JOBS AND PARENTING 24-7: WORK SCHEDULES AND PARENTING OF THE WORKING POOR

by

Karen Bogen and Andrew Cherlin

Johns Hopkins University
Baltimore, Maryland

For Presentation at the 2004 Annual Meeting of the
Population Association of America
Boston, MA
April 1-3, 2004

ABSTRACT

The work-family literature is extensive, crosses disciplines, and covers an enormous range of topics. However, almost all of the research is based on largely homogeneous (white) samples of middle-class families, often dual-earner couples, and covers issues of division of domestic labor and other forms of conflict among dual-earner couples. It does not address the unique work-family issues of poor families. It is towards this limitation that we direct our work.

Our research focuses on the broad issue of work and family dynamics among the working poor, looking at one component of this dynamic, namely the effect of a nonstandard work schedule on parenting behavior and the subjective experience of parenting. We focus on the nonstandard work schedule (working evenings, nights, weekends, or rotating shifts), which middle-class families may choose strategically to balance work and family life but which may be imposed upon working poor families by the labor market. The goal of this research is to explore the effects of a nonstandard work schedule on the well-being of working poor families, measured by six outcomes that cover a range of parenting behaviors (family routines, parenting style, and time apart) as well as the subjective experience of parenting (perceived challenges, stress, and satisfaction).

Using data collected for *Welfare, Children, and Families: A Three-City Study*, the analysis consists of cross-sectional linear regression models to look at the relationship of working a nonstandard schedule to the six parenting outcomes, controlling for important factors related to family well-being. In the cross-sectional models, nonstandard work is found to be strongly associated with two measures of the subjective experience of parenting – overall parenting challenges (reported increases) and parenting satisfaction in particular (reported decreases) – and not at all associated with the objective measures of parenting.

INTRODUCTION AND BACKGROUND

The work-family literature is extensive, crossing disciplines, covering an enormous range of topics but reaching consensus on few. However, away from the specifics of the research content, there appear to be two consistent observations about the field of study – first, an admission to a lack of theoretical foundation for much of the research (for example, see Barnett 1998; Kingston 1989), especially the earliest work in this field; and, second, a limited population base on which much of that research is conducted, even at present (for example, see DeBord, Canu, and Kerpelman 2000; Garey 1999; Newman 1999). It is towards the latter limitation that we direct our research, using the most current, emerging, and relevant theoretical perspective. Our paper focuses on one component of work and family dynamics among the working poor, namely the effect of a nonstandard work schedule (working evenings, nights, weekends, or rotating shifts) on parenting outcomes.

Much of the literature on work-family issues appears to follow Hochschild's work in The Second Shift (Hochschild 1989; Reskin and Padavic 1994) by dealing largely with middle class families, addressing issues of division of domestic labor and other forms of conflict among dual-earner couples, and not addressing the unique work-family issues of poor families. These issues may include having a higher likelihood of being a single parent, working nonstandard hours or days, not being able to find a full-time job, paying a higher percentage of income for child care while having fewer options for high-quality child care, and having a job lower in the occupational rankings, which tends to have lower pay, less flexibility, and less security. In addition, Newman (1999) lists features of the typical job of the working poor – low pay, fluctuating hours, overnight shifts, poor or no benefits (health insurance, vacation, sick pay). These job characteristics make it more difficult for the working poor to raise a family and have a steady work record.

In the middle-class literature, the nonstandard work arrangement is sometimes viewed as a possible mechanism for balancing work and family (Garey 1999; Hattery 2001; Rubin 1994). But for the working poor, a nonstandard work schedule likely reflects the demand side of the low-wage labor market, not lifestyle choices, with unmarried and less educated mothers more likely to report working nonstandard hours for job-constraining reasons (Cox and Presser 2000; Lambert, Waxman, and Haley-Lock 2001; Presser 2003; Presser and Cox 1997).

Whether one works a nonstandard schedule is very much determined by the job. Beers (2000) notes that there are certain industries and occupations in which nonstandard work is very common[1] and others in which it is almost entirely absent (e.g., the rate for computer scientists and construction workers is lower than 5%). Presser says, "Although nonstandard work schedules are pervasive throughout the occupational structure, such schedules are disproportionately concentrated in jobs low in the occupational hierarchy" (Presser 1999, p.1778-9). They are concentrated in the service sector, and they are mostly, with the notable exception of registered nurses, low-paying occupations (Presser 2003).

[1] Presser (2003) lists the top ten occupations of workers with nonstandard schedules: cashiers, truck drivers, sales workers in retail and personal services, waiters and waitresses, cooks, janitors and cleaners, supervisors and proprietors in sales occupations, registered nurses, managers in food service and lodging, and nurses aides, orderlies, and attendants.

Beers (2000) and Presser (Presser 1999; Presser 2003; Presser and Cox 1997) describe the demographic characteristics of nonstandard schedule workers – more common among men than women, higher among blacks (21%) than whites (16%) or Hispanics (16%), never married more than married (21% vs. 15%), more common among women without children than with children, reduced likelihood with higher age, and more common among less educated workers.

