



Low-wage Work Conditions and Mother–Infant Interaction Quality Across the Transition to Parenthood

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Abstract

The present investigation examined the relationship between workplace conditions and mother–infant interaction quality among 65 low-wage, employed mothers. It was hypothesized that the demanding work conditions that new mothers encountered when they returned to paid employment after birth would interfere with parenting quality via increases in maternal depression and anxiety, and that positive work conditions would enhance parenting. Partial support was found for these hypotheses. Mothers who reported greater autonomy at work were less distressed and, in turn, more responsive with their babies. In contrast, workplace urgency—when predictive of increased depression and anxiety—had a deleterious effect on future parenting quality. Contrary to hypotheses, supervisor support did not moderate the negative effects of workplace demands on mothers' distress or parenting. Results indicate that the conditions of low-wage employment have a meaningful effect on mothers' mental health and capacity to engage in sensitive parenting during the transition to parenthood.

Keywords Transition to parenthood · Maternal employment · Parenting · Mental health · Work conditions

Given the dramatic rise in women's participation in the labor force over the past half century, the impact of maternal employment on the lives of children and their caregivers has been a topic of significant study (Beijersbergen et al. 2012; Mesman et al. 2012; Mills-Koonce et al. 2008). The potential consequences of mothers' early return to paid employment has been an area of particular concern, since the first year of life is widely recognized to be a sensitive period of development for infants. Responsive, accurately attuned, and cognitively stimulating caregiving during infancy has been consistently linked to positive developmental outcomes for children, including improved social functioning, cognitive capacity, emotion regulation and secure attachment in later childhood (Belsky and Fearon 2002; Moore et al. 2009). Moreover, stimulating and responsive caregiving has been shown to buffer against the adverse outcomes associated with growing up under financial strain (Fenning and Baker 2012; Mesman et al. 2012). In contrast, maternal parenting that is characterized

by higher levels of detachment (aloof, inattentive, or disengaged parenting) has been associated with attachment dysregulation at 12 months (Holochwost et al. 2014) and poorer developmental outcomes in infants and children, such as poorer language and cognitive abilities in toddlerhood and greater child negativity and behavior problems (Rafferty et al. 2011). For these reasons, there has been increasing interest among researchers and clinicians in identifying the antecedents of responsive and stimulating caregiving, particularly among low-income families (Campbell et al. 2007).

Decades of work–family research have advanced our understanding of the complex associations between maternal employment and family functioning. However, the majority of the empirical literature examining employment and parenting quality has focused on middle class and professional families, despite the fact that there are 10.6 million low-income women with young children in the workforce in the United States (Povich et al. 2014). Too often, the unique work–family challenges facing parents employed in low-wage jobs are overlooked, or subsumed, in broader discussions of work–family conflicts facing all working parents. Yet low-wage workers are more likely to have jobs with less flexibility, fewer leave benefits (i.e., paid sick, personal or vacation time) and less predictable hours and schedules (Perry-Jenkins et al. 2017). In addition, a large literature points to gender inequities in the division

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of paid and unpaid labor in families (Perry-Jenkins and Gerstel 2020), placing low-income women at increased risk for stress and depression during the postnatal period as a function of both class and gender inequality.

Additionally, prior studies that have examined early maternal employment and parenting quality among low-income samples have generally focused on employment status and/or the timing of employment (e.g., hours of employment, work schedules) (Lombardi and Coley 2013; Odom et al. 2013). This approach overlooks how other aspects of the workplace environment, such as job autonomy and time urgency, affect mothers' capacity to engage in sensitive, high quality parenting practices. Moreover, in many of the studies that do examine work conditions in low-income samples, the methodological approach has been to use occupational codes as proxies for work conditions, rather than directly measuring workers' perceptions of autonomy and urgency at work (Parcel and Menaghan 1994; Raver 2003; Yetis-Bayraktar et al. 2013). This approach assumes that all low-wage jobs are lower in autonomy and higher in urgency than jobs at the higher end of the social class spectrum, despite evidence that the experiences of low-wage workers are actually quite varied (Perry-Jenkins et al. 2011). Finally, our understanding of the specific mechanisms and pathways connecting employment conditions to mother–infant interaction quality is underdeveloped, particularly among low-wage workers who, on average, return to paid employment within 12-weeks of the birth (Laughlin 2011). Furthering our understanding of the processes connecting workplace quality and family life can provide insights into how workplaces may serve as important intervention sites for working parents with young children.

The goal of this study is to extend past research and examine the pathways connecting employment conditions (e.g., job autonomy, time urgency) to maternal mental health and mother–infant interaction quality during a key phase of life—the transition to parenthood. Specifically, from a family stress perspective (Conger 2005), we test whether psychological distress (i.e., anxious and depressive symptoms) mediates the relationship between workplace demands and observed mother–infant interaction quality within a diverse sample of low-wage, new mothers returning to paid employment a few months after childbirth.

