Mothers' Nonstandard Work Schedules and the Care Arrangements of Young Children·*

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Introduction

The employment landscape for mothers of young children has changed dramatically in recent decades. Economic trends, policy pressures and incentives, and changing social norms have pushed employment rates among mothers above 70 percent (Bureau of Labor Statistics, 2011). In addition, the emergence of a 24/7 economy and expansion of the service sector have substantially altered the parameters of parents' work. One result of this shift has been an increase in the number of jobs requiring night, evening, weekend and/or rotating hours; at least 40 percent of mothers report working nonstandard hours at some point during the first three years of their child's life (Presser, 2001; 2004).

A key factor in determining the net benefit of parents' employment for families is the extent to which they are able to ensure care and supervision of children during the time they are at work. For most parents of young children not yet in school, this means finding suitable, affordable and reliable care arrangements. A small, but growing literature on the implications of parents' nonstandard employment for children's care arrangements suggests that such schedules provide desired flexibility for some families, while creating significant challenges for others.

The goal of the current study is to contribute to this literature by providing new and timely information about the associations between mothers' nonstandard work hours and the care arrangements of very young children (ages 1 and 3) for a large and diverse sample of families living in U.S. cities. We consider work schedule effects on the type and intensity (i.e., number of hours and arrangements) of care that children experience, as well as on the likelihood that mothers encounter difficulties in coordinating employment and child care. Importantly, we consider whether specific types of nonstandard work (e.g., night vs. weekend hours) have unique implications for care arrangements.

Background and Motivation

Although an established literature exists on the impact of nonstandard schedules on workers, research focused on the implications for children and families is a more recent development. Within this emerging literature, a handful of studies have considered the mediating role of child care. Several qualitative studies, focused primarily on low-income mothers in the post-welfare reform era, reveal significant complexities in coordinating work schedules and care for children. Nonstandard and irregular work hours often require "patchworks" of care arrangements flexible enough to meet schedule demands (Henly & Lambert, 2005; Scott et al., 2005), and are associated with greater use of informal care by relatives or neighbors (Henly & Lyons, 2000). The few quantitative studies that have examined child care use among mothers working nonstandard schedules report findings that are generally consistent with those in the qualitative literature. Mothers' nonstandard work is associated with less frequent use of center-based care for young children (Han, 2004; Kimmel & Powell, 2006; Presser, 2003) and greater use of informal care (Casper & O'Connell, 1998). Less clear is whether nonstandard work increases or decreases the likelihood that children will be in multiple arrangements (either concurrently or successively). Measurement differences (primarily in the time period over which number of arrangements are counted) may account for discrepancies between studies that report more arrangements for children of nonstandard workers (Chaudry, 2004; Folk & Yi, 1994; Presser, 2003) and those that do not find this link (Henly, 2006; Morrissey, 2008). With the exception of Han (2004), none of these studies focused exclusively on mothers with very young children, and none, to our knowledge, has examined whether child care usage patterns vary by specific types of nonstandard work (i.e., night, evening, weekend and rotating hours).

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Methods

Data and sample

Data for this study come from the Fragile Families and Child Well-Being Study (FFCWS), a longitudinal birth cohort study of 4,898 children born between 1998 and 2000 in 20 large U.S. cities (see Reichman et al., 2001). The FFCWS includes an oversample of nonmarital births, which resulted in a large ethnic minority and low-income sample. Our study therefore provides important information about the coordination of employment and the care of young children within this population. Initial interviews with mothers and fathers took place in the hospital within two days of their child's birth, and follow-up interviews were completed when the child was one, three and five years old. In this study, we focus on employment and child care experiences at the time of the Year 1 and Year 3 surveys, with consideration of covariates measured during the baseline survey. Our analysis sample includes all mothers with complete data on employment status and schedule, and child care use (n=2,323). Data from Years 1 and 3 are pooled (i.e., up to two observations per respondent) given that analyses of each wave separately indicated few differences by child age for the particular outcomes examined in this study. This results in 4,545person-year observations.

Independent variables

The FFCWS collected detailed information about parents' work schedules as part of each follow-up interview. We use these data to create a series of indicators for whether mothers employed at the time of the survey worked (a) weekdays, (b) evenings, (c) nights, (d) weekends, and (e) different times each week. To provide a more complete picture of mothers' work experiences, the FFCWS allowed respondents to identify more than one schedule type if applicable; therefore, our derived schedule variables are not mutually exclusive. In the current analyses, we examine the effects of *any nonstandard work* (coded as "1" if one or more of the nonstandard schedules were identified), as well as the effects of each specific type of nonstandard schedule.