Presser (2003, Table 2.10) shows the ten occupations with the highest expected growth rate through 2010, and seven of the ten have higher-than-average rates of nonstandard work schedule, which means that we can expect an increase in nonstandard schedule work. In addition, most of these jobs are over 50% female and low paying. Presser says that that expected growth "combined with the expectation that women and blacks will disproportionately increase their participation in nonstandard work schedules, suggests that this phenomenon will increasingly affect the working poor" (Presser 1999, p.1779).

Researchers have long known that there are important consequences of working a nonstandard schedule. Costa (1996) provides a useful organization by dividing the impact of shift and night work into four categories: biological (resulting largely from disruption of the sleep/wake cycle), working (with fluctuations in performance and efficiency), social (including disruption of interactions with family and friends and the consequences of that interruption), and medical (ranging from gastrointestinal disorders to depression to cardiovascular function). Costa's review article focuses on the medical outcomes and covers literature from 1939 to 1992 (plus one outlier from 1713), demonstrating just how long researchers have been aware of the possible consequences of working a nonstandard schedule.

Other research covers the following effects on nonstandard work schedules: the effects of night work on family life and social life (Carpentier and Cazamian 1977; Pleck and Staines 1985; Pleck, Staines, and Lang 1980; Staines and Pleck 1984; Voydanoff 1988), how families accommodate the non-day work schedule (Hertz and Charlton 1989), the consequences of shift work on marital quality and stability (Presser 2000; Presser 2003; White and Keith 1990), some of the economic, health, and social considerations to working nonstandard schedules (Cox and Presser 2000), the ways in which non-overlapping schedules by dual-earner couples make each parent feel as if they were a single parent (Hattery 2001), the effect of nonstandard work schedules on the gender division of household labor and parent-child interactions (Presser 2003), the effect of mothers' nonstandard hours on young children's cognitive scores Han (2004), and the effect of a nonstandard work schedule (days and hours) on a number of parenting and family outcomes, including amount of time spent in child-related duties each week, amount of time spent on other household duties each week, work-life interference, interference of excessive work hours on family life, interference of work schedule on family life, and an index of family adjustment based on ratings of marital satisfaction, marital happiness, and family satisfaction (Staines and Pleck 1984).

Pleck divides the work-family literature into three conceptual perspectives: job demands, multiple roles, and spillover-crossover, which are reviewed elsewhere (Pleck 1995). The research we present in this paper fits under the umbrella of jobs demands, in that we look at a particular aspect of the job (working a nonstandard schedule) and its relationship to family outcomes. However, there are two important differences from the past work done in the job demands area – first, we present our work in the context of the emerging work-family fit model (described below), and second, the analyses are done on a sample of the working poor, thus

adding new information to the body of knowledge based on middle-class families or the population as a whole.

The three dominant perspectives summarized by Pleck (1995) have provided a useful way of looking at the interface of work and family, particularly as women began joining the labor force and many facets of family life were affected in unpredictable ways. Barnett (1996; 1998) observes that researchers study individuals as if they had separate and competing selves, one at work and one at home, a perspective that was, perhaps, suitable to the time when women in general, then mothers, then mothers of young children were first entering the labor force in new, large numbers. However, none of the three dominant research theories seems fully appropriate now, at a time when the expectation is that women work (making up nearly half the labor force), and there is not such a great newness to the experience of women/mothers working. Instead, Barnett (1996; 1998) advocates a model that shows people with co-existing needs and responsibilities, similar to that proposed by Garey in her 1999 book, Weaving Work and Motherhood, and by Pittman in his fit model (Pittman 1994; Pittman and Teng 2001; Teng and Pittman 1996).

Garey does not subscribe to the view of work and motherhood as a balancing act, where the roles are competing. She prefers the metaphor of weaving, the idea of both work and family being important components of the fabric of a life. Garey argues that the resources available to women restrict or broaden the options that they have available for weaving work and motherhood. The materials, or resources, she's referring to include income, wealth and class background, education, occupational field, job security and seniority, marital status and security, support from other family members, racial-ethnic privilege, public social support programs, neighborhood context, transportation options, family size and age of children, and physical health. These resources are precisely what separate the working poor from the working non-poor and why it is important to study work and family issues for the subpopulation we are looking at in this paper.

Weaving is a metaphor for Garey, while Barnett and Pittman describe the work-family relationship more literally and make efforts to measure it. Barnett describes the concept of "fit":

> Fit is a dynamic process of adjustment between work conditions on the one hand, and the characteristics of workers and their strategies to meet their own needs, as well as the needs of the other people or entities in the social system, and their inter-connections on the other. Accordingly, fit reflects the degree to which workers can realize the various dimensions of their work/social system adaptive strategies, given the options available in the workplace (Barnett 1996, p.32).

The result of fit is either compatibility ("when available workplace options permit workers to realize their strategies") or conflict (when workers are not able to realize their work-life strategies (Barnett 1998, p.167). The concept of fit helps explain why different people with similar work experiences can have very different outcomes. However, central to the concept of fit is the role of choice or control, in order to adapt in ways to make work life and other parts of life compatible. From the literature on why women work a nonstandard schedule, it is clear that some women, especially less educated and unmarried women with children, do not work their nonstandard schedules by choice or design, but by necessity, thus reducing the likelihood of enjoying work-life fit.