Work Conditions, Parenting and the Mediating Role of Psychological Distress

Conger's (2005) family stress framework provides the conceptual underpinnings for the current study. The family stress model posits that contextual stressors (e.g., poor employment conditions, low wages) can disrupt effective caregiving via parental mental health (Conger 2005). This suggests that the

relationship between maternal employment and parenting quality will vary depending on whether employment conditions enhance or interfere with mothers' mental health.

Extant literature indicates that some occupational characteristics known to promote mental health are structural in nature—such as wages and hours—whereas other characteristics pertain to workers' day-to-day experiences on the job (perceived conditions of employment). For example, workers' influence and discretion over their work, the interest of the work itself, and employees' relationships with colleagues and supervisors have all been shown to affect workers' satisfaction and well-being (Costigan et al. 2003; Heinrich 2014). Although there is evidence that both structural and perceived dimensions of employment can have profound effects on employees' mental health, the majority of studies that examine low-income work and family issues during the transition to parenthood focus exclusively on structural work conditions—such as work hours, schedules and the benefits and policies that provide parents with flexibility. Less attention has focused on perceived conditions of employment in relation to new mothers' mental health and parenting (Perry-Jenkins et al. 2011). For example, it may not be number of hours one works that creates distress, but the experience of lack of agency around employment hours that takes a toll on new parents' mental health.

Importantly, these work–family processes outlined by Conger occur within distinct social contexts. Bronfenbrenner's bioecological framework (Bronfenbrenner and Morris 2006) posits that work–family processes may differ within unique ecological niches, making it important to look within contexts, in this case low-income families, to better understand the ways in which paid work is positively and negatively related to parenting. Specifically, the Process-Person-Context-Time (PPCT) model laid out by Bronfenbrenner informs this work by examining how the work–family connections (processes) hypothesized in Conger's model occur for working mothers (person), within low-income families (context), and at a particularly stressful life transition, new parenthood (time). Thus, an aim of the current study is to examine the direct and mediated processes connecting both structural and perceived workplace conditions to mothers' mental health and parenting quality for mothers in low-income families.

Structural Employment Conditions, Maternal Well-Being and Parenting

Work Hours

The literature connecting employment hours to mothers' mental health is inconclusive, although there is a substantial body of literature indicating that very long work hours (i.e., more than 48 h per week) are detrimental to employees' well-being

(Gray et al. 2004; Morris and Levine Coley 2004). Some researchers have found that working full-time has negative repercussions for mothers' mental health (Akinori 2011; Baxter et al. 2007), whereas others have found that full-time employment is protective for mothers' mental health (Bartley et al. 1992). Empirical and theoretical evidence suggests that moderating variables such as job quality and social class may account for these discrepant findings (Brooks-Gunn et al. 2010; Gray et al. 2004; Lucas-Thompson et al. 2010; Raver 2003). For example, Coley et al. (2007) found that stable, full-time employment among low-income, urban mothers predicted higher self-esteem and increased psychological well-being.

At the same time, it is possible that long work hours could directly interfere with mothers' parenting quality, particularly when a mother's employment schedule requires extended separations from her child (Heinrich 2014). Other researchers, however, have observed that mothers may compensate for extended separations by engaging in more positive interactions with their children (Bass et al. 2009) or spending a greater proportion of the time they do have with their children engaging in high quality caregiving activities (Huston and Rosenkrantz Aronson 2005).

Preferred Work Hours

There is evidence suggesting that employees who work more hours than they prefer to work are more likely to experience work-life conflict and have poorer physical and mental health (Gray et al. 2004). In contrast, working fewer hours than preferred (i.e., involuntary part-time employment) has been associated with increases in employees' depressive symptoms (Dooley et al. 2000).

Therefore, mothers who are employed part-time but wish to work full-time may experience levels of stress comparable to mothers who are employed full-time but wish to work part-time. Few studies directly ask low-income parents how many hours they wish to be employed, and it is possible that this omission accounts for some of the disparate findings in the research connecting work hours to mental health and parenting. Based on the literature on violated expectations (Belsky et al. 1986; Hackel and Ruble 1992), we reasoned that it may not be the number of hours that affects mental health, but the experience of violated expectations or lack of agency and control around work hours that negatively impacts mother's wellbeing

Perceived Employment Conditions, Maternal Well-being and Parenting

Job Autonomy and Time Urgency

Early research on job stress, caused by low job autonomy and high time pressure or urgency, can negatively impact

workers (Kasl 1974; Kohn 1979) and affect the quality of their parenting (Gassman-Pines 2013; O'Neil 1994; Repetti 1992, 1994). In the current study, "job challenge" refers to workers' evaluations of their jobs as stimulating, challenging, varied, and self-directed. In contrast, "time pressure" refers to high time demands and requirements that a lot be produced in a limited time frame. Several studies have found that these types of job stressors (i.e., low autonomy and challenge and high time urgency) are associated with increased depression and anxiety among employees (Grzywacz et al. 2002; Morris and Levine Coley 2004). For example, a study analyzing data from the 2002 National Study of the Changing Workforce found that employees with higher levels of job autonomy, defined as discretion over how the job is to be performed, were less likely to feel stressed and more likely to be satisfied with their job, family, and life in general (Lee and Cummings 2008; Thompson and Prottas 2006). The authors also found that employees who felt they had more control over their job experienced more positive spillover between work and home. These findings suggest that perceptions of control at work may promote psychological health and enhance parenting quality among employees and their families.

