first year of life, may have detrimental effects on mothers and their children (Brooks-Gunn, Han, & Waldfogel, 2010). In our sample, mothers who worked full time in low-urgency jobs had the steepest declines in depressive symptoms of all mothers. There was little variability in mothers' work hours across the transition to parenthood in our sample, in part because we excluded mothers who dropped out of the workforce. Future research should examine how stability in work hours, as opposed to number of hours, may be protective for mothers' mental health. For low-wage workers, full-time work often means stable hours, consistent wages, and benefits, all factors likely to enhance mothers' financial security and well-being (Lambert, 2009). Future research should address the nuances of how work hours, schedules, and stability over time independently and in combination affect workers' well-being.

A number of caveats about our findings should be noted. The longitudinal design and multiple points make it possible to examine individual trajectories of change over time, but the lack of random assignment of individuals to jobs makes it impossible to tease apart selection effects. In addition, it is likely that parents reporting more depressive symptoms will experience work as more stressful than parents reporting fewer symptoms. Although when controlling for initial levels of depressive symptoms we still had results for work conditions, future research must attend to the bidirectional relationships between work and mental health. In addition, ideally, it would be important to link subjective assessments of job conditions with more objective data about time pressure at work as well as observations of supervisor, coworker, and worker interactions to provide a clearer picture of how worker characteristics mediate the relationship between job conditions and well-being. Also, the current sample, although targeting an understudied working-class sample, was lacking in racial and ethnic diversity. There may be unique ways that race, gender, and social class influence not only the type of jobs individuals hold but also their experiences of the work. More research is needed that addresses how employers could creatively design working-class jobs to create more autonomy and positive challenge for workers. Also, we did not have a middle-class comparison sample, which would have allowed us to compare our results across social class contexts. Finally, given that all of our participants were first-time parents, we can not address whether similar processes occur for second and subsequent births.

In summary, our findings provide evidence that low-wage jobs have the potential to be ''good'' jobs. Moreover, under conditions of high autonomy and supervisor and coworker support, new parents' mental health is higher and is less likely to decline. Moreover, supportive work settings can mitigate the effects of urgent and stressful job conditions. Taken together, these results highlight key sites for workplace interventions that would support workers with new babies and young children, but are likely to be interventions that could benefit all workers.

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