Dependent variables

As part of the Year 1 and Year 3 survey, respondents reported on all of the nonparental care arrangements currently being used by the family on a regular basis. From these data, we construct a series of dichotomous child care variables to characterize the type and amount of care that children experienced at each wave. Specifically, we identify whether the *child is in care fewer than 20 hours per week*; whether the *child is in more than one arrangement*; and, three variables indicating whether their primary arrangement is *home-based care with a relative*, *home-based care with a non-relative*, or *center-based care*.

At each time point, respondents were asked several questions about the compatibility of their current employment and child care arrangements. Our analyses focus on two dichotomous indicators of child care problems (whether in the past month *special arrangements had to be made because their regular child care arrangement had fallen thru* and whether they had *missed work or school because of difficulties arranging care*) and two continuous measures of the extent to which work schedules accommodate family needs (*work schedule makes it difficult to arrange care* and *work schedule create stress for parent and child*; 1=never, 4=always).

Control variables

We control for several characteristics of children, parents and households that may be related both to mothers' employment schedules and to child care usage patterns, including: child's age in years; child gender; a dummy variable for low birth weight (<2,500 grams); a dummy variable for whether the child has any physical disabilities; indicators of mothers' race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic, and "other"; mother's and father's age; mother's and father's education level (less than high school, high school degree or GED,); mother's cognitive ability as measured by the Wechsler Adult Intelligence Scale-Revised (WAIS-R); mother's relationship status (single, married to child's biological father, married to someone other than child's father, cohabiting with child's biological father, cohabiting with someone other than child's father);

number of children in the household; two dummy variables indicating whether a grandparent and/or another adult lives in the home; household annual income (in ten thousand dollar units); and a dummy variable for any receipt of welfare in the past 12 months. Finally, we also include a set of covariates that capture the intensity of mothers' employment; using respondents' reports of weekly employment hours, we create five dummy variables (0 hours or unemployed, 1-19 hours, 20-34 hours, 35-44 hours, or 45+ hours per week).

Analytic plan

Our primary strategy for addressing the study's guiding questions is to conduct a series of OLS regression analyses that use detailed information about mothers' work schedules to predict the type, intensity and stability of young children's care arrangements and mothers' experiences coordinating employment and the care of children. Logistic regression models are used for dichotomous outcomes. We examine effects across four models. In the first, we compare the effects of working some type of nonstandard schedule (coded as "1" if mothers report any nonstandard hours) to those of working a standard schedule only (the omitted category), controlling only for mothers' work hours. In the second model, we include an extensive list of covariates (described above) to evaluate the extent to which associations between work schedules and child care experiences are accounted for by baseline characteristics of children and families. The third and fourth models parallel the first two, but replace the general 'any nonstandard work' variables with indicators for specific types of nonstandard schedules (i.e., nighttime hours, evening hours, weekend hours, and work hours that change from week to week).

In models predicting type and amount of care, we include a dummy variable to identify mothers who are not employed. Across the two waves of data, approximately one-quarter of unemployed mothers report using a nonparental care arrangement on a regular basis. Unemployed mothers were not asked about employment-related child care problems or the manageability of work schedules, and are therefore excluded from the analysis of those variables.

Preliminary Results and Discussion

In this large urban sample of mothers with very young children (ages 1 and 3), we find that the experience of nonstandard work schedules is a common one. Across both waves, approximately 55 percent of mothers in the sample are employed and, of those, 60 percent report working at least some nonstandard hours on a regular basis. The most frequent nonstandard schedule reported is weekend work (46% of employed mothers) followed by work in the evenings (31%), in shifts that vary weekly (27%), and at night (15%). A majority of children whose mothers are employed are in a regular nonparental care arrangement, with slightly higher participation rates for mothers who work standard weekday hours only (83% versus 70% for mothers working any nonstandard hours). In addition, 26 percent of unemployed mothers report using child care as well.

Key regression results (shown as odds ratios) are presented in Table 1. We find that in comparison to standard work schedules, nonstandard schedules are associated with a greater likelihood that children will be in home-based care with relatives and a lower likelihood that they will experience center-based care. Models including specific types of nonstandard schedules suggest that this pattern is especially true in families where mothers work at least some nighttime hours. Center-based care is also significantly less likely to be the child's primary arrangement when mothers work weekend hours.