Barnett argues, as we did earlier, that work-family research is being conducted in many academic disciplines but without a shared theory. While acknowledging that the proposed model is neither exhaustive nor complete, Barnett encourages researchers to adopt her model, noting that its value is in its "identification of interrelated processes" (1998, p.172). Her hope is that if future work is mapped onto this model, the wide-ranging work-family research agenda will become more focused and the results will be more cumulative. We cannot measure work-family fit, an area in need of much more development work, but we embed our work in the framework of work-family fit, as articulated in the work of Barnett (Barnett 1998) and Teng and Pittman (Pittman and Teng 2001; Teng and Pittman 1996). While the "fit" perspective may still have too many measurement and conceptual issues to be considered a full-blown theory, we believe it will be a useful conceptual map in considering the results of our analyses. Our hypotheses are developed in the context of the "fit" construct.

HYPOTHESES

Our hypotheses are based on the following information from the various related literatures:

* Working a nonstandard schedule is associated with a number of negative outcomes, including sleep deprivation, poor physical health, less time with other family members, lower marital quality, higher divorce rate, and more work-family conflict.
* Much of what we know about nonstandard schedules and work-family dynamics comes from research done on middle-class, mostly dual-earner families.
* Chilman (1995) notes that working poor families are more likely to be headed by single mothers, and these women often have severe role overload because they hold jobs and are responsible for all the work at home.
* Low-wage workers are more likely to involuntarily work a nonstandard schedule than are higher-wage workers.[2]

We believe that when a nonstandard work schedule is imposed by the job (as opposed to being chosen as part of a work-family strategy), it is more likely that the family's fit along the demands-abilities dimension of Pittman's model will be worse. A woman who is "forced" by the labor market, or whose options are constrained, to work a nonstandard schedule is less likely, in the language of Barnett's model, to be able to realize her work-family adaptive strategy. Thus, our hypotheses suggest worse outcomes for families where the mother works (or has a high probability of working) a nonstandard schedule.

Specifically, our hypotheses are that for the working poor population we are studying, the higher the propensity for nonstandard work:

- the more negative the subjective experience of parenting as seen in
  * higher reports of parenting challenges
  * higher reports of parenting stress and
  * lower reports of parenting satisfaction; and

[2] This assertion has not been specifically demonstrated in the literature, largely as a result of data availability issues, but it is certainly suggested by past research.

- the more negative the effects on parenting behaviors as seen in
* lower reports of positive parenting
* less frequent reports of family routines and
* less frequent reports of time with children.

METHODS

The goal of this paper is to explore the effects of a nonstandard work schedule on the well-being of working poor families, measured by a range of outcomes that cover parenting behaviors (interactions with children) as well as the subjective experience of parenting (perceived stress, challenges, and satisfaction). This section describes the methods we used to study this question.

Quantitative Data Source

We use data from the first wave of the survey collected as part of the Three-City Study. This survey includes a sample of about 2400 female caregivers (mostly mothers) of children age 0-4 or 10-14 in low-income neighborhoods. The wave 1 survey, which had a 74% response rate, was conducted between March and November of 1999, after the implementation of welfare reform. One child per family, whom we refer to as the "focal child" (FC), was selected as the focus of the interview. Caregivers of 2-4 year old focal children were asked to participate in a further in-depth interview (in addition to the main interview) as part of the Embedded Development Study (EDS). About 85% of the eligible households agreed to participate in the followup interview at wave 1. The EDS asks a direct question about nonstandard work; unfortunately, this question was not asked of the full sample, and we use the EDS results to develop an imputed value for all non-EDS cases. Another important limitation of The Three-City Study data is that we cannot distinguish among types of nonstandard work, such as afternoon/evening shift, night shift, weekend work, or rotating shifts, a distinction that has been found to be important for some outcomes, such as marital stability (Presser 2000) and work-family conflict (Staines and Pleck 1984). Combining different kinds of nonstandard work into one category, some of which probably affect parenting more than others, will make it more difficult to detect important effects and associations of nonstandard work.

For the analyses, we identified the subgroup of 461 cases who had worked in the week prior to the main interview and had a focal child age 0-4.

Main Analysis Variables

Independent variables

Nonstandard work schedule is the main independent variable of interest. Two-thirds of the caregivers of 2-4 year old focal children participated in the EDS, which includes a direct question about nonstandard work schedules. For the remaining women in the analysis subsample, we use an imputed value for nonstandard work. The imputed probability is based on a probit model estimated for women who were asked directly about nonstandard work schedules in the EDS. We created a variable for nonstandard work that is a combination of observed values for cases with one (n=203) and imputed values (n=258). We also used the coefficient estimates from the probit model to calculate a predicted probability for nonstandard work for all 0-4 year old cases of working mothers to use in the instrumental variable models.

Outcome measures

We use two main groups of dependent variables: the subjective experience of parenting and parenting behavior. We use three scales to measure different aspects of the subjective experience of parenting – a measure of parenting stress (based on 7 items), a measure of parenting satisfaction (based on 5 items), and a parenting challenges scale that combines the 12 items in the stress and satisfaction subscales. To measure parenting behavior, we use three measures – a scale of parenting style (based on 17 items), amount of time the focal child and caregiver were apart on the day before the interview, and a composite measure of family routines for children age 0-4 (based on 5 items).