There is some research indicating that parents who experience high degrees of autonomy, challenge and self-monitoring at work apply these same cognitive resources to their interactions with their children, and therefore engage in higher quality parenting (Greenberger et al. 1994). For example, Menaghan and Parcel (1991) found that greater job autonomy and complexity were related to more positive parenting practices for mothers. Likewise, more recently Goodman et al. (2011) found that in the presence of multiple risk factors, lower occupational self-direction was associated with lower levels of engagement during a father-infant interaction task. Relatedly, Greenberger et al. (1994) found that among parents of school-aged children, lower levels of occupational complexity, challenge, and stimulation in the workplace predicted lower quality parenting practices.

Numerous studies point to the negative effects of time pressure at work on workers well-being, and a few suggest time pressure can negatively impact parenting (O'Neil 1994; Repetti 1992, 1994). Much of the more recent research on the impact of time demands at work has found that the effects of this type of job pressure are conditional on resources on the job. Specifically, the job demands-resources model posits that the negative impact of high time demands at work can be buffered by resources such as supportive supervisors or co-workers (Bakker and Demerouti 2007; Bakker and Brummelhuis 2011). For example, Minnotte (2016) found that job pressure (which tapped into time pressure at work) under conditions of high supervisor support did not negatively impact parenting quality. Thus, the current study first directly measures the

relationship between mothers' experiences of autonomy and time urgency in the workplace and parenting and then considers (1) whether supervisor support (job resource) may buffer the effect of stressful job conditions on maternal well-being, and (2) whether perceived employment conditions (autonomy, time pressure) predict parenting quality via maternal well-being.

Workplace Social Support

Research indicates that social support at work also plays an important role in promoting positive work–family spillover (Perry-Jenkins et al. 2011; Plaisier et al. 2007; Thompson and Prottas 2006). Employees who have supportive supervisors are less likely to experience work–family conflict and experience lower levels of distress (Anderson et al. 2002; Grzywacz and Butler 2005; Perry-Jenkins et al. 2011; Schieman et al. 2006).

Several research studies have found an association between positive interactions with supervisors and more nurturing parenting practices (Gassman-Pines 2011; Goodman et al. 2011; Repetti and Wood 1997). In a daily diary study of low-income women and their children, Gassman-Pines (2011) found that mothers who reported negative exchanges with their supervisors were more withdrawn and harsh when interacting with their children. However, in this study, mothers' caregiving quality was measured via self-report, so it is possible that mothers assessed their own parenting quality more critically on days when they had negative exchanges with supervisors. Goodman et al. (2011) examined the relationship between workplace support and levels of paternal sensitivity among low-income fathers and found that a less supportive workplace environment was associated with lower parenting quality. Together, these studies indicate that employment conditions have the potential to shape low-income parents' mental health and parenting quality, and highlight the need for longitudinal studies that examine the underlying mechanisms and pathways connecting workplace conditions to parenting quality.

The Current Study

The current study addresses a significant gap in the literature by examining how both structural and perceived workplace conditions are associated with maternal mental health and parenting quality within a sample of low-wage, employed mothers. The transition to parenthood provides a critical time to examine work and family issues, especially among low-income mothers who must return to work soon (usually within 12 weeks) after giving birth due to limited parental leave policies, and often return to jobs that have

little flexibility (Perry-Jenkins et al. 2007). Thus, we are focusing on a significant but small window of time when working mothers are juggling the high demands of new infant care while holding down a low-wage job.

Research Questions and Hypotheses

The current study addresses two specific research questions:

Research Question #1: Are structural (work hours, work hours preferences and wages) and perceived (time urgency and autonomy) work demands that mothers encounter when they return to paid employment directly associated with observed mother–infant interaction quality when babies are 1-year-old, and will maternal psychological distress mediate this relationship?

Research Question #2: Does workplace social support, defined as high levels of supervisor support, moderate the relationship between work demands (high urgency or low autonomy), mental health and lower levels of maternal observed mother–infant interaction quality?

Based on the family stress perspective (Conger 2005), we hypothesize that demanding structural and perceived employment conditions will be associated with lower quality mother–infant interactions, and that maternal psychological distress will mediate this relationship. We also hypothesize that workplace social supports will buffer against the potential negative effects of high demand work on maternal psychological distress and interaction quality.

