Nonstandard Work Schedules and Child Cognitive Outcomes

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Observing a substantial movement by mothers of young children into the workforce during the early year of their child's life, many researchers have asked the question of to what extent early maternal employment might affect children's outcomes; therefore, we now know much more than we did a decade ago about the effects of maternal employment on children's cognitive outcomes. At the same time, we also observe an increasing number of working mothers are employed during nonstandard hours (e.g., they work evenings, nights, or rotating shifts). Thus, we find that we need to refine the question of the effects of early maternal employment further on children's cognitive outcomes that may differ by the mothers' work schedules. Previous studies have paid attention to different dimensions of maternal employment, such as the timing and the intensity of maternal employment. However, one important aspect of heterogeneity – mothers' work schedules – has been overlooked, despite the growing number of mothers with young children who work evenings, nights and early mornings.

The importance of recognizing the potential influence of mothers' work schedules on children's outcomes is further underscored by the substantial increase in people working at hours that are not between, for example, 9 am to 5 pm (Beers, 2000; Presser, 1986, 1999); a similar upward trend is also observed among mothers with young children (Presser & Cox, 1997). National surveys have consistently found that certain occupations are more likely to require working nonstandard hours, such as those in the service (e.g., janitors, waitress, nursing) and sales (sales workers, retail and personal services) industries (e.g., Presser, 1995; Presser & Cox, 1997), and these jobs are growing the fastest as we begin the new millennium (Bureau of Labor Statistics, 2001). The recent welfare literature further points out that people with few skills and low levels of education are more likely to work in service or sales jobs; approximately one-third of former welfare recipients work at jobs that require nonstandard hours (Loprest, 1999; Schumacher & Greenberg, 1999). Taken together, these findings demonstrate that a careful examination of the associations between maternal employment and children's outcomes at various ages is warranted given that an increasing number of mothers are working and a nontrivial share of them are likely to work at jobs that require nonstandard hours, and thus more children are likely to be affected by the specific working hours associated with maternal employment.

This paper, thus, builds on and extends prior research on the effects of early maternal employment by utilizing data on a large national sample of children in the 1979 National Longitudinal Survey of Youth-Child Supplement (NLSY79-CS). In particular, the first major aim of this paper is to see whether the effects of maternal employment on children's cognitive outcomes differ by mothers' work schedules. The second major aim of this paper is to examine whether or not the effects of maternal work schedules may differ in different contexts (e.g., low-income families or welfare families). The sample consists of all the children in the NLSY79-CS whom can be followed longitudinally for a eleven to twelve year period, with no missing data on any of our outcome variables - from birth to their first NLSY assessment at the age of 3 or 4, their second assessment at the age of 5 or 6, their third assessment at the age of 7 or 8, their

fourth assessment at the age of 9 or 10, and their fifth assessment at the age of 11 or 12. Because of the way the NLSY79-CS is structured, the sample consists of 1,538 children born between 1982 and 1989, whom can be followed from birth to age 11 or 12 in 1994, 1996, 1998, or 2000. Of these, 755 are non-Hispanic white, 483 are non-Hispanic African American, and 300 are Hispanic.

The NLSY79-CS is well suited for this analysis because, in addition to collecting detailed information on family demographic background, it also contains information on various dimensions of maternal work schedules (e.g., working at evenings, nights, or rotating shifts) at every assessment point along with a rich set of information on early child care and home environment. Specifically, the cognitive outcomes include in this paper and are available in the NLSY79-CS are: Peabody Picture Vocabulary Test-Revised (PPVT-R) at ages 3 or 4, and Peabody Individual Achievement Tests (PIATs) on Math and Reading Recognition at ages 5 or 6, ages 7 or 8, ages 9 or 10, and aged 11 or 12. All of these are widely accepted measures of children's cognitive ability during the preschool and school years. In addition, to account for selection bias in estimating the effects of maternal employment, an extensive set of child, mother, and family characteristics are controlled for in the model: whether the child is male; whether the child has any older siblings; mother's cognitive capability (measured by Armed Force Qualification Test; AFQT); mother's age at birth; mother's education at birth; mother's marital status at birth; years living in a single-parent family; family income in the year before birth; and whether the family was ever in poverty up until the assessment point. In addition, in the separate models where the income effects are examined, the average family income-to-needs ratio (family income divided by the poverty threshold for its household size) by the assessment month is calculated. In the separate models where the effects of maternal work schedules are examined in the context of welfare, the yearly information on whether or not the family had ever received welfare in the past calendar year is used.

As a greater share of young children is raised in working families where parent(s) may often times juggle between different work schedules and family responsibilities, there is a void in our understanding about the developmental experiences of these young children in general, and the extent to which a variety of individual and external factors may affect their daily experience in particular. The results from this study will fill gaps in knowledge about in our knowledge about child development in the context of maternal work schedules, and the knowledge thus gained should prove useful in shaping policy responses.

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