Control variables

The multivariate models control for conditions that literature suggests and we believe could possibly affect the experience of parenting, including respondent, family, child, and job characteristics – number of children in household; age and gender of focal child; whether focal child has been seen for mental health or behavioral problem; spouse, partner or any other adult in household; respondent's education, race, welfare status, and reading skills; income-to-poverty ratio; a scale measuring father involvement with children; an index of job quality; and whether the mother has more than one job. As appropriate, we include a flag for imputed nonstandard work schedule. We also tried all models with a Heckman correction factor for self-selection into the paid labor force.

Weighting

Most models are run three ways: unweighted and with two kinds of weights. The first set of weights adjusts for sample stratification, household nonresponse, and the number of age-eligible children in the sampled household. As such, they assign the largest weights to cases in the largest city (Chicago), in order to adjust for their lower likelihood of being selected for the sample. The second set of weights adjusts for the same sample criteria but they are normalized to give each of the three cities equal bearing in the data, instead of giving the largest city the largest influence. Since it is not entirely clear which type of weight is appropriate for the models we are doing, or if any weight at all is appropriate, we ran the models using all three possibilities, as a way to gauge the robustness of the results.

BIVARIATE ANALYSIS

This analysis includes two parts: the first compares those working a nonstandard schedule to those working a standard schedule on their demographic and job characteristics and the second looks at the bivariate relationship between nonstandard work schedule and the parenting outcome variables. We present only the first of these.

In the Three-City Study, the overall rate of nonstandard work is about 35%, which is higher than the national estimates based on full-time wage and salary workers (about 17%) but is closer to the estimates for part-time workers, ranging from 30-36%. The work schedule question in the EDS is not limited to full-time work nor is it specific about what part of the work schedule is nonstandard, and thus the estimate of 35% is much more inclusive than other, CPS-based estimates.

Table 1 compares household and personal characteristics of nonstandard and standard workers. The comparisons reveal few significant differences, including whether there are other earnings in the household, the number of children in the household, income-to-needs ratio, most of the caregiver's characteristics (nativity, welfare status, and work effort in the past two years), and the child's basic demographic characteristics (gender and age). Caregivers who work a nonstandard schedule are not significantly more likely to have a spouse or partner in the household, an important concern for nonstandard schedule workers with children. They have a higher tendency to have some other adult in the household (including spouse/partner), though the difference is not statistically significant. There are noticeable race differences in nonstandard work (not shown) – blacks work a nonstandard schedule at a higher rate (37%) than Hispanics (30%) (the rate for whites/others is 55% but based on only 20 cases).

However, one interesting difference between the two groups is whether the focal child has been seen for a mental/emotional/behavioral problem. Of course, these cross-sectional data do not in any way suggest anything causal about this relationship; in fact, temporal order is difficult to know in this case.

Table 1. Demographic Characteristic of Nonstandard and Standard Workers

	Nonstandard workers (n» 101)	**Standard workers (n» 187)**	**P^2 test of independence p-value**
Household			
Spouse or partner present in household	23.8%	22.5	n.s.
Presence of any other adult in hh besides primary caregiver	48.5	43.3	n.s.
City: Boston Chicago San Antonio	 37.6 33.7 28.7	 40.6 26.2 33.2	n.s.
Other reported work income in the household	22.8	25.1	n.s.
Mean number of minors in household	2.4	2.4	n.s.
Mean % of kids in household who are pre-school age (<6)	73.6	69.4	n.s.
Income-to-needs ratio	0.82	0.78	n.s.
Caregiver			
Race: Black Hispanic White/Other	 52.5 36.6 10.9	 49.2 46.0 4.8	.08
Born in the U.S.	84.2	77.5	n.s.

	Nonstandard workers (n» 101)	**Standard workers (n» 187)**	**P 2 test of independence p-value**
High School/GED or higher	83.2	73.8	.07
Welfare status: Currently on Formerly on Never on	 25.7 52.5 21.8	 21.1 55.1 23.8	 n.s.
Mean age	27.4	28.2	n.s.
Mean number of months worked in past 2 years	15.4	14.8	n.s.
Focal Child			
Was seen for mental/behav-ioral/emotional problem	10.9	3.7	.02
Male	61.4	52.4	n.s.
Mean age	2.9	3.1	.08
Father involvement score	0.22	0.14	n.s.
This table is based on unweighted data for the 288 cases who reported working at the Wave 1 EDS and had a value for nonstandard work status based on the question asked in the EDS interview. We also looked at all of these numbers for the 203 cases who reported working at the Wave 1 EDS and main interviews, and the pattern of results was the same.			

A comparison of job characteristics of those who do and do not work a nonstandard schedule[3] reveals a pattern of lower quality jobs for those working a nonstandard schedule. Most importantly, and significant, are comparison of pay and whether the caregivers' jobs provide health insurance. While the comparison of mean pay is not significant, the nonstandard workers are significantly more likely to earn less than $8 per hour at their main job and only about 19% receive job-based health insurance, as compared to about 34% of those who work standard schedules. The pattern continues, though none of the comparisons is significant, with nonstandard workers having more part-time work, more temporary/odd jobs, slightly lower weekly hours, slightly lower hourly wage, and more jobs that earn tips.