We also find associations between work schedules and the amount of care children experience. Children of mothers working any nonstandard hours are more than twice as likely as those of mothers working standard hours to be in part-time (vs. full-time) care, but they are also 1.5 times more likely to be in multiple arrangements concurrently. Specific types of nonstandard schedule are differentially associated with number of hours and arrangements. Nighttime and evening hours predict fewer overall hours in care, but also more arrangements. In addition, weekend hours are associated with more part-time care. Work schedules that vary from week to week are not uniquely predictive in these models, suggesting that information about the specific times that mothers work may be more useful than a general indicator of schedule regularity for understanding the particular aspects of child care examined here.

Our analysis of mothers' experiences with coordinating employment and the care of young children suggests that the timing of work hours influences their ability to do so successfully. We find that nonstandard work hours in general, and weekend hours in particular, are associated with a greater chance of regular care arrangements 'falling through'. Moreover, mothers who work night hours report missing work or school more frequently because of child care problems. Nighttime care is challenging to arrange and may be the most difficult type of care to replace on short notice if regular arrangements fall through. Mothers' own evaluations of the manageability of their work schedules also indicate challenges with combining nonstandard work and the parenting of young children. Compared to mothers working standard hours only, mothers working any type of nonstandard hours report more difficulty securing child care and increased stress for themselves and their children.

Although it has been suggested in the literature that some parents of young children may choose nonstandard schedules because it provides them with more satisfactory care arrangements (e.g., trading-off care with another parent or family member), our results indicate that for this sample of mothers, nonstandard employment is associated with greater difficulties in arranging care for children. Notably, these results are consistent across measures that are relatively objective (e.g., use of multiple arrangements, frequency of employment-related child care problems) and those that are more subjective (e.g., mothers' ratings of compatibility between work schedules and family needs). Implications of this research for policies related to parents' employment and early childhood care and education will be discussed in the final paper.

Table 1. Key Logistic Regression Results Predicting Child Care Outcomes from Mothers' Work Schedule

	Primary Arrangement is Home-Based, Relative			Primary Arrangement is Home-Based, Non-Relative			Primary Arrangement is Center-Based Care			Child in Part-Time Care (<20 hrs per week)			Child is in More Than 1 Arrangement			Mother Had to Make Special Arrangements Because Child Care			Mother Missed Work or School in Past Month due to Child Care		
	(1)		(2)	(1)		(2)	(1)		(2)	(1)		(2)	(1)		(2)	(1)		(2)	(1)		(2)
Mother works standard schedule only (omitted)																					
Mother is not employed	1.38	***	1.30	**	0.65	***	0.65	***	0.85		0.91	9.03	***	8.43	***	1.52	***	1.51	***	n/a		n/a	n/a		n/a
	(0.15)		(0.14)		(0.10)		(0.10)		(0.09)		(0.10)	(1.18)		(1.03)		(0.24)		(0.23)							
Mother works at least some nonstandard hours	1.40	***			1.10				0.68	***		2.15	***			1.51	***			1.34	***		0.87		
	(0.12)				(0.12)				(0.06)			(0.25)				(0.18)				(0.12)			(0.11)		
Mother works nights			1.51	***c,d			0.82				0.73	**d		2.08	***a,c,d			1.37	*			1.20			1.42	*b,c,d
			(0.20)				(0.14)				(0.10)			(0.32)				(0.23)				(0.16)			(0.26)	
Mother works evenings			1.12				1.05	a			0.86			1.50	***a			1.35	**			1.10			0.91	
			(0.12)				(0.14)				(0.09)			(0.19)				(0.18)				(0.11)			(0.14)	
Mother works weekends			1.10				1.13	a			0.85	*		1.25	*a			1.16				1.28	***		0.92	
			(0.10)				(0.13)				(0.08)			(0.15)				(0.15)				(0.12)			(0.13)	
Mother works different times each week			0.99	a			1.05	a			0.99			1.16	a			1.09	a			1.09			0.82	
			(0.10)				(0.13)				(0.10)			(0.14)				(0.15)				(0.12)			(0.12)	
Pseudo R-Squared	0.07		0.07		0.07		0.07		0.08		0.08	0.16		0.17		0.04		0.05		0.01		0.02	0.11		0.11	

Notes. n=3,865. Coefficients shown are odds ratios; robust standard errors appear in parentheses. Models control for full list of covariates described in the text. [a] significantly different than "unemployed" [b] significantly different than "evenings". [c] significantly different than "weekends". [d] significantly different than "different times".

*** p<0.01, ** p<0.05, * p<0.1