Method

Participants

This study was conducted in compliance with a university Institutional Review Board (IRB). Participants for this study were drawn from a larger longitudinal study examining the transition to parenthood among low-income, working families (Author, date). Women in their third trimester of pregnancy were recruited from multiple prenatal classes at hospitals in Western New England. Data were obtained during in-depth 2–3-h interviews where parents completed survey questionnaires and answered open-ended questions about their experiences of new parenthood. Mothers were required to meet the following criteria in order to be included in the study: (1) employed for at least 20 h a week prior to the birth of their baby, (2) planned to return to work within 6 months of having the baby, (3) no higher than an Associate's degree and employed in unskilled or semi-skilled occupations. Recruitment and selection procedures for the broader study are described in more detail in a previous paper (Author, date). The current study focuses on

70 mothers from the original study who agreed to participate in a filmed parent–child interaction task shortly after returning to paid employment. These mothers did not differ on key demographic variables such as work hours, income, or age from those families who did not participate in the filmed parent–child interaction task. The sample for the present study includes 35 White, 17 Latina, 14 African American, 1 Asian, and 3 Multiracial identified mothers. Mean age of mothers was 25.5 years ($SD = 5.1$). The majority of families were low income, defined as working families earning less than twice the poverty line. Families earning more often did this by holding down multiple jobs or working “under the table” for additional income. Approximately half ($n = 34$) mothers were cohabiting with their child’s biological father, 29% ($n = 20$) were married, and 23% ($n = 16$) were single. Mothers reported their maternity leave to be 9.5 weeks, on average. Eighty-eight (88%) of mothers in our sample returned to paid work within 14 weeks of the birth.

Procedure

Data for the present investigation were collected during in-home interviews at 3 time points: (1) during the third trimester of pregnancy; (2) 1 month after mothers returned to paid employment; (3) 1-year postpartum. Interviews were conducted by the principal investigator and trained doctoral research assistants. Participants received \$50 for each of the in-home interviews. Observational parent–child interaction data were collected at the 1-year postpartum interview. At this time point, a semi-structured, 10-min mother–child observation was conducted at the family’s home. Mothers were provided with a standard set of toys and instructed to play with their babies as they normally would. This 10-min “free play” interaction was filmed and subsequently coded by trained undergraduate research assistants. The free play interaction and method for computing the parent–child interaction scores were modeled on procedures used in the National Institute of Child Health and Human Development (NICHD) Study of Early Childcare (NICHD Early Child Care Research Network 1999). That study has reported excellent predictive validity for sensitivity measured in a 10-min free play interaction, predicting many aspects of child development, including attachment, behavior problems, and social skills (Newland et al. 2013; NICHD Early Child Care Research Network 1999).

Assessments of work characteristics and mental health were collected shortly after mothers had returned to work (on average 4 months postpartum) via face-to-face interviews. Work conditions measured when mothers returned to paid employment were used to predict future mother–infant interaction quality when babies were 1-year-old, controlling for baseline levels of distress measured during the third trimester of pregnancy.

Measures

Mother–Infant Interaction Quality

Three domains of interaction quality were assessed: (1) *responsiveness*, (2) *detachment*, and (3) *stimulation of development*. *Responsiveness* rates the degree to which mothers are sensitive, prompt, and responsive to their infants; *detachment* measures mothers’ level of physical and emotional engagement (e.g., eye contact, verbal interaction, responses to bids for attention); and *stimulation of development* refers to the level of scaffolding of activities that mothers engage in with the baby (e.g., labeling the child’s experiences, reinforcing the child’s attempts at mastery). High quality parenting is indicated by high levels of responsiveness and stimulation and development, and low levels of detachment. These three dimensions of maternal caregiving quality were coded in 1-min intervals on a scale from 1 to 5, indicating the degree to which the behavior characterized the interaction. Each 10-min free play mother–child interaction was double coded by two independent raters. Reliability estimates were computed on a per-dyad basis. Reliabilities (interclass correlations) averaged across pairs of raters were 0.76 for responsiveness, 0.68 for detachment, and 0.70 for stimulation of development.

Work Hours and Income

Mothers provided detailed information on their work schedules which were used to construct a total work hours per week variable based upon a typical work week. Mothers also reported their annual gross income during the face-to-face interview.

Work Hours Discrepancy

To create this measure, mothers were asked how many hours they preferred to work and how many hours they actually worked each week. A work hours discrepancy variable was created by subtracting the work hours mothers preferred to work from the number of hours per week that they actually worked, and then calculating the absolute value. Higher numbers indicated a greater discrepancy between preferred and actual weekly work hours.

Job Autonomy and Time Urgency

Job autonomy and time urgency were assessed using a scale developed by O’Neil (1994) and used by Greenberger et al. 1994. The questionnaire used a 5-point Likert scale with responses ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The complete scale contains 26 items: 18

items assessed job autonomy, or the degree to which the respondent's job is challenging and self-directed. A sample item assessing autonomy was, "I feel like I have a great deal of influence in the decision-making process at my job". Cronbach's alpha for *autonomy* was 0.80. Time urgency, or the degree of speed and time pressure experienced on the job, was assessed by the remaining 8 items. A sample item measuring urgency was, "I never have enough time to get the job done." In the current sample, Cronbach's alpha for urgency was 0.79.