Since these job comparisons were so suggestive that the nonstandard workers have lower quality jobs, but statistically significant differences are hard to detect, we created a job quality index that counts the number of "bad job" characteristics the respondent had. The following characteristics are included in the job quality index: the job is part-time, the job is temporary, the respondent does not have job-provided health insurance, the job earns tips, and the respondent's hourly wage is less than $8 per hour. For each characteristic, the index adds one point. Thus the possible range is 0 to 5, though no one had more than four of these characteristics at a time. Comparison of nonstandard and standard schedule workers finds a significant difference in means (almost 2 for nonstandard workers, about 1.5 for standard workers), that those who work a standard work schedule are more likely to have 0 or 1 bad job characteristic, while those working a nonstandard schedule are more likely to have 2, 3, or 4 bad job characteristics, supporting the suggestion that

[3] As a result of what was and was not collected at the EDS interview, we are forced to assume that the job worked at the time of the EDS interview is the same as the job described at the main interview done a month or more earlier. We recognize that this is a large assumption, especially in the working poor population where fast job turnover is quite common, and a serious limitation of this analysis.

those who work a nonstandard schedule are working inferior jobs to those who work a standard schedule.

The bivariate analysis also included a comparison of the parenting outcome scores for those who do and do not work a nonstandard schedule. We are not reviewing those results here because they are very similar to the results from the multivariate models, covered in the next section.

MULTIVARIATE CROSS-SECTIONAL ANALYSIS

As discussed earlier, the main focus of this paper is to study the relationship between working a nonstandard schedule and parenting. This section continues this examination by describing a series of ordinary least squares (OLS) regression models of the six selected parenting outcomes. All models included a measure of the nonstandard work schedule independent variable and were in the following form:

$$\underset{\text{(Parenting outcome)}}{Y_i} = a + \beta_1(\text{Measure of nonstandard work})_i + \beta_2(\text{Controls})_i + e_i$$

Throughout the series of models, we used the same model specification for all six parenting outcomes.[4] As described in the Methods section, we ran all models with three weighting schemes (equal-city weights, weights proportional to city population, and unweighted) and with and without the Heckman correction for selection into the paid labor force. Thus, each model was run six ways for each of the six outcomes. There were some modest differences in the magnitudes of the coefficients by weighting scheme and by whether the correction was included or not. However, in almost no cases would one draw a different conclusion about the effect of nonstandard work from the results. Thus, we will not describe in detail the variations by weighting/correction combination. We will focus on a single model, using the equal city weights and the correction for labor force selection.[5]

As described in the Methods section, in order to maximize the number of cases we could use in the models, we imputed values for nonstandard work for all households that did not participate in the EDS – that is all households that were ineligible (where the focal child is age 0 or 1), plus age 2-4 households that chose not to participate. For some models, then, the measure of nonstandard work is a combination of observed values from the EDS (44%) and imputed values (56%), based on all 461 cases in the analysis subgroup. As a precaution, we repeated the basic parenting models using just 1-4 year old cases (n=406, 50% imputed), then just 2-4 year old cases (n=294, 32% imputed), and finally just observed-value EDS cases (n=203, none imputed) to see if the models tell a consistent story when we decrease the percentage of cases in the model that have an imputed value for NS work. The pattern of results for nonstandard work was

[4] In addition to the control variables described in the methods section, we also tried the models including a measure of mother's reading ability, a measure of part-time work, and several interaction terms (nonstandard work by part-time work, by presence of spouse/partner/other adult in the household. by receipt of health insurance from job). They were generally non-significant and did not change the effect of nonstandard work on parenting.

[5] The choice of equal-city weights is consistent with other internal users of these data, who feel that the original survey weights (based on population size), are not as appropriate as considering each city to be a unique, equal data point.

consistent across all four models. That is, for the parenting outcomes where nonstandard work was significant in the first model with all 461 cases, they were significant in the other three models with the reduced sample sizes as well.

The Subjective Experience of Parenting

In the models based on 461 cases of 0-4 year old focal children, we found that a nonstandard work schedule had a significant effect on two of the three measures of the subjective experience of parenting. Table 2 shows the coefficients for nonstandard work from the OLS models for the three measures. The models found that working a nonstandard schedule significantly increases the challenges to parenting and decreases parenting satisfaction.

As described earlier, the measure of challenges to parenting is made up of the two subscales – parenting stress and parenting satisfaction. Thus, it appears that the findings for parenting challenges may be determined in large part by the satisfaction subscale, though not exclusively. Consider, for example, that the number of children in the household is an important determinant for parenting stress and for parenting challenges, but not for parenting satisfaction. For many of the variables in this model, the results for challenges looks more like stress than like satisfaction, which seems to behave quite differently (as would be expected since it's in the opposite, positive direction). We conclude that both satisfaction and stress contribute to the challenges findings, with satisfaction being a stronger contributor.