Supervisor Support

Supervisor support was assessed with a 6-item scale developed by Caplan (1975) with responses ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The supervisor support scale assesses the degree to which the respondents' supervisors made their work life easier, were easy to talk to, and could be relied on. A sample item measuring supervisor support was, "My supervisor goes out of his/her way to make my work life easier". In the current sample, Cronbach's alpha for *supervisor support* was 0.84.

Psychological Distress

Distress was assessed using an average of mothers' depressive and anxious symptoms. Given the small sample size we created a composite variable to enhance statistical power. Symptoms of depression were measured via the Center for Epidemiologic Studies Depression Scale (CES-D), a 20-item questionnaire designed to measure depressive symptomatology (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 1 day a week)* to 3 = *most or all of the time (5–7 days a week)*. Symptoms of anxiety were measured using the state scale from the State-Trait Anxiety Inventory (STAI) (Spielberger 1983). This 20-item questionnaire evaluates present feelings of apprehension, tension, nervousness and worry; responses range from 1 = *never* to 4 = *very much so*. Cronbach's alpha for the composite distress index was 0.94. The composite psychological distress variable was used as the mediator in all analyses.

Infant Temperament

Infant temperament was measured using the Infant Behavior Questionnaire (Gartstein and Rothbart 2003). The items on the IBQ ask parents to rate the frequency of specific temperament-related behaviors observed over the past week.

Parity

During the face-to-face interview, mothers reported on how many children were living in the home.

Analytic Approach

Initial descriptive analyses revealed that the scores of five mothers were extreme outliers falling two or more standard deviations above the mean on the CES-D. We ran our analyses with and without these outliers in the models, and only found statistically significant results when we excluded mothers with extremely high CES-D scores, resulting in a final reduced sample of 65 mothers. Our findings are consistent with previous research that has shown that women with extremely high, clinical levels of depression (CES-D > 26) may differ systematically from women with moderate depressive symptoms (Tandon et al. 2012). Given the high levels of clinical psychopathology of the women in the outlier group, it is likely that they were simply less susceptible to day-to-day work-life stressors compared to women with moderate depressive symptoms.

Parity and mothers' report of child temperament were also included in initial analyses as control variables, but were unrelated to all outcomes, and therefore deleted from the final models in order to preserve statistical power. Separate analyses were run by child gender with no effects. Mothers' age was controlled for in all analyses. We also controlled for mothers' baseline psychological distress, measured during the third trimester of pregnancy.

Ordinary least squares path analysis (Hayes 2012; Preacher and Hayes 2008) was used to examine the direct and mediated effects of perceived and structural workplace conditions on mother–infant interaction quality. The direct effect of workplace conditions on parenting quality is the unstandardized regression weight in a model predicting parenting interaction quality from workplace conditions and mothers' distress (path c'). The direct effect in this model quantifies how two cases that differ by one unit on X (workplace conditions) are expected to differ on the outcome Y (interaction quality), when controlling for the mediator M (distress). The indirect, or mediated, effect (ab) represents how interaction quality is influenced by workplace conditions through a causal sequence in which X (workplace conditions) influences M (distress), which in turn influences Y (interaction quality). PROCESS—a macro for SPSS developed by Preacher and Hayes (2008)—was used to test the statistical significance of the cross product (ab) path, which directly tests the statistical significance of the mediator (distress) on the relationship between workplace conditions and mother–infant interaction quality. Bootstrapping was used to generate a confidence interval

for the mediated effect. Mediation was considered significant if the confidence interval did not include zero.

Results

The means and standard deviations for the main study variables are presented in Table 1. Four months after childbirth, mothers were employed an average of 30 h per week. Most mothers (64%) reported a preference for working at this time; however, only seven (12%) reported that they were employed for the number of hours they preferred. The average discrepancy between preferred hours worked and actual hours worked was 17.7 h ($SD = 13.8$). Approximately half of mothers (48%) were working more hours than they preferred, whereas 40% of mothers preferred to work more hours per week.

Structural Work Conditions And Mother–Infant Interaction Quality

Work Hours

Work hours had a significant direct effect on one aspect of parenting quality: mothers' responsiveness ($B = 0.01$, $p = 0.02$). Women who worked more hours per week were more responsive when interacting with their infants. There was also a marginal direct relationship between work hours and mothers' detachment ($B = -0.01$, $p = 0.09$), with more work hours linked to less detachment (Table 2). The discrepancy between preferred work hours and actual work hours had a marginal direct effect on mothers'

responsiveness such that larger discrepancies between preferred and actual work hours were predictive of lower levels of responsiveness ($B = -0.01$, $p = 0.08$). Work hours were unrelated to the third index of parenting assessed, mothers' stimulation of development. In addition, there was no evidence that maternal distress significantly mediated the relationship between work hours and interaction quality (Table 2).

Income

Mothers' annual income did not directly predict mother–infant interaction quality (Table 2), nor was there evidence of significant mediation.