Table 2. Models for measures of subjective experience of parenting

	CHALLENGES TO PARENTING	PARENTING STRESS	PARENTING SATISFACTION
	Estimate (SE)	Estimate (SE)	Estimate (SE)
NS work, observed and imputed values combined	0.27 (.11)*	0.25 (.18)	-0.30 (.10)**
R-square	0.169	0.130	0.183
n	461	461	461
# p#.10, * p#.05, ** p#.01, *** p#.001			

The Objective Measures of Parenting

The results for the objective measures of parenting are unambiguous – these models show no relationship between nonstandard work and actual parenting. Table 3 shows the coefficients for nonstandard work from the OLS models for the three objective measures of parenting.

For family routines, the imputation flag is significant, suggesting that the imputed values are somehow different from the non-imputed ones. However, looking at the family routines model for only observed-value EDS cases (none imputed) shows few differences; specifically, the nonstandard work coefficient remains non-significant in that and all other family routines models.

Table 3. Models for objective measures of parenting

	FAMILY ROUTINES	POSITIVE PARENTING	HOURS APART
	Estimate (SE)	Estimate (SE)	Estimate (SE)
NS work, observed and imputed values combined	0.03 (.13)	-0.04 (.08)	-1.02 (1.0)
R-square	0.119	0.248	0.215
n	461	455	445
# p#.10, * p#.05, ** p#.01, *** p#.001			

One of the major concerns about the cross-sectional models is the chance of endogeneity – the possibility that nonstandard work and the parenting outcomes are a result of a larger process, both resulting from some unmeasured third variable. In an effort to address this possibility, we tried using an instrumental variable approach, using the predicted probability for all cases, not substituting the observed value for nonstandard work even for the cases with a known observed value In this way, the effect of unmeasured variables normally combined into the error term are partialed out of the predicted probabilities for nonstandard work and the error term in the substantive outcomes model is not correlated with the predicted measure of nonstandard schedule. However, the success of such models depends on the presence in the dataset of a powerful instrumental variable that is related to the independent variable of interest (nonstandard work) but not related to the outcome (parenting). We calculated two versions of the predicted probability of nonstandard work, varying the inclusion of the Heckman correction, which affected which variables we had available to use as instruments. However, for five of the parenting outcomes (all but hours apart) the version did not matter, nor did the selection of weights: in all but three of the 30 models run on these five parenting outcomes, the predicted probability of nonstandard work was non-significant.[6] There are two potential interpretations for non-significant results in these models: either nonstandard work simply is not an important factor in parenting, or it may mean that the instruments were not powerful enough to detect effects on parenting. We cannot know with certainty which interpretation is correct, but the robustness of all other results that show a consistent effect of nonstandard work on parenting challenges and satisfaction, and the limited availability of instrument options, suggests a weak-instrument interpretation.

[6] For one objective measure of parenting – hours apart – the results for the instrumental variable model are quite different. Of the six models regressing this outcome (using 3 kinds of weights, with and without correction for labor force selection), five were significant at the 5 percent level or lower. Up to this point, there has been no detectable effect of nonstandard work on hours apart. In this instrumental variable model, however, there is a consistent and strong effect. (The magnitude of the significant coefficients ranges from about two-thirds of a standard deviation to over a full standard deviation.) And the direction of the effect is non-intuitive – nonstandard work is associated with a decrease in time apart from the focal child. The analysis subgroup consists of focal children age 0-4, so the direction and magnitude of this result is particularly surprising, since children of this age are not yet in school. There are no variables in the nonstandard prediction equation that are similar to hours apart that would explain this result. Throughout this paper, as a precaution against the assumptions and weaknesses of the nonstandard work measure, we have focused on patterns of results, looking for consistency/robustness in the models in order to feel confident about the result. For now, then, until further exploration, we would interpret the "hours apart" results from the instrumental variable models with great caution.

DISCUSSION

Our approach to interpreting model effects was a cautious one, considering results to be "real" only if they were consistent, regardless of weighting scheme or inclusion/exclusion of the correction for selection into the labor force or the inclusion/exclusion of various control variables. Fortunately, when looking across the six versions of each model (3 kinds of weights x with/without correction) and at models that drop non-significant controls and add interaction terms, there were very clear patterns to the results. Specifically, nonstandard work is strongly associated with two measures of the subjective experience of parenting – overall parenting challenges and parenting satisfaction in particular – and not at all associated with the objective measures of parenting.

Our hypotheses, which expected consistently negative effects of a nonstandard work schedule on parenting outcomes – both subjective and behavioral – for the working poor population were based on the following sequence of information from the various related literatures discussed in the Background section:

- Working a nonstandard schedule is associated with a number of negative outcomes.
- Much of what we know about nonstandard schedules and work-family dynamics comes from research done on middle-class, mostly dual-earner families, not on the working poor.
- Working poor families are more likely to be headed by single mothers, and these women often have severe role overload because they hold jobs and are responsible for all the work at home.
- Lower educated and single mothers (the working poor) are more likely to involuntarily work a nonstandard schedule than are higher-educated and married mothers; that is, their work schedules are more likely a result of the jobs they have than chosen for family or personal reasons.

We believe that when a worker's nonstandard schedule is <u>imposed</u> by the job (as opposed to being chosen as part of a work-family strategy) or a worker's options are constrained to jobs that require a nonstandard schedule, it is more likely that the family's fit along the demands-abilities dimension of Pittman's model will be worse and, in the language of Barnett's model, is less likely to be able to realize her work-family adaptive strategy. To test such an interpretation, we would need to compare a sample of the working poor, whom, we believe, are more likely to have their nonstandard work schedule imposed, to a sample of workers who may select their nonstandard work schedule for family or personal reasons. The key variable in using the fit concept is control or choice about work schedule, since that is central to achieving one's work-family adaptive strategy. Given that we do not have that measure (nor do we have the appropriate comparison group), we can only speculate about the role of fit. Had the parenting outcomes been consistently negative, as expected, we would have had a more straightforward interpretation, that the imposed nonstandard work schedule resulted in poor work-family fit, and that poor fit, in turn, resulted in poor parenting outcomes. Unfortunately, our results are not straightforward and consistent and though fit is a useful conceptual idea, it does not really elucidate our inconsistent findings.

Our results suggest that working a nonstandard schedule affects how low-income working mothers of pre-school age children feel about parenting, though it doesn't appear to affect how they actually parent. This latter result is rather surprising, since it is difficult to think that things

such as family routines or amount of time spent together are not negatively affected by a working mother's nonstandard schedule. Of course, there is always the possibility that the measures – of either the parenting outcomes themselves or of nonstandard work – are not sensitive enough to detect differences. In fact, one of the main drawbacks of these data is that we cannot distinguish among different nonstandard work schedules. It may be that the effects of nonstandard work schedule on parenting behavior vary by specifics of schedule – for example, maybe positive parenting declines only for mothers who work overnight (a fatigue effect) and family routines are upset only for mothers who work evenings – and we do not have the ability to detect those differences with our more ungainly measure that combines across all nonstandard work schedules.

However, it may not be a measurement issue at all. There are a number of previous studies that show that women's increased labor force participation has not affected the amount of time they spend with their children or the children's outcomes nearly as much as one might have expected (Bianchi 2000; Bianchi, Milkie, Sayer, and Robinson 2000; Booth et al. 2001; Chase-Lansdale et al. 2003; Sandberg and Hofferth 2001). Time diary studies suggest that working mothers find ways to maintain their relationships with their children despite the demands of a paid job, by reducing their sleep, reducing their leisure activities and time to themselves, and compensating in other ways, such as less volunteer work and more intensive child-time when they're not working, such as evenings and weekends.

In an article titled "Maternal Employment and Time With Children: Dramatic Change or Surprising Continuity?" Bianchi says:

> I conclude that mothers' time and attention to children has been far more constant over the past few decades (and that the gap between employed and nonemployed mothers regarding time with children is far smaller) than we might have expected, given the increase in women's labor force participation (Bianchi 2000, p.412).

Perhaps our results can be interpreted along those same lines, which is that despite expectation that working a nonstandard schedule would affect how these women parent, instead, they are finding ways to preserve their family routines, their time with their children, and the ways they parent. But the results for the subjective measures of parenting suggest that it may come at great personal cost – in addition to the reduced sleep and leisure reported in other research – in a psychological toll of increased challenges to parenting, reduced parenting satisfaction and maybe more stress. The concluding thought, then, is that the effects of a nonstandard work schedule may not be seen in parenting but are felt in the parents themselves, leading one to wonder about the sustainability of such a pattern of work.

References

Barnett, Rosalind C. 1996. "Toward a Review and Reconceptualization of the Work/Family Literature: Work in Progress." Wellesley College.

—. 1998. "Towards a Review and Reconceptualization of the Work/Family Literature." *Genetic, Social, and General Psychology Monographs* 124:125-182.

Beers, Thomas M. 2000. "Flexible Schedules and Shift Work: Replacing the '9-to-5' Workday?" *Monthly Labor Review*:33-40.

Bianchi, Suzanne M. 2000. "Maternal Employment and Time with Children: Dramatic Change or Surprising Continuity?" *Demography* 37:401-414.

Bianchi, Suzanne M., Melissa A. Milkie, Liana C. Sayer, and John P. Robinson. 2000. "Is Anyone Doing the Housework? Trends in the Gender Division of Household Labor." *Social Forces* 79:191-228.

Booth, Cathryn L., K. Alison Clarke-Stewart, Deborah Lowe Vandell, Kathleen McCartney, and Margaret Tresch Owen. 2001. "Child-Care Usage and Mother-Infant "Quality Time"." *Journal of Marriage and Family* 64:16-26.

Carpentier, James and Pierre Cazamian. 1977. "Night Work." International Labor Office, Geneva.

Chase-Lansdale, P. Lindsay, Robert A. Moffitt, Brenda J. Lohman, Andrew J. Cherlin, Rebekah Levine Coley, Laura D. Pittman, Jennifer Roff, and Elizabeth Votruba-Drzal. 2003. "Mothers' Transitions from Welfare to Work and the Well-Being of Preschoolers and Adolescents." *Science* 299:1548-1552.

Chilman, Catherine S. 1995. "Working Poor Families: Trends, Causes, Effects, and Suggested Policies." Pp. 398-408 in *The Work and Family Interface: Toward a Contextual Effects Perspective*, edited by G. L. Bowen and J. F. Pittman. Minneapolis: National Council on Family Relations.