Perceived Work Conditions And Mother–Infant Interaction Quality

Autonomy

There was no significant direct effect of job autonomy on any of the three parenting indices; however, psychological distress significantly mediated the relationship between job autonomy and maternal responsiveness ($ab = 0.13$, 95% CI: 0.019 to 0.310). As presented in Fig. 1 and Table 3, mothers who reported having more autonomy at work endorsed lower levels of psychological distress ($a = -7.63$), which, in turn, predicted increased maternal responsiveness ($b = -0.02$). No relationships emerged between job autonomy and the two other indices of parenting: maternal detachment or stimulation of development.

Time Urgency

Contrary to what we hypothesized, there was a significant direct effect of time urgency at work on all three of our parenting indices, such that that higher levels of urgency directly predicted increased maternal responsiveness, increased stimulation of development and decreased detachment (Table 3). However, an examination of the mediated effects indicated that mothers' psychological distress significantly mediated the relationship between urgency and responsiveness ($ab = -0.10$, 95% CI: -0.229 to -0.004). Mothers who reported higher levels of urgency endorsed higher levels of psychological distress ($a = 5.60$), which, in turn, predicted lower levels of maternal responsiveness ($b = -0.02$). In other words, urgency predicted increased distress, which, in turn, predicted decreased maternal responsiveness (Fig. 2). There was no evidence of significant mediation in the models including stimulation of development or detachment.

Table 1 Descriptive statistics for independent and dependent variables ($N = 65$)

	M	SD	Min.	Max.
Structural work conditions				
Total work hours	30.00	11.24	15.00	59.00
Work hours discrepancy	17.68	13.81	0.00	50.00
Mother's annual gross income	\$16,041	\$10,851	\$5,460	\$42,000
Perceived work conditions				
Work urgency	3.20	0.82	1.50	4.75
Work autonomy	3.44	0.49	2.40	4.61
Supervisor support	3.84	0.81	1.33	5.00
Parenting quality				
Responsiveness	2.93	0.50	1.60	4.30
Detachment	1.77	0.62	1.00	4.23
Stimulation of development	1.72	0.42	1.00	3.15

Table 2 Direct effects of structural work demands on parenting quality

Direct effects of structural work demands on parenting quality (c' path)		Coefficient	SE	t	p
Total work hours		0.01	0.01	2.42	0.02*
Total work hours → responsiveness		−0.01	0.01	−1.74	0.09
Total work hours → detachment		0.01	0.01	1.50	0.15
Total work hours → stim. of development					
Work hours discrepancy					
Work hours discrepancy → responsiveness		−0.001	0.01	−1.81	0.08
Work hours discrepancy → detachment		0.00	0.00	0.49	0.62
Work hours discrepancy → stim. of development		−0.01	0.01	−1.42	0.16
Mother's gross income					
Income → responsiveness		0.00	0.00	−1.62	0.10
Income → detachment		0.00	0.00	0.87	0.30
Income → stim. of development		0.00	0.00	−0.62	0.54
Indirect effects of structural work demands on parenting through distress (ab path)*		Effect	Boot SE	95% Bootstrapped CI	
				Lower	Upper
Total work hours					
Responsiveness		−0.00	0.01	−0.004	0.001
Detachment		−0.00	0.00	−0.003	0.002
Stim. of development		−0.00	0.00	−0.004	0.014
Work hours discrepancy					
Responsiveness		0.00	0.00	0.000	0.000
Detachment		0.00	0.00	0.000	0.000
Stim. of development		0.00	0.00	0.000	0.000
Mother's gross income					
Responsiveness		−0.00	0.00	−0.009	0.001
Detachment		0.00	0.00	−0.001	0.007
Stim. of development		0.00	0.00	−0.001	0.004

95% Bootstrapped CI = bias-corrected confidence interval; 10,000 resamples

* $p < 0.05$

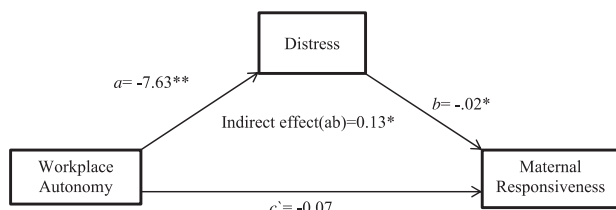


Fig. 1 Mediation model: work autonomy and responsiveness. * $p < 0.05$, ** $p < 0.01$

Supervisor Support As A Moderator Of Work–Family Relations

Contrary to our hypotheses, supervisor support was not a significant moderator in any of the models tested.

Supervisor support did not mitigate the negative effects of work demands on mothers' distress and mother–infant interaction quality (Index of Moderated Mediation = 0.002, 95% CI: −0.019 to 0.458).

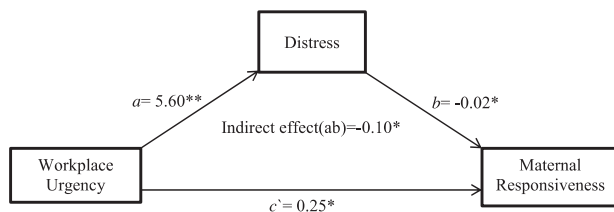
Discussion

The current study examined the relationships between low-wage mothers' employment conditions and parenting quality during the transition to parenthood, and the potential mediating role of mothers' psychological distress. In our longitudinal analysis, we found partial support for hypotheses linking mothers' structural and perceived work conditions to mother–infant interaction quality at 1 year postpartum.

Table 3 Direct and mediated effects of perceived work demands on parenting quality

Direct effects of structural work demands on parenting quality (c' path)		Coefficient	SE	<i>t</i>	<i>p</i>
Work urgency					
Urgency → responsiveness		0.025	0.10	2.38	0.02*
Urgency → detachment		−0.26	0.19	−1.10	0.05*
Urgency → stim. of development		0.18	0.09	2.09	0.04*
Work autonomy					
Autonomy → responsiveness		−0.07	0.14	−0.39	0.69
Autonomy → detachment		−0.05	0.23	−0.22	0.82
Autonomy → stim. of development		−0.07	0.15	−0.46	0.65
Indirect effects of perceived work demands on parenting through distress (ab path*)		Effect	Boot SE	95% Bootstrapped CI	
				Lower	Upper
Work urgency					
Responsiveness	−0.10*	0.06	−0.229	−0.004	
Detachment	0.06	0.10	−0.049	0.221	
Stim. of development	0.00	0.05	−0.087	0.100	
Work autonomy					
Responsiveness	0.13*	0.09	0.019	0.310	
Detachment	−0.08	0.10	−0.360	0.056	
Stim. of development	−0.00	0.06	−0.128	0.132	

95% Bootstrapped CI = bias-corrected confidence interval; 10,000 resamples

p* < 0.05Fig. 2** Mediation model: work urgency and responsiveness. **p* < 0.05, ***p* < 0.01

Structural Work Demand, Psychological Distress and Parenting

We found evidence of a direct relationship between mothers' work hours and observed parenting quality, but no significant relationship between mothers' income and parenting. Mothers who worked more hours per week were more responsive and, at the trend level, less detached when interacting with their infants, highlighting the positive impact of early full-time employment on parenting for low-income mothers. Contrary to our hypothesis and the Family Stress Perspective, mothers' distress did not significantly mediate this relationship. It's possible that mothers who work full-time may engage in higher quality interactions with their children in order to compensate for the time they spend outside of the home (Bass et al. 2009). It is also possible that unmeasured mediators, such as self-efficacy or

self-esteem, may account for the association between greater work hours and higher quality parenting. Future research should examine alternative mechanisms connecting work hours to parenting practices within low-income samples. We suspect the lack of relationship between income and parenting quality may be a function of the intentionally restricted income range of our low-income sample.

We observed a trend indicating that work preferences matter for new working mothers. Specifically, mothers who reported a greater discrepancy between the number of hours they preferred to work and the number of hours they actually worked were less responsive with their infants. This finding suggests that, over and above work hours and wages, it may be the experience of violated expectations or lack of agency around work obligations that are negatively related to mothers' parenting quality. Given our small sample, this finding should be viewed with caution, but it does suggest that future work should look beyond hours to consider mothers' work preferences.

Perceived Work Demand, Psychological Distress and Parenting

In general, the strongest support for hypothesized relationships and the family stress framework emerged around

perceived work conditions, maternal distress and parenting, although differences were apparent in the effects of time urgency versus work autonomy on parenting. Overall, we found that time urgency at work had both positive and negative effects on future parenting quality. When controlling for maternal distress, greater urgency at work actually predicted higher quality mother–infant interactions on all three of our parenting indices. There are several potential explanations for this unexpected finding. First, it is possible that women who report higher levels of time pressure at work are employed in more prestigious and demanding jobs than women who do not report high levels of time pressure at work. In this way, urgency may be a proxy for job status. It is also possible that mothers who report higher levels of urgency at work are more likely to engage with their surroundings in a more active or involved manner. Consistent with this interpretation, Greenberger et al. (1994) found that mothers who reported increased time pressure at work were more likely to engage in cognitively challenging interactions with their 5- and 6-year-old daughters. Time pressure at work necessitates prioritizing, problem solving and quick thinking, and it is possible that these qualities generalize to a more engaged and stimulating parenting style.