Costa, Giovanni. 1996. "The Impact of Shift and Night Work on Health." *Applied Ergonomics* 27:9-16.

Cox, Amy G. and Harriet B. Presser. 2000. "Nonstandard Employment Schedules Among American Mothers: The Relevance of Marital Status." Pp. 97-130 in *Work and Family: Research Informing Policy*, edited by T. L. Parcel and D. B. Cornfield. Thousand Oaks: Sage Publications, Inc.

DeBord, Karen, Rebekah Fanning Canu, and Jennifer Kerpelman. 2000. "Understanding a Work-Family Fit for Single Parents Moving from Welfare to Work." *Social Work* 45:313-324.

Garey, Anita Ilta. 1999. *Weaving Work and Motherhood*. Philadelphia: Temple University Press.

Han, Wen-Jui. 2004. "Nonstandard Work Schedules and Child Cognitive Outcomes." *under review*.

Hattery, Angela J. 2001. "Tag-Team Parenting: Costs and Benefits of Utilizing Nonoverlapping Shift Work in Families with Young Children." *Families in Society: The Journal of Contemporary Human Services* 82:419-427.

Hertz, R. and J. Charlton. 1989. "Making Family Under a Shiftwork Schedule: Air Force Security Guards and Their Wives." *Social Problems* 36:491-507.

Hochschild, Arlie Russell. 1989. *The Second Shift, Working Parents and the Revolution at Home*. New York: Viking.

Kingston, Paul W. 1989. "Studying the Work-Family Connection: Atheoretical Progress, Ideological Bias, and Shaky Foundations for Policy." Pp. 55-60 in *Work and Family: Theory, Research, and Applications*, edited by E. B. Goldsmith. Newbury Park, CA: Sage.

Lambert, Susan J., Elaine Waxman, and Anna Haley-Lock. 2001. "Against the Odds: A Study of Instability in Lower-Skilled Jobs." in *Annual Meeting of the Association of Public Policy and Management*. Washington, D.C.

Newman, Katherine S. 1999. "On the High Wire: How the Working Poor Juggle Job and Family Responsibilities." Pp. 85-94 in *Balancing Acts. Easing the Burdens and Improving the Options for Working Families*, edited by E. Appelbaum. Washington, D.C.: Economic Policy Institute.

Pittman, J.F. 1994. "Work/Family Fit as a Mediator of Work Factors on Marital Tension: Evidence from the Interface of Greedy Institutions." *Human Relations* 47:183-209.

Pittman, Joe F. and Wei Teng. 2001. "DRAFT -- Assessing the Work-Family Interface: An Empirical Test of a New Measure of Work-Family Fit." *Under review*.

Pleck, J.H. and G.L. Staines. 1985. "Work Schedules and Family Life in Two-Earner Couples." *Journal of Family Issues* 6:61-82.

Pleck, Joseph H. 1995. "Introduction. Work Roles, Family Roles, and Well-Being: Current Conceptual Perspectives." Pp. 17-22 in *The Work and Family Interface: Toward a Contextual Effects Perspective*, edited by G. L. Bowen and J. F. Pittman. Minneapolis: National Council on Family Relations.

Pleck, Joseph H., Graham L. Staines, and Linda Lang. 1980. "Conflict Between Work and Family Life." *Monthly Labor Review* 102:29-32.

Presser, Harriet. 2000. "Nonstandard Work Schedules and Marital Instability." *Journal of Marriage and the Family* 62:93-110.

Presser, Harriet B. 1999. "Toward a 24-Hour Economy." *Science* 284:1778-1779.

—. 2003. *Working in a 24/7 Economy: Challenges for American Families*. New York: Russell Sage Foundation.

Presser, Harriet B. and Amy G. Cox. 1997. "The Work Schedules of Low-Educated American Women and Welfare Reform." *Monthly Labor Review* April 1997:25-34.

Reskin, Barbara and Irene Padavic. 1994. *Women and Men at Work*, Edited by C. Ragin, W. Griswold, and L. Griffin. Thousand Oaks, CA: Pine Forge Press.

Rubin, Lillian. 1994. *Families on the Fault Line*. New York: Harper Collins.

Sandberg, John F. and Sandra L. Hofferth. 2001. "Changes in Children's Time with Parents: United States, 1981-1997." *Demography* 38:423-436.

Staines, G.L. and J.H. Pleck. 1984. "Nonstandard Work Schedules and Family Life." *Journal of Applied Psychology* 69:515-523.

Teng, Wei and Joe F. Pittman. 1996. "Conceptualizing the Work-Family Interface: The Work-Family Fit Perspective." in *Annual Theory Construction and Research Methods Workshop, National Council on Family Relations*. Kansas City, Missouri.

Voydanoff, P. 1988. "Work Role Characteristics, Family Structure Demands, and Work/Family Conflict." *Journal of Marriage and the Family* 50:749-761.

White, L. and B. Keith. 1990. "The Effect of Shift Work on Quality and Stability of Marital Relations." *Journal of Marriage and the Family* 52:453-462.