However, our findings also indicated that high levels of time urgency can indirectly interfere with parenting quality. Examination of the mediated pathways revealed that more time urgency at work predicted increased anxiety and depression, which, in turn, predicted lower levels of maternal responsiveness. This finding is consistent with the Family Stress Perspective which holds that contextual stressors interfere with parenting via the toll on parents' mental health and wellbeing. Taken together, these findings indicate that there are different pathways through which time urgency influences parenting, and that urgency can have both positive and negative effects on the quality of mother–infant interactions. Thus, our findings around time urgency may raise more questions than they answer, but suggest that the impact of urgency on parenting may operate through multiple pathways, including mental health. More research is needed to disentangle the mechanisms connecting urgency at work to parenting quality, and to clarify the specific circumstances under which time urgency at work may actually enhance early parenting quality among low-income, working parents. Consistent with our hypothesis, mothers who reported greater autonomy at work endorsed lower levels of psychological distress and, in turn, engaged in more responsive parenting with their infants. This is a notable finding because it suggests that certain conditions of low-wage work can actually enhance mothers' capacity to be responsive caregivers to their children. These results are in keeping with prior research that shows that feeling little challenge or stimulation at work can have a

negative influence on employee well-being and family life (Gassman-Pines 2013; Lehmann et al. 2011). Our results build on these findings and suggest that autonomy at work increases responsive parenting via its salutary effect on mothers' mental health.

It is important to note that significant mediated effects were only found in models that included maternal responsiveness as the parenting outcome. It is possible that workplace conditions differentially predict specific facets of parenting or that our sample size was too small to detect the less robust effects within these models. Within our coding system, responsiveness was more reliably measured than detachment and stimulation of development, so this may also help explain the weaker results for the latter two measures. Nonetheless, given our results, future studies should examine whether using a composite score or global parenting measure instead of individual parenting subscales may mask more nuanced relationships between predictors and specific facets of parenting.

Moderating Role of Supervisor Support

We did not find evidence for our hypothesis that supervisor support would moderate the effects of workplace conditions on mothers' distress and parenting. These results contradict those reported by several researchers (Perry-Jenkins et al. 2011; Thompson and Prottas 2006) who have found that supportive work environments mitigate the deleterious effects of demanding work conditions on parents' mental health. Mothers in our study who reported high levels of supervisor support did tend to report lower levels of anxiety and depression; however, supervisor support did not significantly moderate the pathways connecting high urgency at work to mothers' mental health and caregiving. It may be that for the highly strained women in our study, supportive supervisors could not counteract the negative effects of workplace stressors on mothers' mental health.

Limitations and Strengths

This study has a number of limitations. First, not all mothers from the broader study agreed to participate in the filmed mother–infant interaction task, and several mothers had not returned to work when data on employment conditions were collected. Therefore, our sample size and statistical power were limited. Second, this study does not rule out the possibility that mothers who report greater levels distress may experience their work as more urgent or less fulfilling than parents reporting fewer symptoms; that is, subjective experiences of work conditions may be related to variations in parents' mental health. However, the fact that we

controlled for baseline levels of distress provides some confidence that our findings that work conditions influence maternal mental health and parenting have credibility. Finally, the current study focused only on employed mothers, yet many of the children in our study also had employed fathers.

Additionally, the aim of the current investigation was to examine how one specific contextual factor—experiences at work—predicts parenting quality. However, there are many intersecting spheres of influence that affect family life and parenting quality, especially for low-income women who may face a range of stressors, including classism, discrimination, housing instability, and prejudice. For example, the pressure of balancing early return to employment and new motherhood is undoubtedly compounded for women who are also contending with the effects of systemic racism. Unfortunately, our sample was too small to conduct meaningful subgroup analyses (for example, for black working mothers); however, future studies must attend to the ways that identities and stressors intersect, especially among marginalized groups.

In addition, it is likely that mothers' partners may play a critical role in either mitigating or exacerbating the nature of the relationship between mothers work and their parenting and a limitation of the current study is the lack of attention to fathers. Future work should explore the role of fathers in moderating work–family connections for mothers.

The current study has three key strengths. First, many previous research studies that have examined linkages between low-income employment conditions and parenting behaviors are cross-sectional. Our longitudinal design provides a more methodologically rigorous test of the pathways connecting mothers' early work experiences to future caregiving quality. Second, the use of observational measures to assess parenting quality is unusual in the work–family literature, although structured observational measures have consistently been shown to be more reliable predictors of child outcomes than self-report parenting measures (Zaslow et al. 2006). Finally, the inclusion of both structural (hours, and wages) and perceived workplace conditions (time urgency and autonomy) more accurately assesses the many facets of maternal work that may influence mental health and parenting.

Conclusion

Our results highlight the potential positive influences of consistent full-time employment on low-income families during the transition to parenthood, and help clarify the pathways connecting low-wage work conditions, mental health and parenting quality. Mothers who found their post-childbirth work experiences to be more engaging and self-

directed were less distressed and, in turn, more responsive when interacting with their babies, whereas time urgency at work—when predictive of anxiety and depression—had a deleterious effect on future parenting quality. These findings highlight the variability within low-wage workers' employment experiences and help move the field beyond the assumption that all low-wage work is bad work that interferes with effective parenting. Workplace policies and interventions designed to facilitate a rewarding and stimulating work environment in low-income occupations may be crucial in supporting optimal parenting practices and child outcomes in these families.

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Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed were in accordance with the ethical standards of the Institutional Review Board at the authors' institution and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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